

Toolmakers for the Future

Peter Hundley

TOOLMAKERS FOR THE FUTURE

**International Network
for Environmental Management**

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FOREWORD

Human civilization is on its way to self-destruction. The worldwide economic system is consuming, progressively and irretrievably, the resources necessary to produce goods and generate energy.

Pollution, deforestation, soil sealing and erosion are depleting the natural resources needed by a rapidly growing world population. Famines and battles over the distribution of resources essential for survival – especially water – have already occurred and are predestined for the future on a global scale.

Numerous companies strive exclusively for market share, increased sales and profits, many media focus solely on circulation or audience share, and political parties seek to win elections and increase their power. Whether companies, media or political parties – they are often following the short-term opportunism of their respective target groups.

But now, across the world, there are forward-thinking people from all walks of life standing up who have recognized that the world economic system in its current form is a suicidal software program for humanity and is in need of drastic updates.

Are “entrepreneurial action” and “ethical environmental responsibility” really mutually exclusive? Is the demand that the global economy be “sustainable” or “fit for the future” utopian? Who is in a position to reprogram the economic system in such a way that our biosphere – and with it the very basis of human economy – is preserved?

The German Cabinet adopted a national water strategy on 15 March 2023, which is intended to prevent extreme consequences of the climate crisis. As early as 2011, the German Advisory Council on Global Change came to alarming conclusions in its key report: If humanity is to prevent its own extinction, it must ensure that certain tolerance limits are observed. It must not exceed the planetary guard rails for global warming, decline in biodiversity, availability of fertile soil and potable water, and capacity to absorb pollutants.

If such guard rails are ignored, more and more areas suitable for human life will be lost. Finally, a dangerous escalation looms if "tipping elements" were to exceed critical values. These include the Arctic and Antarctic marine and land ice sheets, the Amazon rain forest, the permafrost methane stocks, the Atlantic thermohaline circulation, the movement patterns of the planetary atmosphere, and the marine carbon pump.

As therapy, the report recommends a "major transformation", a global "environmental social contract" based on global citizenship, and a human right to ultimate stability of the earth system.

Anyone who wants to comment on or help shape this "major transformation" needs comprehensive, reliable and professionally documented material on the central topic of "environmentally conscious business".

The book "Toolmakers for the Future – International Network for Environmental Management" provides extremely well researched material. This documentation by Peter Hundley is an industry-historical summary of the events during the ecological transition and awakening phase of environmentally oriented corporate management.

Dr Georg Winter
Chairman of INEM 1991–2004

Chapter 1

THE BIRTH OF ENVIRONMENTAL MANAGEMENT

Four years after taking over management of the family-owned business with his brother Ernst Michael in 1968, Georg Winter decided to make protection of the environment one of the key goals of the company. Step-by-step he developed a systematic model for integrating environmental considerations into all aspects of company operations, from staff education and motivation, purchasing policy, process and product development, manufacturing and marketing, to energy, water and waste management. By 1984 this concept had grown to be the world's first Integrated System of Environmental Management. But Dr Winter was not satisfied with only improving his own company's environmental performance, he was driven by a deeper need, anchored in his earliest childhood memories – to preserve the natural environment. So he embarked on a crusade to convince other business owners and managers, policy makers and governments of the need for environmental management. And he was successful. Today virtually every major company and many small and medium-sized enterprises have adopted his concepts.

The Hamburg maker of diamond saw blades and other industrial tools eats, sleeps and breaths environment. Despite its 'midsize company' status, it is widely seen as the business role model for environmental awareness in environmentally fanatic Germany. ... Clean and green pays. Clean and green engenders growth, profit and lasting competitive advantage. That's the unmistakable message.

— *Tom Peters*¹

While most businesses were struggling to keep pace with environmental legislation and regulations and international institutions were just taking their first steps toward environmental policies and structures, the Winter company was well on its way to developing the world's first Integrated System of Environmental Management, the so-called 'Winter Model'.



Fig.1.1 Ruins of the Winter factory following a 1943 bombing raid

1.1 The formative years: a passion for nature

Georg Winter's concern for the environment began in his earliest childhood years. Born in war-ravaged Hamburg, Germany, his earliest memories are of a paradise lost. An Allied bombing raid in 1943 had destroyed the family factory and during the Allied occupation the family were expelled from their home and had to seek shelter in the city.²

"The garden where I had played became my lost paradise. This had a profound effect on me, as a four-year-old boy. During the Allied occupation we were expelled from our home and we had to seek shelter in the city. I was too small to play in the street and I disliked the dirty, grey walls of the city, longing back for my garden. Trapped in the city, I began to collect pictures of nature scenes from magazines and books."³

Dr Winter considers this experience as the awakening of his environmental consciousness that would grow and develop in the ensuing years. His next impulse came in elementary school.



Fig. 1.2 Loki Schmidt (adult at back), Georg Winter (behind at 2 o'clock) and class on a field trip to discover nature

“I had one of my key formative experiences as a school beginner, when my teacher Loki Schmidt had the class search the surroundings for plants, which we then planted in flower pots. I found a plant in Hamburg-Othmarschen in the Hirtenweg Street (Shepherd’s Path), which Mrs Schmidt identified as a broad-leafed plantain. It grew well. This plantain had stood not only along the path, but also showed me my path in life.”⁴ Loki Schmidt later became the wife of the German Chancellor Helmut Schmidt.

At the age of 11, Georg Winter wrote an essay for school in which he said that it was his wish one day to create a nature reserve the size of Switzerland, free of noise and traffic, in which the animal world would be protected from extinction.⁵

The next significant impulse for his environmental engagement came in 1972 from reading the book *Todeskandidat Erde* (Please Stop Killing Me) by the American author Ernest E. Snyder, who dramatically describes the impending environmental destruction facing humankind, unless humans fundamentally change their lifestyles. Upon reflecting on the book’s implications, Georg Winter decided to make environmental protection one of the highest goals of Ernst Winter & Sohn, a company he led together with his brother Ernst Michael Winter for the next 23 years.⁶



Fig. 1.3 The book *Todeskandidat Erde* by Ernest E. Snyder moved Georg Winter to take a pro-active role in protecting the environment

“Every year environmental damage causes tremendous financial losses in Europe and causes destruction of natural resources which cannot be expressed in money. Industry faces the challenge to restore the environment with ‘environmental management’, which benefits both the environment and the enterprise.” – Dr Georg Winter [Handelsblatt 1984]

1.2 The company

Ernst Winter & Sohn GmbH & Co. was founded in 1847 by Georg Winter’s great-grandfather. It was a small company specialised in manufacturing diamond tools for lithographers. Over the years, Georg Winter’s grandfather, father and some other family members grew the business and expanded its



Fig. 1.4 Winter employee making a circular saw blade

product range to all types of diamond tools, including saw blades for the natural stone industry, grinding wheels and inner-diameter saws for producing semi-conductors.⁷

In 1968 Georg Winter and his brother became the fourth generation to lead the family business. They decided on a strategy of developing new regional markets and expanding the range of diamond tools. Their efforts were fruitful. By 1987 the company had increased its turnover from less than DM 20 million to over DM 200 million, with a 40 percent market share in Germany and five percent worldwide.⁸ In 1993 turnover had increased to DM 300 million and the company's workforce worldwide (excluding India) exceeded 1735 persons. Winter & Sohn had six sites in Germany and subsidiaries in 13 other countries: Austria, Australia, Belgium, Brazil, France, Greece, Holland, India (minority holding), Italy, Spain, South Africa, the United Kingdom and the United States. Its main production facilities were located in Germany, Greece, South Africa, Brazil and the USA.⁹



Fig. 1.5 Poster advertising Winter & Sohn products

In the 1970s, Georg Winter began implementing a series of measures to improve the environmental performance of the company by reducing the use of raw materials, water and energy and the production of waste. Over the next few years, all environmental measures were systematized and expanded to every aspect of the company, ultimately becoming the world's first Integrated System of Environmental Management.



Fig. 1.6 (from left) Georg Winter and Ernst Michael Winter took over the family business in 1968

Overview of Winter & Sohn

The Winter company was Europe's second largest diamond and cubic boron nitride (CBN) tool manufacturer for the precision engineering and stone-cutting industries. It also became the third largest synthetic diamond manufacturer in the western world. The company, established in 1847 in Germany, was active in four major areas:

- diamond tools for mechanical engineering
- diamond tools for the stone-working and construction industries, and for civil engineering
- diamond synthesis
- technology transfer (licensing and equipment).

Its position in the world market was characterized by technological expertise and quality leadership in its core business areas. It placed strong emphasis on in-house research and development and on collaboration with clients, machine manufacturers and technical universities.

The Winter company was the worldwide leader in quality in certain important types of diamond and CBN tools and in the manufacture of synthetic diamonds for the natural stone-working industry. The workforce was well-trained and had a low fluctuation rate. Winter plants were characterised by a good social climate, an excellent track record in industrial relations, and constructive cooperation with the Works Councils.¹⁰

At the end of 1995, the Winter brothers sold the family business: the tools manufacturing division to the French St. Gobain Group and the synthetic diamonds division to De Beers.¹¹

1.3 Environmental protection becomes company goal

On the occasion of its 125th anniversary, in 1972, the diamond tools manufacturer Ernst Winter & Sohn GmbH & Co. declared environmental protection as one of the company's major goals. Georg Winter made the dramatic announcement on 21 April 1972 after years of reflection on environmental concerns and industry's role in environmental degradation. To inform the workforce about the severity and implications of environmental problems, and to win their cooperation in improving the company's environmental performance, copies of *Todeskandidat Erde* were distributed to all employees.¹²



Fig. 1.7 Aerial view of the Winter & Sohn manufacturing site in Norderstedt, Germany

The Winter proclamation was pioneering, in advance of other business and environment initiatives. Several months after Winter & Sohn had refocused their corporate goals, the Club of Rome, a group of scientists and political leaders, published its landmark, *The Limits of Growth*, drawing world attention to growing pressures on natural resources from human activities. The United Nations' first major conference on international environmental issues, the United Nations Conference on the Human Environment in Stockholm, was held in June 1972 several months after Georg Winter's proclamation. And it was not until October 1972 that the European Community Summit of Heads of State and Governments identified a need for coordinated measures for environmental protection. It took another year for the European Community to develop its first Environmental Action Program. Environmental policy was mentioned for the first time as a full-fledged policy sector in the European Community's Single European Act in 1985.

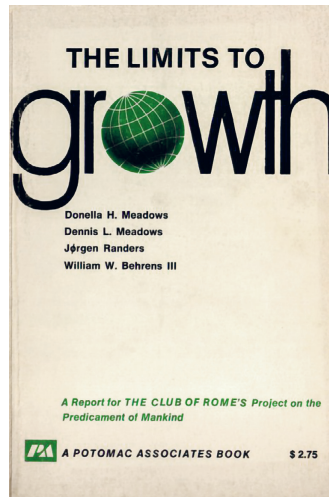


Fig. 1.8 The Club of Rome's landmark book warned that humanity was following a path that could lead to a dramatic decline in population and industrial activity within 100 years. The book concluded that the impending catastrophe could be avoided only by changing current behaviour.

While most businesses were struggling to keep pace with environmental legislation and regulations and international institutions were just taking their first steps toward environmental policies and structures, the Winter company was well on its way to developing the world's first Integrated System of Environmental Management, the so-called 'Winter Model'.

1.4 What is environmental management?

Environmental management is a comprehensive, all-encompassing scheme that goes far beyond mere observance of legal requirements for pollution control. It enables management to assess the environmental impact of every aspect of company operations, and to implement measures to minimise them. The scheme requires environmental consciousness at all levels of the company, from the executive suite to the shop floor. To foster this environmental awareness among its employees and staff, the Winter company initiated an environment education programme, set up an environmental suggestion scheme, and appointed a senior environmental manager to coordinate the activities. This high-level executive was responsible for anchoring environmental considerations into product and process development, implementing cost-reducing recycling measures, developing environmentally oriented purchasing policies, and ensuring that environmental aspects were given a high priority in the construction and maintenance of industrial buildings.

Environmental management provides the basis for seizing opportunities and eliminating risks arising from environmental market trends. A well-functioning environmental management system reduces operating costs, opens new markets,

and reduces the risk of legal liability from pollution of the air, ground and water.

In the first stage of implementing an environmental programme, the company must ensure that it complies with environmental regulations. In the second stage, it adopts measures that directly benefit the company; those that reduce the use of raw materials and cut energy, water and waste disposal costs. The third stage includes measures that are cost-neutral, though they may benefit the company in medium or long term (i.e., replacement of polluting cleaning agents with environmentally acceptable ones that compare in function and price). The fourth stage involves adopting measures that place a financial burden on the company.

“Enterprise management cannot concern themselves solely with the concrete environmental protection measures currently in place in their own company. They must also engage in a fundamental discussion concerning the worldwide problems of industrialisation, population growth, malnutrition, raw material shortages and environmental degradation. In this way, they can identify trends in their mid-term and long-term planning and at the same time provide contributions from their field to help cope with the future.”¹⁵

Where does the term “Environmental Management” come from?

The pioneering Winter Model was developed in the 1970s. It was the first integrated system for managing environmental issues in companies and the term “environmental management” stems from the Winter Model.

“Environmental management” was used in 1984 at the World Industry Conference on Environmental Management (WICEM) in Versailles. It was then defined as “a management to anticipate and prevent environmental damage by company activities”. In 1988 Dr Winter was asked by the United Nations Environment Programme (UNEP) to present the Winter Model to the workshop “Strategy and Management of Environmental Opportunities – A two-day programme of basic environmental awareness for senior executives and operating managers”. At the workshop, whose goal was to develop an UNEP training brochure, the term “environmentalist business management” was chosen to describe the comprehensive and integrated system elaborated in the Winter Model.

Dr Winter and BAUM were asked by the International Chamber of Commerce (ICC) to draft an environmental code of conduct for the business community. The code was completed in January 1990. During the final drafting of the ‘Industry Charter for Sustainable Development’, the ICC not only took the BAUM proposal into account, but also a number of recommendations from other countries. When the ICC publicly launched its Business Charter for Sustainable Development: Principles of Environmental Management at WICEM II in April 1991, the term ‘environmental management’ spread worldwide.

Environmental management aims to help companies protect the natural environment while at the same time maintaining or improving their economic success. But a company’s commitment to environmental protection should not be based solely on a desire to boost sales. As Dr Winter notes, “Clearly, a buyer of diamond tools in industry is going to be more concerned about getting value for money than with the environmental image of

the manufacturer, however beneficial such an image might be in certain sectors of the consumer goods industry.”

“The environmentalist approach to management can increase company profits, e.g., by saving water, energy and expensive raw materials or by offering new environment-based business opportunities. At the same time, though, it serves all members of the community by helping to protect our health and our natural environment (air, water, soil, flora and fauna).” — *Stanley Clinton Davis, Environment Commissioner of the European Communities*¹⁴

1.5 The need for environmental management

In his writings, lectures and speeches Dr Winter gives six major reasons for adopting environmental management. From his book *Business and the Environment*:¹⁵

1. Without environmentalist-minded companies there can be no environmentalist-minded economy – and without an environmentalist-minded economy the human race cannot expect to survive for a life that is worth living.
2. Without environmentalist-minded companies there can be no public consensus with the business community – and without a public consensus with the business community there can be no free market economy.
3. Without environmental management, there will be a loss of fast-growth market openings and a risk of the company being held liable for environmental damage for enormous sums of money, thus jeopardising the future of the company and all the jobs dependent on it.

4. Without environmentalist business management boards of directors, management executives, heads of department and other members of staff are more likely to risk liability for environmental damage, with the consequent jeopardisation of their jobs and careers.
5. Without environmentalist business management substantial potential for reducing costs will go by the board.
6. Without environmentalist business management businessmen will be in conflict with their own consciences – and without self-respect there can be no real sense of identification with one's job.

1.6 The philosophy of environmental management

Environmental management is a concept that allows the company to be successful and profitable, at the same time protect the environment. The fundamental principles for the long-term success of a “properly and responsibly managed” company are quality, creativity, humanity, profitability, continuity and loyalty.¹⁶

Quality and the environment A product can only be considered to be of high-quality if it is produced, used and disposed of without damaging the environment.

Creativity and the environment Creativity of the workforce can be fostered by working conditions that promote good health and psychological well-being, e.g., low noise, healthy temperature and humidity levels, ergonomic office furniture and healthy, vitamin-rich food in the cafeteria.

Humanity and the environment The company can be made more “humane” if its corporate goals, strategies and activities are not only motivated by economic interests but also by a sense of responsibility for all forms of life.

Profitability and the environment Profitability can be improved by reducing operating costs with programs to save materials, energy and water, and by developing new products to meet the rising demand for environmentally sound goods.

Continuity and the environment In the context of increasingly stringent environmental regulations and liability risks, as well as market demands for environmentally friendly products, corporate success is dependent on environmentally sound products and processes.

Loyalty and the environment Managers and employees will only accept civic responsibility if they are genuinely loyal to the laws and goals of the state. That, in turn, is only possible if the country is not endangered by environmental pollution.

1.7 The Winter Model for an Integrated System of Environmental Management

The Winter Model provides a framework for focussing all operational areas and levels of the company on maintaining or increasing its economic success while at the same time protecting the environment. The following are some key elements that help a company integrate, prioritize and implement environmental protection in all areas of company activity.

Environmental training of staff

Dr Winter contends that an environmentally friendly company needs an environmentally aware workforce. Winter & Sohn organized environmental seminars and excursions for its trainees and presentations for all employees. Publications of the Federal Environment Agency and Ministry of Health were distributed to all. The in-house newsletter, *Der WINTER-Schneemann*, included a regular section on environmental issues. What's more, the company ran a number of competitions, such as photography, drawing and painting contests and quizzes, on themes relating to nature.



Fig. 1.9 The 10th issue of the in-house magazine *Der WINTER-Schneemann* was dedicated to environmental management at the Winter company

In the late 1970s the company introduced environmental protection into its training programme for apprentices. In May 1979, for example, Winter & Sohn sent its trainees to the Bildungsstätte Tannenfelde in Schleswig-Holstein for a two-day seminar on environmental pollution. The goal was to introduce the young people to the causes and effects of pollution, and to help them identify opportunities for the individual to contribute to protection of the environment.¹⁷ A similar

educational excursion brought trainees to three sites of groundwater extraction of the Hamburg Waterworks to learn about the environmental impacts of water and soil pollution on the quality of drinking water in September 1984.¹⁸ The following year trainees attended a seminar on Biotopes and Protection of Species that was organised by the German Association for Protection of Birds (DBV e.V.) at the Gut Sunder near Winsen/Aller.¹⁹ In December 1986 the company was invited by the German government to participate in a pilot project on including environmental issues in occupational training.²⁰



Fig. 1.10 Trainees attending an environmental seminar at the Bildungsstätte Tannenfelde in Schleswig-Holstein

Dr Winter is convinced that an environmentally aware individual is a better employee. “In an environmentally oriented company, the work process regains its old status as a means of enhancing the well-being of the company as a whole. A company that can give its employees a sense of doing the right thing can expect better performance — and will get it from properly motivated staff.”²¹

Environmental counselling in employee households

The Winter company decided to boost the environmental awareness of its employees by helping them gain control of the environmental impacts of their private lives. About 30–40 percent of all environmental problems have their roots in private households.²² To address these issues, Dr Maximilian Gege, then Director of Strategic Planning and Environment at Winter & Sohn, developed the concept for ‘Environmental Counsellors for Households’. In December 1984 he presented this concept to invited representatives of ministries, government agencies, environmental organisations, consumer protection offices, as well as journalists, at the conference Environmental Counsellors for Households.²³

On 1 April 1985 Winter & Sohn launched an 18-month pilot project in which five environmental counsellors visited employees in their homes, advising them on such topics as how to reduce their water consumption, make better use of



Fig. 1.11 Dr Georg Winter (l.) introducing Dr Maximilian Gege (r.), who explains his concept for environmental counselling to the public in December 1984.

electricity, and minimise and better manage household waste. The project was co-financed by Winter & Sohn and the Federal Labour Agency.²⁴



Fig. 1.12 Environmental counsellor Heinz-Jürgen Pick advising Inge Reincke, a Winter employee, in her home

Also during this period, Dr Gege founded the organisation Aktionsgemeinschaft Umwelt, Gesundheit, Ernährung e.V. – AUGÉ (Action Group for Environment, Health and Nutrition) to further promote the concept and to train environmental counsellors. AUGÉ offered 6- and 12-month seminars with a standardised curriculum, leading to examination and qualification. By 1985 more than 260 counsellors were employed by local authorities and other organisations in the Federal Republic of Germany.²⁵

In 1986 the experiences and know-how accumulated by environmental counsellors were compiled into a book, *Das*

Ökosparbuch für Haushalt und Familie (The Environmental Savings Book for Households and Families) by Dr Maximilian Gege, Heike Jung, H. Jürgen Pick and Dr Georg Winter. The *Ökosparbuch* shows that environmentally friendly behaviour is not only simple and beneficial to health, but also can save a significant amount of money. A single household, for example, could save up to DM 1,000 per year, a four-person household up to DM 3,000. In 1986 every employee of Winter & Sohn (in their German-speaking locations) received a free copy of the book.²⁶

The Commission of the European Communities asked AUGÉ to extend environmental counselling to the United Kingdom, France and Spain. By the end of 1986, 10 environmental counsellors had been trained and certified in the UK, 15 in Spain and 12 in France. Austria and Switzerland have also created an occupation along the lines of AUGÉ model.²⁷

Environmental managers, committees and suggestion schemes

After laying the initial foundations for an integrated system of environmentally oriented management as from 1972, Dr Winter appointed long-time employee Werner Grützke, previously Assistant to the Director of Sales, as the first Environmental Director of the Winter & Sohn group of companies. Werner Grützke worked closely with Dr Winter to elaborate the concept of 'Environmental Protection as a Corporate Task'.²⁸

Parallel to the dynamic growth of the company, its institutions for environmental protection were systematically expanded and strengthened. Winter & Sohn created a new high-level management position, that of Environmental Director, to coordinate all in-house environmental activities and to ensure that environmental considerations are

taken into account in all areas of the company. The environmental director works closely with all company managing directors and with the works council. He also chairs the Interdisciplinary Environment Committee, which works closely with the Environment Committee – Technology. The Interdisciplinary Environment Committee, comprising representatives of the various departments of the company, decides on an environmental action plan and meets periodically to assess progress and obstacles in its implementation. After joining the Winter company in 1970, Dr Maximilian Gege was appointed Director of Environmental Protection and became Director of Corporate Planning in 1977. As environmental director he worked actively with Dr Winter in the further development of the integrated system for environmentally conscious corporate development.²⁹

An important component for staff motivation and innovation is a functioning employee suggestion scheme. The scheme at Winter & Sohn elicited ideas for improvement from the entire workforce from Hamburg to New Delhi to New York to Barcelona and honoured ideas which were implemented with cash bonuses. Starting in November 1979 suggestions that save water or energy, or which protect the environment, were awarded higher bonuses (30 percent instead of 20 percent of the value of the annual savings over two years).³⁰

The scheme has proven to be extremely effective: one suggestion, requiring a one-time investment of DM 24,000, saved DM 60,000 per year in energy costs.³¹ In 1987 there were 305 suggestions submitted, 133 of which were implemented, resulting in total savings of more than DM 510,000.³² The German Institute for Business Administration (DIB) recognised the Winter suggestion scheme as the best in the German metal-working industry in 1989.³³ The already successful

scheme was continually fine-tuned: in 1991 it again saved the company more than a half a million German Marks.



Fig. 1.13 Werner Grützke, the first Environmental Manager at Winter & Sohn

In a special edition of the Winter-Schneemann dedicated to environmental activities in the company, Werner Grützke warned about an impending environmental catastrophe: "Our natural environment and thus the livelihood of the people is in danger. This threat can only be averted if public organisations, industrial companies, and each of us specifically champions the preservation of a healthy environment."³⁴ Sadly, Werner Grützke succumbed to a serious illness in 1979. We will keep him in an honourable memory.

Development of environmentally friendly products and processes

The development of environmentally friendly products was one of the declared goals of Winter & Sohn, as they were seen to be in the company's commercial interest. For example,

the “Winter Whisper Blades”, diamond circular saw blades for cutting stone, reduced noise levels by 50 percent. These reduced-noise blades are essential for saw works near residential areas because of increasingly stringent noise restrictions. The blades boosted sales and set a new industry standard.³⁵

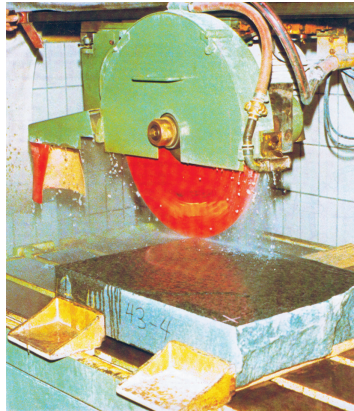


Fig. 1.14 The WISPERO saw blade reduced noise levels by 50 percent

Not only products but also manufacturing processes were optimised. New conveyers for powdered plastics virtually eliminated the dust hazard. This not only protected the working environment but also reduced production costs. An initial investment of DM 250,000 generated annual savings of DM 60,000 and was amortised within four years. Converting three heating plants from oil to natural gas and installing energy-saving thermostats and fluorescent tubes saved DM 270,000 annually. The investment paid for itself in a mere two and a half years.³⁶

The company also undertook a series of measures to reduce water use in manufacturing processes. By 1993 the company had reduced its use of water by 70%. Between 1989 and 1993

the reductions at one plant in Norderstedt saved about 100,000 cubic metres of fresh water, reducing costs by 200,000 DM per year.³⁷



Fig. 1.15 Workers installing environmental technology at the Winter company

Winter & Sohn were determined to go beyond the letter of the law regarding environmental protection. Dust filters and waste gas scrubbers were installed long before they were prescribed by legislation.³⁸ The firm also eliminated asbestos in all types of its diamond grinding wheels, without loss of performance, three years before its use was prohibited.

State-of-the-art waste management and recycling

Every effort was made to recycle as much as possible. Two highly automated and extremely effective water treatment plants neutralised and detoxified wastewater from electroplating processes. A further step harvested cobalt, nickel and caustic soda from the resulting heavy metal oxides. Annual savings

on tipping and credits for recovered cobalt alone amounted to some DM 50,000. Re-using the caustic soda saved DM 8,000 per year.³⁹

Subsidiaries in countries with less stringent environmental legislation were gradually brought up to the parent company's standards. In 1987, for example, Winter do Brasil installed a waste-water treatment plant in its galvanising department that met the limits set by German regulations.⁴⁰

Environmentally friendly procurement

On 21 October 1982 Dr Winter instructed the procurement department to consider environmental impacts as well as quality, price and delivery time when purchasing products and raw materials.⁴¹ According to Dr Winter, the procurement policies of an industrial company play a key role in the further dissemination of environmental consciousness in industry. Their purchasing power also exerts pressure on suppliers to switch to more environmentally conscious products. Cleaning agents and chlorofluorocarbon spray cans were the first products to be replaced with environmentally friendly alternatives.

The Winter company also commissioned a scientific institute to analyse its materials management policy and identify areas where its impact on the environment could be minimised. As a result, changes were made in purchases of paper and office supplies, paint and lacquers, cleaning agents, coolants, building materials and vehicles.⁴²

Environmentally friendly industrial buildings

The Winter company built Germany's first environmentally friendly factory building in 1985 in Norderstedt, Germany. The building houses Europe's largest diamond grinding wheel production facility. It was designed by two architects, one

specialising in industrial plants and another specializing in environmentally friendly building and design. Environmental criteria were incorporated systematically into design, structural considerations, technical equipment, lighting and material selection. Criteria for the selection of building materials included the following questions: Will resources be saved adequately? Will working with the building materials endanger the health of the construction workers? Will the materials pose a danger to the health of employees later? What about the disposal of the materials?⁴³

For example, large hot-air presses used to produce grinding tools generate a lot of excess heat. The new manufacturing hall was especially designed to address this problem, making it a much more comfortable workplace than the older, conventional building. Wooden window frames were used because



Fig. 1.16 In 1985/86 Winter & Sohn built in Norderstedt the first industrial building to meet environmental and occupational health criteria.

they require less energy to be manufactured than plastic or aluminium ones, and because they are less environmentally problematic in their disposal.⁴⁴ Instead of the customary PVC, the firm chose the more environmentally friendly linoleum floor covering for the halls, as well as carpets with high natural fibre content, and glues and lacquers with low solvent levels. Cut-outs in the facade and openings in the ceilings allow sunlight to be used for a significant portion of lighting, thus reducing energy costs. For windows, a special quartz glass was used that passes the entire spectrum of sunlight, thereby stimulating the body's production of vitamin D. This led to a significant reduction in employee sick days and higher worker satisfaction.⁴⁵



Fig. 1.17 Production hall inside the environmentally friendly factory building

Some of the environmentally friendly alternatives were more expensive than conventional ones, however. These increased construction costs by two percent. But the increased costs were balanced by a high-quality working environment that stimulates productivity and creativity, as well as employee satisfaction and loyalty.⁴⁶

A major objective of the project was to motivate other companies to follow suit by showing that environmentally friendly design and materials have long-term benefits. Another was to encourage building contractors and manufacturers of building materials and technical equipment to develop environmental alternatives.⁴⁷

As interest in the Winter Model increased at the national and international level, Georg Winter was regularly invited to give lectures at conferences. In January 1986, at an international conference on “The Upper Rhine Environment – Balance and Perspectives”, which was held in the Palais de l’Europe of the European Parliament in Strasbourg, Georg Winter presented the main features of the “Winter Model” to the conference plenum. The official final declaration passed by the conference included a request to the association for cross-border cooperation to promote the Integrated System of Environmentally Oriented Management (Winter Model).

Environmental considerations in plant siting

When considering relocation or building a new plant, management should consider the environmental situation of the new site. A decision against sites suffering from pollution warns the local governments that they will not be able to attract new enterprises to choose a location in their industrial areas, until they have established good ecological conditions.⁴⁸ In the 1980s, for example, the Winter company decided against one

potential location in the US because of the high level of atmospheric pollution caused by local industry.⁴⁹ Instead, it built the Winter Diamond Inc. works in Greenville, South Carolina, where the local authorities showed a true commitment to environmental concerns.⁵⁰

Collaborating with other companies

The potential for a medium-sized company to influence local, regional, national and international institutions is limited. One option for increasing influence is to work through environmental committees of chambers of commerce and business associations. Winter & Sohn used its membership in a variety of organisations, such as chambers of commerce and sectorial business associations, to “bring business interests in harmony with the exigencies of environmental protection”.⁵¹

The ideal of working together with other companies to improve their environment performance led to the creation of the German Environmental Management Association (BAUM), its sister organisations in other countries, and ultimately the International Network for Environmental Management (INEM).

Supporting local civil and environmental initiatives

Local citizens’ initiatives often lack the resources and expertise to effectively carry out their work. Companies can contribute financially (direct contributions or by seconding staff), materially (providing office space, supplies) and by facilitating contacts to institutions, organisations and governmental bodies to an extent that is far beyond the reach of the initiatives.

The Winter Model also recommends that companies should consider helping local environmental groups. The Winter company, for example, provided financial support to

the Conservation Park Association, the German Federation for the Protection of Birds, and the Eekholt Wildlife Park, whose animal enclosures, nature trails and classrooms are particularly suitable for environmental training of staff. Dr Winter maintains that it is essential for industrial managers and environmentalists to learn from one another.⁵²

Winter commission releases its international study of emission levels achievable by emission scrubber technology

A concerned citizens group, “Better Air for Hamburg”, was opposed to the construction of a coal-fired power plant with obsolete flue gas desulphurisation technology next to the company’s office.⁵³ The citizens group’s objections to the construction went unheeded by both the electric company and municipal regulators. A consortium of European manufacturers of exhaust gas “scrubbers” had argued that the current state of technology did not allow reductions in emissions below the current emission limits.

Winter & Sohn conducted an international survey of available scrubber technologies. The study showed that the USA and Japan were producing scrubbers that could indeed bring emissions under the limit levels. After the release of the study findings, it only took a few weeks for the European producers to admit that they also could provide scrubbers that would offer the same performance as their American and Japanese competitors. As a result, the Senate of Hamburg and the energy supplier Hamburg Electric Works ordered that all future coal-fired power plants must meet these emission limits.

This sent a clear message to other states and municipalities: in a speech to the German Parliament on 25 November 1983, the Minister President of Baden-Württemberg called for the sharpening of regulations for emissions limit values citing the results of the study carried out by the Winter Limit Value Enquête on behalf of Better Air for Hamburg.⁵⁴



Fig. 1.18 German Chancellor Helmut Schmidt at Winter & Sohn in March 1982

German Chancellor Helmut Schmidt visited Winter & Sohn in March 1982. He was so impressed with the company's environmental achievements that he recalled the visit in his 1996 memoirs, "Weggefährten – Erinnerungen und Reflektionen" (Companions – Memories and Reflections), with the words "Winter has combined creativity, quality and profitability with energetic environmental protection in an exemplary manner."⁵⁵

Environmental inventions exchange

The strong public resonance of Winter & Sohn's environmental activities brought the company into contact with environmental innovators, which in turn introduced the company to the problems inventors face in marketing their new products and services. Winter & Sohn decided to help them bring their inventions to the market, and thereby increase the pace of environmental innovation. Winter & Sohn sponsored its first "Environmental Inventions Exchange" in February 1985. More than 60 representatives of public authorities, chambers of trade and commerce, industrialists, scientists and the press heard presentations by 13 inventors.⁵⁶

The Winter Model was the world's first environmental management system

Georg Winter's starting point was the realisation that 'everyday' pollution in homes and factories, rather than the exceptional disasters such as Seveso, Chernobyl and Bhopal, was the real environmental problem.⁵⁷ What's more, Dr Winter saw a number of compelling economic reasons for companies to take control of their environmental impacts. An integrated system of environmental management helps them to

- avoid the risks and costs of environmental liability,
- take advantage of the fast-growing markets for environmentally sound products,
- realise substantial cost-saving opportunities,
- maintain staff morale and attract new employees.

Dr Winter contends that the success of the model has been shown by the fact that Winter & Sohn had "managed to launch a number

of much discussed environmental protection projects, while at the same time expanding its business and creating a substantial number of new jobs". Lower costs as a result of such measures as recycling and reduced material consumption help increase profits.

As a result of the success of the Winter Model, the Commission of the European Communities, through the efforts of Claude Pleinevaux and Dr Gunther Schneider, invited Dr Winter to write the world's first book on environmental management, *Das umweltbewusste Unternehmen* (Business and the Environment), on the occasion of the 1987 European Year of the Environment.⁵⁸ According to former Environment Commissioner Stanley Clinton Davis, the purpose was to provide companies with information on how management policies can be environment- and profit-oriented at one and the same time.⁵⁹



Fig. 1.19 The world's first book on environmental management *Das umweltbewusste Unternehmen* was published in 1987. The edition *Blueprint for Green Management* was published in 1995.

Based on the Integrated System of Environmental Management implemented at Winter & Sohn (the Winter Model) the book provides a series of checklists that help business executives assess the environmental impacts and opportunities for improvement in all main aspects of company management (e.g., corporate aims and strategies, marketing, staff motivation and training, working conditions, product development, materials management, production technology, waste management, building, finance, law, international business and public relations). The European Commission also facilitated translation of the book into English (1988) and French (1989). In total the book has been published in 13 languages, the last being Belarusian in 2001.

1.8 The Winter Model gains recognition: environmental awards and prizes

Over the years, Dr Winter has been honoured by a variety of business associations, environmental organisations and national and international institutions for his pioneering role in helping businesses reconcile their activities with concern for the environment.

In 1985 the Association of Young German Businessmen (BJU) awarded an 'Environmental Oscar' to Winter & Sohn for the development and application of the Winter Model.⁶⁰ As a follow-up, the BJU published a checklist entitled *Environmental Protection as Part of the Business Strategy*, which was explicitly based on the guidelines of the Winter Model.⁶¹ The eight-part checklist was broadly disseminated to German business owners and managers and in many cases persuaded them to adopt environmental measures in their companies.⁶²



Fig. 1.20 Günter Jucho, Chairman of BJU, presents the Environmental Oscar to Dr Winter



Fig. 1.21 (from left) Ernst Michael Winter, Dr Georg Winter and Minister Günter Flessner following presentation of the Order of Merit

The Society for the Study and Promotion of Schleswig-Holstein Business, a non-profit organisation of 300 businesses, selected Winter & Sohn as the “Environmentally Friendly Enterprise” of the Year in 1986. The same organisation subsequently awarded “Environmental Protection Needles” to two Winter & Sohn employees, Axel Balzereit and Johann Schmitz, for reducing emissions and optimising waste recycling at Winter’s Norderstedt plant.⁶³

On 25 February 1987 Dr Georg Winter and Ernst Michael Winter were honoured by the Würzberger Sheaffer Pen company with its Golden Fountain Pen for “business decisions that point the way toward a humane future”. The prize honoured the development of the Winter Model.⁶⁴

The Winter brothers were awarded the Order of Merit of the Federal Republic of Germany in 1987 by German President Dr Richard von Weizsäcker for their development, implementation and dissemination of the Winter Model. The presentation ceremony was held on 7 September at the Ministry for Food, Agriculture and Forestry of Schleswig-Holstein in Kiel. Minister Günter Flessner, whose Ministry is also responsible for environmental issues, presented the award.⁶⁵

In 1995 the German Environment Foundation (DBU) honoured Dr Winter with Europe’s most prestigious environmental award: Dr Georg Winter is recognized as an entrepreneur and founder of the organizations Bundesdeutscher Arbeitskreis für umweltbewusstes Management (Federal German Working Group for Environmentally Conscious Management) BAUM e.V. and International Network for Environmental Management INEM e.V. Through his many years of activity in the field of environmentally oriented

corporate management, he has paved the way for reconciliation between economy and ecology.” Urkunde Deutscher Umweltpreis 1985.⁶⁶



Fig. 1.22 Dr Georg Winter (left) receiving the German Environment Prize from Finance Minister Theo Waigel (right) as co-winner Klaus Günther (middle) looks on

In his laudatory speech, Dr Andreas Troge, President of the German Environment Agency (UBA), praised Dr Winter as an entrepreneur who has not only re-cognised but also utilised the opportunities of pro-active environmental management to both protect the environment and improve his company's economic performance. Dr Troge also lauded Dr Winter's pioneering role in the development and dissemination of environmental management, especially the founding of BAUM in 1985 and INEM in 1991. Dr Fritz Brickwedde, Secretary General of the DBU, commended BAUM for “considerably advancing environmental awareness and protection in German industry”, and INEM for having “a concrete effect on reducing the burden on the environment worldwide”.⁶⁷

In 2003 the Club of Budapest International honoured Dr Winter and INEM with its Change the World – Best Practice Award for achievements in developing, and the world-wide dissemination of his integrated system of environmental management. The Club of Budapest International is a union of prominent personalities, including Mikhail Gorbachev, Sir Peter Ustinov and the Dalai Lama, who are working towards a sustainable world. In his laudatory, Prof Dr Ernst Ulrich von Weizsäcker, Member of the German Parliament and the Club of Rome noted that, “Georg Winter and Maximilian Gege from Hamburg, through the German Environmental Management Association (BAUM), have guided German small and medium-sized businesses onto the environmental path, and the International Network for Environmental Management (INEM e.V.) has internationalized this accomplishment in an extraordinary manner.”⁶⁸



Fig. 1.23 Prof Dr Ernst Ulrich von Weizsäcker lauding Dr Winter's pioneering role in helping business and industry improve its environmental performance



Fig. 1.24 Dr Georg Winter

"Environmental management is even more important in recessionary times because it helps reduce costs and increase profits. Wherever a company can reduce energy, water, raw materials usage and waste, it reduces its costs. There is a huge, untapped potential for such savings, particularly in small and medium-sized enterprises. To take on the right environmental project is not a question of money, but of knowledge and ingenuity." — Dr Georg Winter in an interview with the *Frankfurter Allgemeine Zeitung*, 16 June 1993

Chapter 2

THE WORLDWIDE DISSEMINATION OF ENVIRONMENTAL MANAGEMENT

The world's first environmental management system was developed by Winter & Sohn GmbH & Co., medium-sized manufacturer of diamond tools and synthetic diamonds, between 1972 and 1984. The Winter company, however, was not satisfied with simply improving its own environmental performance. Dr Georg Winter feared that unabated environmental degradation would lead to the end of life on earth. And he believed that business and industry had a large part to play in rehabilitating the natural environment and, therefore, set a high priority on transferring its environmental know-how to the broader business community.

2.1 Spreading the word

Dr Winter took every opportunity to promote his integrated system of environmental management to business organisations, governments, universities, and social and environmental institutions at conferences, workshops and expert meetings. He wrote articles and position papers, contributed to books – and even wrote his own – and gave dozens of interviews to national and international media. As his message spread, an increasing number of companies recognised that adopting

environmental management was essential for both maintaining a healthy human environment and increasing economic bottom lines.

The increasing interest in the Winter Model made Dr Winter a much-demanded speaker at conferences across Germany, Europe and the rest of the world. One of his first presentations in 1984 was entitled, "How can we convince businesspersons to think about the environment?"⁶⁹ In 1985 Dr Winter presented his model for environmental management to seven conferences and seminars, the most important being the Conference on the Protection of the Rhine River: Assessment and Perspectives in Strasbourg on 18 December. As a follow-up to the Conference, participants called on the Environment Committee of the Association for Trans-frontier Cooperation on the Upper Rhine to "pursue its planning with a view to making the business community in the region aware of a comprehensive concept of business management integrating environmental requirements in all fields (production, technology, materials management, personnel, marketing, waste disposal, etc.)".⁷⁰

The Winter Model was presented in full detail to its largest international audience yet at a lecture organised by the Berlin Health and Environmental Protection Training Centre (which is linked with the German Federal Environmental Agency) at the world's largest environmental technology exposition (ENVITEC) in Düsseldorf on 18 February 1986.⁷¹ Dr Winter held seven more lectures in the same year, including presentations to the Symposium on Business Experiences and Perspectives in Environmental Protection (Hamburg), and at conferences organised by the Centre for Continuing Education in Health and Environmental Protection (Berlin), and the Institute for Social and Economic Education (Berlin).⁷²

In 1987 Dr Winter spoke at 10 conferences in German-speaking countries, including the 5th Symposium on Questions on the Long-term Future (Zurich), the European Conference on Industry and Environmental Management (Interlaken), Oekologia Business Days (Vienna), the Chamber of Industry and Commerce (Hamburg) and BIGTECH (Berlin). In 1989 he made presentations to the CEC International Conference on the Rhine River (Strasbourg), the oikos Conference at the University of St. Gallen (Switzerland), the 12th Congress of European Landscape Contractors Association (Nürnberg), the 16th Conference on Materials Management, Purchasing and Logistics (Hamburg), as well as to a number of major German multi-nationals such as Deutsche Bank, Arthur Krüger, TetraPak, the world's largest mail-order company, Otto Versand, and the German Chamber of Industry and Commerce.⁷³



Fig. 2.1 Dr Georg Winter speaking at one of dozens of conferences, workshops and expert meetings he attended to promote environmental management, here together with Ernst Ulrich von Weizsäcker

The following year, Dr Winter took his message to Africa. Eskom, the largest supplier of electricity in Africa, had invited Dr Winter to speak to 100 of South Africa's top business

executives, high-level governmental officials and environmental NGOs at its E3 Workshop: The Business of Environmental Management: Strategies for the 1990s in Johannesburg on 19–23 March 1990. The goal was to create greater awareness of environmental issues and to develop strategies to deal with them in an integrated way.⁷⁴ At the invitation of Dr W. A. Van Niekerk, Chairman of the South African President's Council, Dr Winter also presented his concept for environmental management to that group on 22 March. The task of the President's Council was “to investigate and make recommendations on a policy for a national environmental management system, with particular reference to the ecological, economic, social and legal implications thereof”.⁷⁵



Fig. 2.2 Newsweek reported on the trend to environmental management in its cover story of the 19 November 1990 issue

By now, the mainstream media were also starting to pay attention. Newsweek reported in its cover story of the 19 November 1990 issue that “Many German managers have

absorbed the green ethic so deeply that they have become a new class of executive whose members can claim they are both businessmen and environmentalists without stretching the truth. Perhaps foremost among Germany's eco-executives is Georg Winter, a diamond-tool manufacturer from Hamburg, who in 1972 became one of the nation's first chief executive officers to declare protection of the environment an official corporate goal."



Fig. 2.3 By the mid 1980s Dr Winter's message was gaining support and resonance. A wide range of publications across the world reported on the success of his integrated system of environmental management.

Global File Reports featured the Winter Model in its first report: *The Development of Ecologically Conscious Management in Germany in 1990*. The *Reports*, a series by Fritjof Capra and Rüdiger Lutz of the Elmwood Institute, Berkeley California, summarised successful environmental practices in business and government worldwide.⁷⁶

As word about the Winter Model spread, an increasing number of business leaders, business associations and politicians from across the world visited the Winter company to learn first-hand about its integrated system of environmental management. Among the visitors were the German Chancellor Helmut Schmidt, Hamburg Mayor Dr Klaus von Dohnanyi,

and delegations from China, Hungary, Iran, Japan, Poland, USSR and USA.⁷⁷

2.2 Establishment of a national business association dedicated to environmental management

Winter & Sohn wanted to both spread its integrated system of environmental management to other companies, private and public, and to further develop the concept. To accomplish this goal, it helped establish a non-profit, broad-based, cross-sectoral business association whose aim was to continue development of the Winter Model through an ongoing exchange of information, and to encourage the practical introduction of environmental protection measures in member firms. At the same time the association was to widely disseminate the ideas and practical measures to the broader business, academic and governmental community.⁷⁸ This non-profit membership association of companies was launched under the German name “Bundesdeutscher Arbeitskreis für umweltbewusstes Management (BAUM)” in 1985. The acronym “BAUM” is the German word for “tree”. The goals and activities of BAUM are described in the next chapter.

2.3 The BAUM example goes international

By 1990 BAUM was well-established with more than 255 member companies and offices in Hamburg (its headquarters), Berlin, Bonn, Hanover and Munich. Its success came to the attention of the international business community and the office was flooded with enquiries. In his book

Das umweltbewusste Unternehmen (Business and the Environment), Dr Georg Winter had written in 1987/1988: "The call for environmentalist business management is coming through clearer and clearer in all the countries of Europe. Future-oriented companies everywhere will adjust as quickly as possible to the resultant risks and opportunities. ... It would be encouraging to see environment-oriented companies in other countries set up similar associations..."⁷⁹ Sister organizations based on the BAUM model were founded in Austria (Austrian Environmental Management Association – BAUM Österreich, 1989), Switzerland (Swiss Environmental Management Association – ÖBU, 1989), Sweden (Swedish Environmental Management Association – Svenska BAUM, 1990), the United Kingdom (Technology, Research, Enterprise and the Environment – TREE UK, November 1990) and South Africa (Industrial Environmental Forum – IEF, 1990).⁸⁰ IEF, in turn, introduced the Winter Model and the BAUM concept to Botswana, Mozambique, Namibia and Zimbabwe). Similar business associations had also been created independently in Malaysia (Environmental Management and Research Association of Malaysia, 1984), the United States (Global Environmental Management Initiative, 1990).⁸¹

Like BAUM, its sister organisations were flourishing. At the end of 1989 the Austrian Environmental Management Association had already grown to 100 members and had drawn the attention of highest levels of government. Austrian Chancellor Franz Vranitzky, for example, used the occasion of the association's 1st Environmental Forum on 6 December 1989 to make a presentation entitled, "Ecological Business Policy as a European Undertaking".⁸² Likewise, by the beginning of 1991, the Swiss association ÖBU had grown to more than 130

members, including Migros, Ciba-Geigy, Nestlé, Swiss Bank Corporation, Anova Holding, Lever and Holzstoff.⁸³

International organisations, such as the International Chamber of Commerce (ICC) and United Nations bodies, took notice and began promoting BAUM as a proven-successful instrument for attaining the goals of sustainable industrial production. The BAUM model was first presented to the international community at the Expert Workshop on Sustainable Industrial Activity organised by the ICC on 22–24 November 1989 in Warsaw. There Dr Winter participated in Working Group B, “Tools and means at the national and local levels to promote sustainable industrial activities”. He spoke on the needs of small and medium-sized enterprises (SMEs) and described the structure, goals and activities of BAUM. Dr Winter also had the opportunity to speak with Polish Environment Minister Bronislaw Kaminski and Economics Minister Tadeusz Syryjczyk about the Winter Model.⁸⁴ Both showed great interest in BAUM. Dr Kaminski spoke out for the founding of a German/Polish business association for environmental management.⁸⁵

The official report from the Expert Workshop notes that “Industry associations set up with the special purpose of promoting environmentally conscious management as an integrated system can contribute substantially to raising environmental awareness and encouraging action.” Under the section on Actions Possible, the report recommends that “enterprises should set up associations to promote environment-conscious business management in every country, particularly for small and medium-sized firms”.

On 8–11 May 1990 key ministers of 35 countries and the most important international organisations met at the World Commission on Environment and Development conference

“Action of a Common Future” in Bergen, Norway, to decide on an action programme to solve the world’s most severe environmental problems. The ICC, officially representing of the world’s business and industry at the conference, emphasised the necessity for national organisations for environmental management and stated that the ICC considers BAUM a suitable model for such organisations.⁸⁶

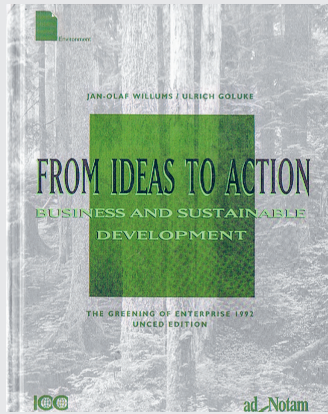


Fig. 2.4 The ICC Report on
The Greening of Enterprise 92 conference

“The prime example of a tireless industrialist raising both his colleagues’ and the public’s awareness of the need to treat the environment as an asset rather than as a free good is Georg Winter, part owner of Ernst Winter & Sohn Co., a German manufacturer of diamond tools for the past 145 years. Georg Winter is the driving force behind BAUM, which is the German acronym for the German Environmental Management Association. BAUM has more than 200 members, most of which are small and medium-sized companies. In just a few years, the association has made a name for itself in Germany as a multi-sector non-profit and non-party organisation that

has played a decisive role in establishing the movement towards environmental management. The association and Mr Winter personally have contributed significantly to the ICC Charter and have set up sister organizations in Eastern Europe, France, Austria, the United Kingdom, Sweden, which are cooperating through the International Network for Environmental Management, INEM.” — *Jan-Olaf Willums and Ulrich Golücke*⁸⁷

In 1991 the International Network for Environmental Management (INEM) was founded to coordinate an exchange of know-how and experience among the BAUM sister organisations and to help establish additional business associations for environmental management worldwide. The activities and achievements of INEM and its member associations are described in subsequent chapters.

2.4 The first book on environmental management

In his further efforts to disseminate environmental management, Dr Winter edited the world’s first book describing an integrated system of environmental management with detailed checklists for all areas and levels of company management. In addition to Dr Winter, the following authors contributed articles for the first edition: C. M. Andreas, Prof Dr H.-J. Ewers, Dr M. Gege, Prof Dr R. Hackstein, Dr F.J. Heeg, Prof Dr J. Hensmann, Dr W.G. Jocher, Dr J. Blankenburg, H. Jung, C. Maas, Prof Dr Meffert, Dr P.C. Mohr, Prof Dr L. Wicke. The book was published in German in 1987 as *Das umweltbewusste Unternehmen: Ein Handbuch der Betriebsökologie mit*



Fig. 2.5 *Das umweltbewusste Unternehmen*, the world's first book on an integrated system of environmental management

22 Check-Listen für die Praxis. Its writing was commissioned as a contribution to the European Environment Year 1987/88 by the Commission of the European Communities (CEC). The CEC also supported its publication in English (*Business and the Environment: A handbook of industrial ecology with 22 check-lists for practical use and a concrete example of the Integrated System of Environmental Business Management [the Winter Model]*) in 1988 and French (*Entreprise et Environnement: Une synergie nouvelle*) in 1989.⁸⁸

The book describes the tried and tested “Integrated System of Environmental Management” (the Winter Model), which encompasses all main aspects of management (corporate objectives, worker motivation and training, materials management, production technology, waste disposal, building, international relations, etc.) and is geared to a planned and gradual implementation process in companies.

Commissioner Stanley Clinton Davis said that “By publishing this book in several European languages, the Commission of the European Communities hopes to provide

companies with information on how management policies can be environment- and profit-oriented at one and the same time. The guidelines have been shown to work in practice, and have been set out in the form of checklists. As a result, the European business community now has a comprehensive and practical handbook on the environmentalist approach to business management, something which will be of interest not only to company directors but to all members of the business community.”⁸⁹

“This manual provides practical examples and methods of how environmental awareness and successful business activities can be effectively combined. The checklists go with the practical tips that result from many years of activity in industrial safety and humanisation of work, forming a comprehensive concept of responsible business management for the benefit of people and the environment.”
— *Dr Norbert Blüm, German Minister of Labour and Social Affairs*

Das umweltbewusste Unternehmen has become the authoritative text on environmental management in the German-speaking countries. Ultimately, six editions were published, each updated with the state-of-the-art developments in the field. The first four editions were published only one year apart. The fifth edition, published in 1993, was completely revised and expanded to include examples and results of an in-depth survey of 600 companies on their environmental activities commissioned by the German Federal Ministry of the Environment. The sixth edition of 1998 was again completely reworked, growing to more than 1,200 pages with contributions by more than 100 authorities on all aspects of environmental management.

Das umweltbewusste Unternehmen has been translated into 12 additional languages. The English edition was published in 1988, the French edition in 1989, the Swedish edition in 1990, followed by the Norwegian and Danish in 1991, Portuguese and Russian in 1992, Chinese in 1993, Slovenian in 1994, Hungarian in 1997, Polish in 1998 and the Belarusian in 2000. It was the first book on environmental management in each of these languages.

"The UNEP Industry and Environment Division in Paris highly appreciated the model of an integrated environmental management as presented in the book, mainly for possibilities of economic benefits in combination with environmental protection measures. UNEP is committed to contribute to the wide dissemination of the book and the Winter Model." — Jacqueline Aloisi de Lardere, Director, Industry and Environment Division, United Nations Environment Programme⁹⁰

The significance for Europe

"By presenting a model along these lines in Environment Year 1987, the Commission was in effect indicating quite clearly that it intended to go beyond the legislative process and provide unbureaucratic and pragmatic assistance for businessmen prepared to espouse environmentalist management techniques. By such activities the Commission demonstrates its concern with the kind of practical issues which really affect the people of Europe.

The Commission believes that the Integrated System of Environmental Business Management developed by Winter & Sohn and generally known as the Winter Model can reasonably be taken

as a guideline for a large number of companies in the European business community.”⁹¹

The six German editions

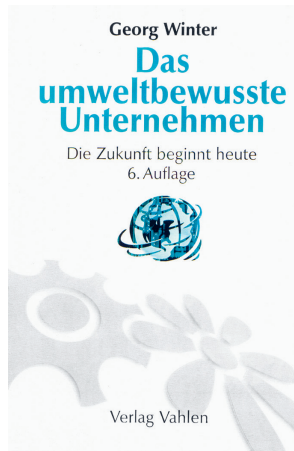


Fig. 2.6 The sixth, completely revised edition

1. *Das umweltbewusste Unternehmen. Ein Handbuch der Betriebsökologie mit 22 Check-Listen für die Praxis.* 1987. C.H. Beck, Munich, 216 pp.
2. *Das umweltbewusste Unternehmen: Ein Handbuch der Betriebsökologie mit 22 Check-Listen für die Praxis.* 2nd revised edition. 1988. C.H. Beck, Munich, 216 pp.
3. *Das umweltbewusste Unternehmen: Ein Handbuch der Betriebsökologie mit 22 Check-Listen für die Praxis.* 3rd edition. 1989. C.H. Beck, Munich, 216 pp.
4. *Das umweltbewusste Unternehmen: Ein Handbuch der Betriebsökologie mit 22 Check-Listen für die Praxis.* 4th edition. 1990. C.H. Beck, Munich, 216 pp.

5. The fifth edition of *Das umweltbewusste Unternehmen: Ein Handbuch der Betriebsökologie mit 28 Check-Listen für die Praxis*, was completely revised and expanded to include examples and results of an in-depth 600-company study about their environmental activities. Commissioned by the German Federal Ministry of the Environment. The so-called FUUF study was the most exhaustive of its kind worldwide. 1993. C.H. Beck, Munich, 615 pp.
6. *Das umweltbewusste Unternehmen: Die Zukunft beginnt heute*, 6th completely revised and expanded edition. 1998. Vahlen, Munich, 1210 pp. More than 100 contributors detail the state-of-the-art in environmental management.

The 12 international editions

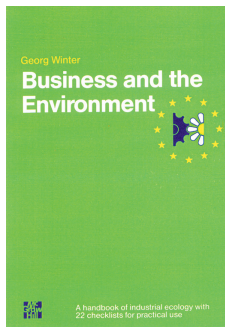


Fig. 2.7 English, 1988

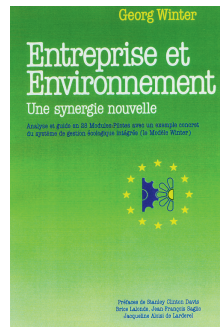


Fig. 2.8 French, 1989

Business and the Environment: A handbook of industrial ecology with 22 checklists for practical use and a concrete example of the Integrated System of Environmentalist Business Management (the Winter Model). 1988. McGraw-Hill, Hamburg, 248 pp.

Entreprise et Environnement: Une synergie nouvelle. 1989. McGraw-Hill, Paris, 347 pp. The French edition contains six additional checklists and an expanded bibliography.

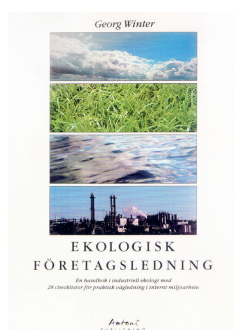


Fig. 2.9 Swedish, 1990

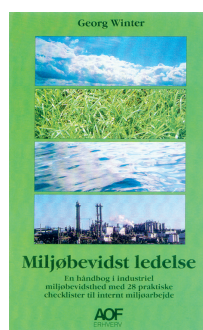


Fig. 2.10 Danish, 1991

Ekologisk företagsledning: en handbok för industriell ekologi med 28 checklistor för praktisk vägledning i internt miljöarbete. 1990, Antoni Publishing, Gothenburg, 269 pp.

Miljøbevidst ledelse: En håndbog i industriel miljøbevidsthed med 28 praktiske checklistor til internt miljøarbejde. 1991, AOF Erhverv, Copenhagen, 272 pp.

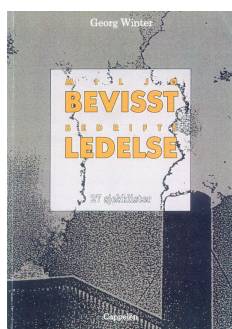


Fig. 2.11 Norwegian, 1991

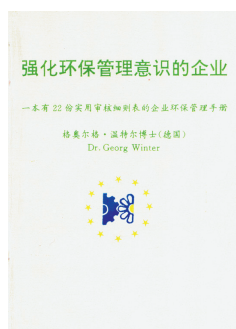


Fig. 2.12 Chinese, 1992

Miljøbevisst bedriftsledelse: med 27 sjekklister for praktisk veiledning i internt miljøarbeid. 1991, J. W. Cappelens Forlag, Oslo, 175 pp.

Business and the Environment: A handbook of industrial ecology with 22 checklists for practical use. 1992, NEPA, Dept. for International Cooperation, Beijing, 242 pp.



Fig. 2.13 Russian, 1992



Fig. 2.14 Portuguese, 1992

Ekologiznoe predpriyatie. pocobie po proizbodbstbennoi ekologii c 22 kontrolnoem peresnjamj dlja prakticeskovo icpolsovanija. 1992, Moscow, 280 pp.

Gestão e Ambiente – Modelo Prático de Integração Empresarial. 1992, Texto Editores, Lisbon, 278 pp.



Fig. 2.15 Slovenian, 1994



Fig. 2.16 English, 1995

Okolju prijazno podjetje. 1994. Inštitut za ekološki management, Ljubljana, 288 pp.

Blueprint for Green Management: Creating your company's own environmental action plan. 1995, McGraw-Hill, Maidenhead, 246 pp. The completely reworked second English edition served as the basis for subsequent translations.



Fig. 2.17 Hungarian, 1997

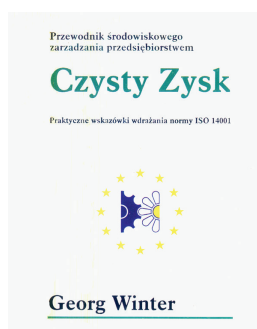


Fig. 2.18 Polish, 1998

Zölden és Nyereségesen: útmutató a környezettudatos vállalatirányításhoz. 1997, Műszaki Könyvkiadó, Budapest, 239 pp.

Czysty Zysk: Przewodnik środowiskowego zarządzania przedsiębiorstwem. Praktyczne wskazówki wdrażania normy ISO 14001. 1998, Centrum Edukacji Zarządzania Ochroną Środowiska, Warsaw, 294 pp.



Fig. 2.19 Belarusian, 2001

Model ekologiceskovo menedshmenta: Rasrabotka sobstbenno ekologiceskovo. 2001. Technoprint, Minsk, 318 pp.



Fig. 2.20 Dr Winter had first called for an Ecological Marshall Plan in a full-page article in Germany's leading business newspaper, *Handelsblatt*, January 1985

2.5 A call for a global ecological Marshall Plan

In 1985 Germany's leading business newspaper, *Handelsblatt*, gave Dr Winter a platform to address the entire German business community. In a full-page article Dr Winter called on all businesses to prioritize environmental protection. He further argued that just as the United States had helped Europe to

rebuild its factories and economy following their complete destruction in World War II, a global Ecological Marshall Plan was now needed to ameliorate damage to the earth’s environment. “Today we are victims of another devastating destruction: that of the environment. Pollution of the air and poisoning of the earth and water are less obvious impacts than the rubble of bombed out cities, but the long-term effects are of comparable magnitude. Today, the business community is facing a new historical challenge.” This was the first known mention of an “Ecological Marshall Plan”.⁹²



Fig. 2.21 Dr Winter in *ABB Inside*

Dr Winter made the Ecological Marshall Plan a recurring theme in his crusade to promote environmental consciousness to the world business community. In an article published in *ABB INSIDE* on 4 August 1991, for example, he stated the “Europe can only reconstruct its ravaged environment if individual companies adopt our environmentalist concept.”

Dr Winter’s call was taken up by many individuals and organisations. In 1989 Lutz Wicke and Jochen Hücke detailed a programme for saving the planet from environmental



Fig. 2.22 Der ökologische Marshallplan

destruction in their book, *Der ökologische Marshallplan* (The Ecological Marshall Plan). The Belgian magazine *Trends* published a two-page article on the Global Environmental Marshall Plan in its 21 March 1990 issue. In 1992 US Senator Al Gore added his voice to the call for a global Marshall Plan in his book *Earth in Balance – Ecology and Human Spirit*. Publication of *Global Marshall Plan: A Planetary Contract* by Franz Josef Radermacher followed in 2004. In 2006 *Solidarität die ankommt! Ziel-effiziente Mittelverwendung in der Entwicklungszusammenarbeit* (Solidarity that works! The targeted use of resources in development cooperation) was published by the Global Marshall Plan Initiative (GMPI).



Fig. 2.23 Earth in Balance

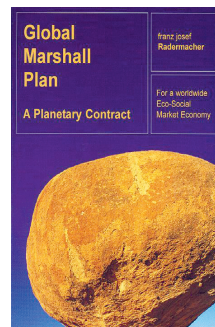


Fig. 2.24 Global Marshall Plan

GMPI is a non-profit organisation that was launched in 2003 by the Club of Budapest International with the support of Dr Winter. It strives to build a binding global framework to bring the world business community, the environment and society and culture into harmony. On 23 July 2004 the Club of Budapest International organised a high-profile event in Düsseldorf, Germany, in cooperation with “Together for Africa” to provide a new impulse for the GMPI.⁹⁵

Chapter 3

THE FIRST NATIONAL BUSINESS ASSOCIATIONS FOR ENVIRONMENTAL MANAGEMENT

One element of the Winter Model is the transfer of environmental management know-how from one company to other companies. Initially, Dr Winter held speeches, wrote articles for professional journals and the popular press, and lobbied business organisations and government to publicise the need for, and benefits of, the integrated system of environmental management. However, each of these vehicles had its limitations. They could increase awareness and serve as an impulse but could not show companies exactly what they had to do. And working within environmental committees of chambers of commerce and sectorial industry associations was like changing the direction of a large ship: it is very slow.

Dr Winter came to the conclusion that industry needed an organisation dedicated specifically and solely to environmental management, an organisation that uses a practical, hands-on approach and provides specific know-how on how to reduce material inputs, minimise and recycle waste, motivate employees, and integrate all environmental measures in a management system. To accomplish this, Dr Winter along with like-minded colleagues created the German Environmental Management Association (Bundesdeutscher Arbeitskreis für umweltbewusstes

Management – BAUM). It was a non-profit organisation. Its aim was to continue work on the Winter Model through an ongoing exchange of information among companies, and to facilitate the introduction of environmental protection measures.

3.1 German Environmental Management Association (BAUM)

The seeds of the German Environmental Management Association were planted in the offices of the Winter company on 24 April 1984. At the invitation of Dr Winter, representatives of the companies Hatlapa Uetersener Maschinenfabrik GmbH and Küppersbusch, as well as Prof Dr Berndt Heydemann, Director of the Biology Centre at the University of Kiel, joined Dr Winter, who was assisted by Dr Maximilian Gege, then Director of Corporate Planning and Environmental Protection at the Winter company, and other key managers of Winter & Sohn to explore ways of collaborating in the further development of the Winter Model and of spreading environmental management know-how to other companies. Dr Heydemann's participation provided a link to natural sciences.⁹⁴

BAUM was subsequently founded in 1985 at the initiative of a number of German industrialists, led by Dr Winter and assisted by Dr Gege, under the name "German Environmental Materials Management Association". Initially, its goal was to have companies make procurement decisions based not only on the traditional purchasing criteria quality, price and delivery, but also on the environmental impacts of the materials. The name was changed shortly afterwards to "German Environmental Management Association – BAUM" to reflect its expanding scope. Dr Winter was elected Chairman and

Dr Gege was named Executive Director and Vice-Chairman. In 1987 BAUM was granted official recognition as a registered non-profit organisation. BAUM members include companies of all sizes and sectors, non-profit organisations, as well as business, trade and industry associations. The inter-disciplinary function of environmental management was reflected in the make-up of the BAUM team: economists, eco-trophologists, biologists, chemists, information scientists and attorneys.⁹⁵

Founding members of BAUM were Frank Blom (Bundesverband Materialwirtschaft, Einkauf und Logistik e.V.), Herbert Knepperges (Wilhelm Fette GmbH), Hans Hermann Garbers (Garbers Bau GmbH & Co.), Dr Maximilian Gege (Ernst Winter & Sohn GmbH & Co.), Dr Hans Heinrich Hatlapa (Hatlapa Uetersener Maschinenfabrik GmbH & Co.), Prof Dr Hans-Jürgen Ewers (Institut für Stadtforschung und Strukturpolitik GmbH), Dr Peter C. Mohr, (Kanzlei Dr Peter C. Mohr & Partner), retired Brigade-General Ingo Günther and Prof Dr Jan Hensmann. The founding Board of Directors consisted of Dr Winter (Chairman), Dr Mohr (Treasurer) and Prof Dr Jan Hensmann. Dr Gege was elected Vice-Chairman and named Executive Director.



Fig. 3.1 Dr Georg Winter, initiator and founder of BAUM, Chairman until 2003



Fig. 3.2 Dr Maximilian Gege, co-founder, Vice-Chairman and Executive Director of BAUM

An overview of BAUM



B.A.U.M.

Fig. 3.3 BAUM logo

Membership in BAUM is open to companies of all sizes and sectors, including manufacturing, trade and commerce. BAUM works in collaboration with chambers of commerce and industry, industrial associations, environmental organisations, and educational and research institutions. The work of BAUM is guided by the principles of its “Action Programme for Environmental Awareness in Business Management”. It includes the following measures:

- Establishment of working groups for exchange of experience among companies in key areas of environmental management, including purchasing policy, water and energy management, weak-point analysis and crisis management, corporate culture and public relations, and reduction of liability risks
- Organisation of lectures and seminars on the integrated system of environmental management
- Creation of an information service on environmental management to present the results of the working groups, seminars and research projects, and to provide details on new environmental legislation and public funding opportunities

- Coordination of research projects and participation in pilot projects
- Promotion of environmental management curricula at institutions of higher education
- Initial consultation for new members to assist in the introduction of an integrated system of environmental management
- Dissemination of information on environmental management and environmental initiatives of pioneering companies to the general public

In 1990 the ICC commissioned BAUM to draft a Code of Conduct for Environmental Management for worldwide application. To accomplish the task, BAUM formed a committee with equal representation of business and academia. It became the ten-point BAUM Code of Conduct and served as the basis for the ICC's Business Charter for Sustainable Development, which was released in April 1991. The BAUM Code of Conduct was subsequently also used as a model for Codes of Conduct of member organisations in the International Network for Environmental Management.

BAUM Code of Conduct

We understand nature, society, the economy and each individual business unit as parts of a global ecological system, the equilibrium and biodiversity of which is decisive for the continued existence of all life; as business enterprises, we affirm our particular co-responsibility for the conservation of the natural environment.

We are convinced that the sound, environmentally acceptable handling of the public assets water, air and soil, and flora and fauna

must be secured by means of market economy instruments, that this requires close collaboration between business and government and that joint efforts must be made to promote public awareness of environmental protection by means of information and education.

We see great entrepreneurial opportunities in an economic order that is environmentally oriented, freely constituted and guided by market forces, that provides sustainable prosperity not only for the present, but also for future generations; this order makes it possible to resolve the conflicts between business and the environment.

With this in mind, we commit ourselves to the following code of business practice.

1. We understand environmental protection as one of the priority corporate goals and include it in our business principles. We will work towards this goal as a continuous process.
2. We perceive environmental protection as an important management task and will ensure that it is implemented in all company functions and at all levels in operationalised objectives and rules of behaviour.
3. We consider environmental protection an area of line responsibility. We will provide the expert competence via environmental protection officers or environmental committees, ensuring the availability of comprehensive information and its inclusion in the entire decision-making process.
4. We will integrate environmental protection as an autonomous criterion in our planning, control and monitoring system, where possible in quantified form.
5. We will assess periodically and in detail the state of environmental protection within the company, in order to identify weaknesses, to initiate any necessary corrective measures, and to document progress.

6. We will provide our staff with detailed information on environmental matters, motivate them towards environmentally aware behaviour – including in their private lives – and place particular importance on environmental protection in our educational programmes
7. We will intensify research and development for ongoing improvement of the environmental soundness of our products and processes. We will use raw materials, energy, water and other goods as economically as possible, taking into account the entire life cycle of the products, including their disposal.
8. We will involve all our business partners in our efforts to improve environmental protection. We will elaborate environmental standards together with our suppliers, provide information and advice to the trade, and give our customers information on how to handle our products in such a way as to ensure environmentally acceptable use and ultimate disposal.
9. We are ready for constant dialogue with all groups within society; we will provide the media with information on environmentally relevant matters and work together with authorities, associations and other institutions for protection of the environment.
10. We regard the legal regulations as minimum requirements and will strive to achieve a higher level of environmental protection throughout our entire organisation.

BAUM's membership grew exponentially from 1985 to September 1990, from 10 to 255 companies. By 1989 demand for information and assistance from business leaders outside of Germany lead BAUM to help found sister organisations in Austria, South Africa, Sweden, Switzerland and the United Kingdom, and subsequently to create the International Network

for Environmental Management (INEM), the first international, independent, industry network devoted to helping business cope with environmental issues. Over the years BAUM has grown to become Europe's largest business association devoted to environmental management. In 2011 BAUM had more than 600 members.

BAUM lauded by business and government

Even in its earliest days, BAUM received praise and encouragement from the highest levels of business and government.

According to a decision of the International Chamber of Commerce (ICC) Environment Commission on 27 October 1989, and a contribution of the ICC to the Workshop on Sustainable Industrial Activities on 22–24 November 1989 in Warsaw, "The most effective method for disseminating and implementing environmentally sustainable production worldwide was the establishment of national business organisations for environmental management according to the BAUM model."

"I believe that your working group with its action programme is a remarkable and exemplary case of a future-oriented business initiative. The work you are doing is unquestionably of a pioneering nature, and I wish you every success in it. All the more because in the final analysis, the demand for government measures is dependent upon how much voluntary initiative is taken for environmental protection," — *Oskar Lafontaine, Prime Minister of Saarland, Saarbrücken, 16 September 1987*⁹⁶

Dr Friedrich Zimmerman, Federal Minister of the Interior, wrote on 7 October 1987, "With the fundamental idea of your association, you are supporting and complementing the efforts

of the Federal Government to promote the sense of responsibility shown by business, and voluntary action in the protection of the environment. At the same time, you are demonstrating that it is quite possible to reconcile environment and business, and that environmental protection offers considerable potential for industry. I wish you and your association much success in the pursuit of your activities.”⁹⁷

Also in October 1987, German President Dr Richard von Weizsäcker praised BAUM for “promoting the development of and experimenting with methods for an environmental approach to businesses management. There is more and more need to show people that environmental awareness and action in industry is not only desirable, but is indeed an indispensable necessity. The Federal President wishes you every success and a wide response to your continued work.”⁹⁸

Dr Klaus Töpfer, Federal Minister for Environment, Nature Conservancy and Reactor Safety commented on 16 February 1988, “Active, prophylactic environmental protection is essential in our times. Environmental awareness has reached a very high level in our society; still more information and more awareness are needed in order to progress from problem awareness to positive action for the environment. I therefore welcome every initiative that gives companies practical assistance in environmental management.”

**On the history of BAUM (Excerpts from
Dr Maximilian Gege (2011) *Zur Geschichte von BAUM*)⁹⁹**

BAUM organised the first large national environmental congresses, for example, one in Nuremberg in cooperation with the Bavarian ministry of the environment where the opening speech was held by then German minister of the environment Dr Klaus Töpfer.

In 1989, cooperations were also established with two other national corporate organisations for environmental management created according to the BAUM model: BAUM Austria and Ö.B.U. Switzerland. These cooperations were the world's earliest model for international association networking in the field of environmentally conscious management. (p. 405)

In 1992 a further significant step in promoting the practical application and dissemination of environmental management was taken with the founding of the profit-making consultancy BAUM Consult. At first, its goals were to apply the environmental ideas and solutions developed by the non-profit BAUM. Soon thereafter, the goals were broadened to include quality and occupational safety, energy and climate protection, regional development and promotion, renewable energies and management of European Union projects. In 2012, BAUM Consult served as a network, with offices in Hamburg, Hamm, Berlin und Munich, for holistic solutions, addressing all areas of business and municipal management, climate protection as well as sustainability. (p. 406)

In 1998, BAUM moved its offices into the HOUSE OF THE FUTURE, which was established by Dr Winter in the former headquarters of the family firm. The HOUSE OF THE FUTURE is an international pilot project aiming to transfer environmental management to numerous economic and other spheres of human activity. It provides space for about 30 independent companies and non-profit organisations at the interface between the economy and environment. The building was completely renovated according to environmental criteria and was the first to be awarded the German Building Passport for renovated structures from the Bauhaus University Weimar. (p. 407)

Since 1993, the BAUM Umweltpreis (environmental award) honours personalities who, from a holistic view, have made

commendable contributions to environmental protection and sustainable development through outstanding long-term commitment and exemplary initiative. The award is given to representatives of enterprises, science, media, and institutions.

In 2009, on the occasion of its 25th anniversary, BAUM founded two new commissions: the Advisory Board for Enterprises and the Board of Trustees for Science. The individuals belonging to the two committees – representatives of member enterprises and academics from the fields of environmental/climate protection and sustainable development – should provide suggestions, constructive criticism, input and impulses for the work and further development of BAUM based on their experience and background and, if possible, also develop synergies with their other networks. To intensify the exchange between academic theory and business practice, the two committees sometimes meet collectively.

The *Energiesparbuch* (energy savings book), published by Dr Maximilian Gege with BAUM e.V., became a real bestseller with more than 120,000 copies sold. It provides a lot of interesting information about energy efficiency and climate protection in the home and describes numerous energy-saving measures, some of which can be implemented quickly and without major investments. The “savings table” at the end of the book is particularly useful. It lists energy-saving measures according to areas of activity and shows the respective savings potential in euros and kg of CO₂ for single, two-person and four-person households. In addition BAUM has initiated and successfully implemented several major communication campaigns in recent years such as “*Solar – na klar!*” *die Solarkampagne* (“Solar – of course!” the solar campaign). “Solar – na klar!” was the biggest nationwide information and motivation campaign of its kind to date. Its aim was to win over private households,

municipalities and companies to use solar heating. From 1999 to 2001, the campaign bundled the potentials of market partners from industry and trade, the relevant solar associations and all social forces in order to spark a surge in the demand for solar thermal systems.

The campaign was initiated by BAUM and was managed and implemented in close cooperation with the associations belonging to the sponsoring group. Along with BAUM, the sponsoring group included: Bund Deutscher Architekten (BDA), Bundesverband Solarenergie (BSE), Deutsche Fachverband Solarenergie (DFS), Deutsche Großhandelsverband Haustechnik (DGH), Deutsche Gesellschaft für Sonnenenergie (DGS), Deutsche Naturschutzring (DNR) and Zentralverband Sanitär Heizung Klima (ZVSHK).

Patrons of the campaign were initially Helmut Kohl, German Chancellor from 1982–1998, and his minister of the environment Dr Angela Merkel, and later, following the change of government, Chancellor Gerhard Schröder (1998–2005) and his minister of the environment Jürgen Trittin.

“Going solar – that’s the way” made an important contribution to the growth of the solar market. In the year 2000, the market in Germany increased by 40 %, from 420,000 m² (1999) to over 600,000 m². (p. 412)

Another initiative in the solar sector was the SolarSchulen 2000 (solar schools 2000) project by BAUM and the Allianz Umweltstiftung. Numerous schools were guided to the “solar path” and supported both financially (with a total of over one million euros) and conceptually in the implementation of solar systems. Eleven education and three environmental ministries of the respective states took over patronage of the project. (p. 412)

In 1991 BAUM was elected to the prestigious Global 500 Roll of Honour of the United Nations Environment Programme (UNEP) “in recognition of outstanding practical achievements in the protection and improvement of the environment”. In particular, BAUM was honoured for the further development and dissemination of the Winter Model. According to UNEP, “This integrated system of environmental management was the first and only systematic attempt to provide businesses with practical checklists on environmentally sound behaviour from production to marketing and transportation to training.” The official presentation was held on World Environment Day, 5 June 1991 in Stockholm, Sweden. The ceremony was officiated by Dr Mostafa K. Tolba, Executive Director of UNEP, and King Carl Gustav XVI of Sweden.



Fig. 3.4 UNEP Global 500 Award Ceremony,
(from right) Dr Mostafa K. Tolba (UNEP), King Carl XVI
Gustav of Sweden, Dr Georg Winter, Dr Maximilian Gege

A selection of BAUM activities after 1995

In 1987 the European Union opened/revised its Eco-Management and Auditing Scheme (EMAS) to include commercial and service sectors. This led BAUM to create a working group in October 1997 to assist companies in these sectors to obtain EMAS registration. The working group provided information and practical advice.

During the second half of 1997, BAUM began development of an environmentally friendly industry park in the 60-hectare Tornesch Business Park. BAUM first performed a feasibility study to examine opportunities for developing a unique marketing position for an environmentally friendly business park. BAUM then identified and advised on the implementation of measures in all facets of business operations, helping the enterprises achieve maximum synergies in both environmental and operative areas. For example, environmental synergies resulted from using the waste of one company as input for a second. Excess heat produced by another firm was used to provide heating to other tenants of the park. Operative synergies were won by cooperation in logistics, marketing, distribution and purchasing.

In December 1997 BAUM developed a workshop for member companies on using the Internet as part of their communications and environmental management system.

BAUM's largest campaign to date was "Solar – na klar!" ("Going solar – that's the way"). This project, under the patronage of the former Federal Chancellor Gerhard Schröder and the former Minister of the Environment Dr Angela Merkel, was Germany's largest-ever communications campaign to promote the use of solar energy in industry, private households and public buildings. Funded chiefly by the German Federal Environment Foundation (DBU), the campaign was



Fig. 3.5 (from left) Dr Maximilian Gege,
Chancellor Gerhard Schröder, Marie-Luise Marjan,
Minister Wolfgang Clement and Dr Norbert Hüttenhölcher

supported by the German Ministry for the Environment (BMU), the German Federal Environmental Agency (UBA), and all 16 federal states. Other partners were some 40 solar enterprises, the associations BDA, BSE, DSF, DGS, DNR, and the German Sanitation, Heating and Air Conditioning Association (ZVSHK). Over 7500 enterprises registered with the campaign. “Solar – na klar!” made an important contribution to the growth of the solar energy market in Germany. The campaign was cited by the European Commission as the “Best National Campaign for Renewable Energy” within the framework of its “Campaign for Take-Off” (CTO) for renewable energy sources.

In early 1998 BAUM launched a program entitled, “BAUM Purchases from BAUM” to encourage business among member companies. BAUM used its monthly newsletter to facilitate the transactions.

In the year 2000, BAUM published the book *Kosten senken durch Umweltmanagement* (Reducing Costs through Environmental Management), which presented about 1000 examples

of how German companies were able to reduce their environmental impacts and their costs. The book, edited by BAUM Executive Director Dr Gege and prepared by the BAUM team, was awarded the Federation of German Industry's (BDI) Environment Prize in 2000. The book was subsequently translated into Japanese, and excerpts were translated into English and published by the INEM Main Secretariat.

On 29 June 2000, BAUM awarded its annual environmental prizes to 10 individuals from large, small and medium-sized enterprises and academia. In addition, for the first time since BAUM began awarding environmental prizes in 1993, the association awarded a prize to an environmental journalist to recognise the importance of the media in promoting environmental issues. German President Johannes Rau (1999–2004) participated in the ceremonies as an honoured guest. German Environment Minister Jürgen Trittin (1998–2005) signed the award certificates. The award ceremony was held in conjunction with the launch of the “Solar – na klar” campaign for the Lake Constance region of southern Germany.

In the Spring of 2002 BAUM Consult, the profit-making arm of BAUM, participated in the 27 month EU-Life EPICENTRE project with INEM affiliates Irish Productivity Centre, 14000 & One Solutions (UK) and KÖVET-INEM Hungary, as well as the British Standards Institute and QuantiSci, a Spanish environmental consultancy. EPICENTRE supported continuous improvement in environmental performance in organisations across the European Union. The objectives were to achieve five EMAS registrations, develop innovative approaches and applications of the environmental performance evaluation model, support knowledge and technology transfer from the more developed to the less developed Members States, work with 250 organisations to develop a comprehensive set of environmental

performance indicators that can be used to support reporting of progress of companies in countries aiming for accession to the European Union, resource management, greenhouse gas emissions regulatory controls, environmental reporting, and encourage capacity-building of regional partners. The EPICENTER partnership also improved interstate partnerships and dissemination channels with 10 workshops with regional partners and 10 workshops in European Union states.

Sustainability Leadership Forum

The Sustainability Leadership Forum, initiated jointly by BAUM and the Centre for Sustainable Management (CSM) at the University of Lüneburg, is a working group and discussion roundtable created by pioneers in the field of sustainable enterprise development. The aim of the Forum is to consolidate and extend the leading position of the participant companies in this field. Prestigious members of the forum include HVB Group, TUI, Deutsche Post World Net, Deutsche Telekom, Schering, IKEA Deutschland, Münchener Rückversicherungs-Gesellschaft and Henkel. Further working groups on the basis of this concept are “Sustainable Supply Chain Management,” “Sustainability in Maritime Economy” and the “Small Enterprise Forum for Sustainability and Future” (MiNZ).

MIMONA

When it comes to putting sustainability into practice in companies, the employees are a major factor for success. Part of the project “Motivating Employees to Sustainability (MIMONA),” supported by the German Federal Environmental Foundation (DBU) and the Labor and Environment Foundation of the Mining, Chemical and Energy Industrial Union (IGBCE), involved the creation of a database with 500 measures that

have been successfully implemented in practice. The compiled know-how is made available to enterprises through a series of events that includes transfer workshops, through the project website and through an email-based information service. In 2005 MIMONA was selected as an official project of the United Nations Decade of Education for Sustainable Development.

Growth, Innovation, Education and Employment Offensive

In 2004 the book *Die Zukunftsanleihe – Wie Deutschland ein Modell für Wachstum und weltweiten Wohlstand werden kann* (The Future Bond – how Germany can become a model for growth and global prosperity) was published by Prof Dr Maximilian Gege. He recommended a “Growth, Innovation, Education and Employment Offensive” for Germany and other countries. The Future Bond and the 10-year future program together could form a model which stimulates sustainable growth and prosperity. In a joint effort by civil society and the state, considerable impulses for growth could be created, billions of euros in energy costs could be saved, dependence on fossil fuels could be reduced and a major contribution could be made to climate protection.



Fig. 3.6 The Future Bond

3.2 Austrian Environmental Management Association (BAUM-Austria)

In Spring 1989 a group of 15 Austria businessmen, led by Dr Walter Seeböck and Dr Thomas Gutwinski joined together under the name Bundesweiter Arbeitskreis für umweltbewusstes Management (BAUM-Österreich). BAUM-Austria was founded as an independent, non-political, charitable association, modelled after the German Environmental Management Association.



Fig. 3.7 Dr Walter Seeböck,
founding Chairman of
BAUM-Austria



Fig. 3.8 Dr Thomas Gutwinski,
the first Executive Director of
BAUM-Austria

In its first year BAUM-Austria developed seminars and presentations on environmental accounting, the environmentally friendly office, environmental management, and environmental protection in the new European Community.

A selection of projects:

- Development of a model for the identification of waste and emissions projects in the framework of EUREKA in cooperation with Ass. Prof Dr Hans Schnitzer of the Institute for Process Technology at the University of Graz.

- Establishment of a working group on the Environmentally Friendly Office, including various seminars and studies.
- Development of a series of seminars on Environmental Management, including one lead by Prof Ulrich Steger of the European Business School, and one focusing on promotion of environmental initiatives in Eastern Europe.
- Founding of the BAUM Institute for Environmental Management to increase cooperation between the city of Vienna and Viennese businesses on environmental issues by providing consulting services and a forum to find environmental solutions acceptable to both sides.
- Awarding of two annual environmental prizes, the Environmental Manager of the Year, in cooperation with the environmental magazine, *Umweltschutz* (Environmental Protection) and the AEDEA Award for outstanding achievements in the environmentally friendly office.

In its first year BAUM-Austria had grown to 100 member companies. It held its first Environmental Forum in Vienna in December 1989. Dr Winter, founder and Chairman of the German Environmental Management Association, made a presentation on “The Practice of Environmental Management” and participated in the workshop “Environmental Accounting in Theory and Practice”. Austrian Chancellor Dr Franz Vrankitsky held the keynote speech on “Corporate Environmental Management as a European Task”. Dr Winter noted, “the fact that a leader of government takes part in such an event as speaker, is unique in Europe”.

Dr Erika Pichelmann represented BAUM-Austria at the founding meeting of INEM held on 19 February 1991 in Hamburg. BAUM-Austria’s Chairman, Dr Seeböck, was elected

to the first INEM Board of Directors, and was named INEM Treasurer, positions he held until the 2001.

In 1993 BAUM-Austria made environmental management training a top priority. According to its Chairman Dr Seeböck, “Top and senior executives must adopt environmental management guidelines at levels of decision-making. Management must also serve as an example for all employees with regard to environmental management so that the goals and the necessity of environmentally beneficial management become clear and are supported by all employees”. To accomplish these goals BAUM-Austria developed a training program covering environmental legislation and environmental management methods. Conference and seminars covered such topics as environmental management best practices, waste reduction and recycling, development of environmental policies, the environmentally friendly office.

BAUM-Austria conducted a government-recognised, seven-day training course for environmental managers in Vienna beginning on 18 May 1994. About 30 participants learned about Austrian waste legislation and regulations and how to organise environmental information flow within the company. Following successful completion of the course and final examinations, participants were certified as Environmental Officers.

In 1995 BAUM-Austria installed a telephone hotline giving members quick access to contact persons in the areas of environmental legislation and policy, training, etc. It also obtained government approval to award certificates for environmental management systems according to the European Union’s Eco-Management and Audit Scheme (EMAS) directive.

By 1996 BAUM-Austria had revised its name to the Austrian Network for Sustainable Management to reflect its

new orientation and aims to contributing to future-oriented implementation of national and international sustainable development goals.

3.3 Swiss Association for Environmental Management (ÖBU)

The student initiative oikos – Students for Sustainable Economics and Management – from the Hochschule St. Gallen laid the groundwork for establishing the Swiss Association for Environmental Management (ÖBU) with the conference “Opportunities of Environmentally Conscious Business Management” on 30 June 1988. The conference brought together some 60 leaders of Swiss business and industry to hear Dr Winter describe his integrated system of environmental management in a presentation on “Opportunities of Environmental Management”.



Fig. 3.9 Stephan Baer, the founding Vice-Chairman of ÖBU

Nine months later a group of Swiss companies and academics from the Hochschule St. Gallen established ÖBU. The founding meeting was held in Winterthur on 15 March 1989.

The founding Board of Directors comprised Dr H. Zumstein (Holzstoff Holding AG), Stephan Baer (Baer Weichkäserei AG), H. R. Bircher (Lever AG), Dr H. Fehlmann (Arco-Moda SA), Dr O. Model (Model Holding AG), Dr Ing. Ruedi Müller-Wenk (Frisco-Findus AG), Dr R. Saemann (Ciba-Geigy), Prof Dr Thomas Dyllick (Institute for Business+Environment, Hochschule St. Gallen), and Prof Dr H. Ulrich (Hochschule St. Gallen). Dr Zumstein was elected Chairman and Mr Baer was elected Vice-Chairman. Dr Arthur Braunschweig became Executive Director.



Fig. 3.10 Dr Arthur Braunschweig, the first Executive Director of ÖBU

The main goals of ÖBU are to move the Swiss economy towards sustainability. Its main activities include conferences, projects, political lobbying, trainings. ÖBU carries out its projects and campaigns in the form of Action Groups. Each is composed of representatives of companies wishing to carry out specific projects. Typically, Action Groups accomplish their research and work in the companies in a period of 18 months. Once completed, the results and lessons in the project are presented to the entire association at a conference and documented in a publication in German and French.

ÖBU held its first Members Meeting on 28–29 March 1990 in Lucerne. Prof Ernst Ulrich von Weizsäcker, Director of the Institute on European Environmental Policy (Bonn, Paris, London), was invited to make a presentation on “Environmental Policy in the European Community and Eastern Europe – Steps toward an Environmental Market Economy”.

In July 1990 ÖBU established an Action Group on Environmental Accounting, which developed a methodology for identifying material flows and evaluating and ranking their environmental impacts. It was led by Dr Müller-Wenk and Dr Braunschweig. The biggest problem in ranking environmental impacts is comparing different types of emissions, e.g. a tonne of CO₂ with a tonne of NO_x. To solve this problem the Action Group adapted and developed the concept of Environmental Impact Points. The Action Group, comprised of Geberit (sanitary equipment), SIKA (construction), Walser (textiles), JOWA-Migros (baked goods), Swiss Bank Corporation, and Baer Weichkäserei (dairy products), presented its accounting methodology at a seminar in August 1992. The new methodology was also published as ÖBU Report 7/92, *Environmental Accounting for Enterprises*.

In early 1991 Dr Winter invited ÖBU to join the founding group of ISEM – the International Society for Environmental Management. While the ÖBU Board on 31 July 1990 found that “the concept of an informal international network for information exchange on speakers, publications and international developments in environmental management to be positive and was, in principle, interested in such a network,” it decided that ÖBU did not yet have the capacity to actively participate in such a formally structured organisation. ÖBU, however, fully supported the initiative, sending Mr Paschen von Flotow as

representative of ÖBU's Chairman Dr Zumstein, to take part in INEM's founding meeting on 19 February 1991 in Hamburg.

ÖBU affiliated to INEM on 22 November 1992 to participate more fully in the international exchange of experience and information but still lacked the capacity to meet the demands and responsibilities of Full Membership.

On 22–23 June 1993 ÖBU organised the conference *The Better Product '93* in cooperation with the Swiss Environmental Protection Agency, the Swiss business magazine *Bilanz*, *Abfuhrwesen* Zurich and the Basel Messe. Subtitled, “realisation of Rio: Ecological Innovation in Enterprises”, the conference focused on three themes: 1) Eco-efficiency as the engine of innovation, 2) Environmental product innovation as security for the future, and 3) Sustainability in practice.

ÖBU became a Full Member of INEM on 29 February 1996.

On 29 May 1998 ÖBU and the Institute for the Economy and Environment, University of St. Gallen co-organised the conference, *Environmental Management in Research and Practice: An Interim Balance*, in St. Gallen, Switzerland. The conference had two objectives: 1) to present the latest results of studies on the state of environmental management in Austria, Norway and Switzerland, and 2) to draw an interim balance on the state of environmental management research and practice. INEM Chairman Dr Winter, Peter J. Hauser (ÖBU) and Markus Lehni (World Business Council for Sustainable Development) made presentations on the session on environmental management practice.

In January 1998 Gabi Hildesheimer took over the position of Executive Director from Dr Braunschweig. At the end of 1998 ÖBU had exactly 300 members.

A recurring theme in its work has been ecological tax reform, which was topic of its the General Assembly in 1993, 1999 and 2011.

Over the years ÖBU has expanded its scope to include not only environmental issues but also emphasis to development of the Swiss economy according to the principles of sustainability. For example, ÖBU held a conference on “Sustainable Private Equity: Investment in Tomorrow’s Markets” on 19 January 2000 in Zurich. The goal was to bring venture capital/private equity and sustainable development together. Speakers included representatives from the leading Swiss financial institutions and innovative companies.

Today, ÖBU has repositioned itself as the Network for Sustainable Business (Netzwerk für nachhaltiges Wirtschaften) and has more than 200 members.

3.4 Föreningen Svenska BAUM Swedish Environmental Management Association

Among the earliest activities in the founding of the Swedish Environmental Management Association (Föreningen Svenska BAUM) was a visit by Dr Winter to Gothenburg on 29 August 1989. He had been invited to present his integrated system of environmental management to the International Congress & Exhibition “Ecology ’89”. His objective was to present the Winter Model to an international audience and to spur the establishment of a Swedish environmental management association.

Dr Winter distributed 200 copies of his book, *Business and the Environment*, and a brochure describing the activities and achievements of BAUM at the conference. He also

held a speech on the "Practical Aspects of Environmental Business Management" at an Extra Session of Ecology '89 on 30 August and participated in the closing panel discussion along with Jacqueline Aloisi de Larderel (UNEP Industry and Environment), Erik Arrhenisu (World Bank), Lars G. Larsson (Federation of Swedish Industries), Bill Long (Organisation for Economic Cooperation and Development), Catharina Nystedt (Fläkt AB), and Bo Wiman (University of Lund).

Dr Winter used the occasion of Ecology '89 to further efforts in establishing a Swedish BAUM. He met with Edwin Krzesinski, who was spearheading the efforts, and gave an interview to the Sweden's leading business newspaper, *Dagens Industri*. The resulting article, "Swedish Branch of the Environmental Tree: The founder of BAUM expands the network," published on 5 September 1989, described the integrated system of environmental management and the structure, activities and benefits of a national business association for environmental management. "Swedish companies have the reputation that they have both awareness of, and solutions for, environmental problems. We want to transfer this knowledge to other companies, and especially small and medium-sized enterprises," said Dr Winter. The article also reported on progress in establishing the organisation. Five companies, including the three largest Swedish banks, IBM, Hewlett Packard and Tetra Pak had shown interest in founding a Swedish organisation. "We hope that we can hold a constituting assembly in Stockholm this fall," said Mr Krzesinski.

Dr Winter's next visit to Sweden came in mid-November 1989. He gave an interview to *Dagens Nyheter* and participated in a meeting with Swedish business leaders interested in organising Svenska BAUM at the Swedish Federation of Industries in Stockholm. This meeting was organised by Mr Larsson.

In March 1990 Mr Krzesinski travelled to London to make a presentation on environmental management in Swedish business and industry at the conference of the TREE UK Students Initiative, *The Greening of Management: Challenge of the 90s*. The conference served to launch the British environmental management association, TREE UK.

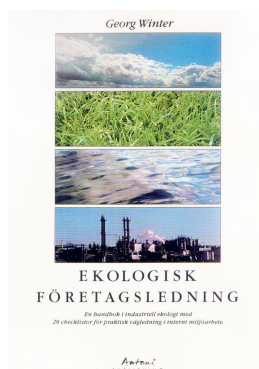


Fig. 3.11 Swedish edition of Business and the Environment

In the meantime, Hans Antoni, Director of Antoni Advertising and Chairman of WWF Sweden, was managing the translation of *Business and the Environment*. It was published as *Ekologisk Företagsledning* in October 1990. Mr Larsson wrote a foreword addressing Swedish issues. He also used his position at the FSI to promote *Ekologisk Företagsledning* to environmental managers of larger companies and all small and medium-sized enterprises of the Federation. Mr Antoni also sent review copies to all important Swedish newspapers and business magazines.

The association *Föreningen Svenska BAUM* was officially launched on 22 October 1990 by 10 companies from virtually all sectors of Swedish business and industry as a non-governmental, non-profit organisation. Its goals are to serve as

a forum for Swedish business for discussion, exchange of experience and know-how, and to provide inspiration in the protection of the environment. Founding Members of the Board were Mr Antoni, Lars Johansson (Swedish Railroad), Göran Lundgren (ABB Fläkt AB), Rolf Henriksson (Sydkraft AB), Maria Nordstrand (Svenska Finans AB), and Mr Krzesinski. Mr Lundgren served as Chairman of Svenska BAUM, and Mr Krzesinski as Vice-Chairman and Treasurer.

Svenska BAUM's member companies are convinced that the environment is a strategic issue for long-term survival. Svenska BAUM aims to:

- increase environmental awareness at all levels in the companies via information, education and networking
- facilitate exchange of information on practical environmental measures and thus inspire other companies
- exchange knowledge among research, business and society
- cooperate in founding an international environmental management association with members in Austria, France, Germany, Switzerland, United Kingdom and other European countries
- expanded focus of environmental concerns to a product's entire lifecycle from raw materials to manufacturing, to use and disposal
- In 1991 Svenska BAUM focused on three major events:
 - February 1991. First Annual Meeting, presentation of action programme
 - April 1991: 2nd World Industry Conference on Environmental Management (WICEM II) in Rotterdam
 - October 1991: ECOLOGY '91: Environmental Exhibition and Congress in Gothenburg

In addition, Svenska BAUM organised eight experience exchanges among member companies on various topics. Each focused on solutions to specific problems like water, energy and waste management. During the experience exchanges the host company described how it had identified and managed a particular environmental problem, reported on lessons learned and made recommendation on how others might solve similar problems. The experience exchanges lead to formation of working groups to explore the issues in more depth.

Svenska BAUM also participated in meetings with Danish and Norwegian business groups to help them to found similar organisations in their countries.

Mr Lundgren, Mr Antoni and Mr Krzesinski represented Svenska BAUM at the founding meeting of the International Network for Environmental Management on 19 February 1991 in Hamburg, Germany.

Dr Winter next visited Sweden in his role as Chairman BAUM in June 1991. BAUM had been elected to the Global 500 Roll of Honour of the United Nations Environment Programme in recognition of its “outstanding practical achievements in the protection and improvement of the environment”. The official presentation ceremony was held on 5 June 1991 (World Environment Day) in Stockholm, Sweden. The ceremony was officiated by Dr Mostafa K. Tolba, Executive Director, UNEP and H.R.H. King Gustav of Sweden.

Unfortunately, Svenska BAUM fell victim to an economic downturn in Sweden in 1992. Mr Lundgren, Chairman of Svenska BAUM wrote in a letter of 14 December 1992, “The initiatives and enthusiasm by Lars Gunnar Larsson, SFI and Rolf Henriksson, Sydkraft, and others after Rio to revitalise Svenska BAUM unfortunately did not survive confrontation with full calendars and other factors of reality in recessionary



Fig. 3.12 Rolf Henriksson, member of the Boards of Svenska BAUM and INEM

times. There are thus no prospects for Svenska BAUM, and we consider the organisation closed.” Mr Lundgren also resigned as Vice-Chairman of INEM because changes in the ABB environmental businesses required him to play a new role that took him away from the activities of Svenska BAUM.

Svenska BAUM was reorganised as a professional organisation for environmental managers, Näringslivets Miljöchefer – the Swedish Association of Environmental Managers – (NMC) in February 1994. Rolf Henriksson, Board Member of the former Svenska BAUM and INEM Vice-Chairman was named to the new Board of Directors. Mr Olle Blidholm became Executive Director.

Under the auspices of INEM, Mr Henriksson made a presentation on “Environmental Management and Audit Systems” during the section on Instruments and Good Practices in Private Industry of the International Business Forum on Agenda 21, which was organised by the Carl Duisberg Gesellschaft e.V. in cooperation with the Federation of German Industries (BDI), INEM, the International

Chamber of Commerce (ICC) and the United Nations in New York on 16–18 June 1997. The International Business Forum offered a platform for publicizing the contribution of the private sector in implementing Agenda 21, for establishing partnerships between employers and business associations from the South, the East and the North, and for realising an international exchange of experiences.

By 1998 NMC had grown to more than 205 members, representing the broad spectrum of Swedish commercial and industrial sectors, e.g., engineering, forestry, chemistry, energy, commerce, transportation and finance.

With the aim of supporting and developing environmental management in other countries NMC participated in international information and experience exchange and initiated its Environmental Management Internship programme in 1998–2001. NMC ran the internship programme in co-operation with environmental managers from Sweden and the Baltic States, Estonia, Latvia and Lithuania. The aim was to create an exchange of experience and knowledge that would benefit both parties. The interns were environmental managers, or persons in similar positions, from the Baltic States. They worked in the environmental departments of Swedish companies for one or two weeks. NMC covered some of the costs for travel and accommodation, the rest was paid by the visiting organisation.

The year 1999 was successful for NMC. It grew from 220 to almost 260 members and launched a number of new activities. Among them were seminars with the Swedish Environmental Minister and with Mr Lester Brown of the World Watch Institute on Environmental Purchasing, Environmental Construction and City Planning, Transport, EMS in Global

Organisations, Ethics in the Business Strategy, Environmental Reporting, and International Environmental Trends (reports from Germany, Japan, France and USA).

In 1999 NMC also launched a Swedish Environmental Award called the “Sustainable Leadership Prize”. The EU Commissioner for Environment, Margot Wallström, was a member of the jury. NMC received almost 50 nominees for the award, holding the awards ceremony on the 23 March 2000.

By June 2009 NMC had 270 members and in 2011 more than 300, representing a broad spectrum of the Swedish commercial and industrial sector, e.g. engineering, forestry, chemistry, energy, commerce, transportation and finance, as well as the public sector.

Among its most recent public events, NMC held a breakfast talk with Dr Ashok Khosla, President of the International Union for Conservation of Nature and former Director of the United Nations Environment Programme, on “The Future of Business and the Business of the Future” in Stockholm on 18 May 2011. On 8 June 2011 NMC staged a lecture by Dr Johan Martinsson in Gothenburg asking whether Swedes were losing interest in environmental issues, as indicated by a recent survey by the SOM Institute of the Gothenburg University, and if so, which issues have taken over instead.

3.5 Technology, Research and Enterprise for the Environment (TREE UK)

TREE UK was founded in two steps. First, the TREE Student Initiative (Team of Responsible Entrepreneurs for Environmental Management) was founded at Leeds Polytechnic by a group of British and German students in March 1989. Key

players were Holger F. Pfund (Chairman), Kristian Jürgens (Treasurer), Andrew Booten and Bernd Hess. Their goals were ambitious: to increase the awareness of environmental management among students and faculty, to integrate environmental concerns into the curriculum of the college of business administration, to set up a network of similar organisations at other British universities, and to lay the groundwork for a national corporate organisation, Technology, Research and Enterprise for the Environment (TREE UK), along the lines of BAUM.

In promoting the establishment of TREE UK, Mr Pfund offered copies of *Business and the Environment* to 1500 leading British businesspersons. Among them were Hugh Somerville, Head of Environment, British Airways, Michael J. Carver, Coordinator, Coventry Pollution Prevention Panel, John Elkington, Director, SustainAbility and Jonathan Wild, Managing Director, Prospect Foods Ltd. Ultimately, about 600 copies of *Business and the Environment* were distributed. Those who wished to receive the book were then invited to participate in a national conference, *Greening of Management: Challenge of the 90s* held on 27 March 1990 in London.



Fig. 3.13 Edwin Krzesinski of Svenska BAUM addressing the TREE UK conference

The conference presentations called on British business and industry to take an active stance on environmental management, and showed how environmental management can increase sales, cut costs, reduce liability, motivate staff and enhance the company's reputation.

The Welcoming Address and introduction were given by Holger Pfund, Chairman, and Andrew Booton, Vice-Chairman of the TREE Students Initiative. John Elkington, the well-known, pioneering author of *The Green Capitalist* and *The Green Consumer Guide*, who was also Director of the consultancy SustainAbility Ltd. in London, made a presentation on "Marketing in the Green Decade". Mike Cohen, Director, Business and Environment Unit, Department of Trade and Industry held a keynote address on "The environmental challenge to business – the government view". Phil Hughes, Head of Safety Services, Courtaulds PLC, covered "Cost-effective environmental protection," Prof Peter Roberts, Head of Department of Urban Planning, Leeds Polytechnic addressed "Business and the environment: setting the agenda for sustainable future development". Dr Winter presented his integrated system of environmental management.

In addition, representatives of existing national business associations for environmental management – BAUM's sister organisations – from Austria (Dr Seeböck, President of BAUM-Austria), Sweden (Mr Krzesinski, Board Member of Svenska BAUM), France (Troy Davis, representative of ARBRE), and the Federal Republic of Germany (Dr Winter) gave reports on their goals, activities and achievements. Holger Pfund, Chairman, and Andrew Booton, Vice-Chairman, of the TREE Students Initiative made a presentation on "Environmental Management in the 1990s: First steps towards establishing a corporate TREE organisation in the UK".

The conference was attended by over 50 organisations. It was a key landmark in the introduction of environmental management to British business and industry, leading to the establishment of the TREE UK exploration group. Members included Sean Blanco (Motor Panels Ltd.), Mike Carver (Coventry Pollution Prevention Panel), Martin Charter and Martin Granados (KPH Marketing), Mr Davis (BAUM), Janet Gledhill (British Soft Drinks Association), Brain Morris (John Laing ETE), Stephen O'Brien (Redland plc), Chris Woodcock (Kellog Co. Ltd), Ron German (Stanhope Properties), Annette Lavalette, (AD Little), Geoffrey Levy (CMB plc), Ian Blair (AEG-UK), M. Stothert, A. G. Barr, Mike Napier (Costain plc), Phil Hughes (Courtaulds plc) and John Wild (Prospect Foods Ltd.). It held its first public meeting on 10 May 1990.

The group's efforts were supported by Federation of German Industry (BDI). On 4 October 1990 Dr Meller and Dr Racke of the BDI Department for Environmental Policy wrote a letter on to Chris Hampson, Chairman of the Environment Committee, Confederation of British Industry, supporting the establishment of TREE UK according to the BAUM model. "In our view, there are no reasons for objecting to the setting-up of a British sister organisation. On the contrary, it is likely to give convincing evidence of corporate initiative for environmental protection".

TREE UK's founding Board of Directors consisted of Ian Blair, Chairman (AEG-UK), Roger Fawdry, Vice-Chairman (Dow Chemical) and Mr Carver, Secretary (Coventry Pollution Prevention Panel).

Member Companies included Activate Consulting, AEG-UK Ltd., A. G. Barr, Arthur D. Little, BAXI Heating, Boots MicroCheck, British Soft Drinks Association, CMB Packaging (UK) Ltd., Costain Group, Courtaulds plc, Coventry Pollution



Fig. 3.14 Mike Carver, founding Secretary, TREE UK



Fig. 3.15 Ian Blair, founding Chairman of TREE UK

Prevention Panel, Duracell Europe Ltd., Hydro Polymers Ltd., Industry Council for Packaging and the Environment (INCPEN), Kellogg Company Ltd., PPH Marketing, John Laing ETE, Leyland DAF Ltd., Perstorp Ferguson, Prospect Foods Ltd., Motor Panels Ltd., Raab Karcher UK Ltd., Redland plc, Rhino Communications, Rosehaugh plc, Safeway plc, Sheffield Insulations Group plc, Stanhope Properties plc, and TNT Express Ltd.

TREE UK's objective was "the promotion of environmental excellence through the creation of environmental awareness and the responsibility of companies and organisations for the development and maintenance of a healthy environment, the further extension of the integrated system of environmental business management by experience, information and research exchange, the introduction of practical methods and processes of environmental business management within member companies to avoid risk and respond to opportunities, the propagation of best practices, experiences and ideas in business and other circles to secure the long-term future of member companies and the manager's identification with the wider environmental impact of his work".

Among its major achievements, TREE UK supported the British Standards Institute in bringing the British Standard BS 5750, which incorporated elements of environmental management, to the International Organization for Standardization (ISO) in Geneva. BS 5750, which has since been replaced by environmental management standard BS 7750, served as a basis for developing the international series of ISO 14000 standards for environmental management systems.

The TREE Student Initiative remained active as the youth branch of TREE UK, providing a link between education and business, and ensuring that as students' careers progress, their decisions would be influenced by the concepts of environmental management.

Business-environment groups in growing competition for members

Environment Council's Business and Environment Programme, launched in 1989, aims to promote the message that "environmental sense is commercial sense" to the business community.

Business in the Environment is not a free-standing organisation, but was launched in autumn 1989 as a "target team" within Business in the Community, whose patron is the Prince of Wales.

The Environmental Concern Centre in Europe (ECCE) was launched in late 1989, its main objective being to "bring together environmental practitioners with a demonstrated interest and concern for the managed environment".

Launched informally in the UK last month, TREE is in some ways the most ambitious of the business-environment groups. Like ECCE, TREE is a self-help group for businesses already aware of

environmental issues. But where ECCE is essentially a club, TREE is more akin to a movement.

This is a particularly apt description since TREE's inspiration is largely founded upon the vision of one man, German industrialist Georg Winter, who developed an "integrated system of environmental business management". At Mr Winter's prompting, this led to the formation of BAUM, the German Environmental Management Association in 1985.

Now with five years' experience and over 250 members in Germany, BAUM's organisers are setting about replicating it in other countries, with the eventual aim of creating an International Society for Environmental Management. BAUM sister organisations already exist in Austria, Switzerland, Sweden and France, and plans are being laid in Norway, Denmark and Canada.

TREE's promoters in the UK are enthusiastic about its prospects. But the organisation has nevertheless still to prove its viability. Partly this is because its Germanic character may not transplant well to Britain. Its arrival on the scene is being viewed with suspicion by the other business-environment groups, which fear that it will compete with them for members. Some interesting jockeying for position can be expected over the next year as all four organisations seek to put down roots. — *ENDS Report 191, December 1990*

Unfortunately, the ENDS Report assessment proved to be correct. Following its initial success, the organisation was not able to remain viable. In late 1993 the Board and Members of TREE UK decided to disband the organisation.

3.6 Erhvervslivets Ledelsesforum for Miljøfremme (ELM Danmark) Forum for Environmental Promotion for Business Leaders

ELM Danmark was founded as a non-profit, independent organisation on 2 July 1991 by five well-known Danish companies, Brødrene Hartmann A/S, InvestMiljø A/S, the Danish State Railway, Renholdningsselskabet af 1898, and Rendan A/S. Brodene Hartmann A/S, an important producer of moulded paper pulp packaging from 100% recycled paper, was the prime initiator of ELM. Ramboll, Hjannemann & Højlund A/S, Jiffy A/S, Danapak Flexibel A/S, Deloitte & Touche and DIEU became initial members. ELM Denmark applied for membership in INEM on 11 September 1991. Asger Domino and Henning Madsen, both from Brødrene Hartmann A/S, were individual founding members of INEM.

ELM Danmark was an association of small, medium-sized and large companies from commerce and industry, as well as trade and industry associations, ministries and individuals, who acknowledged responsibility to the environment and who committed themselves to develop, introduce and implement practical environmental management methods and activities. ELM held conferences, debates and other activities designed to encourage members' efforts in improving their environmental performance. For example, a number of company visits were organised to disseminate information about proactive environmental action in SMEs. The large companies acted as pioneers – as locomotives – for the smaller ones. The Danish Technological Institute served as a consult during the company visits and provided general advice on environmental issues.

Anna Lisa Mortensen, ELM Danmark's International Liaison, participated in the INEM delegation to ISO's SAGE subgroup on Environmental Auditing 15–16 October 1992.

In July 1993 ELM Danmark launched a major membership drive, sending letters and brochures to 3000 Danish companies encouraging them to join the organisation. At the end of 1994 ELM had 136 members.

Key activities in 1994 were seven exchanges of experience via company visits, building networks among ELM Danmark members, and publication of the *Nyt fra ELM* newsletter and the book, *Experiences from the Environmental Work in 10 Significant Enterprises*. Also starting in 1994 Poul Buch Jensen, principle of Buch Jensen Quality Management ApS, a member of ELM Danmark, represented INEM on ISO / TC 207 Subcommittee 4 (Environmental Performance Evaluation). Mr Jensen was known as “Mr ISO 9000” in Denmark and had published numerous papers and books on the ISO international quality management standard. Mr Jensen wrote regular articles on the development of the ISO international environmental management standards for the INEM Bulletin and the INEM website.

In 1995 ELM Danmark focused on “Going from planning to strategies” and conducted four workshops on initial environmental surveys, environmental management and cleaner production, life cycle assessments, and environmental accounting.

By 1996 ELM Danmark had grown to 85 members. About 60% were enterprises, 29% were consultancies and 10% were public authorities. It held six events under the rubric of “From Local to Global” on Danish and European Union sources for funding for environmental improvements, experiences with integration of environmental management activities in the

European Eco-Management and Audit Scheme (EMAS), a visit to the European Environment Agency in Copenhagen (in cooperation with the Swedish Association of Environmental Managers [NMC]), a debate on the role of the consumer, and a Green Network.

Activities in 1997 addressed national political and legislative environmental initiatives, experiences of companies with environmental reporting and green accounting, a discussion on product-oriented environmental management in response to upcoming Danish legislation, strategies for industrial waste management, transport and the environment, and a study trip to the European Commission in Brussels, including meetings with Environment Commissioner Ritt Bjerregaard, the Confederation of Danish Industries and the European Committee for Standardization (CEN). In 1997 membership stood at 70. Regrettably, declining economic conditions lead to the disbandment of ELM Danmark in March 1999.

3.7 Association pour le Respect de la Bioéconomie dans les Réalisations de l'Entreprise (ARBRE) Association for the Respect of Ecological Achievements in Enterprises

The initiative to found a French business association for environmental management began in 1986 with the promotion of the Winter Model at various conferences, workshops and symposia targeting French business and industry and government.

For example, in its final draft of 10 January 1986, the Conference on the Protection of the River Natural Environment: Balance and Perspectives called on the Environment Committee

of the Association for Trans-frontier Cooperation on the Upper Rhine (ACTF) to “pursue its planning with a view to making the business community in the region aware of a comprehensive concept of business management integrating environmental requirements in all fields (production, technology, materials management, personnel, marketing, waste disposal, etc.)”. The conference was co-organised by a Parliamentary Assembly body of the Council of Europe and ACTF. The resolution was based on a talk held on the Winter Model entitled, “Compatibility between economics and the environment and Europe’s heritage”.



Fig. 3.16 French edition of
Business and the Environment

Other key landmarks in the creation of a French environmental management association included the founding of the Institute for Environmental Counselling (Institute ECO-Conseil) in 1987 and the publication of Business and the Environment in French in 1989. These efforts lead to the establishment of a working group under the working title, “Association des entreprises pour la Recherche et le bon Respect de l’Environnement (ARBRE)” and the opening of an information office in Strasbourg in 1989.



Fig. 3.17 Esther Peter-Davis, founding President of ECO-Conseil and UNEP Global 500 prize-winner

Esther Peter-Davis and Institute ECO-Conseil in Strasbourg were key players in promoting the establishment of a BAUM sister organisation in France. Institute ECO-Conseil is a non-profit organisation created in June 1987 by 14 founding members to promote environmental education and environmental counselling as defined by the European Economic Community (EEC) during the organisation phase of a pilot project for environmental counselling aimed at households and local governments as part of ECC activities marking the European Year of the Environment (March 1987–March 1988). Ms Peter-Davis is Founding President.

The initial environmental counselling scheme was developed by Dr Gege and AUGÉ (Arbeitsgemeinschaft für Umwelt, Gesundheit und Ernährung e.V.), a Hamburg-based organisation set up by Dr Gege to carry out a pilot project to introduce his concept in Germany. The scheme focused on municipalities in the Federal Republic of Germany. The French model was developed over a period of three years with the active cooperation of French local authorities. AUGÉ provided initial advice and guidance.

Institut Eco-Conseil was the main contact for the BAUM in France. It was expected that the main impetus for the French association would come from companies which have either already paid for an eco-counsellor, or which are presently paying for their training (Dow Chemical, Lyonnaise des Eaux), as well as others in Alsace (Banque Populaire, de Dietrich, etc.). Institute ECO-Conseil became a founding member of Orée and Gabrielle Margulies served as Secretary-General.

Ms Peter-Davis and other pioneering French businesspersons and intellectuals founded the ARBRE working group in early 1989. It opened an information office in Strasbourg to prepare the ground for a French business association according to the BAUM model. A draft Charter for ARBRE was completed in February 1989. Publication of *Entreprise et Environnement*, the French version of *Business and the Environment* followed in the same year, providing additional impetus to the formation of the association.

Dr Winter continued to bring his message to French business and industry. On 29–31 November 1990 he made a presentation on “The Environmentally Friendly Enterprise,” at a conference in Metz, describing his integrated system of environmental management and the work of the German Environmental Management Association.

The next major step was taken on 10–11 December 1990 at the symposium “Environment – Economy: Environmental Protection and Economic Success in Balance?” organised by the Goethe-Institute in Paris. Participants included Dr Ernst Ulrich von Weizsäcker (Director, Institute on European Environmental Policy, Bonn, Paris, London), Alexandre Aviam (French Ministry of the Environment), Claude Henry (Ecole Polytechnique), Yves Marting (French Ministry of Industry), Jürgen Schölling (German Federal Environment

Agency), Matthias Bergman (Öko-Institut Freiburg), Gérard Dorin (Environment Directorate, OECD), and Dr Tyll Necker (President, Federation of German Industries).

Unfortunately, the establishment of a French business association for environmental management would be delayed until 26 November 1992, when it was officially launched under the name “Orée”. “Orée” is an old French word that describes the edge of the forest. Further development of Orée is addressed in the next chapter.

3.8 Industry Society for Ecology in Israel (ALVA) and Israel Economic Forum for the Environment (IEFE)

Efforts to found ALVA, the Industry Society for Ecology in Israel, began in 1990 after its key principles had attended the International Chamber of Commerce conference Action for a Common Future in May 1990 in Bergen, Norway. They were so enthused by Dr Winter’s presentation on his integrated system of environmental management and the structure and activities of BAUM that they decided to found a similar organisation in Israel. ALVA is the Hebrew word meaning “foliage”.

The initiative for founding ALVA was taken by Lucien Y. Bronicki, President and Technical Director of the turbine manufacturer Ormat Industries, supported by representatives of the Israeli Manufacturers Association, the Society for the Protection of Nature in Israel and the Ministry of Environment. In a letter of 7 May 1990 Joann Blumenfeld of the Israeli Ministry of the Environment said she was “interested in establishing a BAUM organisation in Israel” and requested details on how to establish an environmental management

association, the services it could provide and any other useful details. Ms Blumenfeld, later in the Industry Division of the Ministry of the Environment, renewed her offer of assistance in establishing an environmental management association in Israel in letters of 25 June and 2 July 1990.

The official decision of the founding bodies, Ormat Turbines, the Israeli Manufacturers Association and the Society for Nature Protection, to join efforts to establish an environmental management association in Israel was taken in January 1991. In a letter of 13 June 1991 Michael Gill, Ormat Turbines. Ltd, announced that the preparations for launching ALVA had been completed. Extended discussions goals and future activities delayed the registration. Finally on 13 January 1992, ALVA was publicly launched with a conference in Tel Aviv. Mr Davis, INEM Executive Director, delivered the keynote speech on “Industry and Environment: The International Facet”. Mr Bronicki was named Chairman and Mr Gill became Executive Director.



Fig. 3.18 Michael Gill, Executive Director of ALVA

ALVA's goals included the distribution of information, through literature and seminars, on the integration of business

with environmental protection, and the establishment of an information centre on environmentally sound products and environmental standards for various product groups. Activities included environmental information exchanges among industrial companies, and information on supply chain management. In addition, the association worked to prevent import of products and materials into Israel that are prohibited by other industrialised countries.



Fig. 3.19 Gavrush Shemesh, Chairman of IEFE

In 1994 ALVA transferred its activity to the Israel Economic Forum for the Environment (IEFE). IEFE incorporates 180 leading businesses, as well as academics in the fields of environmental sciences, economics, and business administration. Mr Bronicki, former Chairman of ALVA, congratulated the IEFE for taking over the work of ALVA and for joining INEM, and pledged his support. Former ALVA executives Mr Gill and Joel Weill joined the IEFE Board of Directors. Gavrush Shemesh became Chairman and Samuel Chayen, Executive Director.

In 1998 IEFE co-wrote a National Position Paper with the Samuel Neaman Institute for Advanced Studies in Science and Technology setting out the environmental priorities for Israel.

The paper included contributions from 100 professionals. The project was coordinated by Prof Yoram Avnimelech from the Israel Institute of Technology, who was a member of the IEFE Board of Directors and formerly Chief Scientist of the Israeli Ministry for the Environment.

IEFE launched the Sustainable Environmental Management Programme for Palestinian and Israel Business Leadership in 1998. Its goal was to promote not only environmental management but also peace in the region. The programme was run in co-operation with the Palestinian Society for the Protection of Nature and the Palestinian-Israeli Environmental Secretariat. It consisted of joint lectures on environmental management and field trips to industries. Prominent business and industry leaders and senior representatives of environmental NGOs from Israel and the Palestinian Authority, as well as the Israeli Ministry of the Environment and the Palestinian Ministries of Tourism and Industry participated. The first meeting was held in Bethlehem in October 1998. The Canadian ambassador to Israel, David Berger, also attended. The second meeting was held in February 1999 in northern Israel but due to the deteriorating political climate, the Israeli Defence Force closed the borders, preventing Palestinian participation. One of the results of the programme was the setting up of a joint Palestinian-Israeli Committee for Environmental Management.

On the occasion of INEM's 1999 General Members Meeting in Shefayim, Israel on 9–12 May 1999, INEM and IEFE held the conference, A Global Perspective on Environmental Management Best Practice on 12 May. Dr Miriam Haran, Deputy Chief Scientist, Israeli Ministry of the Environment delivered a keynote address. At the closing ceremonies in Givatayim (near Tel Aviv) Mr Rafael Eitan, Deputy Prime Minister and Minister of the Environment and Agriculture,

Mr Efi Stenzler, Mayor of Givatayim, Dr Winter, Chairman of INEM, and Mr Shemesh, Chairman of IEF, presented awards to IEF Member Companies that had achieved ISO 14001 certification.

IEFE honoured Dr Winter for his environmental achievements with the planting of a Garden of 100 Trees in the hills of Jerusalem on 9 May 1999.

During the months of October-December 1999 IEF held an ISO 14001 training course in cooperation with the Standards Institution of Israel. The course consisted of 80 hours of lectures and workshops. By November 2001 IEF membership comprised 250 of the largest bodies in Israeli economic, academic and political leadership.

Industrial Environmental Forum of Southern Africa (IEF)

The Industrial Environmental Forum of Southern Africa (IEF) is the only INEM member organisation that explicitly aims to go beyond its own national borders, working on a broader regional basis with Botswana, Mozambique, Namibia and Zimbabwe.



Fig. 3.20 Jon Hobbs (left), Dr Winter (second from right, back) and workshop participants

The seed for IEF was planted on 21–22 March 1990 when Eskom SA, the major provider of electricity in South Africa, organised the workshop “The Business of Environmental Management: Strategies for the 1990s” in Johannesburg. Eskom had invited leaders of business, government departments and non-governmental organisations concerned with environmental matters to the workshop. More than 400 decision-makers attended.

In his welcoming speech Dr I. C. McRae, Eskom Chief Executive, stressed that it was time to take a proactive stance on matters of environmental concern. Dr Winter informed the Southern Africans about his integrated system of environmental management – the Winter Model – and the BAUM concept for a national association of environmental management association in his presentation on “Environmental Management – An Innovative Management Tool” on the second day.

On 21 March 1990 Dr Winter also addressed the President’s Council of South Africa in Cape Town, describing the Winter Model and his experiences with environmental management. The task of the President’s Council was “to investigate and make recommendations on a policy for a National Environmental Management System, with particular reference to the ecological, economic, social and legal implications thereof”.

IEF was subsequently founded in August 1990 by Eskom and a group of South Africa’s leading businesspersons and industrialists, who were concerned about deteriorating environmental quality and the implication that industry and commerce are principal agents in this trend, and who shared common values that reflected a vision of the dynamic role that business should play in the protection of the environment. IEF’s goal was to become the preferred voice of business on pertinent environmental issues in the region. Founding members included

Eskom, Caltex Oil SA, BP Southern Africa, Mobil, Chamber of Mines, Nissan SA, Toyota SA, Highveld Steel, Rand Mines Ltd, AECI Explosives and Chemicals Ltd., TransNatal Coal, Sappie Paper & Pulp Ltd., Sentrachem Ltd., Shell SA, South African Airways, and Pick 'n Pay.



Fig. 3.21 Dr John B. Maree,
founding Chairman of IEF of Southern Africa

Dr John B. Maree was elected Chairman. Other members of the founding Executive Committee were Mike Sander, Peter Fewell, Allen Morgan and Derrick Burns. Members of IEF are senior business leaders and professionals who recognise the crucial influence that environmental matters play in determining long-term business success. They are committed to implementing sound environmental practices in the operation of their business as reflected in the 10-point Code of Conduct. IEF is an independent, impartial, non-profit organisation which is self-financed through annual membership fees and cost contributions from participants at specific events. It implements a proactive rather than a reactive approach to environmental issues.

IEF's first public initiative was the staging of the Southern African International Conference on Environmental Management (SAICEM) in Somerset West, near Cape Town, on 28–29 October 1991. SAICEM was conceived as a regional follow-up to the 2nd World Industry Conference on Environmental Management held in Rotterdam on 10–12 April 1991. SAICEM attracted more than 400 local and international delegates and speakers.

Due to the success of SAICEM, IEF was invited to send a delegation to the United Nations Conference on Environment and Development – the Earth Summit – in Rio de Janeiro in June 1992. It also contributed to the Earth Summit by providing case studies for the session on “Changing Course – An African Business Perspective on Development and Environment”, as well as by participating in INEM's first IICSD, held as part of the 1992 Global Forum of UNCED on 2–4 June.



Fig. 3.22 Jon Hobbs, Executive Director of IEF

IEF Executive Director Jon Hobbs lead the session of the IICSD focusing on Southern Africa. It featured presentations by IEF members Dr Derrik Burns of Engen Ltd., Dr Steve

Lennon of Eskom, Dr Horst Wagner of the Chamber of Mines of South Africa, Dr Erica Reynolds of Sasol Limited, and Enos Chiura, Chairman of Delta Corporation and President of the Industrial Environmental Forum of Zimbabwe.

Mr Chiura and Dr Winter also participated in the United Nations Intersectoral Dialogue at which representatives of NGOs spoke about their work, views and needs, and how they could contribute to the success of UNCED.

In South Africa, IEF plays a major role in advising, liaising with and providing business input to various regulatory authorities on the development of environmental policy and standards. Members are instrumental in ensuring that local and international environmental policies take into account cost-effectiveness, achievability and African practicalities. IEF also supports industry in Botswana, Mozambique, Namibia and Zimbabwe, hence its name IEF of Southern Africa. IEF became a Full Member of INEM in February 1992.

3.9 Sociedade para de Incentivo e Apoio ao Gerenciamento Ambiental (SIGA) Brazilian Society for the Promotion of Environmental Management

SIGA, the Portuguese word for “follow”, was founded as a non-governmental, non-profit, educational, environmental organisation in Rio de Janeiro in October 1991. The seed was planted at the WICEM II in Rotterdam, at which Sao Paulo businessman Aron Belinky, Director of CETEST, heard Dr Winter’s presentation on his integrated system of environmental management and learned of the launch of the International Network for Environmental Management. Mr Belinky met with

Dr Winter and INEM Executive Director Mr Davis and agreed to help establish an environmental management association in Brazil.

On 9 October 1990 Jack Sickermann of BT Consulting (Rio de Janeiro, Brazil and Bremen, Germany) contacted Dr Gege requesting information about BAUM. BT Consulting, which specialised in the food industry, particularly in healthy nutrition, was advising on production of orange juice that would meet the criteria of the International Federation of Organic Agriculture Movements (IFOAM). BT Consult was interested in BAUM activities and in establishing a similar organisation in Brazil. Subsequently, Mr Belinky and Mr Sickermann cooperated in founding the association.

SIGA was publicly launched on 9 October 1991 with a televised press conference in Rio de Janeiro following a lunch attended by representatives of several large companies (Joao Fortes Engenharia, White Martins, Coca-Cola, Concremat) and business associations (GIE, FLUPEN). Mr Sickermann was named Executive Director. Meetings also were held on 10 October 1991 in Sao Paulo (Dupont de Nemour do Brasil, Hoechst do Brasil, CETEST Ar Condicionado, PNBE) to present the BAUM and INEM models and to help coordinate and inform about activities in Rio de Janeiro.

In January 1992 INEM enabled two staff from SIGA (and two from ADEGA, INEM's Argentine member association) to participate in a German Agency for Technical Cooperation (GTZ) environmental management seminar in Germany. SIGA and the INEM Main Secretariat co-organised the first International Industry Conference on Sustainable Development as part of the Global Forum of the United Nations Conference on Development and Environment – the Earth Summit – in June 1992 in Rio.

In the framework of the project Global Environmental Management Survey-Brazil, SIGA developed links with SEBRAE (Brazilian Service to Support Micro and Small Enterprises), FIRJAN (Industry Federation of Rio de Janeiro), FIESP (Industry Federation of Sao Paulo) and FLUPEME (Rio de Janeiro Federation of Small Industries). SIGA is also supported by the Chamber of Commerce of Rio de Janeiro. The GEMS Survey assessed the level of knowledge about, and the implementation of environmental management in more than 1000 representative companies.

SIGA's other activities included a series of seminars carried out with SEBRAE on environmental management for smaller companies in six states of Brazil; and participation in a commission which developed environmental labels for several industries.



Fig. 3.23 José Roberto Marino, Chairman of SIGA

SIGA was reorganised on 6 October 1993 with José Roberto Marino as President and Haoldo Mattos de Lemos as Vice-President. Sergio M. Sahlit was hired as Technical Director and Liana Gemunder as Administrative Secretary. Mr Sickermann advised the new staff during the period of transition. Prof Dr Dalia Maimon became Executive Director.

In 1996 Prof Dr Maimon published the book *Passaporte Verde: Gestão Ambiental e Competitividade*. In 1999 she published a guide on ISO 14001 implementation for small and medium-sized enterprises, *ISO 14001: Passo a Passo da Implantação nas Pequenas e Médias Empresas* in 1999.

Today SIGA brings together business associations, government and small and medium-sized private sector companies focused on a common objective: the implementation of environmental management systems aligned with the principles of sustainable development. SIGA believes it essential to implement partnerships to achieve its objectives and has developed designs for both the public and the private sectors. Activities include training on environmental management and environmental marketing, publications and research.

SIGA aims to:

- contribute to changing attitudes of society in matters relating to the environment through education and environmental health and the media.
- support private and public institutions in environmental management, particularly in the sanitation sector, basins and energy conservation.
- enable and train entrepreneurs and decision makers with respect to environmental management and social responsibility.
- Produce educational materials and audio-visual works that focus on education and environmental health, conservation of natural resources and minimisation of environmental impacts.
- develop and spread opportunities for Eco-business
- promote networks of exchange with counterparts in Brazil and abroad.

SIGA is a member of FUNPERJ (Federation of Foundations of the State of Rio de Janeiro) and member of the Environmental Council of the Federation of Industries of Rio de Janeiro. Prof Dr Maimon served as a member of the INEM Board from 1998 to 2003.

Chapter 4

THE INTERNATIONAL NETWORK FOR ENVIRONMENTAL MANAGEMENT

4.1 Background

BAUM's accomplishments came to the attention of the international business community; so many inquiries reached the BAUM office that the organisation found it necessary to dedicate a position solely to answering them. Troy Davis, son of Esther Peter-Davis, who spread Dr Gege's concept for environmental counsellors in France, setting up the Institut ECO-Conseil in Strasbourg, was hired to handle inquiries from the international business community. He worked closely with Dr Winter to set up INEM and upon its founding was named Executive Director.¹⁰¹

One of the first major efforts to launch an international organisation to promote environmental consciousness among the world business community was made by the International Chamber of Commerce (ICC) in the 1980s. In 1986 the ICC and about 25 internationally renowned corporations founded the International Environmental Bureau (IEB), a specialised division to function as a clearing house of primarily technical environmental information. According to its Deputy Director Albert E. Fry, the IEB's fundamental objective was to promote environmental management and its primary purpose was to make the newest industrial expertise and techniques available

to companies world-wide. IEB served as a reference centre for environmental information on the control and abatement of pollution. Mr Fry pointed out that while IEB attempted to respond to requests from companies world-wide, its main focus was on transferring environmental technology know-how to developing nations.¹⁰²

In the meantime, the ICC had taken notice of the effectiveness of the German Environmental Management Association (BAUM). In May 1990, when governmental representatives of 35 countries and the most important international organisations met at the conference Action of a Common Future in Bergen, Norway, to decide on an action programme to solve the world's most severe environmental problems, the ICC, as official representative of the world's business and industry, emphasized the necessity for national business organisations dedicated to the promotion of environmental management and stated that the ICC considered BAUM as a suitable model for such organisations. Dr Georg Winter represented BAUM at this conference just as he had at the *Workshop on Sustainable Industrial Activities* in November 1989 in Warsaw, and again the ICC promoted the BAUM model. The official Workshop report notes that "Industry associations set up with the special purpose of promoting environmentally conscious management as an integrated system can contribute substantially to raising environmental awareness and encouraging action." Under the section Actions Possible, the report further recommends that "Enterprises should set up associations to promote environment-conscious business management in every country, particularly for small and medium-sized firms."

By 1989 BAUM had become the role model for national business associations for environmental management in Austria and Switzerland, and the BAUM model was also gaining attention

in a number of other countries. According to BAUM Chairman Dr Georg Winter, “One of the most important contributions to the solution of global environmental problems consists of the international dissemination of the know-how on environmental management accumulated by BAUM via the establishment of similar organisations in as many countries as possible.”¹⁰³

4.2 Initial efforts to found an international environmental management association

In the view of BAUM Executive Director Dr Maximilian Gege, the work that BAUM had put into assisting the Austrian association could not be provided for other fledgling organisations in Sweden, France and the United Kingdom as it would exceed the capacity of BAUM. Therefore, a separate organisation needed to be established to carry out this work. Initially, the primary task of the proposed association with the working title of “International Society for Environmental Management (ISEM)” would be disseminated know-how accumulated by BAUM to sister organisations in other countries. The next step would be to set up an information exchange to make the pioneering achievements of one of the national associations available to the rest. A further role of the proposed network would be to develop an international strategy for solving transnational environmental problems.

In an article published on 3 February 1990 in the business newspaper *Handelsblatt*, Federation of German Industry (BDI) President Dr Tyll Necker called on German businesses to participate in an “Industry Initiative for Environmental Protection in the German Democratic Republic (GDR)”. Dr Necker argued that West German industry held the world-wide lead

in industrial environmental protection and that it should offer this knowledge to East Germany.

BAUM heeded Dr Necker's advice and, in fact, had already been working on some initiatives to assist East German companies. On behalf of the Federal Ministry for the Environment, BAUM had organised a two-day congress on environmental management in Leipzig in September 1989. BAUM held a similar one-day congress in Schwerin. In February 1990 Dr Winter made a presentation on the practical implementation of his Integrated System of Environmental Management to more than 600 participants of the Congress on Business Administration in the Market Economy in Erfurt.

BAUM also had been asked to provide assistance on how to integrate environmental considerations into economics curriculum at East German universities. BAUM worked together with Prof Dr Volker Stahlmann of the College of Business Administration, University of Applied Sciences – Nürnberg. Prof Stahlmann developed a two-semester introduction to environmental economics as well as a concept for the integration of environmental considerations in the regular business administration curriculum.

In February 1990 a congress to consider the integration of market economics in the curriculum of GDR institutions of higher education was held in Rodewisch/Karl Marx City. In attendance were all 120 lecturers of the GDR Technical Colleges. Dr Gerhart Rompf, Lecturer at the Erfurt Campus of the Technical College of Economics outlined the planned cooperation with BAUM. BAUM provided all participants with information on environmental management. In the same month another meeting between representatives of the College of Economics and the Board of BAUM was held in Hamburg to explore cooperation in the planned evening seminars,

integration of know-how on environmental management into existing training courses, as well as the founding of a BAUM sister organisation in the GDR.

A further important sphere of activity opened with the liberalization of the economies of COMECON countries. When Dr Winter met Polish Minister of Environment Dr Bronislaw Kaminsky and the Minister of Economy Tadeusz Syryjczyk on the occasion of the *Workshop on Sustainable Industrial Activities* in November 1989 in Warsaw, both expressed great interest in his Integrated System of Environmental Management. Dr Kaminsky went further, suggesting that a Polish/German sister organisation of BAUM should be founded in Poland.

Parallel to these activities BAUM was involved with the ICC in discussions on the establishment of an international environmental management organisation, the Environmental Management Foundation (EMF). During a meeting at the offices of BAUM in Hamburg on 9 November 1989, ICC Senior Consultant Dr Jan-Olaf Willums, and BAUM executives Dr Winter (Chairman), Dr Gege (Executive Director) and Prof Dr Jan Hensmann explored cooperation between the proposed EMF and ISEM.¹⁰⁴

Dr Willums reported that EMF would be founded with headquarters in Paris. Its main tasks would be the creation of a network of educational institutions, an East/West Roundtable, as well as special activities for the promotion and dissemination of environmental management worldwide. The promotion of environmental management would be accomplished through an initiative on environmental auditing and an environmental code of conduct for business enterprises. It was suggested that EMF would become a formal member of ISEM, that an EMF representative would serve on the ISEM Advisory Board, and that an ISEM representative would serve on the Advisory Board

of EMF. It was further agreed that BAUM would draft a code of conduct for companies on behalf of the ICC.

The BAUM Board of Directors, in month-long discussions with the Senior Consultant, argued that not one but two organisations should be established, namely:

- EMF, headquartered in Paris, as the centre of a network of educational institutions for environmental management, and
- ISEM, headquartered in Germany, as the main elements of ISEM had already been realised internationally in the form of national business associations for environmental management in Austria, Switzerland, Sweden and the United Kingdom.

The code of conduct, which would become the ICC Business Charter for Sustainable Development, was realised with significant BAUM input, but the cooperation between BAUM and ICC on establishing the EMF was not.

BAUM continued its efforts to establish ISEM. Discussions were held with the German States of Bavaria, Hamburg, Schleswig-Holstein, Bremen and Lower Saxony. Major German companies such as Deutsche Bank, Otto Versand, IBM Germany, Hamburg Electricity Works, Hamburg Gas Works, Beiersdorf AG, Philips Germany, Dräger AG, Messerschmitt-Bölkow-Blohm and Iduna/Nova were approached for sponsorship. But the time was not yet ripe for the founding of ISEM.

4.3 The birth of the International Network for Environmental Management

By 1989 BAUM had grown to more than 200 member companies. Its success attracted international attention, spurring the formation of similar associations. By the end of 1990 national business associations for environmental management following the BAUM model had been created in nine countries: Austria (Bundesweiter Arbeitskreis für umweltbewusstes Management, 1989), South Africa (Industrial Environmental Forum of Southern Africa, 1990), Sweden (Föreningen Svenska BAUM, 1990), Switzerland (Schweizerische Vereinigung für ökologischbewusste Unternehmungsführung, 1989), and the United Kingdom (Technology, Research and Enterprise for the Environment, 1990) with assistance from BAUM, and in Hong Kong (Private Sector Committee on the Environment, 1988), Malaysia (Environmental Management and Research Association of Malaysia, 1984), Taiwan (Taiwan Environmental Management Association, 1988) and the United States of America (Global Environmental Management Initiative, 1990) without direct BAUM assistance. Unfortunately, supporting its sister organisations proved to be an excessive burden on BAUM's resources, and it was decided to establish a separate organisation to facilitate exchange of experience and networking among them. This organisation would become the International Network for Environmental Management (INEM). The original name ISEM, the International Society for Environmental Management, was changed because the founding members decided that the word "Network" better described the organisation than "Society".

Meanwhile, the search for institutional support to finance the proposed organisation during its start-up phase was bearing

fruit. Dr Winter and BAUM had found a strong ally in Dr Franz Froschmaier, the Minister for the Economy, Technology and Transport of the Federal State of Schleswig-Holstein. His ministry agreed to provide funding for INEM between 1 April 1991 and 31 December 1992. In its first year, INEM received DM 177,600 and in its second DM 219,400.¹⁰⁵



Fig. 4.1 Dr Franz Froschmaier, Minister for the Economy, Technology and Transport of the Federal State of Schleswig-Holstein, and Dr Georg Winter

With financing guaranteed for its first two years, the way was clear for the establishment of the world's first international association dedicated to improving the environmental performance of business and industry.

The founding meeting of INEM was held at Haus Rissen near Hamburg, Germany on 19 February 1991. Participants comprised executives of BAUM's sister organisations from Austria, Germany, Sweden, Switzerland and the United Kingdom, as well as organising committees from Denmark and France. The meeting began with a round of reports on the status and activities of the associations. Göran Lundgren (Chairman), Edwin Krzesinski (Vice-Chairman) and Hans Antoni (Member of the Board) of Föreningen Svenska BAUM reported that the Swedish association had been founded in 1990, its membership

stood at 25 companies and that the number was expected to double by year's end.

Roger Fawdry (Vice-Chairman) and Mike Carver (Secretary) of Technology, Research and Enterprise for the Environment (TREE UK) reported on the British association. Founded in 1990, its membership stood at 20 and was expected to increase rapidly. Negotiations were underway with several other British organisations on common programmes.



Fig. 4.2 Founders of the International Network for Environmental Management (top row from left): Mike Carver, Roger Fawdry, Dr Georg Winter, Troy Davis, Georg Wiedemann, Henning Madsen, Göran Lundgren, Edwin Krzesinski; (bottom row from left): Paschen von Flotow, Hugo Prestegaard, Dr Erika Pichelmann, Janna Derkits, Asger Domino, Dr Peter Mohr, Hans Antoni

Paschen von Flotow, representing Dr H. Zumstein (Chairman) of the Schweizerische Vereinigung für ökologisch bewusste Unternehmungsführung (ÖBU), reported on the Swiss association. Founded in 1989, its membership stood at 130. Dr Erika Pichelmann, representing Dr Walter Seeböck (Chairman) of the Bundesweiter Arbeitskreis für umweltbewusstes Management

(BAUM Österreich), reported on the status and activities of the Austria association. Founded in 1989, its membership stood at 80.

Asger Domino of Brodrene Hartmann A/S, Henning Madsen (Project Leader of the organising Committee of ELM Denmark), and Hugo Prestegarrd (Chief, Danish Brundtland Campaign) reported on activities for the establishment of a Danish association. The target launch date was 16 May 1991. Dr Winter, as Chairman of BAUM, reported on the German association. Founded in 1985, its membership stood at 280.

Following these reports, the founding group agreed the final wording of the Charter of the International Network for Environmental Management (INEM) paving the way for the official launch of the organisation.

“The purpose of INEM is the promotion, advancement, development and application of sound environmental management practices and environmental excellence worldwide. It shall pursue this purpose by, among other things, providing services to its members organisations, organising the exchange of information, and promoting cooperation among its members. It shall also provide assistance in the formation and advancement of national business organisations for environmental management.” — Excerpt from the INEM Charter, Article II: Purpose, non-profit character

As no European law was yet available to govern non-profit organisations, German law was adopted and Germany served as legal seat of INEM. Under German law, at least seven legal or natural persons are necessary for the founding of a non-profit organisation. “Legal” persons are defined as institutions, organisations, companies. “Natural” persons are

individual human beings. Because only BAUM, BAUM Austria and Svenska BAUM already had approval from their Boards of Directors to join INEM, seven individuals – Mr Davis (France), Mr Domino (Denmark), Mr Madsen (Denmark), Mr Krzesinski (Sweden), Mr Antoni (Sweden), Ms Derkits (USA) and Mr Carver (UK) – agreed to serve as founding members.

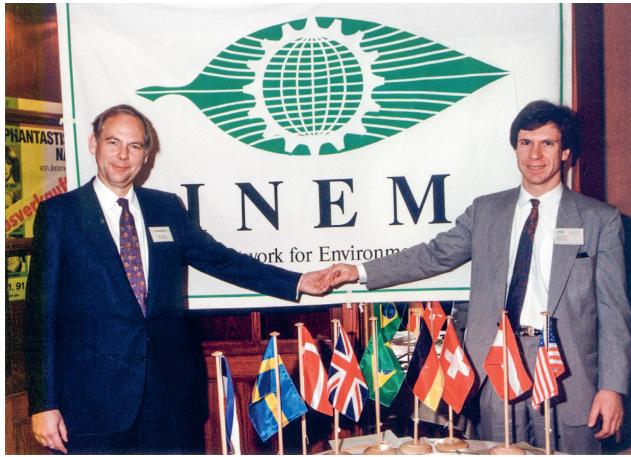


Fig. 4.3 Dr Georg Winter (Chairman) and Troy Davis (Executive Director) celebrate the founding of INEM

The INEM Charter specifies that these natural persons will cease to be members when at least seven organisations have joined INEM. By March 1992 four more associations, TREE UK, ELM Denmark, the Industrial Environmental Forum of Southern Africa (IEF) and Sociedade para o Gerenciamento Ambiental (Society for the Promotion of Environmental Management) SIGA of Brazil, had joined INEM, thus fulfilling the requirement for seven members, and the individual members resigned.

A temporary Board of Directors was chosen to serve until the first General Members Meeting could elect a permanent. Its

duties were to fulfil the legal formalities required for the creation of INEM. Dr Winter and Mr Lundgren were unanimously elected to the temporary Board, and were named Chairman and Vice-Chairman, respectively. Vagn Genter of Denmark and Dr Seeböck of Austria were nominated to serve on the permanent INEM Board. Mr Davis became Executive Director.

It was decided to hold the next meeting and publicly launch the organisation on 12 April 1991 at the World Trade Centre in Rotterdam on the occasion of the 2nd World Industry Conference on Environmental Management (WICEM II).

4.4 INEM's three main spheres of activity

The activities of INEM focus on three main areas: facilitation of cooperation and communications among member associations, assistance in the establishment and advancement of national business associations for environmental management, and participation in international fora to promote INEM, its member organisations, and their objectives.

Founding and support of environmental management associations worldwide

INEM supports the foundation of national business associations for environmental management by helping them help themselves. It helps the new associations apply methods that have been tried and tested by established members. The INEM “start-up kit” includes models for the association charter, mission statement, organisational and membership structure, and Code of Conduct for member companies.

In view of the precarious economic situation in most developing and former COMECON countries, INEM tries to find

financing from foundations, national and multilateral institutions, and international organisations to fund an initial environmental management project. This financing helps to “jump start” the association, covering costs for office space, equipment and staff.

For example, the INEM Main Secretariat secured funding from several international donor organisations to carry out Global Environmental Management Surveys (GEMS) in both Argentina and Brazil (SIGA in Brazil in 1992, ADEGA in Argentina in 1994). The GEMS project allowed the young associations to build relationships to local enterprises, business organisations and government agencies; attract new members; nurture a positive media image; and develop an action programme for the next years.

INEM supported the founding of a Hungarian business association in a similar manner in 1995. INEM had been contracted by the German Federal Ministry for the Environment (BMU) to develop and carry out a series of environmental management seminars for Hungarian business and industry. This project provided the opportunity to create a new association. Mr Tóth and INEM used the opportunity to create a Hungarian business association for environmental management, KÖVET. On 23 November 1994 an organising committee was launched at a public meeting at the Gellért Hotel in Budapest. The meeting was hosted by Attila Frigyer, who had been contracted by INEM to organize the Hungarian seminars. Mr Frigyer was director of a state-owned company developing environmental labels for environmentally friendly products. The Executive Director of the Foundation for Industry, Dr Tamás Kemény was named Secretary-General of the 12-member Organising Committee of KÖVET. Mr Tóth was named Executive-Secretary.

At the launch meeting INEM Executive Director Mr Davis announced that KÖVET had been awarded a contract to produce the Hungarian portion of a report on environmental management seminars organised by the INEM Main Secretariat. Mr Davis also announced that future environmental management seminars targeting Hungarian business and industry would be subcontracted to INEM-Hungary. "It is a question of institutional capacity-building. The Main Secretariat is always looking for projects and programmes we can subcontract to our existing and newly forming associations in order to support their infrastructure."¹⁰⁶

In the mid-1990s INEM initiated efforts to establish a national business association for environmental management in Poland. The new association was to serve as a competence centre for exchanging information and experience about environmental management in Poland and to carry out tasks necessary for Poland's integration into the European Union and the Common Market.

Polish Environment Minister Bronislaw Kaminsky and the Minister of Economy Tadesz Syryjczyk expressed strong interest in the concept of environmental management promoted by BAUM during a meeting with Dr Winter held on the occasion of the Workshop on Sustainable Industrial Activities in November 1989. The Polish Environment Ministry called for the establishment of a Polish/German sister organisation of BAUM.

Professor Maciej Novicki, President of ECOFUND and former Environment Minister, reiterated the call in October 1996:
"It is a very good idea to create this network of INEM in Poland."



Fig. 4.4 Prof Maciej Novicki

Concrete efforts to establish INEM Poland began in January 1997. INEM secured funding for a series of seminars on implementation of environmental management systems according to the international standard ISO 14001, publication of a Polish version of *Business and the Environment*, and the GEMS-Poland survey, an evaluation of the level of environmental management awareness and know-how, and obstacles to the introduction of environmental management in Polish businesses and industries.

These projects were carried out over a two-year period and served to provide the young organisation with an office infrastructure and staff, contacts to Polish enterprises, and credibility among the business community, government bodies and international donor organisations. INEM Poland was publicly launched at the 2nd ECO-BALTIC Conference in Gdansk on 10 October 1997.

The Baltic States were the next countries to request and receive support for the creation of national business associations for environmental management. INEM launched its

massive BALTEMA project in 2002 to establish and support national business associations in Estonia, Latvia and Lithuania. Details are provided in Chapter 7: Environmental Management for Central & Eastern Europe.

Promotion of communication among member associations

INEM Bulletin, INEM Info Service, INEM Members corner on the INEM website

Participation in international processes and forums

Article 8: Cooperation with other organisations and institutions:

“The network and the member organisations shall, when appropriate and in the spirit of cooperation, work with chambers of commerce and industry, industrial, professional and trade associations and unions, environmental and consumer organisations, other non-profit organisations, training and academic institutions, administrative and governmental bodies at local, national and international levels and international and intergovernmental bodies.” — *Excerpt from the INEM Charter*

INEM and its members pursue their goals in cooperation with intergovernmental, multilateral and bilateral organisations, international institutions and NGOs, chambers of commerce and industry, and sectoral associations. INEM representatives speak at conferences, advise United Nations organisations (e.g. UNIDO, UNEP, UNCSD), publish articles, reports and books, and maintain extensive links with the media. An overview of INEM’s cooperation partners is provided in Chapter 9: Cooperation with national and international organisations. A selection of INEM presentations at major international

conferences is presented in Chapter 5: Activities and achievements of the International Network for Environmental Management.

4.5 INEM expands its membership to include cleaner production centres

Cleaner production, also called pollution prevention and waste minimization, seeks to reduce waste and emissions at the source by optimizing material flows. The United Nations Industrial Development Organisation (UNIDO) and United Nations Environment Programme (UNEP) launched a major programme to establish 20 National Cleaner Production Centres in primarily developing countries in 1993. The United States of America also supported a number of pollution prevention centres, primarily in Central & Eastern Europe. Although cleaner production centres function as non-profit consultancies and are not membership organisations, INEM took a decision in the mid-1990s to expand membership to allow them to join the network. The decision was based on commonality of interests and a long-standing history of cooperation with UNIDO and UNEP.¹⁰⁷

UNIDO's ties with INEM date back to the early 1990s, beginning with INEM's collaboration on UNIDO's *Working Paper No. 3, Industry Initiatives in Achieving Ecologically Sustainable Industrial Development*, a background paper for the Ministerial Conference on Ecologically Sustainable Development held in October 1991 in Copenhagen as a forerunner to UNCED. Since then, UNIDO's and INEM's interests converged in several areas, including promotion of cleaner production technologies and techniques and

exploring North-South cooperation in the transfer of non-CFC technologies.

INEM recognised the importance and achievements of cleaner production but argued that the purely technological approach was not sufficient; without environment management “software”, the cleaner production “hardware” is not sustainable. Muki Daniel of UNIDO’s Environmental Coordination Unit acknowledged in the Autumn 1993 issue of the *INEM Bulletin* that “cleaner production requires an integrated environmental management system” and further that “a partnership with INEM in various areas could be very useful”.

Starting in 1995 cleaner production centres in Australia (1995), Bulgaria (1996), the Czech Republic (1996), Estonia (1996), India (1995), Latvia (1998), Lithuania (1998), Romania (2002), the Slovak Republic (1996), Tanzania (1997), Tunisia (1995) and Zimbabwe (1995) joined INEM as Affiliated Members.¹⁰⁸

4.6 How do others view INEM?

In 1994 the magazine *Tomorrow: Global Environmental Business* published an international survey of business alliances and networks for sustainable development called “The Green Keiretsu”. The survey, which was compiled by the renowned environmental consultancy SustainAbility Ltd and Tomorrow, evaluated the goals and effectiveness of 40 national and international business initiatives, including INEM and four of its member associations. Other surveyed organisations included the Business Council for Sustainable Development, Business in the Environment (UK), Global Environmental Management Initiative (USA), International Hotels and



Fig. 4.5 *Tomorrow* magazine compared environmental business organisations

Environment Initiative, and the World Industry Council for the Environment.

Most of the “green business networks” were criticized for having a “reactive” character: defending interests of member companies, restricting dialogue to members and government agencies, using peer pressure to slow innovation, and viewing NGOs as enemies. INEM and its member associations (BAUM, EMIAA, IEF and Orée), on the other hand, were classified as “organisations in transition” that focused on redefining interests of member companies, dialoguing with expanded stakeholder group, and using peer pressure to spread best practice.

The authors John Elkington of SustainAbility and Claes Sjöberg of *Tomorrow* found that “the most interesting response came from INEM, whose 10-year goal was to build a critical mass of environmentally oriented companies,” in the expectation that “successful examples in each sector of activity will encourage imitators that will set off a chain reaction resulting in the worldwide propagation of environmental management”.

INEM was praised for being “locally rooted, practically oriented, balancing the influence of SMEs and large companies and the different industry sectors”.¹⁰⁹

INEM’s German member BAUM was praised for its “high innovation and problem-solving potential, international cooperation through INEM, dialogue between traditional business associations and environmental organisations, high-level contacts with business, media and political circles and good credibility”. INEM’s French member association Orée” was described as “the first organisation in France to develop partnerships between communities and companies based on concrete projects. A primary objective of Orée is to disseminate information and provide SMEs and small communities with help on environmental management”. The survey authors said that INEM’s South African member IEF the “preferred voice of business on pertinent environmental issues in the region [...] launched a new era of understanding in the business community on environmental responsibility”.

INEM’s Australian member association Environmental Management Industry Association of Australia (EMIAA) “serves as the focal point for those who face environmental problems and those who possess the skills, technologies or products to solve them [...] provides members with open and easy access to an ever-expanding international network of corporations, institutions, government and multilateral agencies”.¹¹⁰

Interview with Dr Georg Winter in "The Green Keiretsu", an international survey of business alliances and networks for sustainable development compiled by John Elkington of SustainAbility, Ltd and *Tomorrow* magazine, November 1994

Who is most likely to benefit from your activities?

The environment, all forms of life, and future generations. Participating industries because they acquire a competitive advantage through environmental management. In the long term, they ensure their very existence by preserving natural resources.

Does it matter what environmentalist organisations think of INEM? What do they think?

INEM itself is an environmental organisation. Its special strength is that it can call upon the economic expertise of its members to improve the environmental performance of business. INEM is not a business lobby. INEM represents the positions of business only when and as far as these positions also serve environmental protection. This approach is recognized by the environmentalist media and organisations.

Should organisations such as this police the environmental behaviour of their members?

The INEM Charter ensures that charters of member associations contain environmental protection as a goal and that the associations cannot be misused for anti-environmental purposes. Some of the member associations have developed codes of conduct for their member companies. We do not demand sheep with white fleece, although we do try to keep out wolves in sheep's clothing.

4.7 A selection of environmental prizes awarded to INEM and its members

Global 500 Role of Honour 1991

BAUM was elected to the prestigious Global 500 Roll of Honour of the United Nations Environment Programme (UNEP) in 1991 for the further development and dissemination of the Winter Model. According to UNEP, “This integrated system of environmental management was the first and only systematic attempt to provide businesses with practical checklists on environmentally sound behaviour from production to marketing and transportation to training.” The presentation ceremony was officiated by Dr Mostafa K. Tolba, Executive Director of UNEP, and King Carl XVI Gustav of Sweden.



Fig. 4.6 (from left) BAUM Executive Director Dr Maximilian Gege and BAUM Chairman Dr Georg Winter with certificate attesting BAUM's election to the UNEP Global 500 Role of Honour

German Environment Award 1995

The German Federal Environment Foundation (DBU) awarded Dr Winter its German Environment Award in 1995.

In his eulogy, Dr Andreas Troge, President of the German Environment Agency (UBA), praised Dr Winter as “an entrepreneur who has not only recognised but also utilized the opportunities of pro-active environmental management to both protect the environment and improve companies’ environmental performance”. He also lauded Dr Winter's pioneering role in the development and dissemination of the integrated system of environmental management, especially the founding of BAUM, the world’s first and largest environmental management initiative of businesses and INEM, the world’s largest network for environmental management. Fritz Brickwedde, Secretary General of the DBU, commended BAUM for “considerably advancing environmental awareness and environmental protection in German industry”, and INEM for having a “concrete effect on reducing the burden on the environment [...] and creating economic benefits” for businesses and industries worldwide.¹¹¹



Fig. 4.7 Dr Georg Winter accepting the German Environment Award from German Finance Minister Theo Waigel

Change the World – Best Practice Award 2003

The Club of Budapest International selected Dr Georg Winter and the International Network for Environmental Management

(INEM) as a winner of the Change the World – Best Practice Award for 2003. The Change the World – Best Practice Award recognises innovative projects that put into practice the criteria of the United Nations’ Agenda 21 for socially and environmentally sustainable global development. INEM was honoured for its work in developing and spreading environmental management concepts and instruments to business and industry worldwide. INEM Chairman Dr Winter accepted the prize on behalf of the organisation. Presentation of the award took place on 11 October 2003 in the Neues Schloss in Stuttgart, Germany. The award ceremony was part of the global initiative, “You can change the World”, which was launched in 2002 under the patronage of Sir Peter Ustinov, Mikhail Gorbachev, the Dalai Lama and 50 top VIPs of the Club of Budapest International.¹¹²



Fig. 4.8 Dr Georg Winter (middle) and staff of INEM associations at Change the World prize ceremony

INEM member wins the European EMAS Award 2009

INEM Board Member and Director of INEM’s Belgian member Eco-Conseil Entreprise (ECE) Heinz-Werner Engel won the European EMAS Award 2009 in the Micro-enterprises category in 2009. The annual European Eco-Management

and Audit Scheme (EMAS) Awards celebrate and promote best practice in managing the environment. The European Commission presented the award on 19 November 2009 in Stockholm.



Fig. 4.9 (from left) Herbert Aichinger, European Commission, Marcel Van Meesche and Heinz Werner Engel of ECE at EMAS Award ceremony

4.8 The INEM network comprises almost 50 countries

From 1991 to 2011 a total of 73 organisations in 47 countries in Europe, Asia, Africa, the Near East, and the Americas were members of INEM. Organising committees had been formed in seven additional countries. As with any membership organisation, INEM's size fluctuated over the years. At its peak INEM comprised more than 35 members, representing more than 5,000 companies worldwide. A complete list of INEM members and affiliates with short descriptions of their activities is provided in Annex A.

The original tasks of INEM, to help establish national business associations for environmental management and to

facilitate cooperation among them, expanded to include acquisition of international projects and their execution, publication of case studies, international lobbying for framework conditions favourable for environmentally friendly businesses and industries, expansion of environmental management to other sectors, development of international standards for environmental management systems, and the development and dissemination of environmental management tools, especially for small and medium-sized enterprises. These activities are described in the following chapters.

Chapter 5

ACTIVITIES AND ACHIEVEMENTS OF THE INTERNATIONAL NETWORK FOR ENVIRONMENTAL MANAGEMENT

"I congratulate the International Network for Environmental Management on its 10-year engagement for the worldwide dissemination of environmental management." — Heidemarie Wieczorek-Zeul, Federal Minister for Economic Cooperation and Development, on the occasion of INEM's 10th anniversary



Fig. 5.1 Berlin Conference 2001

"ENSEARCH, by being part of the INEM network, has greatly benefited from the programme and publications initiated by INEM. In particular, INEM has facilitated exchange of information and

experience amongst the network members. This has certainly been of immense help to ENSEARCH in developing its programme in respect of environmental management and cleaner production.”
— *Ir. K. Kumarasivam, President, Environmental Management & Research Association of Malaysia*



Fig. 5.2 Ir. K. Kumarasivam



Fig. 5.3 Gavrush Shemesh

“The Israel Economic Forum for the Environment believes that the environment has no borders and is, therefore, a global issue. IEFE believes that the right way of tackling environmental problems is by promoting sustainable development and environmental

management. IEFE believes that international cooperation is extremely important and INEM, which is the international network coordinating efforts to promote environmental management, is an essential framework for doing so.” — *Gavrush Shemesh, Chairman, Israel Economic Forum for the Environment*

“I first learned about the environmental management initiative of INEM as a graduate student. In four years of working together, I have kept my enthusiasm for the INEM people, who have been helpful and able in implementing new ideas. They have helped enormously to establish KÖVET and to implement projects. I am happy to be in the big family.” — *Gergely Tóth, Executive Director, Hungarian Association of Environmentally Aware Business Management*



Fig. 5.4 Gergely Tóth

“The Foundation for Investment and Developments of Exports (FIDE) is a non-profit private foundation dedicated to strengthening the business and investment climate in Honduras. It has been a pleasure for FIDE to work with the International Network for Environmental

Management since 1996 and as a result of INEM's initiatives, FIDE is now working in the creation of an Environmental Centre, expanding its operation to an organic products certification. This initiative is totally consistent with other major objective of supporting sustainable development.

As we know the importance and great impact of INEM's services, we want to encourage you to continue your assistance in environmental activities, mostly directed to those developing countries that need to learn about environmental issues. INEM's purposes are greatly appreciated." — *Antonio Young, Executive President, Foundation for Investment and Developments of Exports*

"The INEM network is very important for the German Environmental Management Association because only through the network can the results of our practical work in preventative and sustainable environmental management be transferred internationally." — *Dr Maximilian Gege, Executive Director, German Association of Environmental Management (BAUM).*

"There is a great need for nations to be managed according to holistic environmental principles as well as individual companies within them. Thus, we also need to recognize the need for an 'integrated system of environmental government' that covers the public sector.

Governments, like companies, should aim for the goals of environmental protection and resource conservation in all areas and at all levels of activity within their control." — *Dr Georg Winter, Initiator of INEM.*

5.1 International Industry Conferences for Sustainable Development (IICSD)

Starting in 1992, INEM organized a series of international conferences in various countries and regions of the world, usually in cooperation with the local member organizations. The goals of these conferences were to give concrete examples of best practice in environmental protection arising from the world's business community and to encourage business and industry to take the necessary steps towards a sustainable economy. The first of these conferences (Rio de Janeiro, 1992) was the world business community's main contribution to the Global Forum '92 of the United Nations Conference on Environment and Development (UNCED). The second conference (Tokyo, 1993) challenged the world industries, by means of the *Tokyo Appeal*, to draw up and publish *Industrial Agendas 21* with quantified environmental objectives. The third conference (Victoria Falls, 1994) concentrated on the sustainable development of African countries. The fourth and fifth IICSDs, (Lübeck, 1995 and Gdansk, 1997) focused on environmental management in the Baltic Sea region. The sixth IICSD brought environmental management to the Middle East (Shefayim, Israel, 1999). The seventh IICSD spotlighted the United Nations Global Compact and highlighted business opportunities in international development policy (Berlin, 2001).

IICSD 1, Rio de Janeiro, Brazil

By the end of 1991, INEM had grown to 10 members with several associations in the process of affiliation. INEM Executive Director Troy Davis thought it would be a good opportunity for the member associations to meet in Rio de Janeiro on the occasion of the *United Nations Conference on Environment and*

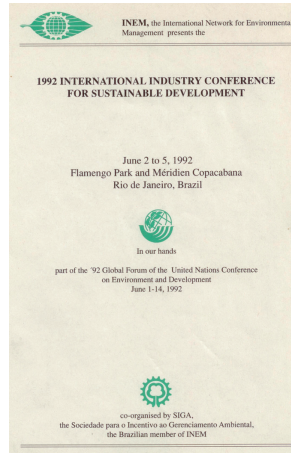


Fig. 5.5 Program of INEM's first
International Industry Conference on Sustainable Development

Development (UNCED) – the so-called Earth Summit. “It was the most obvious place for a first meeting of INEM members. All the world’s attention would be focused on Rio to see what steps our governments would decide on to assure our common future. And we felt we had our share to say.”

INEM’s founder and chairman, Dr Winter, explained, “We decided to have the conference at the *Global Forum '92* in Flamingo Park, amongst some 300 environmental NGOs, because we felt that business should not isolate itself from the environmental movement.” About 200 industry representatives from more than 20 countries took part in the four-day conference. It was co-organized with Sociedade para de Incentivo e Apoio ao Gerenciamento Ambiental (SIGA), INEM’s Brazilian member association. The German Minister for the Environment Prof Klaus Töpfer served as patron of the conference.

The delegates participated in various seminars and workshops on topics ranging from “Examples of Product Redesign

and Waste Minimization,” to “Case Studies in Evolution in Environmental Consciousness”. Speakers included internationally prominent business leaders and environmentalists such as José Lutzenberger, Brazil’s former Minister of the Environment, and Abdulrazag A. Algain, Director General of the Royal Commission for the Yanbu Project, Saudi Arabia, a winner of the United Nations Environmental Programme (UNEP) Global 500 Award. Henrique Brandão Cavalcanti, Director of CAEMI Mineração & Metalurgia, one of Brazil’s pioneer corporate environmentalists, chaired the case studies workshop. Ribeiro Valle of AÇOMINAS presented a case study on waste management in the Brazilian steel industry. Prof Dr Ernst Ulrich von Weizsäcker, a member of the Club of Rome, former Director of the Institute for European Environmental Policy, President of the Wuppertal Institute for Climate, Environment and Energy, and member of the German National Committee for the UNCED preparations co-chaired the session on environmental initiatives of business in Southern Africa, Austria, USA and Japan at the Conference.



Fig. 5.6 (from left) INEM Executive Director Troy Davis, Dr Corazon Claudio of the Philippine Business for the Environment, INEM Chairman Dr Georg Winter

The United Nations Industrial Development organization (UNIDO) strongly supported the IICSD. In her opening speech, Archalus Tcheknavorian-Asenbauer, (Director, UNIDO Industrial Operations Technology Division) pointed out that the goal of industrial and economic development is to act in harmony with the environment. UNIDO Director-General Domingo L. Siazon, Jr greeted the participants in a video-taped message, and Robert Williams, Officer-in-Charge, Environment Coordination Unit, chaired a session in which industrialists from Austria, Brazil, Germany and Sweden showed how environmental concern in business resulted in increased profitability. He also presented a paper on cleaner production of aluminium from bauxite ore.

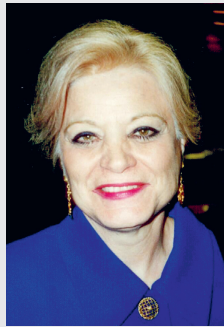


Fig. 5.7 Archalus Tcheknavorian-Asenbauer

At the workshop on “Building, Energy, Water and Industrial Symbiosis”, William McDonough, a well-known New York architect, presented the Hannover Principles, a set of nine guidelines for environmental buildings, and his vision that buildings should be a place where art, architecture, ecology and lifestyle are united. John Doggart of London-based ECD Architects and Energy Consultants, which specializes in energy efficiency for buildings, presented BREEAM, a system of

assessing building designs and awarding a “green” credit to environmentally sound buildings. Yoshihiko Shimada of Fujita Corporation, Tokyo, spoke about his vision for an ecological city using urban design concepts for sustainability. Amory Lovins of the Rocky Mountain Institute spoke via a telephone link on new materials and ecological buildings.

Environmental problems of transportation and their potential solutions were the topic of the workshop chaired by Ulrich Steger, Member of the Board of Volkswagen. Åki Nilsson of ABB Germany focused on long distance travel and the opportunities of high-speed trains. Claus Herzog of Mercedes do Brasil addressed problems and solutions of urban public transport by bus, and Hugh Somerville of British Airways spoke about environmental progress in aviation. Claes Hall of Brazil’s Aracruz paper company spoke at the workshop on “Total Quality and Environmental Management”. According to Hall, “Quality and environmental considerations have much in common. Both have to focus on customers and employees; training is a key question.”

Dr Winter and Enos Chiura of Zimbabwe also participated in UNCED’s *Intersectional Dialogue*, at which representatives of most NGOs present spoke about their work, views and needs, and how, together, they could add to the success of UNCED. “We can become allies in the crusade to protect the environment,” Dr Winter declared before the mixed group of environmentalists, trade union members, women’s groups, and developing country organizations.

IICSD 2, 1993 in Tokyo, Japan

The second International Industry Conference for Sustainable Development was held in conjunction with the International Eco-Management Conference: Towards an Industrial Agenda for Sustainable Development in Tokyo on 9–10 September

1993. The conference was co-organized with the INEM Japanese member organization Japan Eco-Life Centre and the United Nations University in collaboration with INEM. Supporting organizations included the Japanese Ministry of International Trade and Industry (MITI), Japan Environment Agency, Japanese Ministry of Construction, Keidanren – Japan Federation of Economic Organizations, International Council for Local Environmental Initiatives (ICLEI), International Organization for Standardization (ISO), United Nations Industrial Development Organization (UNIDO), the Foundation for Earth Environment (FEE), Global Environment Forum (GEF), UNEP-Japan Association, UNEP Industry and Environment Programme Activity Centre.

“UNIDO is most pleased to pledge its support to the International Conference on Eco-management organized by the Japan Eco-Life Centre and the United Nations University, in collaboration with the International Network for Environmental Management.

UNIDO supports the aims of the Tokyo Declaration and its call for a global Industrial Agenda 21, without which the overall sustainable development objectives set out in Agenda 21 adopted at UNCED cannot succeed.” — *Mauricio de Maria y Campos, Director-General, United Nations Industrial Development organization*



Fig. 5.8 Mauricio de Maria y Campos

A number of representatives of INEM presented papers to the conference. Dr Winter held a keynote address on “The Past, Present and Future of Environmental Management: A Vision for the New Millennium”. INEM associations from China (Cao Fengzhong, NICEST), France (Prof Dr Philippe J. Bernard, ORÉE), the Philippines (Dr Corazon Pb. Claudio, PBE), Slovenia (Polona Blagus Smonig, DREVO), Malaysia (Goh Kiam Seng, ENSEARCH) reported on the state of the environmental and business initiatives for environmental protection in their countries. Rolf Henriksson, Environmental Controller of the Swedish energy provider Sydkraft and a member of the Board of the Swedish INEM association, presented a case study on “Environmental management and development of sustainable energy systems in a power company”. Gary P. Waterworth Owen, CEO, EnvironMental Leadership Network and advisor to the Leicester Environment City Business Forum (UK) described “Public-Private Partnerships in Leicester Environment City”. Claude Blaizat, President of ECOZEO, a member of Orée-INEM France, described environmental activities at his food processing company.



Fig. 5.9 Dr Winter addressing delegates

ICLEI presented its goals and objectives and reported on recent activities of its Local Agenda 21 initiative in a

presentation by Luis Villafuerte, member of ICLEI Executive Committee and former Governor of the State of Camarinas Sur, the Philippines. The Local Agenda 21 Initiative is ICLEI's effort to help implement *Agenda 21* by aiding local governments to establish ongoing, participatory planning processes for sustainable development.

Sascha Kranendonk, Wuppertal Institute for Climate, Environment, Energy and co-editor of the *INEM Bulletin* made a presentation on "Eco-efficient services: an opportunity for the global business community". She explained that one of the Wuppertal Institute's areas of activity is to promote business policies which will lead to products and services that use less energy and less raw materials, without lowering living standards. "That is what we call *eco-efficiency*. Such products are superior products and a source of employment opportunities. The Wuppertal Institute is calling for a quantum jump in resource productivity, not merely a 20% improvement but an improvement by a factor of 10 within the coming 40 years. Already today, with existing technology, a reduction in material use by a factor of four can be achieved."

One of the most important results of the Conference was the release of *The Tokyo Appeal: Towards an Industrial Agenda for Sustainable Development*, which called upon individual businesses worldwide to draft and publish concrete environmental objectives. More information on the *Tokyo Appeal* and the *Industrial Agenda 21* Campaign is provided below.

IICSD 3, 1993 in Victoria Falls

Two of INEM's African member associations, the Industrial Environmental Forum of Southern Africa (IEF) and the Environmental Forum of Zimbabwe (EFZ), jointly organized the 2nd *Southern African International Conference on*

Environmental Management (SAICEM II). It was held near the Victoria Falls in Zimbabwe on 18-21 October 1994. SAICEM II was designated as the third of INEM's series of *International Industry Conferences for Sustainable Development*.

The theme of *SAICEM II* was "Building Capacity for Business Environmental Responsibility – An African Agenda". Speakers included Judge Amadeo Postiglione, Director of the International Court of the Environment; Tom Burke, Special Advisor to the UK Secretary of State for the Environment and co-author of the book, *Green Capitalists*; Dr Yannis Kinnas, Greek Minister Counsellor to the United Nations. In addition, Dr Winter delivered a keynote address. INEM Executive Director Mr. Davis, also participated. A special edition of the *INEM Bulletin* was prepared and distributed to participants.



Fig. 5.10 A special issue of the INEM Bulletin highlighting environmental management initiatives in Southern Africa was published on the occasion of SAICEM II

Business leaders from throughout Africa, as well as regional environment ministers, government officials, and various African environmental groups took part. In working groups,

they discussed and presented plans, and made proposals and commitments on:

- International and national policies – do they help or hinder?
- Environmental management systems and tools
- Communicating environmental performance to stakeholders
- Travel, tourism and sustainable development
- Rural environment and development
- Mining, energy and sustainable industrial strategies
- Cleaner production, technology co-operation and waste management

In addition, case studies on environmental measures implemented at British Airways and IBM, as well as at several African companies were presented. A number of training courses and seminars organized by various international organizations were held as well.

IICSD 4, 1993 in Lübeck, Germany

The 1st *ECO-BALTIC Conference: Partnerships for Sustainable Development in the Baltic Sea Region* was held on 8–10 March 1995 in Lübeck, Germany under the patronage of German Minister for the Environment Dr Angela Merkel.

The conference was organized by INEM with two major partners, the Baltic Sea Chambers of Commerce Association (BCCA) and the Baltic Marine Environmental Protection Commission (HELCOM). Other partners were the Baltic Tourism Cooperation (BTC), Union of Baltic Cities (UBC), Standing Conference of Rectors, Presidents and Vice-Chancellors of the European Universities (CRE), and the Lübeck Jaycees (Wirtschaftsjunioren Lübeck).

The *ECO-BALTIC* gave entrepreneurs from the region their first real opportunity to discuss an environmentally friendly and economically successful development of the area following the

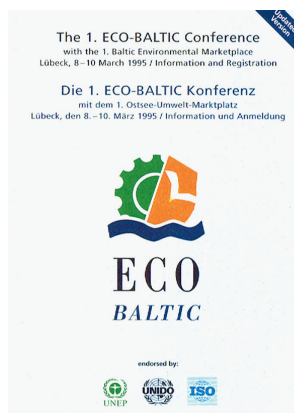


Fig. 5.11 1st ECO-BALTIC Conference program

fall of the Iron Curtain, focusing on industry's contribution to the protection of the severely polluted Baltic Sea. Almost 400 participants from 24 countries attended, the majority coming from the Baltic States, Poland, Russia and Germany. Representatives of INEM associations from Austria, Denmark, France, Germany, Hungary, Ireland, Slovenia, Sweden, Russia (in formation) and the INEM Main Secretariat participated as workshop speakers and / or workshop chairpersons.

An important theme of the conference was the creation of partnerships between East and West, and among the businesses, academic and research institutions, and various levels of government. A total of 16 workshops covered all aspects of environmental management: training programs and practice; eco-audits, life-cycle assessments and other instruments; concepts for sustainable energy, agriculture and tourism; building partnerships among businesses, academic / research institutions, local authorities and governmental institutions, and organizations; and public and private financing programs for the region. In addition, HELCOM organized two workshops: "Privatization and Business Opportunities under the

Baltic Sea Action Programme” and “Solutions for Municipal and Industrial Wastewater Problems”. Case studies were presented in most workshops to illustrate how the principles had been put into practice.

A number of high-level government officials also participated in the conference. Arvo Niittenberg, Estonian Minister of the Environment, Dr Alexandr Averchenkov, Russian Deputy Minister of the Environment, Måns Lönnroth, Swedish Deputy Minister of the Environment, and Dr Edda Müller, Minister of the Environment of Schleswig-Holstein, Germany spoke during the opening plenary and Peer Steinbrück, Minister of the Economy of Schleswig-Holstein, Germany delivered the keynote address of the closing plenary on “Sustainable Development in the Baltic Sea Region”.

Baltic Environmental Marketplace

The 1st *Baltic Environmental Marketplace*, organized by the BCCA, complemented the conference. Its goal was to provide participants with the opportunity to initiate direct contacts with potential partners for sales of environmental products and services, establishment of joint ventures, and transfer of technologies. The BCCA arranged and coordinated meetings between participating companies, organizations and institutions both before and during the conference. Companies and organizations also had the opportunity to present their products and services at an accompanying exhibition.

Lübeck Commitments

One of the concrete results of the conference was the elaboration of the *Lübeck Commitments*, a follow-on to the *Tokyo Appeal* released at the 2nd IISCD in 1993. The *Lübeck Commitments* are public declarations of specific environmental measures to



Fig. 5.12 1st Baltic Environmental Marketplace

be taken over the next two years. The purpose of the *Lübeck Commitments* was twofold: to inform the public of concrete measures that companies, institutions, organizations and local authorities intend to take in the next two years to protect the environment, and to help participants apply the information they had gathered during the conference workshops in their own companies and institutions. Representatives of companies, organizations, local authorities, and governments from 12 countries made a total of 107 commitments.

The 1st *ECO-BALTIC Conference* was supported by the German Federal Environment Foundation (DBU), the Environment Directorate of the European Commission, the Finnish Ministry of the Environment, the Körber Foundation, and the Schweisfurth Foundation. Sponsors were the BfG Bank/Gruppe Crédit Lyonnais, Dow Europe, Landesbank Schleswig-Holstein, Media Concept, Preussen Elektra, Preuss Messe, Römerturm Feinstpapier, and Sydkraft. The United Nations Environment Programme (UNEP), United Nations Industrial Development organization (UNIDO) and

International organization for Standardization (ISO) endorsed the conference.

As a direct result of the ECO-BALTIC, INEM received requests for membership from the Latvian Pollution Prevention Centre and the Engineering Ecology Association from Lithuania.

At the closing plenary Gdansk's Mayor Tomasz Posadzki. invited INEM to hold a second ECO-BALTIC Conference in Gdansk, Poland in 1997 on the occasion of Gdansk's Millennium Celebration.

IICSD 5, 1997 in Gdansk, Poland

The 2nd *ECO-BALTIC Conference: Environmental Management in the Baltic Sea Region* was held on 9–11 October 1997 at the Technical University of Gdansk as part of the Gdansk Millennium Celebrations. The Ministers of the Environment of Germany, Sweden and Poland served as patrons of the conference. It was the major event in the region to concentrate on the transfer of expertise and experience in implementing environmental management at the company level. It is one of the first major events to focus on EMAS and ISO 14001 in the Baltic Sea region, and reduce the environmental impact of industry on the quality of life in the region. It was organized by INEM in cooperation with HELCOM and BCCA as major partners. The conference was endorsed by ISO, UNEP and UNIDO and financially supported by several European ministries of the environment.

The 2nd ECO-BALTIC Conference aimed to provide business and industry in the Baltic Sea region with tools they could use to improve their environmental performance and their competitiveness in European and world markets. It also intended to help industries in Central & Eastern Europe adapt



Fig. 5.13 The Technical University of Gdańsk, site of the 2nd ECO-BALTIC conference

to the market demands of an integrated Europe and to meet the challenges posed by international standards in the key areas of environment and quality. It was based on three methods of communication: information (workshops), company twinning (Company Contact Service) and an exhibition (company presentations, poster session). Target groups were decision-makers of companies, organizations, universities, local authorities and governments throughout the Baltic Sea region. It was attended by about 230 participants from 18 countries.



Fig. 5.14 Report on the 2nd ECO-BALTIC Conference in *Coastal Times*, Poland.

The workshops were of three types:

- **Coaching.** An experienced trainer conveyed the current state of knowledge using modern didactic methods.
- **Presentation.** Environmental management best practice was presented in the form of case studies.
- **Workshop.** The emphasis here was on “work” – current trends and developments were presented and discussed in detail.

Like the first ECO-BALTIC, the second was complemented by a Company Contact Service to facilitate partnerships and exchange among business in the Baltic Sea region.

IICSD 6, 1999 in Shefayim, Israel

A Global Perspective on Environmental Management Best Practice was held on 12 May 1999 in Shefayim, Israel under the patronage of the Israeli Ministry of the Environment. The conference was opened by the Chairman of the Israel Economic Forum for the Environment (IEFE), Gavrush Shemesh, INEM Executive Director Dr Zadok Lempert and Dr Miriam Haran, Deputy Chief Scientist, Ministry of the Environment of Israel.

“On the occasion of the Annual Conference of the International Network for Environmental Management, I would like to express my sincere appreciation for the work undertaken by Dr Georg Winter, Chairman of INEM, and by Gavrush Shemesh, Chairman of the Israel Economic Forum for the Environment, and the professionals who work for them.

Their relentless efforts have promoted the incorporation of a global perspective on environmental management in the industrial sector. Ten large Israeli companies, members of the Forum, have

undergone the ISO 14000 certification while many others are considering it.

I would like to take this opportunity to personally thank you for your unfailing perseverance, and with you a successful Conference and continued fruitful work in the field of environmental management.” — *Rafael Eitan, Deputy Prime Minister, Minister of the Environment, Minister of Agriculture and Rural Development*

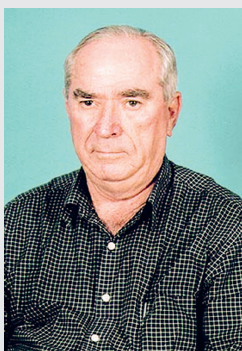


Fig. 5.15 Rafael Eitan

Bracha Litvak, CEO of Clal Environmental Infrastructure Ltd. (Israel) made a presentation on “Privatization of Municipal Services as a Method to Improve the Environment”. She was followed by Bernhard Hanf, Environmental Manager of the German baby food manufacturer HIPPI GmbH & Co., who discussed “Initiatives to Improve Environmental Performance in the Supply Chain”. Driving forces and practical examples for the “Greening of the Financial Services Sector” were presented by Aiko Bode, Coordinator of the Insurance Industry Initiative, UNEP, and Dr Bernd Schanzenbächer, Product Ecology Manager, Credit Suisse (Switzerland).

A panel discussion on “Experience and Benefits of ISO 14001 Implementation” with Joel Weill (Vice-President, Quality and Special Projects, Ormat Industries, Israel), Abraham Fidel (Director, Safety and Ecology, Makhteshim, Israel), Matthias Gelber (INEM affiliate 14000 & One Solutions Ltd., UK) and Prof Dr Dalia Maimon (President, Brazilian Association for Environmental Management) was moderated by Ira Feldman (INEM affiliate GT Strategies and Solutions, USA). Marcel Shaton, General Manager of the Israeli Directorate for the European Union’s Fifth Framework Program, described its activities and opportunities for Israel’s participation.

“Future Perspectives for Environmental and Sustainable Management Systems” were discussed by Perry Davies (Director, Balance of Nature Ltd. Israel), Dr Mária Erdős (Director, Health, Safety and Environment, MOL Hungarian Oil and Gas Company), and Dr Winter. Concluding remarks were made by Eran Macover (Operations and Marketing Manager, Hadarim Enviro-Chemicals and Trade Ltd.) and Dr Lempert.

The closing ceremony was held in Givatayim near Tel Aviv. Following remarks by Rafael Eitan, Deputy Prime Minister and Minister of the Environment, Agriculture and Rural Development, Efi Stenzler, Mayor of Givatayim, Dr Winter and Mr Shemesh, Ira Feldman, made a presentation entitled, “ISO 14000 can Underpin a new Dual-track Regulatory System: Greentracking as an alternative to command-and-control”.

The conference was co-organized by INEM and IEFE. It was supported by British Airways, the Carl Duisberg Gesellschaft (CDG), Clal Environmental Infrastructure Ltd., Dan Transport Cooperative, Friends of the Earth Middle East, Givatayim Municipality, Globes – Israel’s Business Newspaper, Israel Chemicals, Keren Kayemeth Leisrael (Jewish National



Fig. 5.16 The INEM delegation in Givatayim, Israel

Fund), Mofe B'Yehuda Hi-Tech Centre, Pioneer Israel, and Tefen Industrial Park.

The more than 100 participants included representatives of Israeli businesses and municipalities, the Canadian Ambassador to Israel (David Burger), Yeu-Teng Cheng of the Industrial Technology Research Institute (Taiwan), the Industrial Environmental Institute of the Federation of Thai Industries (Dr Pitsami Eamskulrat), the Commercial Counsellor of the Polish Embassy (Stanislaw Ferenstein), the Economic Counsellor of the South African Embassy (Neville Goodchild), and the Commercial Officer (Yigal Levine) and Economic and Commercial Advisor (Edward Murad) of the British Embassy.

IICSD 7, 2001 in Berlin

The international conference, *Business Opportunities Arising from an Innovative Development Policy*, was held on the

occasion of INEM's 10th anniversary on 11 October 2001 at the Centre for Production Technology in Berlin, Germany. It was designated as INEM's 7th *International Industry Conference for Sustainable Development*.

"With the Global Compact, the United Nations have created a platform that is based on common values, and which is suitable for encouraging companies to move towards sustainable management. The Global Compact is a forum that allows enterprises to express their support of fundamental ethical principles, to report annually about their advances, and to participate in an international learning process that is based upon exemplary solutions.

I am very pleased that German development policy strongly supports the Global Compact and, together with the International Network for Environmental Management (INEM), is promoting the Global Compact at the conference." — *Kofi Annan, Secretary-General of the United Nations*



Fig. 5.17 Kofi Annan

“To solve the social, environmental and political problems of our world we also need to employ the expert knowledge and economic-technical possibilities of the private sector. Therefore, the Development Ministry is specifically supporting projects in which businesses are engaged with their own expert staff, know-how and capital, and which at the same time yield development assistance benefits. In such projects both partners in the PPP project and the developing countries gain a larger benefit than with a purely public or private investment – a win-win situation.

I hope that this conference will contribute to dramatically increasing the number of Public-Private Partnerships in the sectors of environment, health, business development, education, agriculture, the IT industry and infrastructure – to the sustainable benefit of developing countries and our world.” — *Heidemarie Wieczorek-Zeul, Federal Minister for Economic Cooperation and Development*



Fig. 5.18 Ms Wieczorek-Zeul speaking at INEM's 7th IICSD in Berlin

The conference was organized by INEM in co-operation with BAUM, BAUM Consult GmbH and the Aachen Foundation Kathy Beys. Deutsche Lufthansa AG, the official air carrier

of the conference, and U. Walter GmbH Lebensbaum, official supplier of organic coffee and tea, supported the conference.

5.2 INEM Partnership Exchanges (IPEX)

One of the principal roles of the INEM Main Secretariat is to provide a platform for the exchange of information and experience and mutual support among members and partner organizations. To achieve this goal, the Secretariat created the INEM Partnership Exchange (IPEX), which is held once a year, coupled with the annual General Members Meeting.

At the IPEX representatives of INEM associations, international institutions, and potential project sponsors meet to exchange experience and information over several days about their activities and, and to explore opportunities for funding of their projects. The first INEM Partnership Exchange was held on 9–10 December 1993 at the German Federal Ministry for Economic Cooperation and Development (BMZ) in Bonn, Germany.

IPEX 1

Participants in the first IPEX were representatives of INEM associations, national and international donor organizations, intergovernmental bodies and potential project partners. During the first session, which was restricted to INEM associations, each organization described its major activities, key successes and failures, and lessons learned through partnerships with other organizations and governmental and intergovernmental bodies.

Following an extended lunch that provided opportunities for INEM members, donors and potential project partners to



Fig. 5.19 Sue S. C. Tang of the United Nations Conference on Trade and Development (UNCTAD) at IPEX I in Bonn, Germany

get to know one another in an informal atmosphere, the INEM member and affiliated associations from Western Europe, South Africa, South America, China and Russia presented their activities to donor organizations and potential project partners. Each outlined its general activities, capacities and successes, and presented a project for which it was seeking funding. An informal evening program provided another opportunity for participants to deepen discussions and exchange experience.



Fig. 5.20 Tom Chalmers, Engineering Employers Federation East Midlands Association

The next morning donors and potential project partners presented their fields of activities, explained their funding processes and explained their priorities. Speakers from the BMZ, UNDP, German Federal Ministry for the Environment (BMU), Commission of the European Communities (CEC), International Finance Corporation (IFC), organization for Economic Cooperation and Development (OECD) Environment Directorate, and Swedish Private Sector Development Agency (SwedeCorp) participated. Another extended lunch allowed time for informal discussions and clarifications. The closing session sought synergies among the projects. Work groups were formed according to interest areas (e.g. Global Environmental Management Surveys, environmental management training). The goal was to develop linkages among existing and future joint projects.



Fig. 5.21 Prof Philippe J. Bernard, Orée-INEM France

INEM members and affiliated associations from Argentina (ADEGA), Austria (BAUM-Austria), Brazil (SIGA), Canada (Focus 2000), China (NICEST), France (Orée), Germany (BAUM), Ireland (IPC), Malaysia (ENSEARCH), The

Netherlands (CE), Slovenia (DREVO), South Africa (IEF), the Russian Federation (ICES), Sweden (Svenska BAUM), and the United Kingdom (EEFEMA) participated. In total 38 persons, representing 15 INEM associations and 14 donor and implementing organizations participated in the IPEX. Financial support was provided by British Airways, BMZ, and the Friedrich Ebert Foundation.

"I would like to thank you for inviting the ILO to the first INEM Partnership Exchange. The event was well-organized, stimulating and productive. I enjoyed participating and learned a great deal.

I also very much enjoyed meeting you and the various capable and very active INEM members. I look forward to a continuing relationship." — Max Iacono, Senior Research and Program Development Officer, Entrepreneurship and Management Development Branch, International Labour Office

IPEX 2

The second INEM Partnership Exchange was held on 5–10 November 1994 at the BMU in Bonn. IPEX 2 brought together more than 55 representatives of 17 INEM and its partner organizations, donor institutions and project implementing organizations for four days of discussions on cooperation in the development, funding and implementation of environmental management. "How to obtain financial support for program work" was the key topic.

Speakers from the BMU, BMZ, German Agency for Technical Cooperation (GTZ), OECD, German Investment and Development Agency (DEG), European Commission, Finnish Ministry of the Environment, Intercambio Ambiental,



Fig. 5.22 INEM members and staff at IPEX 2

Carl Duisberg Society (CDG), and the Helsinki Commission addressed the participants. Observers from the embassies of Estonia, Latvia, Lithuania and Zimbabwe; the Environment Office East of German Business, the Friedrich Naumann Foundation and the German Federal Environment Foundation (DBU) also participated.

Key points made by the speakers were:

- INEM associations should build strong relationships with their national ministries. To tap multinational funding sources like the UNDP, World Bank, European Commission, etc. it is often necessary to apply through the national ministries, as the majority of development assistance flows from the multilateral donors to national governments, which then further allocate the funds.
- INEM associations must secure local funding to co-finance projects, as most donor institutions will not fund 100 % of project costs.

INEM members formed two Task Forces to bolster regional cooperation. INEM Bulgaria (in formation), DREVO from

Slovenia, KÖVET-INEM Hungary, CEMC and INEM-Northwest Russia (in formation), created SPRINT '95 – the Sofia Preparatory Regional Industry Network Taskforce – to prepare CEE industry input to the Sofia European Environment Ministers' Conference in October 1995 in Sofia, Bulgaria. The UNEP Regional Office for Europe and OECD Environment Directorate expressed their support for the initiative.

Associations from Argentina (ADEGA), Brazil (SIGA) and Chile founded the South American Task Force to concretize and expand their cross-border cooperation. The goal was to coordinate development and execution of joint projects, facilitate the exchange of expertise among the countries. PROPEL, INEM's Colombian member was also expected to join the Task Force.

INEM associations from 17 countries attended IPEX 2. Donor and implementing organizations included UNEP, OECD, European Commission, Helsinki Commission, GTZ, environment ministries from Germany and Finland, national development banks, environmental foundations, the Carl Duisberg Society (CDG) and Intercambio Ambiental.

In the closing evaluation, the INEM associations noted that the merely being together in the same rooms for a period of several days was very beneficial for exchanging ideas and experiences, and for developing stronger and closer relationships with one another.

IPEX 2 was co-sponsored by the United Nations Development Programme (UNDP), BMZ and BMU. UNDP funded the participation of 20 persons from Central & Eastern Europe and developing countries.

IPEX 3

INEM held its third IPEX on 25–29 February 1996 in Bonn, Germany. The goals were to strengthen interaction among

INEM associations, inform them of bilateral and multilateral programs that support private sector implementation of environmental management, inform donor organizations and potential project partners of programs and capabilities of INEM associations, and build relationships among them.



Fig. 5.23 Capacity-building workshop;
(from left) Rachid Nafti (INEM Tunisia),
Benjamin Ramasedi (Environmental Forum of Botswana),
James Harrower (Environmental Forum of Zimbabwe)

Speakers included representatives of the BMU, BMZ, GTZ, DEG, UNDP Private Sector Development Programme, European Bank for Reconstruction and Development (EBRD), UNIDO, OECD, and the Wuppertal Institute for Climate, Environment, Energy. A number of institutions, including the DBU, CDG, German Industry for Eastern Europe, and Intercambio Ambiental, as well as the embassies of Colombia, Brazil, Mozambique, Switzerland and Zimbabwe sent their commercial attachés to observe the proceedings.

Bonn's Mayor Bärbel Reindl invited the participants to the historic old City Hall for a reception. She commended INEM for developing and applying the principles of environmental



Fig. 5.24 Mayor Reindl greeting participants of IPEX 3 at reception

management and for its efforts to disseminate them to business and industry in Central & Eastern Europe.

During the course of the IPEX, INEM, the Institute for Natural Resource Management (an organization of the Russian Ministry of the Environment), and the Environment Committee of the Chamber of Commerce and Industry of the Russian Federation (ECOM) signed an Agreement of Cooperation to promote environmental management and create regional INEM associations in the Russian Federation. Prof Yuri Piskulov, Chairman of ECOM called the Agreement, “Decisive for the practical improvement of environmental protection in Russian industry”.

Results of IPEX 3 were used to prepare INEM input to the 4th Session of the UN Commission on Sustainable Development held in June 1997 at the United Nations in New York, and to the 2nd United Nations Conference on Human Settlements: *The Cities Conference* (Habitat 2) held in 1996 in Istanbul.

IPEX 3 was endorsed by UNIDO, UNEP Industry and Environment Programme Activity Centre, BMZ. Funding



Fig. 5.25 Prof Dr Yuri Piskulov, Chairman of ECOM and INEM Executive Director Troy Davis sign Agreement of Cooperation

from the BMU enabled participation of 20 persons from INEM member associations and organizing committees in Central & Eastern Europe and the Newly Independent States. The UNDP Private Sector Development Programme supported participation of INEM associations from Brazil, Tunisia and Zimbabwe. In total, 77 persons from 23 countries participated.

IPEX 4

The fourth IPEX was held in Hamburg on 4–6 May 1997. Representatives of INEM associations and partners from 20 countries – eight from Western Europe, six from Central & Eastern Europe, two from Southern Africa, two from Latin America, and one from the Middle East.

The first day was devoted to presentations of INEM Main Secretariat projects, including the 2nd *ECO-BALTIC Conference*, the *EMAS Tool Kit for SMEs*, *Case Studies in Environmental Management in Central & Eastern Europe*, environmental management training and coaching programs, and Global Environmental Management Surveys, as well as projects of the INEM member associations. For example, Prof

Dr Dalia Maimon, President of SIGA, outlined the Business 21 project, which aimed to boost awareness of businesses, regulators, academics and NGOs about environmental globalization and sustainability. Gergely Tóth reported on KÖVET's Environmentally Friendly Office project. Natalia Ladutko reported on waste minimization and cleaner production activities in Latvia. Viktoras Sakalys reported on environmental management in Lithuania. Idalinhas Dias Sardinha reported on recent and upcoming activities of the Business Forum for Environmental Management (FEMA) in Mozambique. And Andrej Soltes reported on ASPEK activities in Slovakia.



Fig. 5.26 INEM members and affiliates at IPEX 4 in Hamburg, Germany

The second day was a working meeting for the *EMAS Tool Kit for SMEs* project, in which 13 associations participated. In addition, the workshop *Building up a new association* offered new and young members the opportunity to learn about INEM associations' experience with organizational structures, acquisition of members and funding.

The third day consisted of a session on services of the INEM Main Secretariat and a roundtable on activities of the INEM associations and services they provided to their member companies.

Results of the IPEX included agreements of cooperation between

- INEM's Brazilian member SIGA and FEMA of Mozambique, to transfer know-how and implement joint projects
- Latvian and Lithuanian delegations to facilitate regional cooperation, together with Estonia and Kaliningrad
- SIGA and the Israel Economic Forum for the Environment (IEFE) to carry out GEMS

In addition, the South African Chamber of Business (SACOB) agreed to investigate the founding of a national business association for environmental management that would join INEM and liaise with FEMA and other INEM member associations in the region. The Hellenic Institute of Environmental Management agreed to join INEM. The Bulgarian, Honduran and Latvian delegations announced that they would work to set up national business associations with the goal of joining INEM. FIDE of Honduras also agreed to host a future INEM regional secretariat for Central America.

A total of 43 persons, representing 14 INEM member and four potential member associations, as well as five project partners from 22 countries participated in the fourth IPEX. CDG, the Regional Environmental Centre for Central & Eastern Europe (REC), the Swedish Association of Environmental Managers (NMC), the UNDP, and the World Environment Centre (WEC) supported the participation of INEM associations from Africa, Central America and Central & Eastern Europe.

IPEX 5

The 5th INEM Partnership Exchange and General Members Meeting was held in Hamburg, Germany on 6–9 September 1998. In lectures and workshops about 43 participants from 19 countries discussed the integration of quality and environmental management systems, environmental management tools, environmental benchmarking, and the work of INEM in the ISO/TC 207 process. Wolfgang Hungeling, Director of Quality and Environmental Management at Konica Business Machines Europe made a presentation on “Total Konica Management: Environment, Quality, Safety”.

A special meeting was held to discuss the further work and responsibilities for INEM as observer and co-lead party for HELCOM’s Baltic Sea Joint Comprehensive Action Programme (JCP). The meeting was attended by HELCOM, the German Ministry of the Environment, INEM and its Swedish member organization NMC.

A series of reports on INEM activities in ISO/TC 207 Environmental Management Systems was followed by a discussion on the development of a unified strategy for INEM



Fig. 5.27 Workshop on a unified strategy for ISO/TC 207

participation in the ISO/TC 207 process. The day ended with a reception by the Hamburg Senator for the Economy, Dr Thomas Mirow, at Hamburg's City Hall. The next day was opened by Dr Winter with his concept "Five steps on the path to sustainable business management".

In three working groups, participants exchanged their offers and needs. The goal was to identify the themes and projects in which INEM associations were interested and how the Main Secretariat and INEM members could support them. The main issues were up-to-date information on activities of the INEM members, case studies, training methods and materials, access to SMEs and environmental management in the services and public sectors. The afternoon comprised a session on developing joint projects in working groups organized according to themes and geographic regions.

INEM members and affiliates from Austria, Belgium, Brazil, the Czech Republic, Germany, Greece, Hungary, Ireland, Israel, Latvia, Lithuania, Poland, the Slovak Republic, Sweden, Switzerland, and the United Kingdom participated. IPEX 5 was supported by Konica Business Machines Europe.

IPEX 6

The sixth IPEX was held on 9–12 May 1999 in Shefayim, Israel in cooperation with the Israel Economic Forum for the Environment (IEFE). INEM members and affiliates from Austria, Belgium, Brazil, the Czech Republic, Greece, Hungary, Israel, Lithuania, Poland, Sweden, the United Kingdom and the United States participated.

The program included sessions on "Integrating Cleaner Production and Environmental Management Systems" by Dr Roman Vyhnánek, Executive Director of the Czech Environmental Management Centre (CEMC), Mr Gergely



Fig. 5.28 IPEX 6 participants in Israel, 1999

Tóth, Executive Director, and Ms. Györgyi Cicás, Project Manager of the Hungarian Association for Environmentally Aware Business Management (KÖVET), and Mr Vladimir Dobes, Executive Director of the Czech Cleaner Production Centre (CCPC). Mr Heinz-Werner Engel, Director of the Belgian Association of Eco-Counsellors (ABECE), made a presentation on “Making Environmental Management Easier for Small and Medium-sized Enterprises”. Alan Stephens and Henny Hoogervorst, Kluwer Academic Publishers, discussed “The Role of Publishing in Disseminating Environmental Management”. In addition, a Project Exchange session provided a structured environment for discussion of joint projects among INEM members and potential project partners.

On 11 May, a field trip to Tefen Industrial Park was held to demonstrate environmental management practice in Israel Industry. Established in 1995, the Tefen industrial park is home to about 30 private enterprises, whose activities include:

- Industrial manufacturing: plastics, precision and metal-cutting tools, food and medicine packaging, semiconductors
- Consumer products: clothing for infants, glassware, pottery, spices and gifts

- Electronic systems: electronic components, electronic access systems, radio systems, and communications systems

All companies are independently owned, export-oriented and environmentally friendly. The park provides a holistic environment for industries and workers and eliminates the artificial divisions that have traditionally separated industries from aesthetics. Labour from life, etc.

Tefen represents a synergetic combination of industrial, residential development, education and culture. It is a major milestone on the road to Israel's economic independence and has one of the highest per capita productivity rates in Israel. The Tefel facility is home to four museums, dozens of open-air sculptures and the Zur Institute for Industrial Education.

The Tefen model has been applied to other industrial developments in Israel. At the end of 1997, there were three Tefen-model industrial parks, home to 70 companies.

IPEX 7

Due to restructuring and funding constraints, the next IPEX was not held until 2001 in Berlin on the occasion of INEM's conference, *Business Opportunities Arising from an Innovative Development Policy*, held on 11 October 2001 in Berlin, Germany. Discussions focused primarily on restructuring issues.

IPEX 8

IPEX 8 was held on 3–4 October 2002 in Budapest. The first day was devoted to know-how sharing among the INEM members and affiliates and reports on ongoing projects, including EPICENTRE (Norbert Gallagher, Irish Productivity Centre), and the EMAS Toolkit for Small organizations (Peter Hundley, INEM), Independent assurance of sustainability reports (Gergely Tóth, KÖVET), Ecomapping 2 (Heinz Werner

Engel, ABECE), EU project on renewable energies and energy-efficiency in buildings (Katja Firus, INEM), Cooperation between business and municipalities (Ludwig Karg, BAUM), Capacity-building of government agencies for ISO 14001 implementation (Heinz Werner Engel, ABECE), the CBI Contour benchmarking tool (Mathias Gelber, WYGE).



Fig. 5.29 (from left) Dr Georg Winter, Katja Firus, Heinz Werner Engel, Ludwig Karg (partially hidden), Matthias Gelber, Gergely Tóth

A roundtable discussion on corporate social responsibility lead by Ludwig Karg, Dr Winter and Heinz Werner Engel was held in the afternoon. The day was rounded out by the European Awards for the Environment ceremony chaired by EU Environment Commissioner Margot Wallström at the Hungarian National Gallery at the Royal Castle.

IPEX 9

The ninth INEM Partnership Exchange, on 11 October 2003 in Stuttgart, Germany, was held on the occasion of the awarding of the Club of Budapest International's *Change the World – Best Practice Award 2003* to INEM and Dr Georg Winter.

Topics:

- Experience Exchange: Open discussion among participants
- Roundtable Discussion on CSR/Sustainability
- Replication of EPICENTRE project in Southeast Asia
- Implementation of SMALL Initiative
- Press Conference in Literaturhaus Stuttgart on the SMALL Initiative

Regional INEM Partnership Exchanges

At the request of the member associations in 1996, INEM initiated regional Partnership Exchanges. The first two were held for Central & Eastern Europe and Western Europe in Budapest on 23–24 November 1996 and in Paris on 13–14 February 1997, respectively. The intent was to facilitate regional cooperation between the member associations and prepare joint projects.

The third Regional INEM Partnership Exchange was held 5–7 March 1998 in Athens. INEM associations and partners from Belgium, the Czech Republic, Denmark, France, Germany, Hungary, the Slovak Republic and Switzerland participated. It was hosted by the INEM Hellas Organizing Committee. The first part was a working meeting of the organizations developing the *EMAS Tool Kit for SMEs*. The second part was devoted to identifying needs and offerings of the participating organizations with the goal of developing joint projects within the network. In addition, Lexmark-Europe presented a case study on its certification to ISO 14001 and Mr Gelber answered participants' questions about the ISO 14000 series.

Industrial Agenda 21 Campaign

At the Earth Summit in Rio de Janeiro in June 1992, the United Nations adopted *Agenda 21*, a blueprint for concerted action to achieve sustainable development. In Chapter 30, *Agenda 21*

calls on business and industry to “be (full partners) in the implementation of sustainable development”.

A year later at its second *International Industry Conference for Sustainable Development*, INEM expanded the *United Nations Agenda 21* by calling on each enterprise in the world to set quantifiable targets for improving their environmental performance over a specific timeframe, and to make these environmental goals publicly available. *The Tokyo Appeal: Towards an Industrial Agenda for Sustainable Development* was released on 10 September 1993 by INEM and its Japanese member Japan Eco-life Centre, at the closing of the jointly organized *International Conference on Eco-management* held on 9–10 September 1993 in Tokyo. The concept of the *Industrial Agenda 21* was inspired by the *Local Agenda 21* concept developed by the International Council for Local Environmental Initiatives (ICLEI), who also participated in the Tokyo Conference and in the drafting of the *Tokyo Appeal*.

The key text of the Tokyo Appeal:

The next step for business and industry, one year after the Rio Earth Summit, is to operationalize their role towards achieving sustainable development by creating an *Industrial Agenda 21* that includes quantifiable and measurable objectives.

According to INEM’s conception, an *Industrial Agenda 21* should be set up by the industry of each country taking into account cultural, social and technological differences, and the needs of other sectors. An *Industrial Agenda 21* is defined as a public statement of quantified environmental performance goals, regularly updated, with regular reporting of progress towards these goals. It is a practical tool to define quantified

environmental performance goals, and thus motivate companies to improve their environmental performance.

The INEM General Members of 11 December 1993 formally endorsed the Industrial Agenda 21 Campaign with the following resolution:

“As part of its efforts to increase the participation of business and industry in the implementation of the Agenda 21 of the United Nations, the International Network for Environmental management will develop and launch a program to motivate and educate companies to implement the business portion of *Agenda 21*, in a campaign called the *Industrial Agenda 21* campaign. The program shall include and be carried out in partnership with relevant organizations. The core of an *Industrial Agenda 21* for a company resides in the setting of quantified environmental performance targets.”

The *Industrial Agenda 21* was endorsed, among others, by Marti Lujanen, Chairman, Committee 2, 2nd *United Nations Conference on Human Settlements*, and Jeb Brugmann, Secretary-General, International Council of Local Environmental Initiatives (ICLEI).

“I congratulate you and INEM for the important part that INEM played in drafting the *Tokyo Appeal*. I was recently in Japan, attending the Japanese Business Leaders Conference. During this event, I heard much about industry’s initiatives to operationalize their role towards achieving sustainable development. Hopefully, they will accept your challenge to create an Industrial Agenda 21.” — *Maurice F. Strong, Chairman, Earth Council, in a letter to Dr Winter, 16 November 1993*

INEM followed up the *Tokyo Appeal* with the *Lübeck Commitments*, released at INEM's 1st *ECO-BALTIC Conference* held on 8–10 March 1995 in Lübeck, Germany. The purpose of the Lübeck Commitments was twofold: to inform the public of concrete measures that companies, institutions, organizations and local authorities intend to take in the next two years to protect the environment, and to help participants apply the information they had gathered during the conference workshops in their own companies and institutions. Participants from 12 countries made a total of 107 commitments.

The next major milestone in disseminating the *Industrial Agenda 21* was taken at the *United Nations Conference on Human Settlements: The Cities Conference (Habitat 2)* in Istanbul in June 1996. The United Nations had, for the first time ever, officially acknowledged the crucial role of enterprise is a key factor in developing healthy, safe and sustainable cities by inviting a World Business Forum (WBF) to take place at the Habitat II Conference. The WBF was held on 5 May–2 June 1996, directly preceding *Habitat 2*, which ran from 3–14 June 1996.

Dr Winter held a keynote address at the WBF, promoting the *Industrial Agenda 21* and calling upon participants to endorse and help operationalize it. "Such target setting is crucial to the success of environmental management systems such as ISO 14001 and EMAS. An *Industrial Agenda 21* provides a standardized format for companies to display their public commitments. We hope that this concept will be adopted by as many companies as possible."

The WBF accepted his challenge, drafting the *Istanbul Commitments* to promote the *Industrial Agenda 21* process. The WBF also developed a set of recommendations to governments and other sectors. Both the *Istanbul Commitments* and

the *WBF Recommendations* were presented to the Heads of State at the Habitat 2 Conference.

“A key outcome of the World Business Forum was the endorsement of the concept of an *Industrial Agenda 21*. Because of the competitive and diverse nature of the private sector, no entity can speak for or make commitments on its behalf as a whole. To be effective and credible, commitments must, therefore, be made at the natural level of accountability – that is, at the level of each individual business.

Inspired by the tool invented by local authorities, the Local Agenda 21, business has created a practical tool that will service an enabling framework to allow business to make concrete and publicly available commitments. The *Industrial Agenda 21* fills an important gap in the process of implementing *Agenda 21* by providing a mechanism that will enable business and industry to further harness the power of competition in order to raise environmental performance. The *Industrial Agenda 21* is designed to be used by companies of all sizes, in all sectors, everywhere.” — *Excerpt from Report of the 2nd United Nations Conference on Human Settlements (HABITAT II), Istanbul, 3–14 June 1996, Chapter V, Report of Committee II, Hearings involving representatives of the World Business Forum (A/CONF.165/14, pg. 147)*

The INEM Executive Director made a further presentation on the *Industrial Agenda 21* during the session on “Instruments for a Sustainable Economy” at the *International Business Forum on Agenda 21* organized by CDG in cooperation with the Federation of German Industries (BDI), INEM, the International Chamber of Commerce (ICC) and the United Nations on 16–18 June 1997 in New York.

Step-by-step implementation of environmental management systems

INEM had argued at ISO/TC 207 meetings that an incremental scheme for environmental management system implementation should be developed to lower barriers for SMEs and industries in developing countries. To prove its hypothesis and to develop practical instruments for this step-by-step approach, INEM and its member organizations carried out a series of projects for developing, implementing and certifying a scheme for implementation of ISO 14001 in a series of certified and verified phases, particularly in SMEs supplying to large companies.

In 2000 INEM's UK affiliate White, Young, Green Environmental (WYGE) served as the lead party in these efforts. It decided to use the international standard *ISO 14031: Environmental Performance Evaluation* to verify completion of each step of the phased EMS implementation. To test its concept, WYGEI carried out a pilot project, funded by the Department of Trade and Industry (DTI), involving a range of companies from different sectors in England. The project investigated the following scenarios:

- Can the ISO 14031 approach facilitate the effective operation of existing certified environmental management systems within organizations?
- Can the ISO 14031 approach facilitate the development and implementation of a certifiable environmental management system?
- Can the ISO 14031 approach provide an effective alternative to a certifiable environmental management system?
- Can the ISO 14031 approach be adapted for use as a supply chain management tool?

- Can the ISO 14031 approach be used for meaningful benchmarking environmental performance either internally, or by external stakeholders?
- Can the ISO 14031 approach be utilized to provide reliable indicators of environmental risk?

The pilot project showed that ISO 14031 could serve as a suitable framework and that a phased implementation of environmental management systems as envisioned by the project would be accepted by the market. These results were integrated into the subsequent Project Acorn.

Project Acorn

Project Acorn was a DTI-funded, staged EMS implementation project working with major UK supply chains in collaboration with British Standards Institute and INEM's UK affiliate White, Young, Green Environmental. It ran from 2001–2003. Project Acorn aimed at developing a methodology for the step-by-step implementation and certification of environmental management systems in six phases. The first five phases describe EMS implementation and Stage 6 focuses on reporting, external communication and data verification in line with the requirements of the European Union's EMAS regulation and the international environmental management system standard ISO 14001.

Project Acorn led to the articulation of the British Standard *BS 8555: Guide to the phased implementation of an environmental management system including the use of environmental performance evaluation*, which was published in April 2003. BS 8555 encompasses the six-phase achievement criteria utilized in the Acorn Scheme.

BS 8555 links Environmental Management Systems (ISO 14001) and Environmental Performance Evaluation (ISO

14031) provides for focused training, auditing and implementation at each level and supports relationships between suppliers and customers. BS 8555 has six key phases:

- Commitment & establishing the baseline
- Identifying & ensuring compliance with legal and other requirements
- Developing objectives, targets and programs
- Implementation and operation of the EMS
- Checking, audit & management review
- The final phase, following successful completion of the above five, prepares for either EMAS registration or certification to the international standard ISO 14001.

EPICENTRE

INEM's EPICENTRE project further tested and refined the methodology in several European countries. EPICENTRE built on the ACORN lessons, focusing on the application of environmental performance evaluation and a phased and certified environmental management system to achieve and report on continual improvement at organizational, institutional, national and international levels.

EPICENTRE was carried out over 27 months by INEM members in Germany (BAUM), the UK (14000 and One Solutions), Ireland (Irish Productivity Centre), Spain (IHOBE) and Hungary (KÖVET-INEM Hungary). It was funded by the LIFE Environment Office of the European Union. Specific goals were to achieve five EMAS registrations in each of the target countries, develop innovative approaches and applications of the environmental performance evaluation model, support knowledge and technology transfer from the more developed Member States to the less developed ones, work with 250 organizations to develop a comprehensive set of

environmental performance indicators that can be used to support accession reporting, resource management, greenhouse gas emissions regulatory controls, and environmental reporting and build the capacity of regional partners.

Asia Eco Pro / Advancing environmental management with NESPES (New European Standard on Phased Environmental Management Systems)

The Asia Pro Eco Programme was launched in 2002 as an initiative by the European Union to strengthen the environmental dialogue between Europe and Asia. This five-year program, which had a total budget of EUR 31.5 million, aimed to provide support to European and Asian organizations to enable them to share strategies, advanced technologies and know-how addressing Asian environmental issues.

The aim of the NESPES project was to support continuous improvement in the environmental performance of organizations by introducing an innovative and proven-successful phased approach in implementing an environmental management system. It transferred experience and techniques from a series of projects on developing a step-by-step methodology for the implementation of an environmental management system. Each phase of implementation is certified, so that an enterprise can demonstrate its improved environmental performance before full implementation of an environmental management system. The methodology for the phased implementation and certification was developed in Project Acorn described earlier.

In 2003 the NESPES project transferred the phased implementation methodology to Asia. The BS 8555 approach provided guidance and helped address many of the difficulties smaller companies face in adopting an EMS and achieving ISO 14001 certification. In addition, the project contributed to

the dissemination of the EU-funded Epicentre Project outside of the EU. The target groups were SMEs, large companies with supply chain requirements, environmental consultants, government agencies and academic institutions. NESPES comprises a series of two-day seminars followed by one-day meetings with government and industry professionals in Thailand, Vietnam, Philippines and India.

INEM was a member of the project consortium, which also included the German-Thai Chamber of Commerce, the Asia-Pacific Roundtable for Cleaner Production, the Confederation of Indian Industry, Fundacion Entorno of Spain and IVAM of the Netherlands. Project Partners were the Irish Productivity Centre, 14000 & One Solutions (UK), TMS Consulting (Ireland), Regional Institute of Environmental Technology (RIET), and the Thai Environmental Institute. Frans Verspeek, head of the Department of Cleaner Production and Technology Transfer of IVAM (Amsterdam) coordinated the consortium. Primary funding was provided by the European Union.

5.3 A selection of INEM projects

Over the years INEM members and affiliates have joined together to carry out numerous cross-border, regional and international projects. The primary goals were to transfer know-how and experience, and to build capacities of the project partners. The majority of these projects were conceptualized and managed by the INEM Main Secretariat, which also secured primary funding from donor institutions. This was especially important for the new association, which needed an initial project give them an office infrastructure, staff and a program to carry it through its first year. A classic example of such a

“start-up” project is the Global Environmental Management Survey (GEMS) described below.

INEM associations also carried out projects among themselves without involvement of the Secretariat. These were often conceived at INEM Partnership Exchanges, which were organized by the INEM Main Secretariat precisely for that purpose. An example is the *EnviroSense: Environmental Cost Accounting and Environmental Performance Evaluation Demonstration Project* carried out by INEM’s Hungarian and US American organizations in the Spring of 2000. They had conceived the concept and sketched out the major elements of the project during IPEX 6 in Israel in 1999.

Similarly, when INEM’s Irish affiliate Irish Productivity Centre was developing an innovative training scheme for SMEs on environmental awareness and materials utilization in 1992, it looked to the network for tools and experience. According to Norbert Gallagher, Head of Unit, Environmental Business Management, “We decided to help implement environmental management practices in Irish SMEs through a practical, collaborative training program. We are particularly building on existing experience from other organizations which work with SMEs such as INEM’s German member BAUM and the Canadian Chamber of Commerce Focus 2000 Programme.”

Global Environmental Management Surveys (GEMS)

The goal of GEMS is to assess the level of implementation of environmental management by business and industry in a given country. It also identifies barriers companies face in the implementation of environmental management and cleaner technologies. A common methodology allows comparisons across countries and continents. The results were used to establish priorities for the work program of local INEM member

associations and have a sound basis for making recommendations to governments and international agencies on environmental policy.

INEM set up a GEMS Task Force in February 1993 to design the international survey. Its members were representatives of INEM members associations from Argentina, Brazil, Canada, France, Ireland, Slovenia and South Africa. The GEMS Task Force met for second time on 15–16 June 1993 at the UNESCO offices in Paris. The purpose was to finalize the assumptions, wording, format, design and methodology of the GEMS questionnaire.

ADEGA, the INEM association in Argentina was first to conduct GEMS, starting in July 1993. It was funded by the German Agency for Technical Cooperation (GTZ), SwedeCorp and the Argentinian Business Council for Sustainable Development (ABCSD). ADEGA carried out the survey in collaboration with the Union Industrial Argentina and ABCSD. The INEM Main Secretariat provide technical assistance and international coordination. The final report of the *Environmental Business Management Survey of Argentine Business* was released in June 1994.

GEMS was conducted by SIGA in Brazil in 1995–1996. The main objectives of GEMS-Brazil were to:

- assess the current status of industries in major Brazilian states regarding environmental management and control
- check the awareness levels of Brazilian businesspersons, including those running SMEs, regarding environmental issues in general and matters related to their own operations, and
- identify the needs and remove the barriers blocking the implementation of environmental control measures, ranging from compliance with local legislation to the

establishment of in-house environmental management programs and policies.

The GEMS-Brazil project was financed primarily by the GTZ and was implemented by SIGA in partnership with the National Confederation of Industries (CNI) and the SEBRAE Small Business Incentive Bureau.

Environmental policies as a job-creating approach for SMEs in regions under competitive pressure

The goal of this European-wide research project was to analyse the factors which strengthen both the competitiveness and environmental competence of companies in economic crisis regions and offer possibilities for safeguarding/creating jobs. INEM is undertaking this project with the Bellagio Forum for Sustainable Development and the Ifo Institute for Economic Research. In 1998 INEM prepared a collection of “best practice” case studies by developing a questionnaire and searching for companies.

The project was funded by the European Commission, the European Union ADAPT program and the DBU.

KÖVET and GT Strategies and Solutions run the EnviroSense project

In order to show that the environmental measures help companies reduce to rather than increase costs, KÖVET-INEM Hungary launched *EnviroSense: Environmental Cost Accounting and Environmental Performance Evaluation Demonstration Project* in Spring 2000. GT Strategies and Solutions (INEM affiliate from the USA) was an implementing partner. Funding was provided by the EcoLinks program of the US AID.

In preparation KÖVET collected leading-edge environmental cost accounting and environmental performance



Fig. 5.30 Handbook on *Environmental Cost Accounting and Environmental Performance Evaluation* resulting from EnviroSense project.

evaluation know-how, adapted and translated training material, produced short information guides about the tools, and collected success stories and case studies. The information guides were distributed to 200–300 companies which were invited to participate in one or more workshops. In the Enabling phase, KÖVET organized a training course for 20–30 companies. In the final phase, Specific Assistance, several companies were assisted in the application of ECA and EPE in their companies.

Promotion of EMAS in Southern Europe

INEM was awarded a contract by the European Commission to promote the economic benefits of the Community Eco-management and Audit Scheme (EMAS) in Greece, Italy, Spain and Portugal. Much of the focus was on capacity-building of local agencies to facilitate continuing support for organizations wishing to implement EMAS. INEM member and affiliated member organizations carried out the project: Labros Bouklis of INEM Hellas, Matthias Gelber and Mark O'Reilly of the INEM affiliate 14000 & One Solutions (UK), Heinz-Werner Engel of INEM's Belgian affiliate ABECE, and

Enviros QuantiSci in Spain. Deliverables included seminars for companies and local authorities (two in Greece, four in Italy, two in Spain and two in Portugal) and a printed publication.

The project consisted of four interrelated phases which were partly carried out simultaneously. The first phase includes collection of cases studies on economic benefits of EMAS implementation. The second phase focuses on collection of experiences of successful applications of EMAS within the INEM network and beyond.



Fig. 5.31 The *EMAS 2000* booklet was published in Greek, Italian, Portuguese and Spanish

A 20-page booklet giving a short and practical overview of the revised EMAS regulation and highlighting the business benefits of EMAS registration was produced in the third phase. The booklet, published in Greek, Italian, Portuguese and Spanish, outlines easy-to-follow steps for maximizing business benefits. It was distributed to EMAS competent bodies and other relevant EMAS promoters to help them better market the scheme. In the fourth phase, four one- to two-day seminars with a strong emphasis on business benefits of EMAS were

held in each of the target countries. In addition, there was a core focus on capacity-building of local partners in order to strengthen the support mechanisms necessary for the future uptake of EMAS. The project began in February 2000 and ran for 12 months.

INEM's affiliate in the Basque region of Spain, Sociedad Pública de Gestión Ambiental (IHOBE) replicated the project with a focus on ISO 14001 rather than EMAS in 2001.

European Environmental Benchmarking Network (EEBN)

Fondazione Eni Enrico Mattei (Italy), the Technical University of Delft (The Netherlands), Groundwork (United Kingdom) and INEM, upon the request of the European Commission, Directorate General for Industry, set up the European Environmental Benchmarking Network (EEBN). EEBN played a crucial role in promoting the adoption of environmental benchmarking, and environmental management in general, in various types of organizations (companies, industry associations, universities, etc.) by:

- collecting and disseminating information on current experiences to a wide public, and by
- providing a reference for firms and other stakeholders in launching environmental benchmarking activities.

Benchmarking is defined as the process of comparing and measuring an organization's business practice and performance against a given standard. The objective of benchmarking is the promotion of process or product improvement by the identification of proper standards and the related actions to be taken. Environmental benchmarking is an environmental management tool that can provide a substantial contribution to the improvement of environmental performance by facilitating the identification of the gap between a company's expected

performance and a given performance standard. Any process or business activity can be a candidate for environmental benchmarking. The European Commission, Directorate General for Industry supported the project with EUR 80,072 (40% of overall costs) in the first 12 months.

EMAS Easy

The *EMAS Easy* methodology focused on capacity-building of the environmental consulting and auditing community for the implementation of lightly documented and innovative EMAS applications in Estonia, Hungary, Latvia, Lithuania and Poland. The project comprised coaching programs to assist 10 organizations per country to implement an environmental management system and obtain EMAS registration.

INEM's Hungarian member KÖVET used the methodology to obtain EMAS registration in July 2006. KÖVET was one of only eight EMAS-registered organizations in Hungary at the time.

Germany's Ministry of Environment supported a national conference on *EMAS Easy for SMEs*, which was held on 12 June 2007 in Bonn to present German and international experience with the *EMAS Easy* methodology.

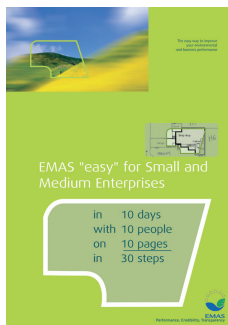


Fig. 5.32 The *EMAS Easy* guidebook has been published in more than 15 languages.

The *EASY* guidebook proved to be very popular and has since been published in 17 languages: Bulgarian, Czech, English, Estonian, French, Finnish, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Polish, Portuguese, Spanish, Swedish and Russian.

EMAS in five Countries

This project allowed INEM to replicate the successful *EMAS Tool Kit for Small Organizations* and *EMAS* in Southern Europe projects in several Central & Eastern European countries. It consisted of a series of awareness-raising seminars on the economic benefits of EMAS registration in Estonia, Latvia, Lithuania, Hungary and Poland. Deliverables included seminars in each of the countries, a CD-ROM version of INEM's *EMAS Toolkit for Small Organizations* and a printed guidebook in each of the languages.



Fig. 5.33 *EMAS Toolkit for Small Organizations*

EMAS Easy Capacity-Building of 25 local consultants in the new Member States

In the framework of this EU-funded project, Eco-Counselling Enterprise srl and INEM members carried out an 18-month project aimed at training 25 consultants in Estonia, Latvia,

Lithuania, Poland and Hungary in the EMAS Easy methodology, and supported them in their implementation of EMAS in 50 SMEs.

EMAS Conferences in the new Member States

In the framework of this EU-funded project, INEM and its member organizations in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, the Slovak Republic and Poland organized conferences to promote the uptake of EMAS and translated and adapted the guidebook *EMAS 2000* into each country's language. This 20-page publication provides a brief overview of environmental management concepts and tools, economic and other benefits of environmental management systems, plus a step-by-step guide to implementing an EMS and obtaining EMAS registration.

The original version of *EMAS 2000* had been developed for the countries of Southern Europe by INEM. It was published in Greek, Spanish, Italian, Portuguese and Basque. Each version of the Guide was adapted to the target country's circumstances and provides examples from local industry. The Hungarian version was commissioned by the city of Miskolc and made possible by the Phare Programme of the European Union.

ÖGUT and BAUM Consult promote greening of companies in Alpine region

The ASPECT Project promoted and developed environmentally friendly companies in the Alpine Space: Germany, Austria, France, Italy, Slovenia and Switzerland. The two-year project began in 2006 and ended in 2008. It stimulated the industry by providing various tools (methodology, database, etc.). ASPECT analysed eco-industries in the Alpine Space to discover their

strengths, weaknesses, threats and opportunities in bilateral meetings, seminars and conferences. The aim was to create synergies to stimulate their growth and closer cooperation with local policy makers.

Eco-industries were asked to give their contributions and suggestions for the creation of a common methodology that can be applied to the whole Alpine Space area and have been involved in bilateral meetings, seminars and events.

Two of the main deliverables of the project were:

- a SWOT analysis of the eco-industry in the Alpine Space
- a booklet containing the guidelines for public policy makers to support and promote eco-companies

The ASPECT project concluded with the conference, *Economy, Territory and Environment: New strategies to support eco-industries*, organized by the Province of Mantua on 17 January 2008, and the Foragriexpo Fair, hosted in the Fiera Millenaria of Gonzaga on 18–20 January 2008. The conference presented the occasion to distribute the project results in the form of “Guidelines for Public Policy-Makers to Support and Promote Eco-companies in the Alpine Space” to a large audience. At the Foragriexpo Fair ASPECT partners hosted 11 companies from the Alpine Space regions, with the aim of supporting trade and international partnerships. The project also successfully involved policy-makers: many decision-makers in local authorities, such as the President, Vice-President and the General Director of the Province of Mantua, attended the conference. Moreover, policy-makers from the regions of Switzerland, Austria and Slovenia took part in the roundtable *European Strategies to Support Eco-companies*.

SMART – Sustainable Management Action Research and Training

Under the umbrella of the European Union's Action Programme on Environmental Management and Certification for the development of African, Caribbean and Pacific Enterprises, INEM's Belgian member ABECE launched the Sustainable Management Action Research and Training (SMART) project. It was developed under a framework agreement between the European Union's Centre for the Development of Enterprise (CDE) and INEM. SMART aimed to reinforce local capacities with new methods and proven concepts for implementation of environmental management systems and standards. The key concept was that environmental certification can be achieved at reduced cost and time by the clustering of enterprises and the process of coaching with local environmental consultants.

The SMART Programme began in the Caribbean region with a Prospective Study in July 2004, in order to analyse existing know-how and initiatives, to meet existing stakeholders, and to assess current capacities and future needs. Based upon the results of this study, the seminar *Capacity Building for Environmental Management Systems for Caribbean Enterprises* was held in Port of Spain, Trinidad and Tobago from 22–26 November 2004. It was attended by 31 environmental professionals from seven ACP countries. A number of them joined the CDE consultants' network and the INEM infrastructure. They constitute a base of well-trained and qualified consultants from the private sector for environmental management in the Caribbean region. As a direct result of the seminar's workshops, some 15 project ideas involving a 50 private companies, mainly in the tourism and agro-food sectors, were drafted for national and regional projects covering five Caribbean countries.

Meetings at the European Investment Bank were held in November 2004 with Mr David Crush, Head of the Caribbean and Pacific Division and on 16 February 2005 with Mr Anthony Whitehouse, Deputy Head of Caribbean Division, Mr Justin Loasby, Associate Director for Southern Africa and the Indian Ocean, Mr Francisco Gaspar and Mrs Isabel Costa, in charge of Mozambique and Angola. The purpose of these meetings was to describe SMART activities in the Caribbean and Southern Africa region, as well as to present the first results of the seminar held in Port of Spain, Trinidad & Tobago.

In March 2005, a Prospective Study in Southern Africa and the Indian Ocean was carried out in Angola, Botswana, Madagascar, Malawi, Mauritius, Mozambique and Zambia. Meetings with more than 150 stakeholders from the environmental sector were held to explore projects in agro-food, aquaculture, horticulture, mining, and supply-chain management.

Biofuel Cities – European Partnerships for biofuel innovation at the local level

The Biofuel Cities project and its Biofuel Cities European Partnership aimed to increase the use of biofuels and vehicles that use them. Biofuel Cities covered the complete chain from feedstock to biofuels production, distribution and utilization in vehicle fleets. The project was coordinated by seven partners (SenterNovem, Exergia, ICLEI – Local Governments for Sustainability, INEM, Institute for Fuels and Renewable Energy, Netherlands Standardization Institute, Flemish Institute for Technological Research) that share unique and extensive experience, not only on biofuels research and application and sustainable mobility, but also on the specific needs of local governments and private enterprise. It was supported

by the European Commission under the EU's Sixth Research Framework Programme.

In particular, the project integrated European research and pilot projects in the use of pure vegetable oils, biofuels derived from waste and residues, and biogas by European local governments. It aimed to accelerate the market introduction of biofuels and energy-efficient vehicles based on local sustainable mobility policies and stimulate continued market penetration of biofuels by identifying strategic research and development needs and changes in policy. The project started in May 2006 and ended in December 2009.

The Biofuel Cities European Partnership was created and managed by the Biofuel Cities project, which aims to foster the widespread use of new and innovative biofuel technologies. It was officially launched on 8 November 2007 at the Clean Vehicles and Fuels Symposium in Stockholm, Sweden. Alexandra Langenheld from the EC Directorate-General for Energy and Transport invited all cities and enterprises, users and producers as well, to join the partnership.

The launch of the stakeholder platform for the application of biofuels, the Biofuel Cities website, in July 2007 has raised great interest amongst different stakeholder groups, with more than 1,000 registered users in its first year. The reason for this success lies not only in the numerous useful services and facilities offered by the platform, but also in the increasing public interest in the topic as illustrated by the prevalence of the issue in the media and on political agendas.

The project ran more than a dozen workshops, study trips and conferences in Austria, Belgium, Bulgaria, Germany, the Netherlands, Poland, Spain and Sweden. The Biofuel Cities European Partnership also held a session at the World Biofuel Markets Conference on 18 March 2008 in Brussels. The session

focused on the adoption of biofuels on a local and regional scale, bringing together the objectives of the Biofuel Cities European Partnership and the increasing demand for up-to-date information about the use of biofuels in local fleets.

INEM represented both the biofuel producers and consumers in the Biofuel Cities project.

Activities in Central & Eastern Europe

Over the 10 years between 1995 and 2005, INEM carried out more than 40 projects with its partners in Central & Eastern Europe. The two major campaigns, Aid to Self-Help (Czech Republic, Hungary, Poland in 1997–2000) and BALTEMA (Estonia, Latvia, Lithuania in 2002–2005), and individual projects and activities are presented in *Chapter 7: Environmental Management for Central & Eastern Europe*.

Participation in international conferences and workshops

Over the years INEM has participated in more than 200 international conferences, workshops and seminars in order to promote the economic benefits of environmental management, the effectiveness of national business associations for environment management in improving the environmental performance of business and industry, and to transfer environmental management methods to other sectors. This is in addition to those, such as INEM's *International Industry Conferences for Sustainable Development*, organized by INEM and its members. To give a feeling of the frequency and broad range, a small but representative sample taken from 1996–2003 is presented below.

On 9 January 1996 INEM Executive Director Troy Davis held a speech on “Cleaner Production, ISO 14000 and Environmental Management” at the *Conference on Innovative*

Technologies and Environmental Management (ITEM 96) in Prague. A month later Dr Winter spoke to a press conference on “Necessity of Associations for Environmental Management in Central & Eastern Europe” at the *Environmental Technology Forum* on 26 February 1996 in Berlin.

On 25 March 1996 Dr Winter, Mr Davis, and INEM Projects Manager Katja Firus made presentations to the *Seminar on Environmental Requirements within World Trade* organized by CDG for participants from developing countries. The seminar was held on the occasion of the 4th Session of the United Nations Commission on Sustainable Development held in June 1996 in New York. The CDG also organized the *International Business Forum* to provide a platform for publicizing the contribution of the private sector in implementing *Agenda 21*, for establishing partnerships between employers and business associations for the South, the East and the North, and for realizing an international exchange of experience. The recommendations and conclusions of the conference were presented to the United Nations General Assembly’s Special Session.

Dr Winter reported on INEM activities in a session on *Business Initiatives for the Implementation of Agenda 21*. Mr Davis presented INEM’s *Industrial Agenda 21 Campaign* to the session on *Instruments for a Sustainable Economy*. INEM Vice-Chairman Rolf Henriksson reported on experience with the European Union Environmental Management and Audit Scheme (EMAS) in Sweden during the session on *Instruments and Good Practices in Private Industry* on 18 June. Dr Marin Ignatov, INEM-Bulgaria Organizing Committee, spoke on how to identify training needs in the session on *Human Capital for Sustainable Development*. Carlos H. Barragan, General Manager of INEM’s Colombian member Promoción de la

Pequeña Empresa Eco-Eficiente en Latinoamérica (PROPEL) presented examples from Colombian SMEs to the June 15th session on *Good Practices in Private Industry*.

Dr Winter spoke on “Environmental Management: A Competitive Advantage for Companies and Countries” at the *International Conference on Environmental Management* on 9 May 1996 in Hannover, Germany.

The United Nations invited INEM to speak at the *World Business Forum* of its *Habitat 2* conference, held in Istanbul on 1 June 1996. Dr Winter served as chair of the Environment Workshop during the *Business Plan of Action* session. Mr Davis served as speaker at the *Roundtable on Eco-Management*. INEM also organized its own event at the WBF, the *Roundtable on Sustainable Industries for Cities* in cooperation with UNIDO.

INEM was invited to Israel to participate in the *Environmental Conference in Jerusalem* on 30 June – 4 July 1996. Dr Winter presented a paper on “Environmental Management: A Competitive Advantage for Companies and Countries”.

In March 1998 INEM Vice-Chairman Mr Henriksson held a keynote speech at the conference on *Economic Benefits of Environmental Investments at the Factory Level* in Herzlia, Israel. The conference was organized by the Israeli Ministry for the Environment.

The Institute for International Research (IIR) asked INEM to facilitate a workshop on “Utilizing Effective and Comprehensive Environmental Management to Successfully Combine Environmental Concerns and your Business Prosperity” at its conference *Environmental Management Solutions Africa* in April 1998. Mr Henriksson and Matthias Gelber, INEM’s representative on ISO 14000 matters, ran the workshop. IIR was very pleased with the workshop and expressed interest in continuing cooperation with INEM.

The INEM Chairman delivered the keynote address at the conference *Environmental Management in Research and Practice – An Interim Evaluation*, organized by the Institute for Economy and Ecology of the University of St. Gallen, Switzerland in May 1998. He presented his model for “Five Steps toward a Sustainable Company”.

The INEM Executive Director facilitated the workshop “Institutions for Clean Development Mechanisms: Governance and operational issues domestically and internationally” during the *UNIDO Expert Group Meeting on the Clean Development Mechanism and Sustainable Industrial Development: New Partnerships for Industry in Developing Countries*. The meeting was organized by UNIDO in October 1998. The participants discussed the role of clean technology transfer for the development of a country. The focus was on the prevention of environmental degradation in the industrial development process.

In order to further strengthen its link to cleaner production initiatives, INEM participated in the *European Roundtable on Cleaner Production (ERCP)* in Lisbon in October 1998. The *Roundtable* focused on three topics:

- sustainable product development and sustainable consumption
- environmental management systems and performance indicators, and
- the role of financial organizations and environmental measures in the service sector

INEM also contributed to the pre-conference meeting on Building Learning Communities to Promote Cleaner Production.

The UNEP Industry and Environment office invited INEM to take part in the 1998 UNEP Consultative Meeting with Industry Associations held in October in Paris. Participants

presented their activities in roundtable discussion. Topics included sustainable management and Factor 10, progress in environmental and sustainability reporting and indicators, voluntary agreements for climate change, progress in environmental management initiatives, indicators for sustainable enterprises, and the work of the UNEP Industry and Environment department in the previous year.

INEM participated in the annual International Chamber of Commerce Environment Commission Meeting in London in October 1998. The meeting was mainly about preparations for the United Nations Commission on Sustainable Development (UNCSD) 7 in April 1999, a discussion on the role of ICC at the WTO High Level meeting on Trade and Environment, preparations for the UNFCCC Conference of the Parties in Buenos Aires in November 1998, and an update on developments in ISO 14000 and EMS in general.

The World Trade organization (WTO) invited INEM to its High Level Symposium on Trade and Environment held in March 1999 in Geneva, Switzerland. The conference was attended by official country delegations of the WTO, industry representatives and environment and development NGOs. During the conference statements were given on the implementation of environmental aspects in the WTO negotiations and treaties.

On 28 September 1999, the Edinburgh Parallel Computing Centre (EPCC), UNI-C, and the INEM organized the workshop Traffic Control and Air Pollution: The Reduction of Congestion and Pollution through Practical Modelling and Management Techniques in Budapest. It was a satellite event to the 6th European Roundtable on Cleaner Production (ERCP '99). The objective of the workshop was to create awareness in the use of modelling tools to improve the quality of air in

towns and cities. It showed how computers have been applied in a cost-effective way to tackle these problems.

INEM participated in the official launch meeting of the Baltic 21 Industry Sector in Stockholm in March 2000. The goal of Baltic 21 is to assure the sustainable development of the Baltic Sea region. Members of Baltic 21 are Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden. Sweden and Russia were named co-lead parties for the Industry Sector. The European Union, Helsinki Commission, International Baltic Sea Fishery Commission, Nordic Council of Ministers, UN Economic Commission for Europe, Vision and Strategies around the Baltic Sea, European Bank for Reconstruction and Development, European Investment Bank, Nordic Environmental Financing Corporation, Nordic Investment Bank, World Bank and several NGOs are also participating in the process. The major outcomes of the Industry Sector meeting were the establishment of a Task Force and the creation of the Baltic 21 Seal of Approval for projects. The Task Force, comprised of the co-lead parties and representatives of Baltic 21 countries, has responsibility for steering Industry Sector activities and awarding the Baltic 21 Seal of Approval, which signals that a proposed project meets the requirements of, and has gained the approval of the Task Force. The endorsement facilitates and accelerates applications for project funding.

INEM, represented by its Executive Director Dr Zadok Lempert and INEM Information Manager Peter Hundley, participated in the Aarhus Business and Environment Initiative (ABEI) Spearheading meeting with Czech businesses in Prague on 5 May 2000. The objective was to spread the concept of eco-efficiency among business and industry. Czech business was represented by the Czech Business Council for

Sustainable Development (CBCSD), the Czech Environmental Management Centre (CEMC) and a number of individual companies. EU Environment Minister Margot Wallström presented the keynote speech.

INEM was a supporting organization of the first international conference on Improving Environmental Management and Performance in the Central & Eastern European Accession Countries held on 13–14 June 2000 in Budapest. Dr Winter served as chairman for the first day and gave a plenary speech on “New Routes to Cross-Border Environmental Partnership with Central & Eastern Europe”, in which he made a number of recommendations to the European Commission, governments and the business community. Dr Winter stated that “It is essential to strengthen cross-border environmental partnership between the European Union and Central & Eastern European countries. This requires contributions by a number of players including the EU and its Members States, the CEE governments, and the business community.”

In October 2000 Dr Winter made a presentation on “The Way to Sustainability Pays: Success Stories from Environmentally Conscious Companies” at the Internationalen Strategietage in Baden-Baden, Forum der Entscheider (International Strategy Days, Forum of Decision-Makers) held in Baden-Baden, Germany. The conference was under the patronage of Mikhail Gorbachev.

On the occasion of the awarding of the BAUM Environmental Prize 2001 on 7 December 2001, Dr Winter held a speech on “Sustainable Management in SMEs – Advancing Environmental Protection Worldwide with Competence Centres”. His presentation included an evaluation of INEM’s past 10 years, its plans for the next 10, plus 10 reasons national associations for environmental management are effective

vehicles for dissemination of environmental management know-how.

Representatives of the Business and Environment Programme of the Regional Environmental Centre for Central & Eastern Europe (REC) conferred with INEM on how the two organizations could cooperate in supporting the implementation of environmental measures in small and medium-sized enterprises in Central & Eastern Europe. Robert L. Nemskéri, Director of REC and Dr Roman Vyhanek, Executive Director of the Czech Environmental Management Centre (INEM member) exchanged perspectives with Dr Winter and INEM Executive Director Gergely Tóth and agreed to explore the development of joint projects.

INEM's Global SMALL Company Initiative was officially launched at the International Forum Cities, Companies and Environment held on 21–23 May 2002 in Barcelona. Dr Winter held a keynote address entitled, “Think Big, Act Small: The Global SMALL (Sustainable Management for all Local Leaders) Initiative for Sustainability”. A key result of the Forum was the drafting and signing of the Barcelona Declaration, which elaborated the objectives of the Global SMALL Company Initiative. The core of the Forum was the “Symposium on Eco-design and Green Products”. A business exchange was held concurrently on 23 May.

Heinz-Werner Engel, Director of INEM's Belgian affiliate Association Belge des Eco-Conseillers et Conseillers en Environnement (ABECE) and Member of the INEM Board, represented INEM at the international conference Trade and Development: Building Capacity for Sustainable Markets on 19–20 June 2002 in New York, where he also made a presentation on “Building Capacity of Suppliers”. The conference was supported by UNEP and the United Nations Office for

Project Services. It aimed to provide a forum for exploring the trend emerging among international agencies, governments and private companies for including social and environmental considerations in purchasing practices.

In March 2003 Dr Winter held a keynote address on at the international conference Integrative Approaches towards Sustainable Development in Jurmala, Latvia. The conference was organized by the United Nations University with cooperation with partners from the Baltic States, including the University of Riga. The main objectives were to

- motivate Baltic researchers, politicians and economists to focus on strategic action towards sustainable development
- build a framework for updated and new links and partnerships between researchers and stakeholders from the Baltic Rim and Western Europe
- encourage young scientists to take opportunities offered by the European research area
- promote networks of excellence in sustainability.

Chapter 6

ISO 14000 ACTIVITIES IN THE INEM NETWORK

More than 223,149 organizations in more than 159 countries have been certified worldwide to ISO 14001 at the end of 2009.¹¹³

Up to the end of December 2010, at least 250,972 ISO 14001:2004 certificates had been issued in 155 countries and economies, a growth of 27,823 (+12%).¹¹⁴

Liaisons A: Organizations that make an effective contribution to the work of the technical committee or subcommittee for questions dealt with by this technical committee or subcommittee.

Reference ¹¹⁵	Title	Type
TC 207	Environmental management	A
TC 207/SC 2	Environmental auditing and related environmental investigations	A
TC 207/SC 3	Environmental labelling	A
TC 207/SC 4	Environmental performance evaluation	A

6.1 Background

The origins of the International Organization for Standardization Technical Committee 207 – Environmental Management (ISO/TC 207) lie in the preparations for the so-called Earth Summit held in 1992 in Rio de Janeiro. The United Nations Commission on Environment and Development (UNCED), which organized the Earth Summit, wanted to include the voice of the world's business and industry in shaping a roadmap towards sustainability. Mobilizing its participation fell to the Business Council for Sustainable Development (BCSD).¹¹⁶ Among its activities, BCSD set up a working group called “International Standards of Environmental Performance” and invited INEM to participate in its work.¹¹⁷ In August 1991 this Working Group evolved into the Strategic Advisory Group on the Environment (SAGE) set up by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). It carried out its work in six subcommittees:

- environmental management
- environmental auditing
- life cycle analysis
- environmental labelling
- environmental performance, and
- environmental elements of product standards

The SAGE mandate was to determine the need for establishing standards in the field of environmental management that would improve economic and environmental performance and enhance trade.¹¹⁸

INEM became a Liaison A member of SAGE in September 1991. INEM Executive Director Troy Davis participated in meetings and mobilized participation by INEM delegations.

For example, INEM's British member organization TREE UK supported the British Standards Institution in presenting its work on extending its British Standard BS 5750 on quality assurance to environmental management systems to SAGE at the ISO headquarters in Geneva.¹¹⁹ (BSI released the world's first environmental management system standard as BS 7750 in 1992.¹²⁰) Anna Lisa Mortensen, International Liaison of INEM's Danish member association ELM Danmark, participated in the INEM delegation to ISO's SAGE subcommittee on Environmental Auditing in October 1992.¹²¹

By the end of 1992 SAGE had completed its work. It had achieved two major accomplishments: In January 1992 it had submitted a series of recommendations on environmental management to the UNCED preparatory committee, and in October 1992 it submitted a recommendation to ISO/IEC to establish a new ISO Technical Committee on environmental management. The UNCED recommendations were reflected in both *Agenda 21* and the *Rio Declaration*, the two major documents resulting from the Earth Summit. The SAGE recommendation to develop standards for environmental management systems was accepted by the ISO Technical Management Board, resulting in the establishment of the ISO Technical Committee on Environmental Management (ISO/TC 207) in January 1993.¹²²

On January 25 1993, Canada was chosen to head the secretariat of ISO/TC 207. The Canadian Standards Association (CSA) took responsibilities for the secretariat on behalf of the Standards Council of Canada. The first meeting was held in June 1993 in Toronto.¹²³ On the same day that CSA took on the leadership of ISO/TC 207 Alan Knight, CSA's Manager of Business Development, Environment Program, wrote INEM Chairman Dr Georg Winter to announce that CSA had

been awarded the Secretariat and requested a meeting with Dr Winter to discuss CSA's approach to the development of environmental management standards and to solicit his advice and cooperation. This meeting was held at the offices of Winter & Sohn in the week of 11 February 1994. John Wolfe, Director of Environment Programs, CSA, also participated.¹²⁴

6.2 INEM participation in the ISO 14000 process

There are three levels of participation in ISO/TC 207:

- Member bodies: national delegations, which have voting rights
- Liaison A members: international or regional organizations, which can participate in meetings and comment on drafts but cannot vote
- Liaison B members: who are observers but cannot actively participate¹²⁵

INEM was officially registered as a category A liaison with ISO/TC 207 subcommittees 1 through 6 in July 1993.¹²⁶ Its obligations were to participate regularly in ISO/TC 207 meetings and to provide regular annual reports to ISO/TC 207 and its subcommittees on INEM's ISO activities. INEM was represented by its Executive Director Troy Davis who served as Head of Delegation. Key INEM representatives were:

- Matthias Gelber in SC1 (environmental management systems) and SC4 (environmental performance evaluation)
- Poul Buch Jensen in SC2 (environmental auditing)
- Heinz Werner Engel in SC1
- Eberhard Seifert and Almut Nöh in SC4

Other INEM representatives contributed to the work of their national delegations:

- Ira Feldman, GT Solutions & Strategies, USA national delegation
- Dr Roman Vyhnánek, Czech Environment Management Centre, Czech national delegation
- Dr Zdeněk Suchanek, Czech Environment Management Centre, Czech national delegation
- Prof Rolf Henriksson, Sydkraft, NMC and INEM Vice-Chairman, Swedish national delegation
- Joel Weill, Board Member of IEFEE, Israeli national delegation

In addition, INEM invited a number of interested and qualified persons from the INEM member organizations to participate in meetings on an irregular, ad-hoc basis.¹²⁷ What's more, Haroldo Mattos de Lemos, former Executive Director of INEM'S Brazilian member association Sociedade para o Incentivo a Apoio ao Gerenciamento Ambiental (SIGA) served as Vice-Chair of ISO/TC 207 in mid-2000.¹²⁸

The INEM delegation worked to shape the ISO standards so that less advantaged players, such as business and industry in developing countries and small companies, could more easily implement them. INEM argued that ISO standards tended to be biased toward large companies in developed countries which had both monetary and staff resources to implement sophisticated and somewhat complex management systems. Mr Davis advocated a stepladder approach to standards implementation, whereby the lesser advantaged companies could implement the systems in a step-by-step manner and have their efforts recognized upon achieving the goals of each level. His efforts led to the establishment of an informal working group which is

described below. After Mr Davis left INEM in 1997, Mr Gelber became Head of Delegation and continued these efforts. In mid-2004 he was appointed to serve on the TC 207 Future Vision Task Force.¹²⁹

Mr Gelber's perhaps most important contributions were in the area of environmental performance evaluation. He brought to ISO the experience he gained in participating in a number of projects carried out by INEM and partner organizations to develop and implement a step-by-step approach to environmental management system implementation, particularly focusing on SMEs. Among them were Project Acorn and EPICENTRE described in the section on the United Kingdom below.

Starting in 1994 Poul Buch Jensen, a member of ELM Denmark, represented INEM in ISO/TC 207/SC2 Working Group 4, which prepared ISO 14015: Environmental Assessment of Sites and Organizations, and in a Working Group of ISO/TC 207/SC2, whose work resulted in the preparation of ISO 19011: Common Environmental and Quality Auditing Standard.¹³⁰

Mr Engel, director of INEM's Belgian affiliate, Association Belge des Eco-conseillers et Conseillers en Environnement (ABECE), specialized in developing tools to assist small and micro-companies in evaluating their environmental performance, implementing environmental management systems and developing documentation. His probably most significant accomplishment was development of the *Ecomapping* tool described in the section on Belgium below.

Dr Seifert and Almut Nöh worked to include "links" between company-level indicators (micro) and economic indicators developed by national and international institutions and organizations (macro) in the standard for environmental performance evaluation.¹³¹

6.3 Official recognition of INEM contributions to ISO/TC 207 SC4

Resolutions and text agreed by ISO/TC 207 and ISO/TC 207 Subcommittee 4 as the result of the work of INEM delegations from 1995 to 1997:¹³²

Resolution 12

ISO/TC 207/SC4 expresses its great appreciation to the Ad Hoc Group on Micro-Macro Linkages and its convener, INEM, for their hard work, determination and contribution to the work of the Subcommittee.

“Regional, national and global indicators of environmental performance evaluation (EPE) are being developed by government agencies, non-governmental organizations, and scientific and research institutions. When selecting indicators for EPE and collecting data, organizations may wish to consider indicators being developed by such entities, and compatibility with information which is provided by them.” — Text referring to micro-macro linkages on indicators in Committee Draft 14031 on Environmental Performance Evaluation, as a result of the work of the Ad Hoc Group on Micro-Macro Linkages convened by INEM in cooperation with the Wuppertal Institute for Climate, Energy and Environment.

Resolution 24

ISO/TC 207 resolves to review its relationship with the United Nations Commission on Sustainable Development (UNCSD), including opportunities for liaison and communication and

asks the ISO/TC 207 Secretary to make a formal proposal on how this might be achieved at the June 1998 meeting.

Resolution 25

Recognizing the influence of the ISO 14000 series of standards, ISO/TC 207 will monitor the interrelationships of the standards with international trade; national and regional legislation, and international agreements; industry or business management initiatives and programs (e.g., Responsible Care, eco-labelling schemes); and intergovernmental initiatives (e.g., UN CSD).

6.4 INEM maintains ISO standards-making process ignores needs of SMEs, developing countries and countries in transition

Following a presentation entitled “Issue of Implementation of ISO 14000 Series in SMEs and Lesser Developed Countries” by INEM Executive Director Troy Davis at the ISO/TC 207 meeting in Oslo, Norway in July 1995, a group of national delegations, NGOs and individual experts decided to create an Informal Working Group on the Implementation of the ISO 14000 series of Standards, especially in SMEs, Developing Countries and Countries in Transition to Market Economies (IWG). Founders of the IWG were the NGOs INEM and Consumers International, national delegations from the Czech Republic, Hong Kong, Ireland, Israel, Mauritius, South Africa, as well as experts in their individual capacities from Belgium, Germany, UNDP and UNIDO. INEM served as secretary of the IWG.¹³³

The objectives of IWG were agreed at the next meeting of ISO/TC 207 in June 1996 in Rio de Janeiro:

- to accelerate the implementation of the ISO 14000 series standards, especially in SMEs, developing and transition countries, and
- to promote greater participation of these groups in the work of ISO/TC 2007

The IWG identified obstacles to, and problems in, implementation of the ISO 14000 series, and in participation in the ISO/TC 207 process; collected ideas and examples of solutions to the obstacles and problems, and recommendations to address the obstacles; and informed interested parties about the results. The second meeting of the IWG was held at the 5th ISO/TC 207 Plenary on 24 April 1997 in Kyoto, Japan. Progress reports were presented by Jennifer Hillard (Consumers International), Abraham Fidel (Israel Manufactures Association), Ana Quiros, (INTECO, Costa Rica), Dr Zdenek Suchanek of the Czech Environmental Management Centre (INEM member), and INEM delegate Matthias Gelber, then affiliated with the Staffordshire University Business School, UK.¹³⁴

In a 1 July 1996 letter to Norbert Gallagher of the Irish Productivity Centre (INEM's affiliate), William B. Burns of the National Standards Authority of Ireland reported that at the plenary meeting of ISO/TC 207 on 18 and 23 June 1996, "Concern was expressed that a level playing field be created in relation to ease of implementation of 14001 worldwide, not only from the perspective of the SMEs but also from that of developing countries. This viewpoint was advanced by INEM supported by several other delegations including Ireland. The mobilization of 'infrastructural support' (e.g., by international agencies like INEM and ICC at national level through their national member-bodies could be an important ingredient

of such support. I would welcome your ideas on this and any other issues which Mr Techera might usefully incorporate in his report, in order to assemble an Irish input to the process.” José Luis Techera, AENOR/Spain, had been appointed Project Leader to study the “special needs of SMEs” and was to report back to the next meeting of SC1 in Kyoto in 1997.¹³⁵ At the Kyoto meeting, on the basis of the report on SMEs by the Subcommittee 1 project team, it was decided to upgrade the project team to an official SC1 SME Task Group chaired by Spain. The Task Group was mandated to collect information on SME experience with the standard and presenting its findings to SC1 for further consideration and recommendations at its annual meeting in San Francisco in June 1998.¹³⁶

In 2000, ISO/TC 207 created the NGO Task Group to examine the role of NGOs in the TC and the barriers that exist to their effective participation. In creating the NGO Task Group, TC 207 recognized the importance of NGO involvement in the TC’s work. This represented a step forward toward opening up the standards development process to a wider variety of voices and perspectives. The NGO TG operated from 2001 until 2003. It produced two key documents: *The Guide to NGO Participation in TC 207* and the N590 document entitled “Increasing the Effectiveness of NGO Participation in ISO TC207”. At its plenary in 2003 in Bali, TC 207 disbanded the NGO TG and created an NGO-CAG Task force to review and recommend for implementation the recommendations of N590. INEM was represented in the Task Group by Sergei Daiman, project manager of its Russian affiliate, Ecoline. Mr Daiman also participated in Subcommittee 1 (environmental management systems); Subcommittee 2 (environmental auditing); Subcommittee 4 (environmental performance evaluation) and Working Group 4 (environmental communications).¹³⁷

At the 2003 plenary of ISO/TC 207 in Bali, participating NGOs established an NGO Forum to continue the work of the disbanded NGO Task Group and to outreach to NGOs not involved in the ISO/TC 207 process. This move was welcomed by ISO/TC 207 with a plenary a resolution. Heinz Werner Engel represented INEM in the NGO Forum.¹³⁸

This was followed in September 2004 with the founding by ISO/TC 207 Subcommittee 1 of the Strategic ISO 14001 SME Group. Its mandate was to study how SMEs were using ISO 14001 and alternative environmental management systems, barriers to their use, and how to increase the value of ISO 14001 to SMEs. The survey attracted almost 2,500 respondents.¹³⁹ The SME Group published its findings and 18 recommendations in *The global use of environmental management system by small and medium enterprises*.

Among the recommendations:

- **B5.** Staged approaches might be supportive of ISO 14001 uptake and use, especially with SME regional or sector clustering, judicious funding and broad support networks.
- **B6.** A generic business specification standard for sustainable SMEs should be considered further. This could be performance oriented by including elements of ISO 9001 (quality management) and ISO 14031 (environmental performance evaluation). This would respond to the wish of those respondents who would like to have one standard for quality and environmental management. (p. 26)

The SME Group's recommended actions were discussed at a workshop at the next ISO/TC 207 plenary in September 2005 in Madrid.¹⁴⁰ Matthias Gelber and Heinz Werner Engel of INEM were among the 46 members of the Strategic SME Group, which was chaired by Lennart Piper of the Swedish Industry Association.¹⁴¹

6.5 INEM projects to implement ISO 14001 in companies

INEM ran a number of major demonstration projects to help in particular SMEs implement ISO 14001. Among these were the Aid to Self-Help (Czech Republic, Hungary, Poland in 1997–2000) and BALTEMA (Estonia, Latvia, Lithuania in 2002–2005) campaigns which focused on assistance to companies in Central and Eastern Europe between 1997 and 2005. Some of these are described below and in Chapters 5 and 7. INEM also produced several publications to broadly disseminate environmental management best practice and know-how to business and industry both within and beyond the INEM network. These publications are described below.

In addition to the ISO 14000 series, INEM promoted and developed tools and ran projects to help businesses achieve registration to the European Union's Eco-Management and Audit Scheme (EMAS), which adopted ISO 14001 as its management system element in 1996. Among these tools was the development and publication of the *EMAS Tool Kit for SMEs* in 1998, and its subsequent revision and publication as the *EMAS Toolkit for Small Organizations* on the European Commission server (<http://ec.europa.eu/environment/emas/toolkit/>) in 2004.

6.6 A selection of ISO 14000 activities of INEM associations

In addition to projects in the framework of multi-country INEM campaigns, individual INEM member organizations carried out a wide variety of programs to promote and implement the

ISO 14000 series in their own countries. A selection of these is presented below.

INEM Association	National Standards Work	International Standards Work	Training / Seminars / Information	Auditor / EMS certification
ALVA (Israel)		▪		
BAUM (Austria)			▪	▪
BAUM (Germany)	▪		▪	▪
CCPC (Czech Republic)		▪	▪	
CEMC (Czech Republic)		▪	▪	
EFZ (Zimbabwe)	▪	▪		
ELM (Denmark)		▪		
EMIAA (Australia)		▪		
ENSEARCH (Malaysia)	▪	▪	▪	▪
IEF (South Africa)	▪	▪	▪	
IPC (Ireland)		▪	▪	
NMC (Netherlands)			▪	
NMC (Sweden)		▪	▪	
ÖBU (Switzerland)	▪			
Orée (France)	▪	▪	▪	

(Source: 1995 INEM Bulletin, Vol. 4, No. 3/4, p. 17)

Table 2 Areas of activities of selected INEM associations on Environmental Standards in 1995

Australia

In 1998 the Australian Centre for Cleaner Production (ACCP), the Environmental Protection Agency and the Victorian Automobile Chamber of Commerce (VACC) joined forces to develop and implement an environmental management system

for the automotive smash repair industry. The program aimed to introduce recycling or efficient disposal of waste wash-water and the use of low-impact detergents, recycling of packaging waste, segregation of coolant from other waste, use of computerized paint recipe systems (which ensure that only the amount of paint needed for a specific job is made up), on-site solvent recovery or collection systems, and benchmarking performance (e.g., paint consumption, energy usage, etc.). Pilot projects were run in 10 rural and metropolitan smash repair shops. Significantly VACC has made adoption of the framework a requirement for ongoing membership. VACC represents about 60% of the Victorian smash repair industry.¹⁴²

Also in 1998, ACCP, EPA and the company Tomorrow's Food Today undertook a joint project to develop and implement an environmental management system for beef ranchers. The program encouraged ranchers to adopt management practices which cut water usage, fertilizer run-off to streams, erosion, and chemical residues. A pilot project undertaken by four regional ranchers evaluated options for environmental and business improvements. Other significant ACCP achievements included assisting companies in having their environmental management systems certified to ISO 14001. These included Geelong Wool Combing, a wool scourer and tops manufacturer, and Hines Waste Technology, a waster transporter and treatment company, both of which obtained certification in the first quarter of 1998.¹⁴³

Belgium

INEM had long argued that environmental management tools and international standards must take into consideration the special needs of SMEs. In addition to lobbying such organizations as ISO, INEM and its member organizations developed

a number of tools to help SMEs improve their environmental performance. One of the most important was developed by Heinz Werner Engel, a member of the INEM Board and president of the Belgian Association of Eco-Counsellors (ABECE) which affiliated to INEM in 2000 and became a full member in 2002. Mr Engel has a particular interest in creating simple, easy-to-use tools to help smaller companies, including micro-enterprises with less than 10 employees, and public bodies to assess and improve their environmental performance. One of the most successful was the *Ecomapping* tool, developed by ABECE in the framework of INEM's *EMAS Tool Kit for SMEs* project in 1997–1998.

Ecomapping is an easy-to-use, visual tool with which smaller companies could pinpoint their environmental problems and take actions to remedy them. The first step in *Ecomapping* process is to make a map of the company site, as seen from above, including machines, boilers, and other significant objects, plus car parks, access roads and the surroundings. Eight copies are needed to assess a company's environmental performance:

- Urban situation: locates the company in its urban context
- Nuisances: provides a quick evaluation of the environmental situation, using the 18 point “Environmental Weather Map”, discussions with employees and an input-output analysis of material and energy flows in physical terms (kg, kWh, m³, etc.)
- Water: assesses water use and discharges
- Soil: looks at storage areas of inflammable, dangerous or hazardous products that could pollute the groundwater
- Air, odours, noise, dust: assesses all emissions and functioning of machinery
- Energy: considers energy use and its impacts

- Waste: evaluates waste management and prevention
- Risks: assesses risks of accidents and pollution

The *Ecomapping* guide gives instructions and suggestions on what areas one should consider for each “ecomap”, including suggestions on what to “draw”, “document”, “estimate” and “work out”. It suggests that symbols such as hatched lines, circles and thick circles be used to identify small, medium and large problems. Once all the ecomaps have been completed, a work program is developed by ranking environmental problems in terms of severity (thick circles first) and considering solutions for them. These solutions could be written directly onto the individual ecomaps with the name of the responsible person(s) and completion dates.^{144, 145}

Over the next couple of years Mr Engel continued optimization of the tool, culminating in *Ecomapping 2* which helps companies not only assess and improve their environmental performance but also implement an environmental management system fully certifiable to ISO 14001 and/or obtain EMAS registration. The slogan “10 pages by 10 people in 10 days” reflects the easy-of-use that makes *Ecomapping* ideal for smaller companies. The 10 pages comprise a two-page environmental report based on the Global Reporting Initiative guidelines, two pages of procedures, and six pages of data recordings and registers, environmental information and work processes.¹⁴⁶

There were six major enhancements to *Ecomapping*:

- Data collected were tagged with ISO 14001 references
- A visual language including symbols for each step of environmental management systems implementation was introduced
- Individual ecomaps (now called “templates”) were improved and new ones created
- A short manual and informal procedures were included

- Templates were enhanced with more specific explications
- Timelines and business cycles were added

The enhancements included two new pages focusing on environmental declarations and external communication, two additional pages on environmental procedures, plus six new templates.¹⁴⁷

The revised *Ecomapping* tool was validated in a pilot implementation in two micro-enterprises from the waste management sector in the Wallion region of Belgium in November 2003. The companies, Retrival and Cedevar, were granted EMAS Certificates 13 and 14.¹⁴⁸

A survey conducted from January to May 2002 by Mr Engel and his team shows that *Ecomapping* was being used by variety of organizations around the world,¹⁴⁹ highlights include:

Belgium: ABECE and other organizations used *Ecomapping* to boost employee involvement in environmental issues. Environmental coordinators of local authorities used *Ecomapping* to implement sustainable development programs. *Ecomapping* was used to elaborate the shortest documentation of an environmental management system to be certified to ISO 14001 in Belgium.

France: Orée, a French NGO (a full member of INEM between 1993 and 1999) uses *Ecomapping* to assist companies in industrial estates implement ISO 14001 cooperatively.

Hungary: The Hungarian Association for Environmental Management (KÖVET) uses *Ecomapping* for the initial environmental assessment of small companies.

Russia: Ecoline, a Russian NGO (INEM affiliate since 2002), uses *Ecomapping* to accelerate improvement in environmental performance of former state-owned companies by speeding up environmental audits, the documentation process, and implementation of corrective actions.

Italy: UNICA, the Italian professional association of eco-counsellors, uses *Ecomapping* to support ISO 14001 internal and external audits.

Western Europe: The EPICENTRE project (see Chapter 5) uses *Ecomapping* as a baseline assessment and training tool in for the step-by-step implementation and verification of environmental management systems according to ISO 14001 and EMAS in 250 SMEs in Germany, Hungary, Ireland, Spain, and the UK.

Asia: The Asian Productivity Organization (APO) uses *Ecomapping* in its Green Productivity program training to assist export-oriented SME's in improving their environmental performance. Ecomapping has also been used in India, Thailand and Hong Kong.

Middle east and North Africa: the DELTA network uses *Ecomapping* in Jordan, Syria, Palestine and Algeria to improve SMEs' environmental performance and facilitate access to the European market.

United Kingdom: Lowestoft College in Suffolk created an on-line version of *Ecomapping* to assist SMEs in the petroleum industry to implement environmental management systems.

Below are three other projects undertaken by ABECE in the years 1999–2000.

ABECE created a number of publications promoting the economic and environmental benefits of environmental management systems for micro-enterprises (companies with 10 or less employees), SMEs and public authorities. and tools with which they could implement them. For example, the guidebook *Pourquoi et comment gérer l'environnement des votre entreprise? Une brochure de la FED sur le projet ISO 14000-EMAS* focused on why and how to implement an EMS according to ISO 14000 or EMAS. It was developed by ABECE in cooperation with



Fig. 6.1 Pourquoi et comment gérer l'environnement dans votre entreprise?

the Belgium Federation for Enterprises. The French-language guide was distributed to Belgian companies and made available worldwide via free download from the INEM website.¹⁵⁰

In 2000 ABECE carried out a project in cooperation with the Namur, Belgium-based Institut Eco-Conseil and the Federation of Belgian Business to develop environmental performance indicators for small companies in the service sector (theatres and opera houses, banking and financial services, distribution, retailing and catering), the manufacturing sector (textiles and thermoplastic injection) and public administration (local and regional authorities and public training and educational institutions). The results were a set of low-cost, easy-to-use management tools that help organizations to monitor and manage their environmental aspects, communicate environmental performance to employees, and benchmark and compare performance with other organizations in their sectors.¹⁵¹ In the same year ABECE carried out a pilot project on using the Internet for on-line training of 10 companies in Brussels in the implementation of an EMS.¹⁵²

Bulgaria

The environmental concerns and policy were relatively new fields for the Bulgarian Industry Association in the early 1990s. To tackle these issues it set up the Clean Industry Centre (CIC) in September 1995. Its main priority and a long-term goal was to support Bulgarian industry associations and enterprises in minimizing their negative impact on the environment and raising production efficiency via pollution prevention measures, waste minimization, and implementation of environmental management systems. CIC launched a wide range of activities targeting companies of all sizes, including SMEs:

- waste minimization/pollution prevention programs
- training and consultancy on the implementation of ISO 14001 and EMAS
- establishment of a network of environmental management systems auditors, consultants and state bodies

In addition, CIC experts conducted environmental impact and site assessments to facilitate privatization of public enterprises.¹⁵³

“The Clean Industry Centre at the Bulgarian Industrial Association is a partner organization of INEM, though not a full member. Our Centre is promoting Environmental Management Systems to Bulgarian industry, namely the implementation of ISO 14001. In this activity we have received substantial help from INEM and we consider this organization as the leading one in the efforts to sensitize the European society in the sustainable development approach. The information we receive almost on a daily basis from INEM we try to disseminate among BIA’s regional and branch associations and through their networks to reach almost all of our thousands of members.” – *Branimir Natov,*

*Advisor on Environmental Policy, Bulgarian Industrial Association,
30 November 1999*

Czech Republic

INEM's Czech member the Czech Environmental Management Centre (CEMC) played a key role in introducing environmental management systems standards in the Czech Republic. CEMC staff and representatives of its member companies served on both the official Czech delegation to ISO/TC 207, and on the national body responsible for the elaboration of Czech environmental management system standards. What's more, CEMC carried out numerous projects to promote the standards to Czech business and industry, and assisted dozens of enterprises, particularly SMEs, in implementing ISO 14001 through a series of projects.

CEMC was one of the initiators and founders of the Czech national body responsible for the elaboration of environmental management system standards, the Technical Standardization Commission No. 106 of the Czech Standards Institute (CSNI/TNK 106) in December 1994. CSNI/TNK 106 is the competent body for Czech standards preparation and an advisory body to the Czech Standardization Institute.¹⁵⁴ CEMC set up committees within CSNI/TNK 106 to exactly mirror the structure of ISO/TC 207. CEMC representatives served on five of the six subcommittees: CEMC Executive Director Dr Roman Vyhnanek served as chair of SC 1: Environmental management systems; Ing V. Vucka, representative of a CEMC member company, chaired SC 2: Environmental auditing, Dr Zdenek Suchanek, Director of the CEMC Eco-management Program, chaired SC 3: Environmental labelling, and Dr J. Kubatova,

representative of a CEMC member company, chaired SC 4: Environmental performance evaluation, and SC 6: Terms and definitions.¹⁵⁵ At the end of 1999 Dr Vyhnanek was appointed Chairman of CSNI/TNK 106.¹⁵⁶

The CEMC executive team organized plenary sessions, meetings and various ad hoc working groups of CSNI/TNK 106 and conducted the meetings in cooperation with the Czech Standards Institute. It also held seminars and training courses and spoke at conferences to inform the Czech business community of progress in the national and international standards-making process. Among the seminars with public participation were: Seminar on Czech Environmental Terminology (SC1 and SC6 – December 1995), Seminar on Results of the Plenary Session of TC207/ISO in Oslo (September 1995), Seminar on Results of the Plenary Session of TC207/ISO in Rio de Janeiro (July 1996), Seminar on EMS – Welcome to the Czech ISO 14000 Standards and Results of the Plenary Session of TC207/ISO in Kyoto (June 1997). In January and June 1997 CEMC held events in the Slovak Republic, an EMS training course in Bratislava and a conference on environmental management in Banská Bystrica, respectively.¹⁵⁷

An official Czech national delegation participated in the annual ISO/TC 207 plenaries for the first time in June 1995 in Oslo. Previous involvement in the international standards-making process had been limited to written comments. Three of the four representatives of the official “P” member Czech Office for Standardization, Metrology and Testing were CEMC experts. (Dr Suchanek – SC1, Ms Rolková – SC1 and SC2, Dr Kubátová – SC4). CEMC delegates also took part in meetings of the INEM delegation. The Czech delegation to the June 1996 plenary in Rio de Janeiro was composed entirely of CEMC staff and representatives of Czech member companies

(Dr Suchanek, who served as Head of Delegation, – SC₁ and SC₃, Ms Rolkova – SC₂ and SC₅, Dr Kubatova – SC₄ and SC₆). All participated in meetings, workshop and initiatives of INEM at the TC/207 plenaries. Dr Kubatova also participated in working sessions of SC₄ in San Francisco and Stockholm. The three CEMC representatives also participated in the April 1997 ISO/TC 207 Plenary session in Kyoto.¹⁵⁸ In the first quarter of 1999 Dr Suchanek left CEMC and his responsibilities were assumed by Dr Vyhnánek who served as head of the Czech delegation to the ISO/TC 207 annual meeting in Seoul (June 1999). Dr Suchanek continued co-operation with CEMC on ISO issues as external expert.¹⁵⁹

CEMC regularly informed environmental management professionals and the broader public about events, progress and achievements in ISO 14000, EMAS and environmental management systems in general in CEMC periodicals, such as the journal *Environmental Aspects of Business: Perspectives*, and in various nation-wide business and technology journals and newspapers, including the leading business newspaper *Hospodářské noviny*.¹⁶⁰ In 1999 CEMC published two issues of a bulletin on environmental labelling, which was distributed with the official bulletin of the Czech Ministry of Environment and was published on the Czech Ministry of Environment website.¹⁶¹

In 1997 CEMC was contracted by the Czech Standardization Institute to elaborate Czech standards for *ISO 14001 – Environmental management systems – specifications with guidance for use* and *ISO 14004 – Environmental management systems – General guidelines on principals, systems and supporting techniques*. ECOsystem Ltd., a CEMC member company, was granted the contract for formulating the environmental auditing standards ISO 140010 (general principles), ISO 140011 (audit procedures) and ISO 140012 (qualification criteria

for auditors). Following final translation and editing CEMC organized a public hearing on the new standards in February 1997. They were then published and entered into force in mid-June 1997. On 24 June 1997 CEMC held a launch seminar with the national CTS 106. About 100 persons participated. In the first week after publication CEMC sold 200 sets of the standards, and the CSI sold 10.¹⁶²

As part of its activities to promote environmental management systems, CEMC translated the *UNEP/ICC/FIDIC Environmental Management Systems Training Resource Kit* and publicly launched the manual with a two-day train-the-trainer workshop on its use in January 1998. Officials from the Czech and Slovak Republics, the Regional Environment Centre, UNEP, Pollution Prevention and Cleaner Production Centres, and INEM associations from Central & Eastern Europe participated in the UNEP-supported workshop.¹⁶³

The INEM Main Secretariat obtained funding from the German Environment Foundation (DBU) to directly support the participation of CEMC in the development and dissemination of the ISO 14000 series from 1997 to 2000. The support included travel costs to ISO/TC 207 meetings, as well as funding for activities to disseminate the ISO 14000 series in the Czech Republic.¹⁶⁴ In 1998–2000 CEMC carried out the project Pollution Prevention and Environmental Management Systems Consultation in SMEs in the framework of INEM's *Aid to Self-Help* campaign.¹⁶⁵ In the framework of POEMS 12 SMEs involved in construction (Multipstav, ECO-Building Brno, GHE Ostrava, Stavby silnic a železnic), energy consulting (ECO-Project-Invest, Ltd), food (Master Foods), metallurgy (Energetika Třinec), electrical engineering (VUES Brno), transportation (TKLAS Karviná), environmental engineering (GEOTEST Brno), wood-processing (Dřevozpracující

družstvo), and glass making (Sklárny BOHEMIA). A total of 31 employees were trained and certified as internal environmental management system auditors, in most cases two per company. CEMC provided staff training, and helped identify environmental aspects and impacts, develop environmental policies and action plans, and assure legal compliance. The companies implement environmental management systems that were certified to ISO 14001 in 2000 and 2001.¹⁶⁶

Estonia

Among several projects carried out by INEM's Estonian affiliate, Pollution Prevention Centre at the Estonian Management Institute (EMI-ECO), to introduce the ISO 14000 series in Estonia was the "Pilot Project: ISO 14001 Implementation at an Estonian Cement Factory" in 1997. An environmental audit was conducted at Kunda Nordic Cement by Estonian auditors under the guidance of consultants of the internationally recognized Det Norske Veritas Ltd. Based on recommendations made in the audit report, the company accepted the proposal of the Estonian Ministry of Environment to participate in an Estonian-Finnish bilateral co-operation program to implement an environmental management system in line with the international standard ISO 14001. The aim of the co-operation program was to build local capacity to assist Estonian industries in the implementing of EMSs based on either ISO 14001 or EMAS. Local consultants were selected to carry out the EMS implementation at the pilot company under the supervision of a Finnish consultant. The total cost of the pilot project was USD 75,000 and was shared between the Ministry of Environment of Finland (80% of costs) and Kunda Nordic Cement (20%). The project was carried out in 1998–1999. In addition, two construction material production

companies were assisted in implementing an environmental management system in preparation for ISO 14001 certification. A similar ISO 14001 implementation project was launched for the electronics industry in February 2000. ([May 2000] Pilot Project: ISO 14001 Implementation at an Estonian Cement Factory. INEM Info Service, No. 19, May 2000)

In the first half of 2004 INEM's affiliate the Estonian Institute for Sustainable Development/Stockholm Environment Institute (SEI-Tallinn) prepared training materials for an ISO 14001 coaching program that comprised four training sessions. The first iteration was held in February and March, the second in October and November 2004. A total of 45 participants from various enterprises participated. In April 2004 SEI-Tallinn held an ISO 14001 seminar with 16 participants for the construction industry. An addition seminar on environmental impact assessment and environmental auditing was held on 16 June 2004 (21 participants).¹⁶⁷

Hungary

The Hungarian Association for Environmental Management (KÖVET-INEM Hungária) has played a leading role in promoting the ISO 14000 series to Hungarian industry. It has designed training courses for environmental managers and auditors, carried out demonstration projects on implementation of environmental management systems according to ISO 14001, and promoted ISO 14001 in publications and support activities. KÖVET's representatives also participated in the Hungarian elaboration of the ISO 14000 standards and have indirectly contributed to the work of the ISO/TC 207 through the Hungarian Standards Institute and INEM delegations.¹⁶⁸

KÖVET-INEM Hungária maintains and regularly updates the national ISO 14001 register, which keeps track of Hungarian

EMS consultants, certifiers and certified companies. Core data of the register are published in the KÖVET-INEM Hungária information bulletin and on the Internet. The KÖVET-INEM Hungária library also offers a wide range of ISO 14001 case studies, guidelines and other related literature.¹⁶⁹

In 1998 KÖVET-INEM Hungária was awarded a contract to develop a training course for environmental managers and auditors by the Hungarian Ministry for Foreign Affairs. The 12-day course covered not only ISO 14001 and its auditing, but also provided up-to-date knowledge on environmentally friendly products, environmental performance evaluation, cleaner production and environmental cost accounting. The first of these courses was very successful. Although original plans called for 20 participants, due to great demand 38 persons passed the four examinations and completed the course. Following the pilot, ownership of all course material was passed on to the Hungarian Standards Institute which was entitled to repeat the training on a regular basis.¹⁷⁰

In the framework of INEM's *Aid to Self-Help* campaign KÖVET-INEM Hungária ran a demonstration project that assisted SMEs in the simultaneous implementation of cleaner production techniques and an environmental management system entitled "Pollution Prevention and Environmental Management System Consultation Programme in Small and Medium-sized Enterprises (POEMS)". The aim of this two-year project (1998–2000), carried out in cooperation with the Hungarian Cleaner Production Centre (HCPC) and BAUM-Austria, was to show that the integration of pollution prevention concepts with environmental management systems is more effective than the introduction of pollution prevention and environmental management systems independently of one another. Twenty-three Hungarian SMEs participated. To support the

project KÖVET-INEM Hungária produced the manual *TISOT: Tisztább termelési és környezetközpontú irányítási rendszer (ISO 14001) tréning* covering ISO 14001 principles, practical experience, and case studies. Major funding was provided by the German Environment Foundation (Deutsche Bundesstiftung Umwelt) and the European Union's PHARE program.¹⁷¹

In 1999 Gergely Tóth, Executive Director of KÖVET-INEM Hungária created a tool to assess the rank of countries in the number of ISO 14001 certifications. The *ISO 14001 Speedometer* shows country positions based on the number of ISO 14001 certifications (Index 1), as well as the ratio of certifications to population (Index 2) and to GDP (Index 3). The quarterly-updated *Speedometer* (first in June 1999) has been published in Hungarian, English, French and Czech. An electronic version was published on the INEM website.¹⁷²

The ISO 14001 Speedometer: A tool to better assess country ranking in ISO 14001 certifications



Fig. 6.2 Speedometer

The number of certifications to the international environmental management standard ISO 14001 is often used as an indicator of a country's development in the use of voluntary environmental agreements and is understood as a sort of country-level environmental performance indicator.

However, does the fact that Japan ranks first in the number of certifications mean that its environmental performance is better than that of smaller Scandinavian countries? Perhaps if we take into consideration a country's size and its economic development, the number of certifications can provide a clearer picture.

The *ISO 14001 Speedometer* uses a country's population as an indicator of size, and GDP as an indicator of economic development.

Indicator 1	Ranks countries according to the number of ISO 14001 certifications.
Indicator 2	Shows the country's number of certifications in relation to its population. A small country with the same number of ISO 14001 certifications as a large country has a significantly better indicator rating.
Indicator 3	Relates the number of certifications to a country's GDP. A poorer country requires more effort to have a certain number of companies certified than a wealthier country, thus rates higher.

In autumn 2002 KÖVET-INEM Hungária organized a national, nine-city "ISO Tour" from November 2002 to February 2003 to inform SMEs about ISO 14001 and its staged implementation. KÖVET-INEM Hungária worked with regional chambers of commerce and industry to organize half-day courses and workshops on ISO 14001 for SMEs. The first five workshops were held at the end of 2002 and the other four in early 2003. Lectures were given by KÖVET-INEM Hungária experts; refreshments, promotional mailings and the venues were provided by the chambers. About 250 companies participated.¹⁷³

Israel

A key impetus in promoting the ISO 14000 series to Israeli industry was provided by the 6th *International Conference on Preservation of Our World in the Wake of Change* held on 30 June – 4 July 1996 in Jerusalem. at which INEM Chairman Dr Winter made a presentation on “Environmental Management – a Competitive Advantage for Companies and Countries”. The Israel Society for Ecology & Environmental Quality Sciences, which organized the conference, had invited INEM Chairman Dr Winter to make the presentation. On 30 June Dr Winter also held a speech on environmental management, sustainable development, the activities of INEM, as well as general experiences in the founding and further development of national associations for environmental management at Ormat Industries. In a letter of 8 December 1996 Joel Weill, Vice-President, Quality and Special Projects, Ormat Industries and member of the board of INEM’s Israeli member organization, reported to Dr Winter that “Since your lecture in Jerusalem and in Ormat, environmental management systems and ISO 14000 standards became a ‘hot’ topic in Israel. In Ormat we are progressing towards the establishment of our EMS.” Mr Weill later served as the head of the Israeli delegation to ISO/TC 2007 Environmental Management.¹⁷⁴

INEM’s Israeli member organization, the Israel Economic Forum for the Environment (IEFE), in conjunction with the Standards Institution of Israel (SII) held an ISO 14001 auditor training course in the fall of 1999 in Shefayim for Israeli companies. The 80-hour course held over five days was designed and implemented by IEFE Board Members in co-operation with SII. It was the first of its sort in Israel. It consisted of 80 hours of lectures and workshops which were followed by an expert-supported internal environmental audit of the

participants' home firms. Successful participants received an Internal Auditor's Certificate from the SII. Three months after the course the participants were re-united to share experiences and get advice from the professionals and peers.¹⁷⁵

In April 2000 IEFE, in conjunction with the Palestinian-Israeli Environmental Secretariat (PIES) and the Palestinian Society for the Protection of Nature (PSPN), launched the Israeli-Palestinian Environmental Management Initiative (IPEMI) at a conference in Jericho entitled, *ISO 14001: An Environmental Management System for Profitable, Sustainable Development*. Presentations by Israeli and Palestinian government officials, trade union representatives, as well as local and international experts provided participants with an appreciation for the environmental and economic advantages of adopting environmental management techniques such as ISO 14001. In the second phase of IPEMI, which was supported by the United States Embassy and the company Chemonics International, five Palestinian and five Israeli firms were assisted through the initial stages of the ISO 14001 implementation process.¹⁷⁶

Latvia

Seminar on Standards ISO 9001, ISO 14001, OHSAS, HACCP on 13 November 2003 (32 participants)

Experience exchange of environmental managers from companies where EMS has been implemented and/or certified according to ISO 14001 on 3 February 2005 (29 participants)

Lithuania

The Environmental Engineering Association (EEA-INEM Lithuania), its member organization the Environmental Management and Auditing Institute (EMAI) and the Institute of Environmental Engineering (APINI) at the Kaunas

University of Technology – all affiliated to INEM, ran a number of projects to introduce the ISO 14000 environmental management standards to Lithuanian companies and government.

EEA, which was recognized by the Lithuanian Environmental Protection Ministry and Ministry of the Economy as one of the official ISO 14000 implementation institutions, held four such seminars in 1997. Between 1998–2000 EEA had 10 trainers who provided training in ISO 14000 implementation. In 1998 EEA assisted companies to implement ISO 14000 in six industrial sectors.¹⁷⁷

EMAI ran two major programs focusing on environmental management systems in 2002–2004:

- Implementation of “less formal” approaches to environmental management (and eco-labelling)
- Implementation of environmental management systems according to the international standard ISO 14001

The “less formal” approaches, comprising *Ecomapping* and environmental good housekeeping methodologies, assisted small businesses. Thirty SMEs were trained in the seminar series that began in 2002. EMIA held 12 additional training sessions for 15 SMEs on the implementation of ISO 14001. In addition, EMAI provided consultancy to eight enterprises that obtained ISO 14001 certification. EMAI produced two publications to support its trainings: *Implementation of Principles of Sustainable Development in Small and Middle Enterprises* and *The Guide for Implementation of Enterprise’s Environmental Management System and its Certification*, and translated *Ecomapping* into Lithuanian.¹⁷⁸

EMAI is a member of the Lithuanian Standards Association Technical Committee on Environmental Protection (TK 36 “Aplinkosauga”). Among activities directly related to standardization, EMIA carried out a project to initiate a national

scheme for environmental labelling as the first stage in the introduction of the ISO 14020–14025 series of standards in Lithuania. EMIA also elaborated the Lithuanian standard for identifying environmental aspects and assessing environmental performance evaluation in micro, small and medium-sized enterprises, *Environmental aspects identification and environmental performance evaluation in micro-, small- and medium-sized enterprises. Requirements*.¹⁷⁹

EMAI and APINI joined forces to conduct a series of eight seminars on environmental management systems in Vilnius between February and May 2003. APINI also carried out a number of events alone. For example, it held informal seminars on environmental management systems for companies in the Kaunas region on 19 February, and in Siauliai on 20 March 2003. Two representatives of INEM's Swedish member Swedish Association of Environmental Managers (NMC) assisted in the Kaunas seminar. In April APINI held a seminar on *EMAS implementation in Lithuania and the European Union* with 64 participants, including 33 industry staff. And between May and October 2003 it held a series of five two-day trainings on the implementation of environmental management systems. Nine companies participated in the first training and 10 each in the following four. In the fall of 2003 APINI hosted a series of Environmental Performance Evaluation (EPE) train-the-trainer workshops for participants from Estonia, Latvia and Lithuania at Kaunas University of Technology. Content of the two-day trainings included use of the international environmental standard *ISO 14031: Environmental Performance Evaluation* to develop performance indicators. Examinations were held on 9 December 2003 in Kaunas, Riga and Tallinn. Successful candidates were awarded certificates.¹⁸⁰

Malaysia

The Environmental Management and Research Association of Malaysia (ENSEARCH), INEM's Malaysian member association, organized a meeting on 15 December 1998 to discuss the ISO/TC 207/SC4 Roundtable on Environmental Performance Evaluation, held in Kuala Lumpur on 10–14 December 1998. The INEM Main Secretariat facilitated the participation of Dr Eberhardt Seifert, a member of the German DIN delegation to SC4. He gave an insight into the ongoing work on the environmental performance evaluation standard and reported on new developments with ISO 14001, in particular the revision process and discussions on the issue of external reporting.¹⁸¹

Poland

As its name says, Polish Forum ISO14000 – INEM Poland focused its work on dissemination and implementation of the ISO 14000 series of environmental management systems. One of its very first activities was the seminar, “Concept and Implementation of Integrated Management Systems ISO 9000 and ISO 14000”, held on 23–24 October 1997 in Lodz. It was organized by INEM Poland, Polski Centrum Badan i Certyfikacji and the Environmental Management Training Centre (EMTC) and attracted representatives of 50 companies. Topics included Environmental Problems and ISO 14000, Criteria for Selecting a Program that will Protect the Environment, and Integration of Environmental Management and Quality Management Systems.¹⁸²

In 1998 the INEM Main Secretariat, INEM Poland and EMTC organized a seminar entitled “Integrated Environmental Management in line with the ISO 14000 Series” in Sierock. It was held in two sessions, the first on 6–9 April covering environmental management tools and the ISO 14000 series and

the second on 6–8 October on value-added implementation of ISO 14001. More than 30 representatives from industry and industry federations, universities, municipalities and the Polish Ministry for the Environment participated. The seminar, which was funded by the German Federal Environment Foundation, was led by INEM's Head of Delegation to ISO/TC 2007, Matthias Gelber, Director of INEM's British affiliate 14000 & One Solutions.¹⁸³ Participants from the Technical University in Warsaw reported that the seminar inspired them to establish an MBA course for environmental managers.¹⁸⁴

Grazyna Momot, Executive Director of INEM Poland, spoke on “The Role of the Initial Environmental Review in Establishing and Environmental Management System” at the *Environmental Management Systems and ISO 14001 in Central & Eastern Europe* conference on 25–26 March 1998 in Prague. In addition, Ms Momot led a workshop on initial environmental reviews during a day of workshops on ISO 14001 implementation held in conjunction with the INEM-endorsed conference.¹⁸⁵

By the time INEM Polska became a Full Member in INEM on 9 May 1999, it had carried out another project called “Implementation of Quality and Environmental Management Systems in Two Polish Hospitals”.¹⁸⁶

The following October INEM Poland, in cooperation with SIMPTTEST Poznań, held a training for 35 companies on the introduction of integrated management systems in industrial plants in Poznań. Seminar documentation was distributed to INEM Polska members.¹⁸⁷

Russian Federation

Among the major activities of the Institute for Natural Resource Management (INRM), INEM's Russian member

organisation, is the dissemination of information about the ISO 14000 series to Russian enterprises. It also provides environmental management system consultancy and training. Leading up to 1998 INRM staff were trained in ISO 14001 implementation in the USA and Moscow with the support of the United States Agency for International Development (USAID). They also participated in training seminars on the ISO 14000 series and EMAS in Sweden.¹⁸⁸

In a report to the INEM Main Secretariat on activities, INRM Executive Director Dr Aleksey E. Ignatiev highlighted two major projects that ran between September 1998 and February 1999:

- Dissemination of ISO 14001 Information to Russian Enterprises and Training of Specialists
- Dissemination of the ISO 14000 series to Russian Enterprises to Reduce Industrial Pollution

The first was realised jointly with the German Association for the Promotion of International Environmental Technology Transfer (ITUT e.V.) in the framework of the European Union's TACIS BISTRO programme. Its main goal was to transfer know-how from European to Russian enterprises, in particular German experience with implementation of the ISO 14000 series. The second, financed by the United States, trained INRM staff in the principles and requirements of the ISO 14000 family of standards. INRM put its newly gained knowledge to immediate use, conducting two follow-on training seminars for representatives of administrative bodies and environmental authorities and companies in the oil, chemical and metallurgic sectors. The seminars covered the principals and requirements of the standards focusing on environmental management systems (ISO 14001 and ISO 14004) and environmental auditing (ISO 14010–14012), life cycle assessment,

international experience in introducing ISO 14000 standards, and the development and implementation of environmental programmes and cleaner production methodologies. Practical exercises focused on developing an environmental policy and environmental programme, EMS audit procedures and introduction of cleaner production.¹⁸⁹

In the framework of the projects INRM produced three publications:

- Concept for Adaptation and Introduction of the Principles and Requirements of the ISO 14000 Series in Russian Enterprises
- Programme of Information Dissemination on the ISO 14000 Series in Russian Enterprises and Training of the Specialists to Introduce Environmental Management and Certification on Conformity with the ISO 14000 Series Requirements
- Guidelines on Dissemination of the ISO 14000 Series and its Methods and Requirements

INRM also established a training and consulting centre specialised in ISO 14000.¹⁹⁰

Between 2001 and 2003 INRM provided consultancy on the design and implementation of environmental management systems meeting the requirements of ISO 14000 and the occupational health and safety management systems standard OHSAS 18001, primarily to companies in the mechanical engineering and oil and gas sectors. INRM also conducted a number of EMS audits for such major companies as for LUKOIL Overseas Holding Ltd and Thermotron on compliance with ISO 14001. For the latter INRM also developed guidelines for implementing an EMS and provided staff training. LUKOIL was the first company of the Russian oil and gas industry to obtain certification to ISO 14001 and OHSAS 18001. In follow-up

consultancies INRM assisted LUKOIL in developing a waste management programme, formulating an environmental policy and establishing an environmental safety programme for 2004–2008.¹⁹¹

Slovak Republic

INEM's affiliate in the Slovak Republic, the Slovak Cleaner Production Centre, carried out a number of projects focussed on ISO 14000 in 2003–2004.

- **Bulgaria** – capacity-building for environmental management systems: Introductory training, top-management training, internal auditor training, consultancy and implementation training in one company.
- **ŽOS Trnava** – implementation of an environmental management system, seminars, trainings, pre-certification audit
- **Slovnaft Bratislava** – integrated management system (ISO 9001, ISO 14001, OHSAS 18001) – implementation consultancy, internal auditor training, training of top and middle management, courses for personnel, pre-certification audit
- **Slovakofarma Hlohovec** – implementation of integrated environmental and health and safety management systems, training of internal auditors, management training
- **Kappa Štúrovo** – integration of environmental, quality and health and safety management systems, internal auditor training, top-management training, elaboration of an integrated management system manual
- **Provident Financial, Bratislava** – creation of a register of environmental legislation
- **Transpetrol Bratislava** – training of top-management on integrated environmental and quality management systems

- **Mont-servis, Bratislava** – implementation of integrated management system, consultancy, training, courses, elaboration of environmental management system documentation
- **Modular training project** for internal auditors of quality, environmental and health and safety management systems, and integrated management systems co-operation with ASTRAIA Nitra.¹⁹²

South Africa

The Industrial Environmental Forum of Southern Africa (IEF), INEM's member association in South Africa, lead the movement to promote environmental management standards to industry in not only South Africa, but also the neighbouring countries Zimbabwe, Namibia, Mozambique and Botswana.

In 1992 IEF brought Michael Gilbert of the British Standards Institution to South Africa to lead a series of workshops on the British Standard 7750 (Specification for Environmental Management Systems). This led to a broad understanding of the British standard among South Africa enterprises. One of the most important activities of IEF in 1993 was its participation in the formulation of South African standards for environmental management systems. This document became part of a discussion paper for creating the international environmental management system standard ISO 14001.¹⁹³ The IEF was one of the few organisations from developing countries to actively participate in the work of ISO/TC 207. Following the release of ISO 14001 in 1996, the IEF turned its attention to accreditation and certification schemes in South Africa and to the development of tools for implementation of environmental management systems adapted to African requirements.¹⁹⁴

INEM international experts supported IEF's efforts. For example, in April 1998 INEM Vice-Chairman Rolf Henriksson

and INEM's Head of Delegation to ISO/TC 207, Mr Matthias Gelber, conducted workshops at the 4th Annual National Environmental Solutions – Africa in Fourways, South Africa. Mr Henriksson led a workshop entitled, "A Swedish Experience with Environmental Management Systems and Auditing". Mr Gelber held a workshop on "Ensuring that your Company meets International Environmental Standards by Successfully Integrating ISO 14001 into your Existing Management Systems". In addition, they teamed up to hold a one-day INEM workshop on "Utilising Effective and Comprehensive Environmental Management to Successfully Combine Environmental Concerns and your Business Prosperity" a day after the closing of the conference.¹⁹⁵

Tunisia

At the end of 2000, INEM's Tunisian affiliate of the International Centre of Technology and the Environment (CITET) carried out a pilot project to assist 10 enterprises in implementing environmental management systems according to ISO 14001. Under the project, CITET and international experts

- ran a training programme focusing on awareness-raising for employees and staff of the enterprises
- conducted an initial environmental review to identify environmental aspects and impacts, as well as critical issues to be addressed
- assessed compliance with legal requirements
- developed an action plan to resolve identified problems via concrete measures and objectives
- evaluated implementation of the programme and carried out corrective measures

Among the 10 pilot companies, Tunisie Lait, a dairy production unit located at Sidei Bou Ali in the Sahel region, obtained

certification to ISO 14001 in October 2002 and ISO 9001 (quality management) in December 2003. In 2004 the food processing company obtained certification of its integrated environmental and quality management system.¹⁹⁶

United Arab Emirates

INEM in co-operation with the United Nations Development Programme (UNDP)-United Arab Emirates and the Zayed International Prize for the Environment held a two-day seminar entitled, “ISO 14001: Environmental Management and Sustainable Development”, in Dubai on 27–28 November 1999. The seminar was led by Matthias Gelber, member of INEM’s Expert Group on ISO 14000. More than 30 participants from private and public companies, governmental authorities and the Dubai Police Department took part.¹⁹⁷



Fig. 6.3 Dr Zakok Lempert and Colonel Bin-Fahad

Subsequently, INEM’s Executive Director Dr Zadok Lempert signed a Memorandum of Understanding (MoU) with Colonel Bin-Fahad, Chairman of the Zayed Prize and Mr Adel M. Khalifa of UNDP-UAE to introduce environmental

management to UAE industries. Under the terms of the MoU, INEM was to organise between 10 and 14 seminars in the UAE in the year 2000. In addition, the Zayed Prize would act as an organising committee for creating an INEM association in the Emirates. INEM also provided the Zayed Prize with copies of INEM publications for translation into Arabic.¹⁹⁸

United Kingdom

In the year 2000, White, Young, Green Environmental (WYGE), INEM's British affiliate, carried out a UK-based pilot project funded by the Department of Trade and Industry (DTI) to test the use of the ISO 14031 standard on environmental performance evaluation in a range of companies from different sectors. The following scenarios were tested:

- Can the ISO 14031 approach facilitate the effective operation of existing certified environmental management systems within organisations?
- Can the ISO 14031 approach facilitate the development and implementation of a certifiable environmental management system?
- Can the ISO 14031 approach provide an effective alternative to a certifiable environmental management system?
- Can the ISO 14031 approach be adapted for use as a supply chain management tool?
- Can the ISO 14031 approach be used for meaningful benchmarking environmental performance either internally, or by external stakeholders?
- Can the ISO 14031 approach be utilised to provide reliable indicators of environmental risk?¹⁹⁹

The results were integrated into the follow-on Project Acorn, a DTI-funded, staged EMS implementation project working with major UK supply chains managed by the British Standards

Institution (BSI) with consultancy from WYGE. From October 2001 to March 2003. A total of 28 “blue chip” mentor companies such as Cable & Wireless, Severn Trent Water, Vauxhall, Rolls Royce and Marks & Spencer and 250 supply chain companies participated in the project.²⁰⁰

Success of Project Acorn, in turn, lead to the elaboration of British Standard *BS 8555:2003 Environmental management systems. Guide to the phased implementation of an environmental management system including the use of environmental performance evaluation*, which was published in April 2003. The standard outlines six separate phases of EMS implementation.²⁰¹

Independent audits at each level verify the company’s progress in implementing an environmental management system. This scheme is especially attractive to larger companies, as it helps them avoid multiple audits of their supply chain. The suppliers benefit because they can prove their commitment to environmental management and improvement. The Acorn has proved to be quite successful as demonstrated by its support by the major corporations, the UK government, industry associations and environmental organisations.²⁰²

The International Standards Organisation (ISO) is currently reviewing the incorporation of BS 8555:2003 into the international ‘family’ of standards. ISO 14005 “Guidelines for the staged implementation of an environmental management system, including the use of environmental performance evaluation” is currently in development with a proposed publication date of September 2010.²⁰³

In February 2011 ISO/TC 207 released ISO 14005:2010 which “provides guidance for all organizations, but particularly small- and medium-sized enterprises, on the phased development, implementation, maintenance and improvement of an

environmental management system”. It also includes advice on the integration and use of environmental performance evaluation techniques.²⁰⁴

6.7 Selected publications on ISO standards from the INEM network

An Introduction to the ISO 14000 Family of Environmental Management Standards

Written by INEM ISO Expert Poul Buch Jensen, this regularly updated pamphlet provides an overview of the scope and stage of development of the various ISO 14000 standards on environmental management systems, environmental auditing, environmental labelling, environmental performance evaluation, environmental assessment, Life Cycle Assessment, and ISO 19011: Common Environmental and Quality Auditing Standard.

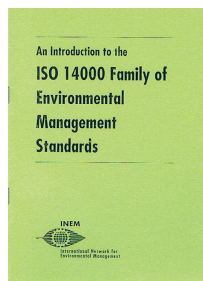


Fig. 6.4 ISO Family of Environmental Management Standards

BAUMIS: Do-it-yourself environmental information system

The interactive, CD-ROM based BAUMIS (Betriebliches Audit- und Management Informationssystem) tool was developed by

BAUM AG. The idea was that companies that cannot afford a well-functioning environmental management system often lack an integrated view of their environmental situation and opportunities for improvement. BAUMIS was developed to assist especially smaller companies in constructing an interactive environmental information system on CD-ROM. Users can conduct an audit of key areas of their company (production to fleet management, staff motivation to purchasing), build an effective environmental information system, decide measures to be taken, and put together an environmental report. In addition, the CD-ROM contains numerous case studies and successful examples.

Guide to Environmental Legal Compliance as an Element of ISO 14001 and EMAS

This guide was developed to help SMEs deal with environmental legal compliance at a reasonable cost. It explains how a company can determine whether it complies with environmental legislation and how it can establish and maintain compliance as an element of an EMS according to ISO 14001 and EMAS. It is designed for use by non-legal experts. The *Guide* was originally published by INEM's Swiss member organisation ÖBU in German, then translated to English and adapted to

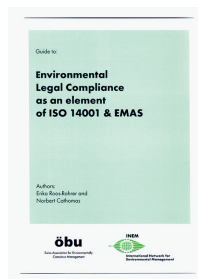


Fig. 6.5 Legal Compliance

international requirements by the INEM Main Secretariat in the context of the *EMAS Toolkit for SMEs* project.

Környezeti teljesítményértékelés

KÖVET-INEM Hungary published an 80-page guide, *Környezeti teljesítményértékelés* (Assistance in the Implementation of Environmental Performance Evaluation), to assist companies in developing and using environmental performance indicators. The guide is based on the premise that there are several methods of evaluating a company's environmental performance, and that one of the easiest is the development of environmental indicators and establishment of a system of 20–30 core indicators. The advantage of this approach is its flexibility: it can be applied in a very rough (1–2-hour brainstorming exercise for internal use only) or very elaborate manner (3–4-month project, detailing procedures for each indicator, strong information technology support).



Fig. 6.6 Environmental Performance KÖVET

ISO 14001: Passo a Passo da Implantação nas Pequenas e Médias Empresas

In 1999 Prof Dr Dalia Maimon, President of INEM's Brazilian member association, Sociedade para de Incentivo e Apoio ao

Gerenciamento Ambiental (SIGA), published a guide on ISO 14001 implementation for small and medium-sized enterprises.

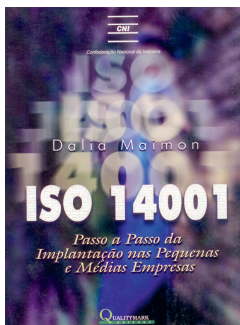


Fig. 6.7 ISO 14001 Prof Dr Dalia Maimon SIGA

Aplinkos Apsaugos Vadyba: ISO 14000

The first Lithuanian book on environmental management systems, *Aplinkos Apsaugos Vadybas: ISO 14000 (Environmental Management – ISO 14000)*, was edited by Dr Eduardas S. Davidavičius, Executive Director of the Institute of Environmental Management and Auditing, INEM's Lithuanian member association.

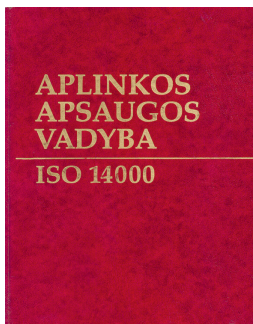


Fig. 6.8 Environmental Management – ISO 14000,
edited by Dr Eduardas S. Davidavičius

Chapter 7

ENVIRONMENTAL MANAGEMENT FOR CENTRAL & EASTERN EUROPE

7.1 ECO-BALTIC Conferences in Lübeck (1995) and Gdansk (1997)

Two major campaigns comprising more than two dozen projects, Support of Associations for Environmental Management in CEE Countries as Help for Self Help (Czech Republic, Hungary and Poland) and Support of the Establishment of a Baltic Environmental Management Association (BALTEMA) in Estonia, Latvia and Lithuania (2002–2005).

The aim of these campaigns was to help companies, particularly SMEs, to prepare for access to the EU and the Common Market in terms of environmental protection. These projects are carried out by national partner organizations in coordination with the INEM Main Secretariat. All projects described below were co-financed by the German Federal Environment Foundation (Deutsche Bundesstiftung Umwelt – DBU).²⁰⁵

“It is important that the economic development of particularly the former COMECON countries is so guided that economic success is not attained at the expense of the environment. What good is strong economic development if it ruins the environment? In the long-term,

economic development at the expense of the environment cannot be not successful, because it destroys the very basis for future sustainable economic development.” — Dr Georg Winter, on the occasion of the 1st ECO-BALTIC Conference, March 1995

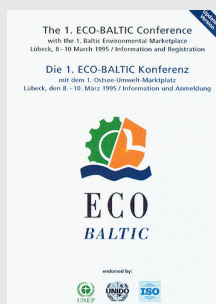


Fig. 7.1 1st Eco-Baltic conference brochure

In 1994 the International Network for Environmental Management (INEM) launched a number of initiatives focusing on Central & Eastern European (CEE) countries. The activities included capacity-building seminars and workshops, conferences, a series of projects focusing on the implementation of environmental management in SMEs and the founding of INEM associations. In addition, INEM has participated in public policy debates at national and international levels aiming to set up a legal and regulatory framework to favour and foster environmentally friendly behaviour of CEE business and industry.²⁰⁶

The projects directly helped several hundred CEE enterprises to improve their environmental performance and built capacity of CEE institutions to continue the work into the future. This significantly contributed to the reduction cross-border pollution emanating from CEE countries and

helped lower environmental barriers to their accession to the European Union.

7.2 INEM members and affiliates in Central & Eastern Europe

In total, eight environmental management associations in CEE have been members of INEM:

- České ekologické manažerské centrum (CEMC)
in the Czech Republic, Czech Environmental
Management Centre
- Eesti Keskkonnajuhtimise Assotsiatsioon (EKJA)
in Estonia, Estonian Association for Environmental
Management
- Környezettudatos Vállalatirányítási Egyesület (KÖVET)
in Hungary, Hungarian Association of Environmentally
Aware Management, now KÖVET Association for
Sustainable Economies
- Latvijas vides pārvaldības asociācija (LVPA) in Latvia,
Latvian Association for Environmental Management
- Inžinerinės Ekologijos Asociacija (IEA) in Lithuania,
Engineering Ecology Association
- Polskie Forum ISO 14000 – INEM Polska in Poland,
Forum ISO 14000 – INEM Poland
- Asociácia priemyselnej ekológie na Slovensku (ASPEK)
in the Slovak Republic, Association of Industrial
Ecology in Slovakia
- Drustvo Poslovnodnih Delavcev Slovenije (DREVO) in
Slovenia, The Institute for Environmental Management

In addition, cleaner production/pollution prevention centres in the Czech Republic, Estonia, Latvia, Lithuania, Romania and the Slovak Republic also have affiliated to INEM.

- Clean Industry Centre (CIC) in Bulgaria
- Czech Cleaner Production Centre (CCPC) in the Czech Republic
- Pollution Prevention Centre at the Estonian Management Institute (EMI-ECO) in Estonia
- Säästva Eesti Instituut, Stockholmi Keskkonnainstituudi Tallinna Keskus (SEI-T) in Estonia, Estonian Institute for Sustainable Development, Stockholm Environment Institute – Tallinn
- Latvian Cleaner Production Centre (LPPC) in Latvia
- Aplinkos vadybos ir audito institutas (AVAI) in Lithuania, Environmental Management and Auditing Institute
- Aplinkos Inžinerijos Institutas (APINI) in Lithuania, Institute of Environmental Engineering at the Kaunas University of Technology
- Centru de Prevenire a Poluari (CPP) in Romania, Romanian Pollution Prevention Centre
- Fundatia pentru Parteneriat in Romania, Romanian Environmental Partnership Foundation
- Slovak Cleaner Production Centre (SPCP) in the Slovak Republic
- Environmental Education and Information Centre (EEIC) in the Ukraine

The INEM Main Secretariat also supported the formation of INEM Organizing Committees in Croatia, and the Russian Federation.²⁰⁷

The Clean Industry Centre (CIC) was established as a unit of the Bulgarian Industrial Association (BIA) in September 1995 under the Co-operation Agreement with the World

Environment Centre (WEC) sponsored by USAID. BIA is the main employers/industry association in Bulgaria comprising 72 industry (sector) associations and more than 40 regional and municipal industry associations. The activities and objectives of the BIA's environmental policy adopted are directly connected e.g. with efforts of the industrial enterprises in achieving better environmental performance and minimization of their impact on the environment and with implementation of the preventive and sustainable development concept (EMS, CP/WM/PP/EE) while improving efficiency and productivity and avoiding technical barriers to international trade in years to come.

Gradually the CIC has broadened its scope to include Cleaner Production and EMS. CIC also provides a number of services such as EMS diagnostics, management support in conducting Initial Environmental Review, developing environmental policy, etc.

[...]

The CIC cooperates with the similar centres in CEE (a tripartite agreement has been signed with Czech CEMC and Romanian PPC) dealing with the pollution prevention and EMS such as WEC, INEM. CIC also played a significant role providing support in establishing cleaner production centres in Veles and Skopje in the Republic of Macedonia.²⁰⁸

7.3 Co-ordination of activities on EU Integration

INEM has been a member of several international bodies focusing on environmental issues in CEE. Among others, INEM was a member of the Organization for Economic Cooperation and Development (OECD) Task Force for the

Implementation of the Environmental Action Programme in Central & Eastern Europe (EAP Task Force), as well as a member of the United Nations Economic Council for Europe (UNECE) “Environment for Europe” Group of Senior Officials²⁰⁹ and held observer status with the Baltic Marine Environment Protection Commission, better known as the Helsinki Commission (HELCOM).²¹⁰ INEM’s aim was two-fold: to convince policy-makers to promote environmental management as a tool to reduce environmental pollution to prepare for accession to the European Union, and to help companies, particularly SMEs, in the region to improve their environmental performance.²¹¹

In December 1994 INEM Executive Director Troy Davis and representatives of INEM associations in Slovenia (Polona Smonig) and the Czech Republic (Radomir Matyas) served as panellists at the OECD’s first ad hoc Advisory Group on Industry and Environment (AGIE) meeting in Paris. They discussed how the private sector in CEE and Western Europe could contribute to the improvement of the environment in CEE. Dinah Köhler, a member of the INEM-Hungary Organizing Committee, and Prof Philippe Bernard and Esther Peter-Davis of INEM’s French member Orée also took part in the meeting. Ms Smonig, director of DREVO and Peter Radev of the INEM Bulgaria Organizing Committee gave reports on the status of the environmental technology industry in their countries.²¹²

A month before the AGIE meeting in Paris INEM had founded the Sofia Preparatory Regional Industry Network Task Force (Sprint ’95) to prepare input from CEE business and industry to the Sofia Ministerial Conference: Environment for Europe on 23–25 October 1995 in Sofia, Bulgaria. SPRINT ’95 was created at INEM’s second annual International

Partnership Exchange (IPEX 2) held on 7–10 November 1994 in Bonn, Germany by INEM-Bulgaria (in formation), CEMC, INEM-Hungary (in formation), INEM-Northwest Russia (in formation), and DREVO.²¹³



Fig. 7.2 Participants in SPRINT '95 conference in Ljubljana

INEM's Slovene member DREVO hosted a SPRINT '95 conference on 14–15 September 1995 in Ljubljana to elaborate a report for presentation to the Sofia conference. Representatives of business and industry from Belarus, Bulgaria, the Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic, Slovenia and the Ukraine participated.²¹⁴ A secondary objective was to inform CEE business and industry about the Environment for Europe process and promote their participation in it. Three presentations provided participants insight into the Environment for Europe (EfE) process. Prof Willem J. Kakebeeke, Chairman of the UNECE Working Group of Government Officials, described how the EfE process functions. Jernej Stritih, Regional Coordinator of the OECD Task Force Secretariat, introduced the work of the Project Preparatory Committee. And Pavel Gantar, Minister for the Environment of Slovenia, explained the National Environmental Action Plans (NEAP), and described

how Slovenia had put its NEAP into action. Rolf Domroes from the Bureau for the Preparation of the Sofia Conference participated as an observer. SPRINT '95 was funded by the United Nations Environment Programme (UNEP) Regional Office for Europe and the Environment Ministries of France, the Netherlands, Slovenia and Switzerland. The INEM Main Secretariat provided international coordination.^{215, 216}

Key recommendations from CEE industry to the Environment for Europe process

There should be permanent and institutionalized consultation and dialogue between business and government on industry and environment issues, as is already done, e.g. for labour issues.

- Education and training on business and environment issues should be promoted at all levels of business and society.
- Integrated environmental management is the key operating concept for environmental protection in business, and includes cleaner production, pollution prevention, etc.
- Environmental management partnership-based organizations (linking relevant institutions in a network) are the suitable focal point in their country for activities directed at promoting sound environmental behaviour in business.
- There should be a shift from over-reliance on negative economic instruments to positive economic instruments.
- Financial resources levied from business through environmental fees, taxes, fines, etc. should be “recycled” back to business to help it improve its environmental performance.
- All parties should promote closer cooperation among CEE countries on business and environment issues, both at government and at business levels.
- There should be close coordination/cooperation on business and environment issues among all relevant ministries and

agencies (e.g. Environment, Health, Industry/Economy, Finance, Transportation, Water/Forests, Justice, Planning, Education, Labour) and between those bodies and national parliaments.

- Legislation and regulations affecting business and environment issues should be clear, non-contradictory and not penalize innovation, with gradual timetables for domestic and international harmonization, and should be fairly enforced.
- All parties should promote the development of a strong domestic environmental goods and services industry in CEE countries.
- All business and environment activities supported by donors and international financial institutions should include local independent experts.²¹⁷

The SPRINT '95 recommendations were presented to the *Sofia Ministerial Conference* by an INEM delegation led by Rimantas Budrys, President of IEA. CEMC Executive Director Dr Roman Vynhanek presented the recommendations to the third plenary session: *Business, Industry and the Environment*. INEM Executive Director Troy Davis, Natalia Ladoutko, Director of LPPC, Alesej Urgancic of DREVO, and Dr Vynhanek also spoke at a parallel event, *Business, Industry and the Environment*. Many of the SPRINT '95 recommendations were adopted by the ministers.²¹⁸

7.4 The Business and Environment Twinning Initiative

One of the SPRINT '95 recommendations was to establish a twinning program by which governments, donor bodies

and international financial institutions support Western and Eastern European cooperation among individual companies and sectoral or environmental management associations.²¹⁹ To facilitate this process INEM launched the Business and Environment Twinning Initiative, inspired by the concept of twin cities and a proposal made to the EAP Task Force. It aimed to foster personal contacts and thereby build trust between associations or companies to facilitate transfer of environmental management know-how. The first twinning linked INEM's member in Sweden (Swedish Association of Environmental Managers), NMC and LPPC.²²⁰ In 1997 NMC launched its Environmental Management Internship Program, which brought environmental managers, or persons in similar positions, from the Baltic States work in the environmental departments of Swedish companies for one or two weeks.²²¹

A further recommendation called on CEE organizations to translate and adapt the *UNEP/ICC/FIDIC EMS Training Resources Kit*. This task was accomplished by CEMC in 1997. The manual was launched with a regional, two-day, train-the-trainer workshop on its use in January 1998 in Prague. Participants included representatives from the Czech and Slovak Republics, the Regional Environmental Centre for Central & Eastern Europe (REC), UNEP, as well as INEM members and affiliates from the region.²²²

7.5 CEE BINCA Report

The success of SPRINT '95 encouraged its participants to repeat the process in the months leading to the next Ministerial Conference in June 1998. Under the direction of Dr Vyhnánek and CEMC, the group evaluated progress in implementation of

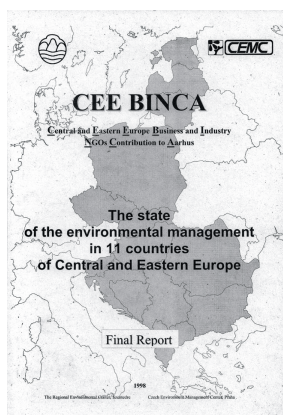


Fig. 7.3 A number of INEM associations contributed to the CEE BINCA report, which was compiled by Dr Roman Vynhanek, Executive Director of CEMC.

environmental management, including the status of ISO 14001 implementation and work on ISO 14000 series in the respective countries, and cleaner production technologies in 11 CEE countries and, comparatively, in the region as a whole. They also examined the role, structure and importance of national schemes and networks. The results were compiled in the *Central & Eastern Europe Business and Industry NGOs Report On State of Environmental Management Implementation*, the so-called CEE BINCA Report.²²³ A full evaluation was elaborated for nine countries (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic) with brief overviews for Slovenia and Croatia. The CEE BINCA Steering Committee included four INEM member associations, CEMC, KÖVET, ASPEK and DREVO. INEM affiliates CIC (Bulgaria), EMI-ECO (Estonia), LPPC (Latvia), APINI (Lithuania) and CPP (Romania) contributed reports on their countries. Elaboration of the *CEE BINCA Report* was supported by grant from REC and the UNEP

Regional Office for Europe.²²⁴ It was presented to the Aarhus Conference and distributed to delegates by the INEM Main Secretariat.

INEM also participated in meetings of the preparatory committees for the fourth *Ministerial Conference: Environment for Europe* held in Aarhus, Denmark in June 1998, the Ministerial Conference itself, and in the follow-up meeting in October 1998. The main purpose of the follow-up meeting was to discuss the future work of the EAP Task Force, such as the Terms of Reference of the proposed Aarhus Business and Environment Initiative (ABEI).²²⁵

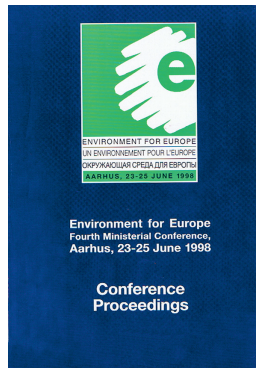


Fig. 7.4 Aarhus Conference proceedings

Recommendations from the CEE BINCA group were incorporated in the Policy Statement on Environmental Management in Enterprises released at the Aarhus conference. Ministers agreed on the need to establish business-government dialogue in CEE/NIS on a more continuous basis, and invited the business community to join them in promoting public-private partnerships designed to achieve common environmental objective and to promote sustainable development.²²⁶

7.6 Aarhus Business and Environment Initiative (ABEI)

The process put into motion by SPRINT '95 also led to the founding of the Aarhus Business and Environment Initiative (ABEI). ABEI was established by the private sector and Environment Ministers at the Aarhus Conference to facilitate public-private dialogue and to promote better environmental management practices in enterprises.²²⁷ ABEI incorporates the expertise of the European Round Table for Industrialists (ERT), World Business Council for Sustainable Development (WBCSD), European Partners for the Environment (EPE) and INEM, among others.²²⁸ It provides guidance on business-related issues in CEE and the Newly Independent States (NIS) and promotes the implementation of the commitments arising from the *Policy Statement on Environmental Management in Enterprises* accepted at the Aarhus Conference. Members of ABEI are business leaders, business organizations, donor governments and other stakeholder groups. Tom Garvey (former Deputy Director General of the EU Commission Directorate General for the Environment) and Patrick Nodé-Langlois (Executive Vice President of Lafrage) were appointed co-chairs.²²⁹ The OECD, REC, European Commission DG Enterprise and Environment, ERT, INEM, WBCSD and local partner organizations supported its activities. REC and OECD provided secretariats for ABEI, REC covering CEE, SEE and the Baltic States, and OECD for Eastern Europe, Caucasus and Central Asia.²³⁰

ABEI launched its activities with a series of spearheading missions in each of the target countries. The first was held in May 2000 in Prague at which INEM was represented by its Executive Director Dr Zadok Lempert and Information

Manager Peter Hundley. Czech business was represented by CEMC, the Czech Business Council for Sustainable Development (CBCSD) and key industry leaders. Consultations were held with the Czech Minister of Industry/Economy. European Commissioner for the Environment Margot Wallström presented the keynote speech.²³¹ A second consultation was held with the Bulgarian Minister of Industry/Economy in Sofia in May 2000.²³² The third, entitled “Partners in Eco-Efficiency”, was held in June 2000 in Hungary. It aimed to secure support from the Hungarian Ministries of Economy and Environment and from Hungarian industry for ABEI. Participants included Ms Wallström, representatives of the Hungarian government, Mr Garvey and Mr Nodé-Longlois, INEM Chairman Dr Georg Winter, and leading Hungarian industrialists. The Hungarian Parliamentary Secretary of State of the Ministry of Economic Affairs, Béla Glattfelder and Ms Wallström opened the meeting. Dr Winter, assisted by KÖVET Executive Director Gergely Tóth, made a presentation on the practical experience of eco-efficiency, cleaner production and environmental management projects in Hungary. This was followed by a discussion among the Commissioner, Secretary of State and the industrialists. The meeting was organized in co-operation KÖVET.²³³

In the second phase, the ABEI Steering Committee decided in October 2000 to carry out a series of actions in various countries. As a result, an eco-efficiency conference was organized in November 2000 in Szentendre, Hungary by REC in partnership with KÖVET, a fact-finding mission was carried out in Polish Silesia, meetings were held with cleaner production centres, and a round-table on eco-efficiency was convened in December 2000 in Prague.²³⁴ In the final phase of ABEI in 2003, REC developed the CD-ROM-based *Eco-efficiency Tool-kit for Central and*

Eastern European Small and Medium-sized Enterprises, which incorporated the *Ecomapping* tool developed in 1997 by Heinz-Werner Engel, Director of INEM's Belgian member ABECE, and the *Simple Life-cycle Assessment for SMEs* tool developed by Balázs Havér, Deputy Director of KÖVET in 2001. KÖVET also provided a number of case studies.²³⁵

7.7 Policy-making bodies in the Baltic Sea region

INEM also participated in several intergovernmental policy-making bodies concerned with the Baltic Sea region. Two of the most significant are Baltic 21 – an Agenda 21 for the Baltic Sea region – and the Baltic Marine Environment Protection Commission, better known as the Helsinki Commission (HELCOM).

Baltic 21 was launched by the environmental ministers of the 11 countries bordering the Baltic Sea and the Commissioner of Environment and Nuclear Safety of the European Commission in October 1996 at a meeting in Saltsjobaden, Sweden. In the Saltsjobaden Declaration they elaborated terms of reference for regional cooperation in seven sectors: Agriculture (HELCOM and Sweden), Energy (Denmark and Estonia), Fisheries (International Baltic Sea Fisheries Commission (IBSFC), Forests (Finland and Lithuania), Industry (Russia and Sweden), Tourism (Estonia, Finland Baltic Sea Tourism Commission) and Transport (Germany and Latvia).²³⁶ In 1998 they agreed on an action plan for Baltic 21, whose goals are to ensure that sustainability are integrated into all activities of the Council of the Baltic Sea States by implementing capacity-building measures and creating examples of sustainable development throughout the region.²³⁷ Baltic 21 members

are Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden, the European Commission, international development banks such as the World Bank, Nordic Investment Bank (NIB) and EBRD, and intergovernmental organizations, including the Nordic Council of Ministers (NCM), HELCOM, UNECE and UNEP, as well as business, municipal and environmental NGOs.²³⁸ It is steered by the Senior Officials Group (SOG) of which INEM was a member.²³⁹

In 2000 Baltic 21 established an Industry Sector to coordinate activities of the private sector. INEM was invited to participate in its launch meeting in Stockholm in March 2000. Sweden and Russia served as the co-lead parties. Its membership included the European Commission, HELCOM, IBSFC, NCM, UNECE, Vision and Strategies around the Baltic Sea, EBRD, European Investment Bank (EIB), Nordic Environmental Financing Corporation, NIB, World Bank and several NGOs. One of the major outcomes of the launch meeting was the establishment of a Task Force to steer and coordinate activities and a Baltic 21 “Seal of Approval” for projects. The Seal of Approval signals that a proposed project meets the requirements of, and has gained the approval of the Task Force, which should facilitate and accelerate applications for project funding.²⁴⁰ In 2003 Task Force members included representatives of Ministries of Economy of Sweden, Russia, Denmark, Estonia, Finland, Latvia, Lithuania and Poland and EIB, HELCOM, INEM and NCM.²⁴¹

Baltic Marine Environment Protection Commission (HELCOM)

INEM holds observer status with HELCOM, representing the private sector in the Programme Implementation Task

Force (PITF) and acting as co-lead party, together with the German Federal Ministry of the Environment (BMU) and the Union of the Baltic Cities (UBC), within the Baltic Sea Joint Comprehensive Action Programme (JCP) program element “Institutional Strengthening and Human Resources Development”. For example, INEM participated in PITF meetings in Turku, Finland, in May, and Oslo, Norway, in November 1998. During the 5th INEM Partnership Exchange INEM met with HELCOM, the German Ministry of the Environment and its Swedish member organization NMC to discuss strategies and objectives.²⁴² HELCOM also participated in both of INEM’s ECO-BALTIC Conferences. HELCOM was a major partner of the 1st Eco-Baltic Conference in Lübeck, Germany, on March 8, 1995 at which Executive Secretary Ulf Ehlin held an opening speech. HELCOM also held two workshops, one entitled “Privatization and Business opportunities under the Baltic Sea Action Programme” and the other, “Solutions for Municipal and Industrial Wastewater Problems”.²⁴³

In Spring 1999 INEM provided HELCOM with a report on the education and research needs in the field of environmental management in the Baltic states. The report was compiled in cooperation with the International Institute for Industrial Environmental Economics at Lund University, Sweden. It was financed by INEM’s Swedish member association, Swedish Association of Environmental Managers (NMC).²⁴⁴

7.8 Participation in conferences

INEM was both speaker and participant in numerous conferences focusing on business and industry in Central & Eastern Europe. A selection of the most significant is provided below.

Dr Winter spoke on “Introduction of Environmental Management in Eastern Europe: Developments in Hungary and Slovenia” at the 2nd *North-East European Environment Congress* on 18 April 1994 in Hamburg.

17 May 1995 – The Baltic Sea Conference 1995 for local and regional government. Plenary Speech Dr Georg Winter, Chairman INEM: *Communication – Economic and Environmental Benefits for the Baltic Sea State*.²⁴⁵

Troy Davis speech to Hungarian Quality Society conference

9 Nov. 1995 – Quality Week IV organized by the Hungarian Quality Society (Magyar Minőség Társaság), Budapest/Hungary. Presentation made by Troy Davis, Executive Director INEM: *Global Movement for Environmental Management*.²⁴⁶

Conference on Innovative Technologies and Environmental Management (ITEM 96)

Prague, Czech Republic. Speech by Troy Davis, Executive Director, INEM on *Cleaner Production, ISO 14000 and Environmental Management*.²⁴⁷

On 26 February 1996 Dr Winter spoke at a press conference of the *Environmental Technology Forum* in Berlin on “Necessity of Associations for Environmental Management in Central & Eastern Europe”.²⁴⁸

In 1998 INEM was a member of the steering committee for the conference “New ways towards a cross-border environmental partnership with Central and Eastern Europe”. The conference was one in a series of events supported by the German Federal Environment Foundation (DBU) leading up to the World Exhibition EXPO 2000, held in Hannover,

Germany in 2000. The task of the steering committee was to discuss and set up the conference program.²⁴⁹

In March 1999 INEM participated in an *Industry-Government Dialogue* organized by REC and the European Round Table of Industrialists in Szentendre, Hungary. Representatives from governments of CEE countries, industrialists and NGOs attended. The conference promoted dialogue between business and governments in order to ensure that policies are cost-effective, participatory, and have a positive long-term impact on all stakeholders. The dialogue and experience transfer allowed countries to use the lessons that have been learned by others and apply them to their own work. Participants agreed a work plan for contribution to the *Environment for Europe Ministerial Conference* in Kiev in 2002.²⁵⁰

Roundtable on Baltic States

INEM participated in the *Baltic Roundtable* workshop, organized by the German Federal Environment Foundation (DBU) in March 1999. The goal was to inform the staff of the foundation about the political and environmental situation in the Baltic States and to discuss possibilities for funding projects in the region by the DBU.²⁵¹

In April 1999 INEM Executive Director Dr Zadok S. Lempert gave a plenary speech to the conference, *Regional Environmental Problems and Cooperative Approaches to Solving Them – The Case of the Baltic Region*. Organized by the Organization for Security and Cooperation in Europe (OSCE), the conference gave an overview of the environmental problems in the Baltic Sea Region and initiatives to solve them.²⁵²

Dr Winter served as Chairman of the conference *Improving Environmental Management and Performance in the Central &*

Eastern European Accession Countries held on 13–14 June 2000 in Budapest, Hungary. Dr Winter's plenary speech on "New Routes to Cross-border Environmental Partnership with Central & Eastern Europe" provided a number of recommendations to the European Union, national governments and companies.²⁵³

ECO-BALTIC Conferences improve the environment of Baltic Sea states

INEM not only participated in conferences in the CEE region, it also organized two major ones on its own: The first and second ECO-BALTIC conferences focusing on the Baltic Sea region.

1st ECO-BALTIC Conference

The idea for a conference on environmental management in the Baltic Sea region was born in 1993 in a discussion with representatives of the Schleswig-Holstein Ministry of Economy, Technology and Transport and the Board of INEM.²⁵⁴ "We decided to have the 1995 *The ECO-BALTIC Conference: Partnerships for Sustainable Development in the Baltic Sea Region* was held on 8–10 March 1995 in Lübeck, Germany. A primary goal was to promote partnerships among companies, local authorities and environmental organizations for the sustainable development of the Baltic Sea region.²⁵⁵ A total of 16 workshops covered all aspects of environmental management: training programs and practice; eco-audits, life-cycle assessments and other instruments; concepts for sustainable energy, agriculture and tourism; building partnerships among businesses, academic/research institutions, local authorities, governmental institutions, and NGOs; and public and private financing programs for the region. Case studies were presented in most workshops to illustrate how the principles have been put into practice.²⁵⁶

"The dynamic economic development of the entire Baltic Sea region and the need of Eastern Europe to modernize are creating extraordinary opportunities for trade and investment in environmental technologies and services. Despite modern telecommunications, personal contact is, as ever, the deciding factor for the building or expansion of business cooperation. Therefore, INEM and BCCA jointly initiated the 1st Baltic Environmental Marketplace as a platform for the exchange of project ideas, experiences and knowledge from company to company." — *Wolf-Rüdiger Janzen, President, Baltic Sea Chambers of Commerce Association and Dr Georg Winter, Chairman, International Network for Environmental Management*



Fig. 7.5 Dr Edda Müller

Dr Edda Müller, the former Minister for Nature and Environmental Protection of Schleswig-Holstein, held a keynote address during the Opening Plenary on 8 March 1995 on "Opportunities of a Federal State to Deepen Baltic Sea Cooperation in the area of Environmental Protection". The Russian Deputy Minister of the Environment, Dr Aleksandr Averchenkow, the Swedish Under Secretary of State of the Ministry of the Environment, Måns Lönnroth, and the

Estonian Minister for Energy, Arvo Niitenberg also held keynote speeches. The conference was closed by Schleswig-Holstein's Minister for Economy, Technology and Transport, Peer Steinbrück, who spoke on sustainable development of the Baltic Sea Region.²⁵⁷

"The critical environmental situation in the Baltic Sea and in major parts of its drainage area calls for extreme actions to reduce the pollution load, especially in the former socialist countries on the eastern and southern side of the Baltic Sea. INEM and HELCOM wish to highlight these needs, and inform about opportunities of especially the private sector." — *Ulf Ehlin, Executive Secretary, Helsinki Commission*



Fig. 7.6 Ulf Ehlin Helsinki Commission

More than 400 participants from 14 countries attended. The conference was held under the patronage of the German Minister for the Environment Dr Angela Merkel, and was endorsed by the International Organization for Standardization (ISO), UNEP and the United Nations Industrial Development Organization (UNIDO). The European Commission Directorate General-Environment, DBU, Schweisfurth

Foundation, Körber Foundation and the Finnish Ministry of the Environment provided financial support, as did the private companies BfG Bank AG/Gruppe Crédit Lyonnais, Preuss Messe, Sydkraft AB, Preussen Elektra, Römerturm Feinstpapier, Media Concept, DOW Europe, and Landesbank Schleswig-Holstein.²⁵⁸



Fig. 7.7 *1st Baltic Environmental Marketplace Catalogue*

The *1st Baltic Environmental Marketplace* complemented the conference by providing representatives of companies, local authorities and research/educational institutions with the opportunity to hold direct, one-one-one discussions with potential business and cooperation partners for sales of environmental technologies and services, establishment of joint ventures, and transfers of technology. The Baltic Sea Chambers of Commerce Association (BCCA), organizers of the Marketplace, arranged and coordinated the dialogues both before and during the conference. The *1995–1996 Baltic Environmental Marketplace Catalogue*, which provides contact details and a description of the needs and offers of Marketplace participants, was distributed to all ECO-BALTIC participants and interested businesses and institutions in the Baltic Sea region beginning in January

1995. BCCA comprises 34 chambers of commerce and industry from all 10 countries bordering the Baltic Sea.²⁵⁹

Voices of Key Players in the Baltic Sea region

“The ECO-BALTIC Conference is an important motivating force for the environmentally conscious reconstruction of competitiveness in this region.” — Dr Dietrich Schulz, President, Union of Schleswig-Holstein Business Associations

“During the last few years, the states bordering the Baltic Sea have become aware of the sensitivity of their daily surroundings, and of the opportunities for local authorities to make an active contribution to the environment. I hope that local initiative and strength, paired with cooperation among the communities – which was once so successful for the Hanseatic League – can also be mobilized for the environment.” — Michael Bouteiller, Mayor of Lübeck

“For those of us who live around the Baltic Sea, only separated by (the same!) water, it is imperative to take the ecological questions seriously. We will only succeed in this endeavour if we learn to understand the factor ‘environment’ as an important component of economic success.” — Wolf-Rüdiger Janzen, President, Baltic Sea Chambers of Commerce Association

One of the key results of the *ECO-BALTIC* was the elaboration of the *Lübeck Declaration: An agenda for the sustainable development for the Baltic Sea region* and articulation of *Lübeck Commitments* by companies, organizations, local authorities, and national governments. INEM Executive Director Troy Davis described the *Lübeck Declaration* an extension and adaptation of *Agenda 21* to the region: “It will serve as a guide for the sustainable development of the countries that border the

Baltic Sea.”²⁶⁰ The Lübeck Commitments are public declarations by individual companies and public bodies of specific environmental measures they plan to implement over the next two years.²⁶¹ For example, Dr Vilnis Kazocins of the Environmental Protection Division of the Latvian Railway made the following commitments:

- to measure emissions of harmful substances
- to educate employees on environmental matters
- to modernize the testing laboratory, and
- to prepare a plan for an eco-audit

Dr Aleksandr Averchenkov, Deputy Minister for Environmental Protection and Natural Resources of the Russia Federation, committed to:

- creating special environmental funds on the national and local levels
- establishing a new environmental protection facility for the stimulation of private investment, and
- supporting environmental investments for private enterprises

In total, participants from 12 countries made 107 commitments.²⁶²

As a direct result of the ECO-BALTIC, INEM received requests for membership from LPPC in Latvia and IEA in Lithuania.²⁶³ In his speech to the Closing Plenary, the Mayor of Gdansk, Tomasz Posadzki, invited INEM to hold a second *ECO-BALTIC Conference* in Gdansk on the occasion of its millennium celebrations in 1997.²⁶⁴

2nd ECO-BALTIC Conference

The 2nd *ECO-BALTIC Conference: Environmental Management for the Baltic Sea Region* was held on 9–11 October 1997 in Gdansk, Poland as part of the Gdansk Millennium Celebrations. It was a continuation of the process of integration

of environmental protection with economic development in the Baltic Sea region begun with 1st *ECO-BALTIC Conference* in March 1995 in Lübeck, Germany.

“I am very happy that INEM is organizing this important conference giving an opportunity for representatives from the private sector in the Central & Eastern European countries to take on environmental management. EMAS and ISO 14001 are important instruments in our pursuit of sustainable development in the Baltic Sea region. This is very much in line with the pioneering work going on right now. I hope that this conference will be successful in laying the foundation for economic growth in the region, with at the same time encompasses sustainable development as the leading star.” — *Anna Lindh, Minister of the Environment, Sweden*



Fig. 7.8 Anna Lindh, Minister of Environment,
Sweden Eco-Baltic 2

The 2nd *ECO-BALTIC Conference* aimed to provide business and industry in the Baltic Sea region with the environmental management instruments they need to improve their performance and their competitiveness in European and world markets. It also intended to help industries in Central & Eastern Europe adapt to the market demands of an integrated Europe

and meet the challenges posed by international standards in the key areas of environment and quality.²⁶⁵ The Ministers of the Environment of Germany (Dr Angela Merkel), Sweden (Anna Lindh) and Poland (Stanislaw Zelichowski) served as patrons of the 2nd *ECO-BALTIC*. It was organized by INEM in cooperation with the Technical University of Gdansk, the City of Gdansk and the Gdansk Water Foundation. The Baltic Marine Environment Protection Commission (HELCOM) and BCCA were major partners. Official endorsers were ISO, UNEP and UNIDO.²⁶⁶



Fig. 7.9 The 2nd *ECO-BALTIC* Conference reader provided texts of all speeches and workshop presentations.

The 2nd *ECO-BALTIC* was based on three methods of communication: information (12 workshops), contacts (Company Contact Service) and presentations (exhibition, poster session). Target groups were decision-makers of companies, organizations, universities, local authorities and governments throughout the Baltic Sea region. The workshops covered three themes:

- Environmental management tools: EMAS and ISO 14001, environmental auditing, environmental cost management

- Environmental management case studies: certification to ISO 14001, EMAS registration, cleaner production/pollution prevention
- Environmental marketing and finance: eco-marketing with emphasis on Eco-labelling, environment and banks, environment and insurance

More than 230 participants from 18 countries attended, including representatives from Hipp Werke, Adam Opel AG, Deutsche Bahn AG, DOW and Gerling Consulting Group (Germany); the Swiss Association of Banks (Switzerland); Sydkraft AG (Sweden); Esti Vevärk and Kroonpress (Estonia); Dr Oetker and Konica (Poland). Governmental organizations and national and international institutions such as chambers of commerce, the Polish Agency for Foreign Investment, UNIDO, the Baltic Environmental Forum, REC, and the Stockholm Environment Institute-Tallinn sent delegates. Senior government officials included Leszek Baginski, Director of the Department of Water Management, representing the Polish Minister of the Environment; Svante Bodin, Director of the Swedish Ministry of the Environment, representing the Minister of Environment; Marek Kostecki, Vice-Mayor of the City of Gdansk; Ulf Sviden, Director of the Swedish Environmental Protection Agency; and Olvai Tammemäe, Director of the Nature Conservation Department, Estonian Ministry of the Environment.²⁶⁷

In order to further promote and implement the goals of the United Nations' *Agenda 21*, and as a follow-on to INEM's *Tokyo Appeal* and *Lübeck Commitments*, INEM called on participants to formulate the *Gdansk Commitments*, declarations of intent for setting and achieving environmental objectives for the next two years. More than 40 companies and institutions elaborated their commitments. For example, the Department of Quality

Management and Structural Development of the Ministry of the Economy of Latvia committed to assigning the Latvia Centre for Standardization the task of adopting the ISO 14000 series of international environmental management standards as national standards, and called on the Certification Centre of the Latvia Academy of Sciences to organize training of environmental auditors. The Deutsche Bundesbahn (German Railway) committed to reduce its energy consumption by 25 percent and its emissions of CO₂ by 20 percent, based on 1990 levels, by the year 2005.²⁶⁸

The Conference was supported by the Technical University of Gdansk, the City of Gdansk, the Wojwodship of Gdansk, Bank Gdanski, the German Environmental Management Association (BAUM), the Foundation for German-Polish Cooperation, the German Federal Ministry of the Economy, the Finnish Ministry of the Environment, the European Commission/TAIEX, the Landesbank Kiel, Sydkraft International, Sydkraft AB, LOT Polish Airlines and Konica.²⁶⁹

7.9 Activities to promote implementation of environmental management in CEE

Greening of Central & European banks

As a member of the European Bank for Reconstruction and Development (EBRD) *Advisory Committee for Environmental Training of Central & Eastern European Bankers*, INEM helped develop a training package for the International Banking Training Centre (Budapest) on how to best integrate environmental considerations into lending criteria and other banking operations. The project began in February 1994.²⁷⁰ INEM Chairman Dr Georg Winter travelled to Zagreb to participate

in the meeting of the **Environmental Advisory Board of the European Bank for Reconstruction and Development (EBRD)** on 28–29 October 1996 at the Zagreb Inter-Continental Hotel. Dr Winter advises Jacques de Larosière, President of the EBRD, on industry and environment issues. On the occasion of the EBRD meeting, Dr Winter also met with representatives of Croatian industry and government to explore possibilities for establishing a national business association for environmental management.²⁷¹ INEM's Executive Director also participated in the EBRD's Environmental Advisory Council Meeting (ENVAC) held in April 1997 in London.²⁷²

Introduction of environmental management to Hungarian business and industry

Beginning in 1994, the INEM Secretariat carried out a series of environmental management seminars for Hungarian business and industry. The first cycle of the seminars were held on 21 and 22–23 November and 6–7 December 1994 and the second on 9–10 and 13–14 November 1995 in Budapest. Topics were environmental management as a competitive advantage; tools and concepts of integrated environmental management (e.g., eco-audit, life cycle analysis, employee motivation, staff training); and financing opportunities. A number of Hungarian trainers also attended the seminars so that they could continue the seminars on their own in 1996–1997.²⁷³

The seminar presentations, case studies and policy recommendations were collected in a conference reader which was published in English, German and Hungarian. The seminar series was funded by the German Federal Ministry for the Environment, Nature Protection and Nuclear Safety (BMU) and the German Federal Environment Agency (UBA) as part of the German government's TRANSFORM Program

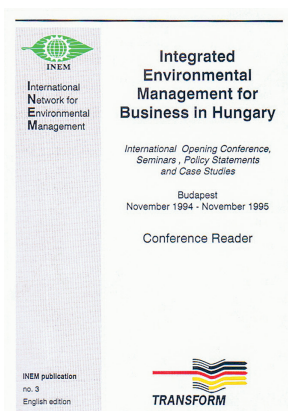


Fig. 7.10 The Integrated Environmental Management for Business in Hungary conference reader was published in Hungarian, German and English.

for Eastern Europe.²⁷⁴ Additional support was provided by the Hungarian Ministry for the Environment and Regional Planning, the German-Hungarian Industry Chamber of Commerce, the Hungarian Quality Society, as well as the Prosperity 2000 Group.²⁷⁵

Case Studies in Environmental Management in Central & Eastern Europe

INEM compiled the experiences of 14 Central & Eastern European companies in integrating environmental considerations into their day-to-day operations. The companies, both large and small, represented various sectors in the Czech Republic, Estonia, Hungary, Latvia, Lithuania and Poland. INEM worked either with its member and partner associations in the respective countries, or directly with the companies to obtain the information necessary for consistent and comprehensive case studies. Developing contacts and collecting information began in June 1997, the casebook was published in autumn 1999 by Greenleaf Publishing, publisher of, amongst

others, *Greener Management International*. The case studies were also made available on the INEM website.²⁷⁶

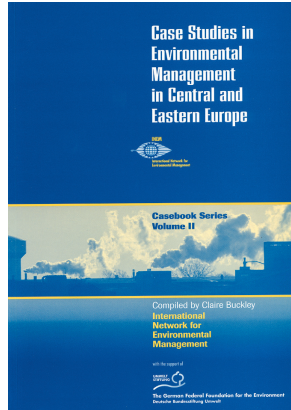


Fig. 7.11 Case Studies in Environmental Management in Central & Eastern Europe

Case studies on Czech, Hungarian and Polish companies that have implemented environmental management will be compiled in a casebook

The case studies will be developed by CEMC, KÖVET, and INEM Poland with the support of the INEM Main Secretariat. Each case study will be organized as follows: background information on the economic structure of the country and its sectors, description of companies, motivation factors, definition of problems, implementation of environmental protection measures, results, and plans for the future.

The resulting case studies will be published as Volume 3 of the INEM *Case Studies in Environmental Management* casebook series and placed on the INEM website. The project, which is co-financed by the DBU, will run from June 1997–March 1998.²⁷⁷

Establishment and support of associations for environmental management in the countries of Central & Eastern Europe as an aid to self-help

INEM carried out a series of 10 projects in CEE between February 1997 and December 2000 in a EUR 1 million campaign to strengthen the capacity of the existing INEM associations in the Czech Republic and Hungary and to establish a Polish business association for environmental management. The projects provided direct assistance to more than 1,000 enterprises, most of them SMEs. The campaign showed that support for national business associations for environmental management is an especially cost-effective method for dissemination of environmental management concepts and know-how. Major funding was provided by the DBU.

Support for the Czech Environmental Management Centre's TC 207 activities

The INEM Main Secretariat obtained funding from the DBU to support the participation of its member association CEMC in the work of ISO TC/207 and its subcommittees, as well as its activities in disseminating the ISO 14000 series in the Czech Republic. CEMC played a key role establishing committees that mirrored the ISO/TC 207 structure in the Czech standardization body. CEMC staff participated in the translation of international ISO environmental management standards into the Czech standards EN ISO 14001, 14004 and 14010-12, as well as the ISO 14020 standard on environmental reporting. The support ran for four years: 1997–2000. (See Chapter 6 for a detailed report).²⁷⁸

**Global Environmental Management Survey:
Czech Republic, Hungary and Poland**

INEM, together with its partners in the Czech Republic and Hungary, conducted a survey among companies that will reveal the exact state and obstacles to implementation of environmental management in the countries. The results will serve as the basis for work on the topic of environmental management. The study also can aid policy-making by serving as a resource for decision-makers who formulate laws and strategies, and provides a basis for making project proposals to public institutions. KÖVET, together with the Budapest University for Economics, developed the methodology.²⁷⁹

**Global Environmental Management Survey (GEMS):
Czech Republic, Hungary and Poland**

Between 1998–2000 INEM associations in the Czech Republic (Czech Environmental Management Centre), Hungary (KÖVET) and Poland (Polish Forum ISO 14000 – INEM Poland) conducted surveys of business and industry in their countries to determine the current state of, and obstacles to, implementation of environmental management. The results of GEMS were used to develop tailor-made projects and training programs that addressed the needs of companies seeking to improve their environmental performance.

Global Environmental Management Surveys

INEM associations in the Czech Republic, Hungary and Poland will conduct INEM's Global Environmental Management Survey (GEMS) in their respective countries in 1998–2000 with financial support of the DBU. The surveys will assess the current state of, and obstacles to the implementation of environmental management in business and industry. The

results will provide the INEM associations with the basis for developing specific programs to help companies in the three countries implement environmental management. GEMS has previously been conducted by INEM associations in Argentina and Brazil.²⁸⁰

A questionnaire with 100 common questions, plus additional country-specific questions, was sent to a random sample of at least 300 companies representing all sizes and sectors in each country. The questionnaire addressed technological, institutional and product-oriented aspects. In Hungary and the Czech Republic an additional group was surveyed: those with previous experience with environmental management, i.e., environmental management experts, participants in the POEMS projects (see below), and companies with certified environmental management systems. This additional group served as a control to compare results with the general survey companies.

In Hungary, 344 randomly selected enterprises were interviewed in 1999. All ISO 14001-certified companies were surveyed as a control group. Analysis of the results showed that the companies could be divided into five groups:

- the first, the pioneers (8% of the total), showed good environmental behaviour on all aspects. They were mostly large companies.
- the second (16% of the total), demonstrated good behaviour in respect to their products. Many small and medium-sized enterprises belonged to this group.
- the third, the laggards (33% of the total), scored below average on all aspects. An above average number were SMEs.
- the fourth (13% of the total), scored well on institutional aspects. It includes primarily large companies.

- the fifth (30% of the total), was stronger on technological aspects.

Results of the Hungarian survey confirmed the general supposition that the size of the enterprise is directly related to its environmental performance: many large companies were in the pioneer group and many SMEs among the laggards. The pioneers felt stronger stakeholder pressure than companies in the other groups, the laggard group felt absolutely no pressure from outside. The control group of ISO 14001-certified companies demonstrated better environmental behaviour: environmental aspects were better integrated into the organization, environmental measures were applied more often in the various areas of the company, and more emphasis was given to communication of environmental information to the public. The largest difference could be seen in the area of production: ISO 14001-certified companies tended to minimize hazardous materials and waste; the others tended to rely on end-of-pipe technologies.

CEMC staff interviewed 304 Czech enterprises. Results were similar to the Hungarian experience.

- the pioneers (12% of the total) showed good environmental behaviour on all aspects.
- the second group (15% of the total) demonstrated good behaviour in respect to their products.
- the laggards (33% of the total) scored below average on all indicators.
- the fourth group (10% of the total) scored well on institutional aspects.
- the fifth group (22% of the total) was stronger on technological aspects.

In Poland 344 companies were interviewed by INEM Poland staff. In comparison with the Czech Republic and Hungary,

it was more difficult to obtain general information about the companies, such as turnover, export ratio, etc. Therefore, it was not possible to analyse results according to company size.

General conclusions from all three countries:

- Only a very small proportion of companies in all three countries is managed in an environmentally friendly manner. Many are reactionary, using technical, end-of-pipe solutions to meet environmental regulations.
- Pressure to introduce environmental management comes mostly from the state, partly from company management, and partly from competitive pressure. Consumer demand plays almost no role.
- Many companies, however, express some interest in environmental questions (because of legislation) and a large part of companies have appointed a person to be responsible for environmental questions.
- The size of the company influences its environmental behaviour: most large companies have implemented environmental management systems.
- To improve the situation, environmental protection must gain higher acceptance in the general population. In addition, the state needs to support and recognize companies interested in implementation of environmental management.

The survey results served as the basis for work programs for the promotion and implementation of environmental management. They also served as a basis for public policy decisions. KÖVET-INEM Hungary, together with the Budapest University of Economics (BUE), adapted the methodology developed by INEM's international GEMS Task Force to CEE. To ensure compatibility of the results across all three countries, BUE statistically analysed answers to all of the questionnaires.

Pollution Prevention and Environmental Management Systems Consultation in Small and Medium-sized Enterprises (POEMS) in the Czech Republic and Hungary

INEM had always contended that cleaner production – the hardware – could not be sustainable without environmental management – the software. The POEMS project dealt with the integration of pollution prevention methods with environmental management concepts and their implementation in 12 Czech and 25 Hungarian SMEs.

Czech Republic and Hungary

The Pollution Prevention and Environmental Management Systems Consultation Project deals with the integration of pollution prevention concepts with EMS. Between 20 and 40 Czech and Hungarian companies, mainly SMEs should adopt this integrated approach to introducing pollution prevention and EMS simultaneously. The project is being implemented in Hungary by KÖVET-INEM Hungária, the Hungarian Cleaner Production Centre and BAUM Austria, INEM's member association in Austria. The project in the Czech Republic is being implemented by CEMC. It runs from August 1998 to June 2000. It is co-financed by the European Union, PHARE Partnerships office and the DBU. The project will be extended in the Czech Republic to help companies reach ISO 14001 certification. (Activities Report 1999, p. 8)

Development of the curriculum for a series of 12 seminars consisting of lectures, case studies and hands-on exercises began in August 1998. By the end of the course in June 2000, the participants had learned the basics of cleaner production and environmental management, how to identify environmental problems, and how to develop solutions for them. POEMS was implemented in the Czech Republic by CEMC and in Hungary



Fig. 7.12 Participants of the POEMS project in Hungary.

by KÖVET, the Hungarian Cleaner Production Centre and INEM's Austrian member, BAUM.

The scope of the POEMS project was extended in the Czech Republic to help companies obtain ISO 14001 certification. The seminars offered additional material addressing the requirements of the ISO 14001 environmental management system standard. All participants (21 in total) were certified as environmental auditors during the 11th meeting. In total, participants identified 58 environmental protection measures, 14 of which were implemented before the end of the project. All participating companies committed to obtaining ISO 14001-certification.

In Hungary, three groups were formed. The first comprised seven companies, the second 11, and the third had seven companies from the Borsod-Abaúj-Semplén region. Before starting the trainings, the project partners visited each of the participating firms to identify their environmental problems. On the basis of this initial environmental assessment, the project staff developed a tailor-made plan for the integrated implementation of cleaner production and environmental management for each company. Participants learned what they needed to know to implement the plan in a series of 12 seminars consisting



Fig. 7.13 KÖVET wrote the *Cleaner Production and Environmental Management System (ISO 14001) Training* manual to support the POEMS project in Hungary.

of case studies and practical exercises. Even before the end of the project, 14 had implemented an integrated system of cleaner production and environmental management, another five planned to do so before the end of the year 2000. KÖVET continued its support to those companies. As an added incentive, BAUM-Austria carried out an environmental audit at no cost for the best company in each group.

Pollution prevention and environmental management system consultation program in small and medium-sized enterprises

co-financed by PHARE PARTNERSHIP PROGRAMME 1997

Project start date: 4 August 1998

Project end: 4 June 2000

The POEMS projects in both countries helped the individual companies achieve significant reductions in their environmental burdens. The methodology proved very effective because the integrated system of cleaner production and environmental management simplified the identification and assessment of environmental impacts in the companies. POEMS also increased the environmental awareness of not only of the

trainees but also of the rest of the employees in the participating companies.

From Final Report by KÖVET:

According to our experiences the applied integrated approach of PP and EMS is more effective than the introduction of individual concepts independent of one another. Use of PP tools made easier identification and evaluation of environmental aspects and impacts of companies. It helped to increase environmental commitment and awareness of participants' employees.

POEMS is a "learning by doing" program. This method was a really effective way to implement and operate the integrated system and to achieve measurable reduction of pollution. At the same time we had to realize that mainly small and medium-sized companies could apply this method.²⁸¹

POEMS created highly motivated groups that wanted to continue working together after the end of the project. In Hungary, the POEMS participants created a network to continue their cooperation and self-help. The POEMS methodology – a mixture of consultancy and training in small groups – proved to be very effective in assisting SMEs. Both the Czech and Hungarian partners continued to use and further develop the POEMS methodology. CEMC received funding from the Czech Ministry of Environment to replicate POEMS in the Ukraine. POEMS was co-financed by the European Union PHARE Partnerships Office and the German Federal Environment Foundation (DBU).

POEMS – Pollution Prevention and Environmental Management System Training

KÖVET and HCPC has developed this coaching with PHARE Partnership assistance to integrate the two approaches. Model courses are held in 1999, so the program should be distributed

at a much lower cost. 15 SMEs per region are targeted. KÖVET and regional offices are responsible for local implementation.

Experience gained from the first courses should be built in the subsequent events.

Regional offices should also demonstrate and develop the Cleaner Production Information System and Database available on Internet. It contains information, case studies, etc.

They should also demonstrate successful environmental management projects; like POEMS (Pollution Prevention and Environmental Management System Consultation Program in Small and Medium Sized Enterprises) or the Environmentally Friendly Office.²⁸²

POEMS EE in Romania

Starting from October 2001 **Pollution Prevention Centre (Centrul de Prevenire a Poluarii – CPP)** is involved in the POEMS EE program of EMS implementation and capacity-building of internal auditors in SMEs financed by Czech government, according to methodology developed by CEMC – Czech Environment Management Centre within PHARE Partnership project coordinated by INEM – International Network for Environmental Management.²⁸³

Assistance for the establishment of an environmental management association in Poland

In January 1997 INEM launched a project aiming to establish a national business association for environmental management in Poland.

Establishment of INEM Polska

In January 1997 INEM supported the establishment of a national business association for environmental management in

Poland. The goal was to create a competence centre for exchanging information and experience about environmental management in Poland that actively promotes the dissemination of knowledge on the subject and on tasks which are relevant for European Union integration and the Common Market. The association was officially launched during the 2nd *ECO-BALTIC Conference* in Gdansk in October 1997. The secretariat was hosted by the Centre for Environment and Development was established in December 1997. (Activities Report 1999, p. 2)

INEM founded a Task Force of the key players in the field of environmental management and environmental management systems in Poland to formulate goals for such an association, identify potential company members and set up an administrative structure. Members of the Task Force included Polish Forum ISO 14000, **Polish Forum ISO 9000**, the Centre for Environment and Development (CED), the **Polish Centre for Testing and Certification (PCBC)**, the **Polish Standardizing Committee (PKN)**, the **National Foundation for Environment Protection**, the **GIG Cleaner Production Centre**, the **NOT Cleaner Production Centre**, the **Polish-German Chamber of Commerce (AHK)**, **Ecofund II**, the Polish Federation of Consumers (PFK), the **Polish Chamber of Commerce (KIG)**, the Environmental Management Training Centre (EMTC), the Responsible Business Forum, WS Atkins Polska, SGS Poland, and Steel Works "Huta Czestochowa", one of the biggest metallurgical foundries in Poland.²⁸⁴

INEM Poland was publicly launched at the 2nd *ECO-BALTIC Conference* in Gdansk on 10 October 1997. Andrzej Gerhardt, of CED was named Interim Executive Director. A secretariat situated at the CED was established in December 1997. Initial activities included publication of a newsletter, a series of environmental management seminars, a survey on the

status of environmental management in Polish companies (part of INEM's GEMS programme), and translation and adaption of Dr Winter's book *Blueprint for Green Management* into Polish.²⁸⁵

After lengthy discussions, the Task Force decided that the existing association Polish Forum ISO 14000 should be restructured into a national business association for environmental management. The reasons were two-fold:

- taking over the legal structure of an existing non-profit association avoided a lengthy and expensive administrative process
- companies already members of the Forum would become members of the new association.

In March 1999 the General Members Meeting of the Polish Forum ISO 14000 agreed to the transformation. The Forum's charter was amended so that the organization could function as a national non-profit association for the dissemination of environmental management. In addition, the name of the organization was changed to Polish Forum ISO 14000 – INEM Poland.

In May 1999 INEM Poland became a Full Member of INEM. By the end of the year 2000 it had 130 members and 21 supporting companies and organizations. In addition to GEMS and seminar series described below, INEM Poland carried out a project with the German-Polish Chamber of Commerce to introduce an integrated quality and environmental management system at two Polish hospitals, St. Sophia in Warsaw and Bonifraters in Cracow. The project ran from summer 1998 to December 2000.



Fig. 7.14 The Polish version of *Blueprint for Green Management*

Publication of environmental management handbook in Polish

Blueprint for Green Management, the second English edition of *Business and the Environment* by Dr Winter, was published in the Polish language in late autumn 1998. The book was translated from English and augmented with Polish examples. Translation and adaption, layout and printing were managed by EMTC.

Seminars on ISO 14000 series of environmental management system standards in Poland

As its name says, Polish Forum ISO 14000 – INEM Poland focused its work on dissemination and implementation of the ISO 14000 series of environmental manager systems. One of its very first activities was the seminar, *Concept and Implementation of Integrated Management Systems ISO 9000 and ISO 14000*, held on 23–24 October 1997 in Lodz. It was organized by INEM Poland, Polski Centrum Badan i Certyfikacji and EMTC, and attracted representatives of 50 companies. Topics included “Environmental Problems and

ISO 14000”, “Criteria for Selecting a Programme that will Protect the Environment”, and “Integration of Environmental Management and Quality Management Systems”.

The INEM Main Secretariat, INEM Poland and the EMTC next organized a seminar on *Integrated Environmental Management in Line with ISO 14001*. It was divided into two sessions. The first focused on *Environmental Management Tools and the ISO 14000 series*, the second on *Value-added Implementation of ISO 14001*. It took place on 6–9 April 1998 and 6–8 October 1998 near Warsaw with more than 30 participants from business, government (including the Polish Ministry of Environment), universities and NGOs.

Participants from the Technical University in Warsaw reported that the seminar had inspired them to establish an MBA course for environmental managers. The success of the seminar led to a second seminar series in 1999. The training was led by INEM’s Head of Delegation to ISO/TC 2007, Matthias Gelber. The seminar series was co-funded by the DBU.

Support for the Czech Environmental Management Centre’s ISO 14000 activities

INEM supported the participation of its member association Czech Environmental Management Centre (CEMC) in the development and dissemination of the ISO 14000 series of international environmental management standards from 1997 to 2000. A representative of CEMC served as head of delegation for the Czech Republic to ISO TC 207 in 1998. The support included travel costs to ISO TC 207 meetings, as well as funding for activities to disseminate the ISO 14000 series in the Czech Republic. CEMC was accredited to Subcommittee 1 on Environmental Management Systems and Subcommittee 3

on Environmental Labelling, and members of CEMC were accredited to Subcommittee 2 on Environmental Auditing and Subcommittee 4 on Environmental Performance. CEMC helped transform the ISO standards into the Czech standards EN ISO 14001, EN ISO 14004, EN ISO 14010, EN ISO 14011 and EN ISO 14012. CEMC was also involved in the translation of the standard ISO 14020 into the Czech standard on environmental reporting. Funding was provided by the German Federal Environment Foundation (DBU).

7.10 The environmentally friendly office

About half of all employees work in an office. Office work affects both employees' health and the environment, e.g., from dangerous cleaning agents, ozone from copy machines and large quantities of waste. KÖVET launched a project on environmentally friendly offices with the goal of introducing measures to protect workers' health and improve the environmental performance of companies in managing their offices. KÖVET conducted a series of training seminars and published

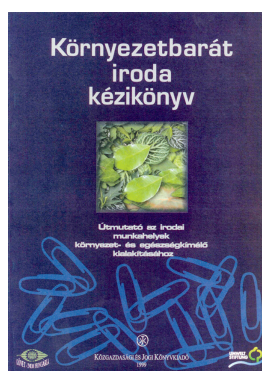


Fig. 7.15 *The Environmentally Friendly Office*

a guidebook covering such issues as environmentally friendly procurement, environmentally friendly office supplies and equipment, minimising office waste, and maximising energy savings. The project ran from August 1997 to July 1998. It was supported by the DBU.²⁸⁶

KÖVET launches environmental cost accounting and environmental performance evaluation project

In order to show that the environmental measures help companies reduce to rather than increase costs, KÖVET has launched EnviroSense: Environmental Cost Accounting and Environmental Performance Evaluation Demonstration Project. GT Strategies and Solutions (USA) is an implementing partner.

The project targets companies at three levels: general, enabling and specific assistance. In preparation KÖVET will collect leading-edge environmental cost accounting (ECA) and environmental performance evaluation (EPE) know-how, will adapt and translate training material, will produce short info guides about the tools, and will collect success stories and case studies. In the General phase, the info guides will be distributed to a group of 200–300 companies who will be invited to participate in one or more workshops. In the Enabling phase, KÖVET will organize a training course for 20–30 companies. In the final phase, Specific Assistance, three to five companies will be assisted in the application of ECA and EPE in their companies. Implementation funding is being provided by the EcoLinks programme of the US AID.²⁸⁷

Environmental manager and auditor training in Hungary

In 1998 the Hungarian Ministry for Foreign Affairs published a call for tender for the development of an *Environmental Manager and Auditor Training – Specification for Qualification*

and Model Course that would be the basis for an officially registered course in Hungary. An expert team lead by KÖVET-INEM Hungary won the contract and developed a 12-day course. The course not only covered ISO 14001 and auditing, but also provided up-to-date knowledge on environmentally friendly products, environmental performance evaluation, cleaner production, environmental cost accounting, etc. The first training course was very successful. Although originally only 20 participants were foreseen, 38 passed the four exams.²⁸⁸

REGEM Project background

The pollution of the air, soil, water and destroying species threaten really our long-term existence. The industry and overall business activity were made responsible for this degradation by the society. The reaction of the business world has changed from end of pipe approach (like waste selection, chimney filters) to preventive / proactive approach of managing environmental matters. Main approaches emerged in the business sphere are cleaner production (in other words pollution prevention or waste minimization) and environmental management.

Cleaner production (CP) minimizes or prevents the generation of waste streams and emissions at source, saving material and energy, reducing the cost of waste treatment and disposal. Cleaner technologies encourage good housekeeping, material substitution, technology changes, on-site recycling, product redesign or combination of these actions. Pollution prevention can bring benefits through better inventory control, maintenance, repairing leaks, simple equipment and process modifications, etc. Most of these measures have a short payback period but organizational resistance often hinders their use.

Environmental management (EM) recognizes sustainable development and environmental protection as a major

priority and establishes policies, programs and practices implementing business activities in an environmentally sound way. They should be incorporated into each field of functions as an essential element of management: organizational structure, research and development, material management, production engineering, marketing, PR, human resources, finance, legal affairs, etc.

This project is to show that EM and CP are closer to each other in practice than in theory.

SMEs are not so big individual polluters as big companies, but the number of enterprises of this size are large and their activity is left out of the authorities' consideration. However, their aggregated (macroeconomic) environmental impact is considerable.

Sophisticated approaches like ISO 14001 are often too bureaucratic or costly for SMEs. They need more simple, ready-to-use methods with direct benefits (e.g. cost cutting) to become active in greening their business. The 3 partners participating in this project possess such know-how and would like to disseminate it in Hungarian regions through regional offices. SMEs cannot be reached unless locally.

This project is to show that simple and easy-to-comprehend EM and CP methods can increase SME competitiveness with strong on-site support.

The regEM project is proposed and was designed by Gergely Tóth (KÖVET) based on discussions with Heinz Werner Engel (ABECE) and Miklós Galli (HCPC).²⁸⁹

In order to enable SMEs to strengthen their market position KÖVET and HCPC intends to make current environmental management and cleaner production know-how available through regional offices covering the whole country. The Belgian partner ABECE adds its know-how on environmental

management for SMEs to the project in order to be able to provide a wide range of good environmental management and cleaner production tools to Hungarian SMEs. Also, we are counting with 1–2 seminars of Eco Counselling Europe experts on the topics of environmentally aware construction and possibly ecolabelling for touristic services.²⁹⁰

Innovative approach to EMAS II implementation in the local authorities of new member states (EMAS 4 New States)

EMAS II (the revised European Union Eco-Management and Audit Scheme) provides local authorities with a systematic approach for solving environmental problems and improving their environmental performance. This project demonstrated how EMAS II could be implemented in Latvian local authorities to provide a model for other New Member States (NMS).

The EMAS 4 New States project was initiated by the Latvian Environmental Management Association (LVPA), a member of INEM, and the consultancy SIA Biznesa Konsultantu Grupa (BKG) in 2004. Two Latvian local authorities, Daugavpils



Fig. 7.16 Initial project meeting. (left) Natalia Ladudtko (LVPA) and (right) Ludwig Karg (BAUM).

City Council and Naujene Rural Municipal Council, and the German Environmental Management Association (BAUM) were project partners.

The aims of the project were:

- to demonstrate and promote EMAS II in local authorities of new member states, using Latvia as a role model
- to introduce new effective tools of EMAS II implementation and dissemination
- to assist NMS in their EU integration process
- to introduce EU environmental regulations to the NMS

The initial meeting of the project partners was held on December 3, 2004 in Riga. An awareness raising and motivating introductory seminar took place in Riga on April 29, 2005. Participants included 25 local authorities, 10 Latvian consultants, nine consultants from New Member States (NMS) and 10 guest organizations. A five-day training seminar for representatives of five local authorities and Latvia and NMS consultants took place on May 30 – June 3, 2005 in Riga, Latvia. It was organized by LVPA and conducted by Ludwig Karg and Wolfgang Ackermann of BAUM. Participants in the training seminar were representatives of 12 Latvian district and rural councils, 10 Latvian consultants, and eight NMS consultants from the Czech Republic, Estonia, Hungary, Lithuania, Malta, the Slovak Republic, Slovenia and Poland.

On 24 April 2007 the project held the *EU Integration Conference for Latvian Local Authorities* in Riga to highlight European local authority experience on local, national, regional, and global sustainable development. Speakers also reported on structural reform in Danish local authorities and new Local Agenda 21 strategies and priorities derived from it, and Swedish experience in achieving sustainability at the local, regional and state levels.

Representatives of participating municipalities and their consultants travelled to Germany for a study tour from 30 September to 9 October 2005. The group visited Immenstadt Hospital, an EMAS-registered school in Leutkirch, a biogas plant for the production of electricity in Konstanz, heating plants operating on wood chips and pellets in Leutkirch and Überlingen, city administrations in Leutkirch, Überlingen and Immenstadt, and a popular tourist location, Mainau Island in Lake Constance, which also has obtained EMAS registration.

The EMAS implementation phase in Latvian local authorities took about seven months, beginning in August 2005 and ending in December 2006. The project developed a number of manuals and guidebooks to assist local authorities:

- EMAS Master Manual
- Implementation guides and workbook
- Environmental data monitoring tool
- EMAS for Municipalities: Implementation Guide for the Step-by-step Cluster Approach



Fig. 7.17 The guidebook developed to support the EMAS 4 New States project is also available for download on the project and EU websites.

EMAS for Municipalities: Implementation Guide for the Step-by-step Cluster Approach presents a step-by-step method that makes EMAS implementation clear and logical. It significantly reduces paper work and makes the implementation process controllable. It breaks down EMAS implementation into six steps and three audit phases. It also outlines a “cluster” approach for creating partnerships that facilitate cooperation in the solution of mutual or trans-border environmental problems.

EMAS capacity-building in the new Member States

In the framework of the EU-funded project, *EMAS Capacity-building in the New Member States*, INEM’s Belgian affiliate Eco-Counselling Enterprise scrl and INEM associations in the target countries carried out an 18-month training of 25 business consultants in Estonia, Latvia, Lithuania, Poland and Hungary in the *EMAS EASY* methodology, and supported the consultants in their introduction of EMAS in 50 SMEs. The aim of the project was to promote the EMAS Regulation by highlighting its economic benefits and providing a step-by-step methodology for its implementation. It also facilitated the establishment of a regional network for exchange of EMAS information and know-how.

EMAS conferences in the new Member States

This project supported practical capacity-building for EMAS implementation in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and the Slovak Republic, in particular in SMEs. INEM and its partner organizations held six conferences on EMAS and translated and adapted a guidebook, *EMAS 2000*, which was originally written in the framework of INEM’s EMAS in Southern Europe, project. The overall goal was to promote the uptake of EMAS among companies

in the target countries and, thereby, facilitating their access to European Union markets.

Baltic University Programme:

Development of EMS curriculum

In early 2000 INEM was invited by Uppsala University (Sweden) to help develop an environmental management curriculum for the Baltic University Programme (BUP) network. BUP is a regional university network in the Baltic Sea Drainage Basin set up in 1991. Some 170 universities in 14 countries take part in its activities and about 6000 students are enrolled in its courses. BUP is coordinated by a secretariat at Uppsala University.

Work on the curriculum began with a conference in Kaunas in May 2000, at which 28 scientists and researchers from Sweden, Russia, Latvia, Lithuania, Belarus, Poland, Germany and the Czech Republic, as well as the Swedish Environmental Protection Agency and INEM met to develop a half-year programme in environmental management. It consisted of four courses: Policy Instruments, Cleaner Production, Product Design, and Environmental Management Systems. For each course a book, material on CD disc, a set of case studies and an Internet site was produced. The work was divided into four teams, INEM worked in Team D: Environmental Management Systems in Cooperation with the Hamburg-Harburg Technical University.

7.11 Support of the Establishment of a Baltic Environmental Management Association (BALTEMA) in Estonia, Latvia and Lithuania

The project officially started on March 22, 2002, with a planned length of 3 years. After an initial delay of finding the most

suitable local partners, INEM requested a 6-month prolongation, so the BALTEMA project officially finished on 21 September 2005.

For the implementation of the project 802.250 Euro were calculated. DBU has secured 80 % of the budget: German Environmental Foundation: **650.000 Euro**. Other sources: **152.250 Euro**.

Between 1995, when INEM held its first ECO-BALTIC Conference, and the year 2000 numerous projects had been carried out to introduce environmental management and environmental management systems to Baltic enterprises. By 2002 about 30–40 Baltic enterprises had implemented environmental management systems and obtained ISO 14001 certification, and about 30 companies in each country were currently participating in various projects to attain the standard.

However, sophisticated approaches like ISO 14001 often proved to be too bureaucratic and costly for SMEs. They need simpler, easy-to-use methods with direct benefits (e.g., cost cutting) to green their businesses. INEM has developed several tools that feature this simplicity and ease of use:

Tool 1: *Ecomapping* and environmental good housekeeping. Ecomapping is a simple, visual tool for small enterprises to measure and reduce environmental impacts. Environmental good housekeeping are simple measures for saving energy, water and raw materials, and reducing waste.

Tool 2: *Environmental Performance Evaluation*. There are several methods of evaluating companies' environmental performance. One of the easiest is the development of environmental performance indicators with a set of 20–30 performance indicators.

Tool 3: *Environmental Management Systems for SMEs*. This concentrates on three issues: a simple guide to ISO 14001

implementation for beginners; a register of certified companies and consultants; and a coaching programme to help SMEs implement an environmental management system themselves.

In consultation with the German Federal Environment Foundation (DBU), the INEM Main Secretariat and partner organizations from the Baltic States, it was decided to launch a major campaign to disseminate these tools to Estonian, Latvian and Lithuanian companies, and to establish national business associations that would further develop and promote the concepts. These objectives formed the basis of a 34-month campaign entitled, "Support of the Establishment of Baltic Environmental Management Associations in Estonia, Latvia and Lithuania (BALTEMA)".

The goals of BALTEMA were:

- to raise awareness among Estonian, Latvian and Lithuanian enterprises about the economic and environmental advantages of environmental management, and to build capacity to implement it, and
- to establish self-sustaining national business associations for environmental management in each of the three Baltic States

The range of assistance included train-the-trainer seminars focusing on *Ecomapping*, environmental good-housekeeping practice, environmental performance evaluation (EPE), integrated pollution prevention, and implementation of EMAS and the ISO 14000. INEM also provided guidance on establishing national business associations for environmental management. The tasks of the business associations are to

- provide information about environmental management tools, best practices and benefits to Baltic enterprises
- serve as a forum for exchanging experiences in solving environmental problems

- institutionalize this exchange of information by building up a stakeholders network
- broaden the exchange of information on a trilateral (Baltic) level

The BALTEMA campaign was carried out in cooperation with INEM members and affiliates from Belgium, Estonia, Germany, Hungary, Latvia, Lithuania, Sweden and the United Kingdom.

Baltic State project partners were

- Estonian Institute for Sustainable Development of the Stockholm Environment Institute – Tallinn (SEI-Tallinn)
- Latvian Pollution Prevention Centre (LPPC)
- Latvian Environmental Management Association (LVPA)
- Environmental Management and Auditing Institute (EMAI) of Lithuania, and
- Institute of Environmental Engineering (APINI) of the Kaunas University of Technology Lithuania

Activities in Estonia

Following a thorough needs assessment and preparation, SEI-Tallinn established an organising committee for an Estonia environmental management association. The first meeting of the organising committee was held on 10 March 2003. A second meeting was held on 24 March, and a third on 14 April, during which the membership fee structure and final wording of the association charter were agreed. The Estonian Association for Environmental Management (EKJA) was launched on 21 April 2003 in Tallinn. Founding members were 11 enterprises and organizations and four private persons.

Together with SEI-Tallinn, the new association held its first conference on environmental management on 29 May 2003 at the National Library in Tallinn. More than 100 persons

attended, including principals of 41 enterprises, and representatives from the Ministry of Environment, industry and trade associations, state institutions, local authorities, universities and the German Delegation of Businesses in Estonia.

The newly formed association held number of events in quick succession. On 17 October 2003 EKJA held an experience exchange on pending environmental legislation. EKJA published its first information bulletin in November 2003. On 24–25 November 2003 a delegation of 14 LKJA member companies went to Sweden on a study tour organized by SEI-Tallinn and the Swedish Association of Environmental Managers (NMC). And on 4–5 December 2003 more than 25 companies participated in a two-day training seminar on EMAS organized by SEI-Tallinn.

EKJA was accepted as a Full Member of INEM at the INEM General Members Meeting in Stuttgart on 8–11 November 2003. By the end of 2003 its membership had already doubled to 22 enterprises. Although the goal of establishing a national business association for environmental management had been accomplished, the BALTEMA campaign carried on its work in strengthen capacity for environmental management in 2004.

Two workshops were held on environmental management system implementation in Tallinn. In March a workshop on ISO 14001 implementation was given by Matthias Gelber of INEM's British member 14000 & One Solutions. And in September Heinz Werner Engel of INEM's Belgian member ABECE lead a seminar on EMAS/ISO implementation in SMEs. In addition, two rounds of *Ecomapping* training and demonstration projects by Estonian trainers with assistance from Mr Engel were held in 2004. The first round of the two-day training was held on 19 February and 23 March. Representatives of

11 companies participated. The second round of training was held on 4 and 18 November. 14 participants from 12 companies took part. On the first day of training participants learned to use the *Ecomapping tool* and were assigned to assess the environmental performance of their own companies as homework. On the second day of training the participants discussed their results and developed environmental programmes for their companies.

SEI-Tallinn also organized four experience exchange seminars for EKJA members on the following topics:

- Product-related environmental management issues (23 January 2004)
- Experiences and new trends in environmental impact assessment (16 June 2004)
- Invitation and presentation of the Finnish Association for Environmental Managers: an overview of its activities and general situation in Estonian environmental-related related to enterprises with about 30 participants (14 October 2004)
- Topics related to greenhouse gas emissions trading, IPPC, chemical risk management and packing waste management with 25 participants (25 November 2004)

SEI-Tallinn and EKJA also organized two working groups to comment on and discuss possible amendments to the Estonian environmental legislation (e.g. Environmental Impact Assessment, Environmental Auditing Act and Ambient Air Protection Act). Their cooperation continued with the seminar “EMS and Beyond: Value, Vision and Integration” lead by Mr Gelber on 7 October 2004. Its aim was to give an overview of the latest trends in environmental management. More than 50 representatives of enterprises, public authorities and other institutions attended. The Estonian version of the *EMAS Easy* guidebook was released at the seminar.

In the first half of 2004 SEI-Tallinn experts also prepared training materials for an ISO 14001 coaching programme and organized the first two of four ISO 14001 trainings for groups of companies. 15 participants from different enterprises took part. The third and fourth coaching sessions were held on 15 October and 11 November. In total 30 participants from various companies participated. In addition, a training seminar on EMAS/ISO 14001 was held for the construction sector.

Throughout 2004 SEI-Tallinn and EKJA continued to assist the Ministry of the Environment in the implementation of the EMAS regulation in Estonia. Representatives of both organizations participated in EMAS policy group meetings to prepare the administration structure as well as the national EMAS policy and strategy.

Activities in Latvia

The BALTEMA project was carried out in Latvia by two organizations, the Latvian Environmental Management Association (LVPA) and the Latvian Pollution Prevention Centre (LPPC). LVPA had already been founded in 1998 but had become inactive. It was decided by the project partners to revitalize LVPA rather than to establish a new association.

In March–April 2003 several consultations with individual stakeholders were held to explore the need for and role of an environmental management association. During the same time period, informal negotiations were held with the Ministries of Environment and Economy. Meetings were also held with individual companies, such as VAS Latvenerg and AS Arta-F on 31 March, AS Ditton pievadkezu rupnica, SIA DauER-D and AS Rebir on 14 April.

In order to further promote the activities, goals and benefits of the environmental management association to Latvian

business community the partners held the conference, *Business Management for Sustainable Development: Role of Latvia in the Global Process* on 28 May 2003 in Riga. A number of participants expressed interest in joining the proposed environmental management association by signing a Letter of Commitment.

The revitalized LVPA was launched with a conference in Riga on 28 May 2003. It increased its membership from six passive members to 26 active ones. LVPA was accepted as a Full Member of INEM at the INEM General Members Meeting in Stuttgart on 8–11 November 2003.

On 5 August 2003, a meeting with representatives of the machinery and Metal-processing Association of Latvia was held in Riga. The Director of the association expressed his support and interest to cooperate in LVPA. This helped to firmly establish LVPA.



Fig. 7.18 The Latvian BALTEMA team

LVPA hosted the first of session of the two-part *Ecomapping* train-the-trainer workshop on 9–10 June 2003 in Valgumi. Participants came from Estonia, Latvia and Lithuania. The second part of the *Ecomapping* training was held on 15–16 September.

A third *Ecomapping* train-the-trainer seminar was held on 19 February 2004. On 17 September 2004 Mr Engel lead a workshop on EMAS/ISO for SMEs in Riga.

Meanwhile, *EMAS Easy* had been translated and adapted to Latvian requirements. It was distributed at the EMAS seminar organized on behalf of the European Commission Directorate General Environment in the framework of the “EMAS in 5 Countries” project on 17 September 2004.

Rough translation of the *Environmental Performance Evaluation: A Handbook* into Latvian was completed in November 2004, revisions and corrections were completed in January 2005.

Activities in Lithuania

In Lithuania two organizations, EMAI and APINI, shared tasks. It was decided to restructure EMAI’s existing membership association, the Engineering Ecology Association (EEA) into a national business association for environmental management.

On 25 February 2003, EMAI hosted a meeting of the INEM-Lithuania Organising Committee. Participants included Budrys Rimantas, President of EEA, Dr Eduardas Davidavicius, Head of EMAI, Dr Jurgis Staniskis, Director of APINI. It was agreed that the name of the environmental management association would be Engineering Ecology Association – INEM Lithuania and that any necessary changes would be made to the statutes of EEA to conform with the INEM Charter.

On 18 March 2003 EMAI and APINI held the 1st *Business Round Table for Interested Enterprises and Organizations* at

the Ministry of the Economy in Vilnius to promote the environmental management association. Participants included the representatives from the Ministries of Environment, Economy, and Agriculture, the Lithuanian Industrial Confederation, and companies and municipalities. The overall number of participants was 138. The *Round Table* supported the restructuring of EEA and its aim to introduce environmental management in Lithuania.

A second Round Table was held at the Lithuanian Industrial Confederation on 25 March with the same goals and results.

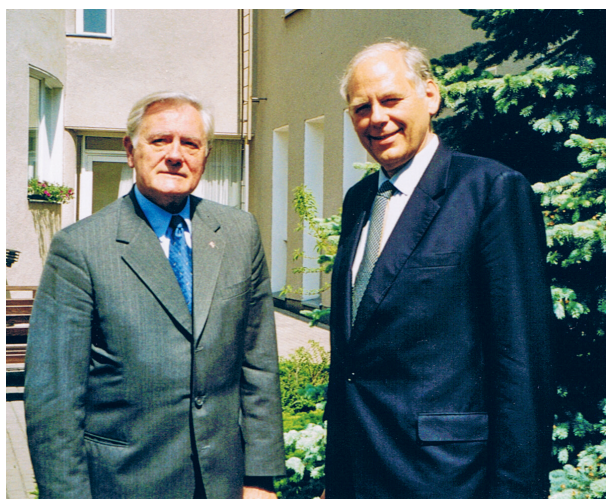


Fig. 7.19 (from left) Dr Valdas Adamkus
and Dr Georg Winter

On 26 May 2003, INEM Chairman Dr Winter met with the former President of Lithuania, Dr Valdas Adamkus, and executives of the Lithuanian Industrial Confederation to garner support for the Lithuanian environmental management association. Dr Adamkus agreed that introducing environmental management and sustainable principles was important for

Lithuanian enterprises and that he supported the efforts to establish a Lithuanian environmental management association.

The next day Dr Winter met with the Lithuanian Industrial Confederation (LIC) to explain the goals and objectives of the BALTEMA Campaign and to gain LIC support for the founding of EEA-INEM Lithuania. Participants in the meeting were Dr Winter, Mykola Alieliunas, Vice-President of LIC, Dr Rimantas Budrys, President of EEA, and Dr Eduardas Davidavicius, Head of EMAI. It was agreed that new association would become a member of INEM and that it should execute the BALTEMA projects in Lithuania.

In the meantime, the EMAI Board had agreed a revised the Charter of EEA to meet the requirements of INEM membership. The way was now clear for the relaunch of the organization as a non-profit, non-partisan, national business association for environmental management.

On 27 May 2003 EMAI and APINI held a conference to launch the Lithuanian environmental management association.



Fig. 7.20 EEA-INEM Lithuania launch conference.

By November 2003 EEA-INEM Lithuania had gained five new members. EEA-INEM Lithuania was accepted as a Full Member of INEM at the INEM General Members Meeting on 8–11 November 2003 in Stuttgart.

Between February and May 2003 APINI and EMAI held a series of eight seminars on environmental management systems in Vilnius in the framework of BALTEMA. The seminars focused on positive change in environmental behaviour of companies. They were given information to help them implement an environmental management system with their own staff and resources, avoiding the costs of external consultants.

APINI also carried out a number of events alone. For example, it held informal seminars on environmental management systems for companies in the Kaunas region on 19 February, and in Siauliai on 20 March 2003. Two representatives of INEM's Swedish member NMC assisted in the Kaunas seminar. In April APINI held a seminar on *EMAS implementation in Lithuania and the European Union* with 64 participants, including 33 industry staff. And between May and October 2003 it held a series of five two-day trainings on the implementation of environmental management systems. Nine companies participated in the first training and 10 each in of the following four.

In the fall of 2003 APINI hosted the two-part EPE train-the-trainer workshops for BALTEMA partners from Estonia, Latvia and Lithuania at Kaunas University of Technology. The first round of trainings was held in October 2003 and the second in November 2003. Lecturers were Mr Gelber and Mr Tóth. Content of the two-day EPE trainings included identification of environmental aspects, use of the international environmental standard *ISO 14031: Environmental Performance Evaluation* to develop performance indicators, identify material and energy

flows, and identification of environmental savings potentials. The certification examination consisted of two parts: homework and an examination. The homework required each participant put together an indicator system for a real company, including 10–30 significant environmental indicators, and compilation of real values for at least half of the indicators for the past three years. The examination was a test on material covered in the workshops and in the accompanying *Environmental Performance Evaluation: A Handbook*. The certification examinations were held on 9 December 2003 in Kaunas, Riga and Tallinn. Successful candidates were awarded certificates.

A large number of BALTEMA activities were carried out in 2004. The *Prevention Strategies Conference* was held in Vilnius. On 21–22 June Mr Engel lead an *Ecomapping* workshop for 11 companies in Kaunas, and launched two pilot projects in small companies using the methodology. The first Experience Exchange on environmental management systems and environmental performance evaluation was held for 19 companies in the Klaipeda region on 20 August. The Klaipeda municipality, which hosted the event also participated. A second Experience Exchange was held on 4 November in connection with the second EPE training seminar. It was hosted by the furniture manufacturer Kauno Baldai. A third Experience Exchange on the same topics was held on 4 November in Kaunas. Two representatives of EMAI and five from APINI as well as 13 from companies took part. On 26–27 August representatives of 13 companies were trained in the application of EPE tools during a seminar in Kaunas.

In cooperation with the BALTEMA project partners, APINI held training seminars on Ecomapping and EPE for Lithuanian companies in 2004. The first of the two-part Ecomapping training was held on 21–22 June. It consisted of

lectures on using the Ecomapping tool, group work and practical exercises in two companies. The participants also received a homework assignment: to “ecomap” their own companies. The second part was held on 21 October. It consisted of presentations of the results of their homework assignment and evaluation of their ecomaps. The first of two trainings on EPE was held on 26–27 August. As homework, the participants applied the EPE methodology in their companies. They reported on their findings at the second part of the training on 4 November, at which they also evaluated their homework and took a certification examination. Those who successfully applied the EPE methodology and passed the exam were awarded certificates.

On 6–9 December 2004, five APINI staff members participated with their colleagues from Estonia and Latvia in the “EMAS Capacity-building in the New Member States” train-the-trainer seminar in Tallinn.

EMIA activities focused on acquisition of new members for the environmental management association, and preparation of the new Lithuanian standard *Environmental Aspects Identification and Environmental Performance Evaluation in Micro, Small and Medium-sized Enterprises*. Following monthly meetings that began in December 2003, including six at the Committee Stage with the Lithuanian Standards Board Technical Committee 36, the standard was officially published in September 2004.

On 4 June 2004 EMAI and the EEA-INEM Lithuania awarded environmental prizes in three categories at a ceremony in Vilnius. Two companies were honoured for their excellent environmental management systems, one for its environmentally friendly product, and four for their environmentally friendly processes.

Publications of the BALTEMA campaign

Environmental Performance Evaluation: A Handbook shows how to set up a system for evaluating the environmental performance of a company. The original version was developed by KÖVET-INEM Hungary in a project funded by the Ecolinks programme of the U.S. Agency for International Development. The 80-page handbook was used as a resource in the train-the trainer seminars. It was translated into each of the Baltic States languages.

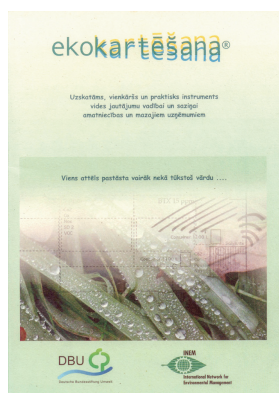


Fig. 7.21 Latvian version of the *Ecomapping* guide

Ecomapping is a visual, simple and practical tool to analyse and manage the environmental performance of small companies and craft industries. By indicating environmental problems on a series of “ecomaps” of the company site, managers and employees can quickly pinpoint areas for improvement. Ecomaps are provided for water, air, noise and other nuisances, soil, urban situation, energy, waste, and risks. Guidance is also provided on developing an environmental programme to continuously improve the company’s environmental performance. The completed set of ecomaps provides an inventory of significant

environmental aspects and impacts that can be used as the basis for documentation of an environmental management system. Ecomapping also provides a simplified reporting format and procedures to collate information from the aspect evaluation. It was published in Estonian, Latvian and Lithuanian in 2003.



Fig. 7.22 Estonian version of the *EMAS Easy* guidebook

EMAS Easy presents a new method for implementing an environmental management system in SMEs based on the Ecomapping methodology. It is a way to implement EMAS which is proportional to the size, financial capacity and organizational culture of small business. It promised to help companies implement EMAS in 10 days, with 10 people, on 10 pages. The work process from, beginning to end, takes 30 steps. It was published in Estonian, Latvian and Lithuanian in 2003.

Major funder of the EUR 802,250 BALTEMA project was German Federal Environment Foundation (DBU). The DBU contributed EUR 650,000 and other sources EUR 152,250.

Chapter 8

PUBLICATIONS OF THE INTERNATIONAL NETWORK FOR ENVIRONMENTAL MANAGEMENT

Two of INEM's main missions are to collect and disseminate environmental management know-how and to develop and to disseminate practical tools for companies to improve their environmental performance. At the very beginning, Dr Georg Winter and the earliest advocates of environmental management spoke at expert meetings, addressed conferences, wrote newspaper and journal articles and books. The INEM secretariat and its member associations continually produced publications to in the never-ending quest to share their know-how and tools with larger and broader audience. Collections of case studies showed how companies were using environmental management to cut costs and reduce pollution. Tools and methodologies developed by members of INEM aimed to help particularly smaller companies assess and improve their environmental performance.

With the advent of electronic media, CD-ROMs, the world wide web and email, INEM gained a very powerful and cost-effective tool to take its mission one step further: to transfer environmental management know-how from within the INEM network to the entire world business community at virtually no cost.

Below is a sample of publications produced by the INEM Main Secretariat. Of course, individual INEM associations and their members also produced a wide range of books, journal articles and electronic media. Some of these are described in other chapters.

Dr Winter's landmark book, *Business and the Environment*

Business and the Environment was originally published under the title *Das umweltbewusste Unternehmen: Ein Handbuch der Betriebsökologie mit 22 Check-Listen für die Praxis* in German in 1987, in English as *Business and the Environment* in 1988, and as *Entreprise et Environnement: Une synergie nouvelle* in French in 1989 at the initiative of the Commission of the European Community on the occasion of the 1987/1988 European Year of the Environment. It was the world's first book to describe an integrated system of environmental management and show how to implement it in companies of all sectors and sizes.

"Business and the Environment is a dependable guide on how to save resources and protect the environment while making a profit. 'Clean and green' is synonymous with growth, profit and lasting competitive advantage. This model ... is the most thorough and useful guide to environmental management that has been developed so far, and is likely to remain so for quite some time." — *Tom Peters, management guru and author (In Search of Excellence, etc.)*

The German version was subsequently published in six editions, growing from some 210 pages in 1987 to more than 1,210 in its sixth edition in 1998. The German edition became the authoritative textbook on environmental management in the German-speaking countries. The translation and adaption of *Business*

and the Environment into further languages was carried on by INEM following its establishment in 1991. The translation and adaption was often carried out in the framework of INEM projects focused on the establishment of a national business association for environmental management in that country. More information on *Business and the Environment* is provided in Chapter 2: Dissemination of Environmental Management.

The INEM publishing program

INEM is not a publishing company. Its books were written in the framework of programs and projects aimed at motivating and assisting businesses and industries to “green” their day-to-day operations. For example, INEM’s first book, *Case Studies in Environmental Management in Small and Medium-sized Enterprises*, sought to negate the generally accepted notion that environmental management was only applicable by large, affluent companies with the time, money and staff to implement and manage an environmental management system.

INEM’s publishing program began with contributions to reports of other organizations. These initial efforts then developed into position papers that grew into pamphlets and booklets, and ultimately, to “real” books. The first of these efforts was INEM’s contribution to the United Nations Industrial Development Organization (UNIDO) *Working Paper III, Industry Initiatives in Achieving Environmentally Sustainable Development* in 1991. This was followed by INEM’s booklet *Challenge of the Nineties: Integrated Environmental Management applied to Business and Government* in 1991.

At the same time, INEM member associations were producing their own publications. The Swiss Environmental Management Association (ÖBU) produced booklets based on the results of projects it had carried out. For example, the ÖBU

Action Group “Environmental Accounting for Enterprises” adapted and further developed the revolutionary Environmental Impact Points methodology that allowed companies to compare the environmental impacts of different types of emissions, e.g. a ton of CO₂ with a ton of NO_x. The results of the two-year project were presented in August 1992 at a seminar, and published as ÖBU’s Report 7/92 *Environmental Accounting for Enterprises*. Results of other Action Groups on environmental management, environmental accounting, energy contracting, employee motivation, environmental policy, environmental procurement, and environmentally friendly packaging had been published since 1990. In 1996 ÖBU published *Leitfaden zur Umweltrechts-Konformität in ISO 14001 und EMAS mit detailliertem Fragenkatalog zum schweizerischem Umweltrecht*, which INEM translated and published as the *Environmental Legal Compliance as an Element of ISO 14001 and EMAS*.

Likewise, INEM’s French member Orée also produced a number of resources:

- *Guide d’Auto-Diagnostic* – environmental self-assessment guide for auto repair workshops
- *Guide Pratique de l’Environnement* – practical environmental guide
- *Guide des indicateurs* – guidelines on environmental indicators
- *Guide de Formation et de Sensibilization à l’Environnement* – a guideline for environmental awareness and training
- *Guide d’Evaluation Environnement d’une Zone d’Activités* – guidelines for the environmental assessment of industrial estates

- *Report sur les Emballages Plastiques Ménager et leur Valorization* – a report on household packaging waste and its re-use

INEM translated Orée's 1997 casebook on the environmental measures implemented in 43 French SMEs in sectors ranging from agro-food to plastics to water supply into English and German. INEM Project Manager Claire Buckley augmented the casebook with case studies of German, Irish and Swiss companies. The English version was published as *Experiences of European Companies in Implementing Environmental Management*.

INEM's first venture in book publishing was the casebook, *Case Studies in Environmental Management in Small and Medium-sized Enterprises*. It was released at a satellite event, *SMEs and Environmental Management: A Global Perspective*, of the fourth Session of the United Nations Commission for Sustainable Development in New York in 1996.

INEM pamphlets and booklets

- *The Challenge of the Nineties: Integrated Environmental Management applied to Business and Government*, by Dr Georg Winter and Eberhard Seidel in collaboration with Troy Davis and Stefan Zensus. A holistic environmental management system enables companies to meet their environmental responsibilities and at the same time enhance their corporate culture and economic success. Similarly, environmental management enables governments to better fulfil their responsibilities for the maintenance of natural resources and for sustained economic development. 23 pages. 1991.
- *INEM, the International Network for Environmental Management: Activities and Goals*. Provides an overview of

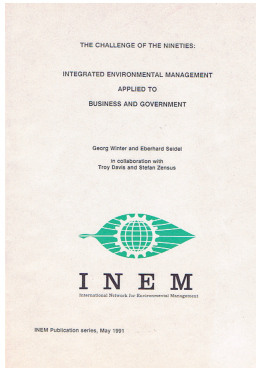


Fig. 8.1
*The Challenge of
the Nineties*

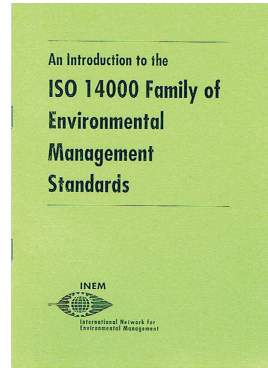


Fig. 8.2
*An Introduction to the ISO
14000 Family of Environmental
Management Standards*

environmental management concepts, describes the activities of national business associations for environmental management, INEM's main spheres of activity and makes recommendations to business and industry and governments. 56 pages. 1992.

- *An Overview of INEM and its Activities: Western and Central & Eastern Europe*. Presents the goals, mission and activities of INEM and describes selected projects. 20 pages. 1998.
- *An Introduction to the ISO 14000 Family of Environmental Management Standards*. Prepared by INEM's ISO 14000 expert Poul Buch Jensen, the pamphlet describes how the standards are prepared and each of the standards. It was updated regularly to keep pace with the ISO TC 207 process. It was also published on the INEM website. 16 pages. 1998.

8.1 Books published by the INEM Main Secretariat

Case Studies in Environmental Management in Small and Medium-sized Enterprises

SMEs face a particular challenge in dealing with environmental issues: they often lack the required expertise and resources. This casebook presents the experiences of 13 SMEs from around the world in taking on this challenge. The various approaches adopted to solving environmental problems are presented in the context of the social, economic and technological conditions faced by each company. The companies are from Brazil, Colombia, the Czech Republic, France, Germany, Hungary, India, Ireland and Tunisia. The case studies were also made available on the INEM website. 120 pages. Soft cover. 1996.

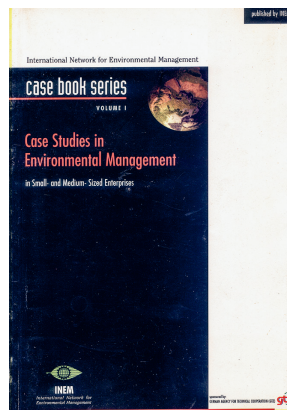


Fig. 8.3
Case Studies in Environmental Management

Experiences of European Companies in Implementing Environmental Management

This collection of case studies focuses on practical solutions 43
French and four European small and medium-sized enterprises

have developed for putting environmental commitment and policy into action. The experiences of the SMEs in sectors ranging from agro-food to plastics were compiled by INEM's French member, Orée and translated by INEM. 166 pages. Soft cover. 1999.



Fig. 8.4. Orée Case Studies

EMAS Tool Kit for SMEs

INEM published the 262-page Tool Kit in January 1999. It is a step-by-step guide to assist small and medium-sized enterprises

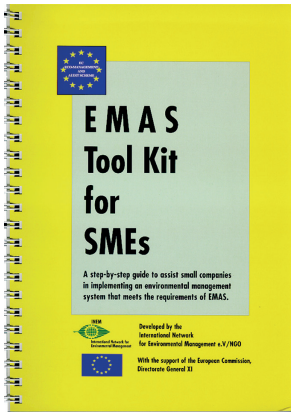


Fig. 8.5 *EMAS Tool Kit*

(SMEs) in implementing an environmental management system that meets the requirements of the European Union's Eco-management and Audit Scheme (EMAS).

Developed together with 14 INEM member and partner associations in Europe, it explains each step of EMAS implementation and provides guidelines, examples, case studies and tools to walk SMEs through the entire process. The *Tool Kit* was also made available on the INEM website. Its development and publication were funded by the European Commission. 262 pages. Soft cover, spiral bound. 1999.

Environmental Legal Compliance as an Element of ISO 14001 and EMAS

Developed by INEM's Swiss member ÖBU, this guidebook helps SMEs deal with environmental legal compliance at a reasonable cost. It explains how a company can determine whether it complies with environmental legislation and how it can establish and maintain compliance as an element of an EMS according to ISO 14001 and the Eco-Management and Audit Scheme (EMAS). It is designed for use by non-legal

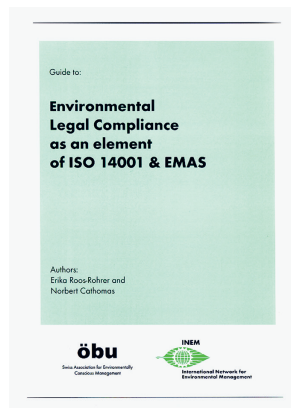


Fig. 8.6 *Environmental Legal Compliance*

experts. Originally published in German ÖBU. INEM translated the Guide into English and adapted it to an international audience. 46 pages. Soft cover. 1998.



Fig. 8.7 *Environmental Reports, Environmental Statement*

Environmental Reports, Environmental Statement: Guidelines on Preparation and Dissemination

Companies are under increasing pressure from both external and internal stakeholders to communicate about their environmental impact. A growing number is using open and factual environmental reporting to distinguish themselves from their competitors, establish greater credibility with customers and increase employee motivation. Based on results of research by the Ecological Economics Research Institute (Institut für ökologische Wirtschaftsforschung) in Berlin, this guide provides step-by-step advice on publishing an environmental report/statement that complies with the reporting requirements of the Eco-Management and Audit Scheme (EMAS). A comprehensive check-list provides a set of weighted criteria

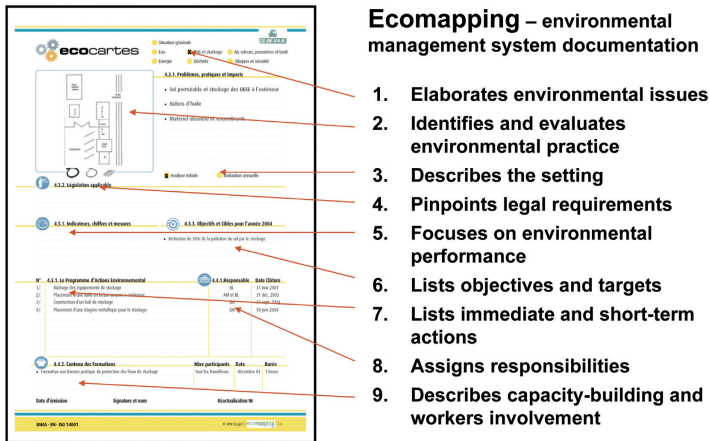


Fig. 8.8 Ecomapping EMS Documentation

that allows evaluation and comparison of environmental reports/statements. 58 pages. Soft cover. 1998.

Ecomapping

Ecomapping is a visual, simple and practical tool developed to help small and medium-sized enterprises (SMEs). It was developed by Heinz Werner Engel, Executive Director of ABECE, INEM's Belgian affiliate in the framework of the *EMAS Tool Kit for SMEs* project in 1997 and has been used widely since then. Its tool is especially designed for SMEs that lack the capacity to develop a full EMS and are characterized by oral and visual culture. By drawing a series of “maps” of the company site that show potential environmental hazards, managers and employees can quickly pinpoint areas for improvement. The complete set of eco-maps provides an inventory of practices and problems that can be used as the basis for documentation of an EMS according to ISO 14001. The tool is available in English, French, Czech, Danish, Arabic, Estonian, Hungarian, Latvian and German.

The *Ecomapping* tool has been continuously updated and improved to incorporate experience with its use and the changing demands of environmental management systems.

By 2003 Mr Engels had developed the third version, which is fully compliant with the requirements of the international environmental management system standard ISO 14001 and the European Union's EMAS regulation. A key element of *Ecomapping 3* is its methodology for presenting all necessary environmental management system documentation together on a single sheet of paper. *Ecomapping 3* was validated by Belgian auditors on 8–10 October 2003.

Case Studies of Environmental Management in Central & Eastern Europe

INEM compiled the experiences of 14 Central & Eastern European companies in integrating environmental considerations into their day-to-day operations. The companies, both large and small, represented various sectors in the Czech Republic, Estonia, Hungary, Latvia, Lithuania and Poland. INEM worked either with its member and partner associations

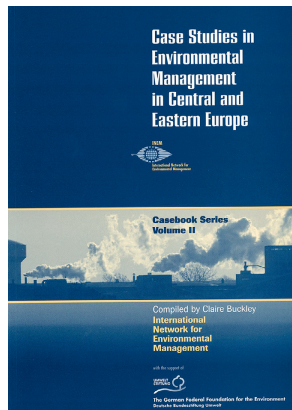


Fig. 8.9 CEE *Case Studies*

in the respective countries, or directly with the companies to obtain the information necessary for consistent and comprehensive case studies. The case studies also were made available on the INEM website. Greenleaf Publishing. 144 pages. Softcover. 1999.

Collection of Case Studies:

Environmental policy as an opportunity for increasing employment, illustrated by companies and sectors in the Augsburg-Schwaben region affected by structural change

A contribution to the debate on whether environmental protection creates or destroys jobs, these seven case studies result from a survey that tested the hypothesis that the introduction of environmental management has positive effects for the maintenance and creation of jobs. A direct positive correlation could be shown in only one case, namely the creation of the position of Environmental Manager. However, the implementation of environmental management in the seven companies contributed to improved employee motivation, reductions in raw material and energy use and waste production, and to the

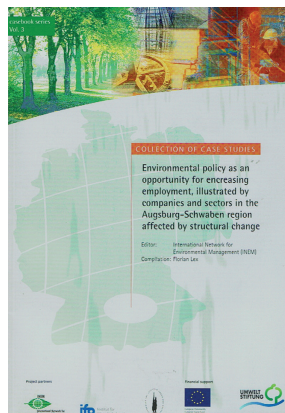


Fig. 8.10 *Collection of Case Studies*

development of new products and markets, all of which helped to increase the economic success of the companies. Published with the support of the European Union and the German Federal Environment Foundation. 60 pages. Softcover. 2000.

EMAS 2000

In 2001 in the framework of the EMAS 2 in Southern Europe project, an introduction to the economic benefits of the revised EMAS regulation for SMEs, *EMAS 2000: A dynamic instrument for the protection of the environment and sustainable development – Economic benefits and environmental management in the Mediterranean region* was published in Greek, Italian, Portuguese and Spanish, and distributed widely in those countries. The publications were also made available for download on the INEM and European Union EMAS websites.

EMAS 2000 was subsequently translated and adapted with local case studies into Hungarian, Estonian, Latvian and Lithuanian in the framework of other INEM projects. In 2001 INEM's member in the Basque region of Spain, IHOBE, translated and adapted the book to include the international environmental management standard ISO 14001 into the Basque language. 20 pages. Soft cover. 2001.

The INEM Sustainability Reporting Guide: A Manual on Practical and Convincing Communication for Future-Oriented Companies

The sustainability debate has triggered a shift of emphasis in company reporting. Stakeholders are now increasingly interested in information about the social and environmental as well as economic dimensions of a company's activities, the so-called 'triple bottom line'.



Figs. 8.11–14 *EMAS 2000* in Spanish, Greek, Italian and Portuguese

The INEM Sustainability Reporting Guide gives advice on how to draw up an effective sustainability report. Focusing on the economic interests of companies, as well as on reliable and convincing communication, it informs about target groups and their interests in information, outlines the principles of sustainability reporting and describes the elements of the sustainability report. It also provides numerous practical examples for

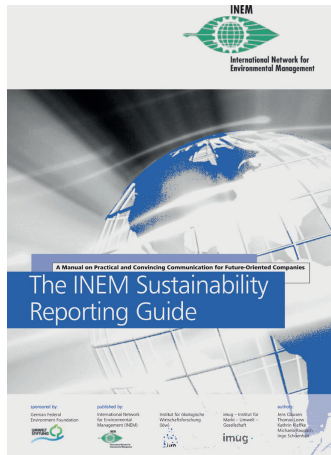


Fig. 8.15 *Reporting Guide*

presentation of performance data and design of sustainability reports. Further on, the Guide addresses the problem of credibility of the sustainability report and shows possible ways to sustainable management. The *Guide* is appropriate for both small and medium-sized enterprises and large companies. 61 pages. Softcover. 2001.

EMAS Toolkit for Small Organizations

In 2000 the European Commission released a revised EMAS regulation which expanded its scope to include not only industrial companies but also service sector enterprises, public

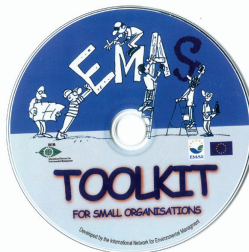


Fig. 8.16 *Toolkit*

authorities and non-business organizations. INEM updated its successful *EMAS Tool Kit for SMEs* to incorporate these changes and renamed it *The EMAS Tool Kit for Small Organizations* to reflect the change. The new *Tool Kit* was published on the European Commission's official EMAS website and made available on CD-ROM. It was also distributed via EMAS workshops in Budapest, Riga, Warsaw and Prague in June–November 2004.

8.2 The INEM Bulletin

Since 1991 INEM has published the *INEM Bulletin*, generally three to four issues per year, in cooperation with the Wuppertal Institute for Climate, Environment, Energy. In addition to the state-of-the-art of environmental management around the world, the *INEM Bulletin* reported on the activities of INEM member associations, and the activities and research of the Wuppertal Institute.

"Implementing the concept of sustainable development implies making wide-ranging structural changes in the make-up of our economies. To foster research and develop practical policies as how such changes can be brought about in an industrial economy is the main goal of the Wuppertal Institute for Climate, Environment, Energy.

The Wuppertal Institute will cooperate closely with INEM to monitor the needs and constraints of the companies which have already committed themselves to effective environmental management, as well as help to inform INEM members, through this *Bulletin*, about future or potential policy developments meant to favour

eco-restructuring, and therefore likely to affect their businesses.” –
*Prof Dr Ernst Ulrich von Weizsäcker, President, Wuppertal Institute
for Climate, Environment, Energy*



Fig. 8.17 Prof Dr Ernst Ulrich von Weizsäcker

The *INEM Bulletin* was distributed to all member and partner organizations and their member companies, interested individuals, international non-governmental organizations, ministries of the environment and economy, the European Commission, and United Nations bodies, as well as a large number of enterprises. The *INEM Bulletin* had an average circulation of 4,000 copies.

Vol. 1, No. 1. March/April 1991

8 pages. Circulation: 3000

INEM Bulletin No. 1
The International Network for Environmental Management's news bulletin

First Issue: March/April 1991

Table of contents:	Page
I. Why the International Network for Environmental Management?	1
II. The first international business network for environmental management	2
III. Descriptions of selected national organisations for environmental management (in chronological order of foundation)	3
1. Germany	3
2. Switzerland	4
3. Austria	4
4. United States of America	5
5. Sweden	5
6. South Africa	6
7. United Kingdom	6
IV. Charter of the International Network for Environmental Management	7
1. The founding meeting of 19 February 1991	7
2. Excerpts from charter	7
3. Planned activities for 1991-1993	8

At a glance:
Selected existing national business organisations for environmental management (priorities in this bulletin are marked by empty cells in the INEM)

Country	Year	Members	Activities
Germany	1985	100	20 activities
Switzerland	1985	100	20 activities
Austria	1985	100	20 activities
USA	1985	100	20 activities
Sweden	1985	100	20 activities
South Africa	1985	100	20 activities
United Kingdom	1985	100	20 activities

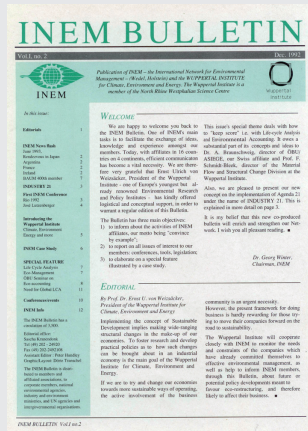
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Fig. 8.18 *Bulletin 1*

- Why the International Network for Environmental Management?
- The first international business network for environmental management
- Descriptions of national organizations for environmental management in chronological order of foundation (Germany, Switzerland, Austria, United States, Sweden, South Africa, United Kingdom).
- **Special feature:** Creation of the International Network for Environmental Management: The launch meeting in Hamburg on 19 February 1991, excerpts from its Charter, and proposed activities for 1991-1993.

Vol. 1, No. 2. December 1992

12 pages. Circulation: 3,500

Fig. 8.19 *Bulletin 1 No. 2*

- INEM launches Industry 21 program
- *1st International Industry Conference for Sustainable Development*, Rio de Janeiro, 2–5 June 1992
- Activities of INEM associations in Argentina, Brazil, France, Germany, Ireland and Japan
- Introducing the Wuppertal Institute for Climate, Environment, Energy
- **Special feature: How to “keep score” – Life-cycle assessment and environmental accounting.**

Vol. 2, No. 1. March/April 1993

16 pages. Circulation: 3,000



Fig. 8.20 *Bulletin 2 No. 1*

- Guest Editorial by Alain Manou-Mani on the founding of Orée at the European Parliament in Strasbourg, France on 28 January 1992
- Activities of INEM associations in Argentina, Brazil, Canada, France, the Netherlands, the Philippines, Slovenia and Southern Africa
- Creating demand for recycled products
- Special feature: Improving business success by applying Total Quality Management rules to environmental performance

Vol. 2, No. 4. Winter 1993/1994

24 pages. Circulation: 4000

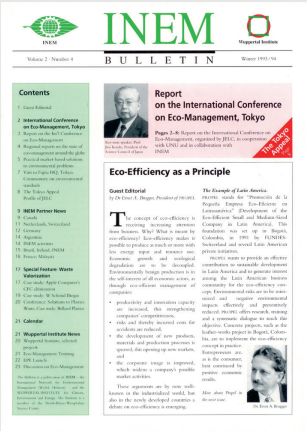


Fig. 8.23 *Bulletin 2 No. 4*

- **International Conference on Eco-management, Tokyo, including the Tokyo Appeal**
- **Guest editorial by Dr Ernst A. Brugger, President of PROPEL, on eco-efficiency in Latin America**
- **Activities of INEM associations in Argentina, Brazil, Canada, Colombia, France, Germany, Ireland, Japan, Malaysia, the Netherlands and Switzerland**
- **Special feature: Waste valorization at Apple Computer, W. Schmid Biogas, Belland Plastics**

Vol. 3, No. 1/2. Spring 1994

32 pages. Circulation: 4000

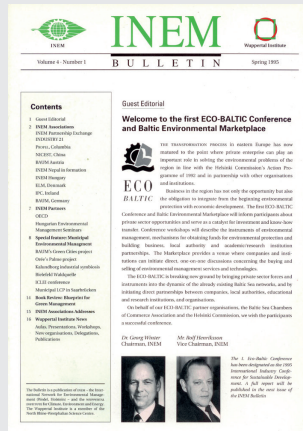


Fig. 8.24 *Bulletin 3 No. 1/2*

- **1st Eco-Baltic Conference and 1st Baltic Environmental Marketplace, 8–10 March 1995 in Lübeck, Germany**
- **SAICEM II, 18–21 October 1994, Victoria Falls, Zimbabwe**
- **European Municipalities sign Sustainable Cities Charter at the first *European Conference on Sustainable Cities and Towns* on 24–27 May 1994 in Aalborg**
- **Activities of INEM associations in Austria, China, Denmark, France, Germany, Ireland, Malaysia, the Netherlands, the Philippines, South Africa and Zimbabwe**
- **Special Feature: Greening the textile industry**

Vol. 4, No. 1. Spring 1995

20 pages. Circulation: 5000

Fig. 8.25 *Bulletin* 4 No. 1

- IPEX 2 held 7–10 November 1994 at the Federal Ministry for the Environment, Bonn, Germany
- CEE Task Force formed to provide input from CEE industry to the Conference of Environment Ministers to be held in Sofia, Bulgaria in October 1995
- Sofia Preparatory Regional Industry Network Taskforce (SPRINT '95)
- INEM Main Secretariat organists EM seminar series for Hungarian Business and Industry
- Activities of IEM associations in Austria, Colombia, China, Denmark, Germany, Hungary, Ireland and the INEM Nepal organizing committee
- **Special Feature: Municipal Environmental Management**

Vol. 4, No. 2. Summer 1995

16 pages. Circulation: 5000



Fig. 8.26 Bulletin 4 No. 2

- 1st ECO-BALTIC Conference report
- Lübeck Commitments
- SIGA launches GEMS in Brazil
- Activities of INEM associations in Austria, Brazil, Germany, Hungary, the Netherlands, the Philippines, Sweden, Switzerland
- Wuppertal Institute publishes *Handbook for Eco-design*, commissioned by Austrian
- Special Feature: Framework Convention on Climate Change Conference in Berlin

Vol. 4, No. 3/4. Winter 1995

32 pages. Circulation: 4000



Fig. 8.27 *Bulletin 4 No. 3/4*

- Focus on CEE: INEM contribution to the *Sofia Ministerial Conference*; SPRINT '95 meeting held on 14–15 September 1995 in Ljubljana, Slovenia; Business and Environment Initiative
- INEM co-organizes “Day of the Workplace” at 4th session of the *United Nations Commission on Sustainable Development* on 30 April 1995 in New York
- Activities of INEM members in France, Germany, Ireland, the Philippines and Zimbabwe
- Special Feature: ISO 14000, EMAS and eco-auditing

8.3 Special Editions of the *INEM Bulletin*

For especially significant conferences, such as the 2nd Southern Africa Industry Conference on Environmental Management and the Sofia Conference of European Environment Ministers, INEM published special editions tailored to the interests and needs of the participants.

Special SAICEM II Edition, October 1994



Fig. 8.29 *Bulletin* SAICEM Edition

- INEM salutes the 2nd Southern African International Conference on Environmental Management
- 18–21 October 1994, Victoria Falls, Zimbabwe
- A short history of INEM in Africa
- Environmental Management in Southern Africa

Special Sofia Edition, October 1995



Fig. 8.30 *Bulletin* SOFIA Edition

- INEM Contribution to the Sofia Initiatives
- The Business and Environment Twinning Initiative
- SPRINT enables CEE Industry input to Sofia Conference
- Recommendations of CEE industry to Sofia Conference
- CEE Industry Commitments
- INEM Commitments

Special Habitat II Edition, May 1996

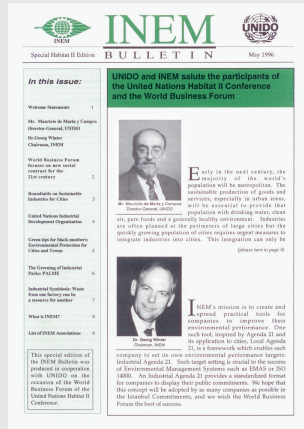


Fig. 8.31 *Bulletin HABITAT II Edition*

This special edition was produced in cooperation with UNIDO on the occasion of the World Business Forum at the *United Nations Conference on Human Settlements: The Cities Conference (Habitat 2)* in Istanbul.

- World Business Forum focuses on new social contract for the 21st century
- Roundtable on Sustainable Industries for Cities
- Green Tips for Black Numbers: Environmental Protection for Cities and Towns
- The Greening of Industrial Parks: PALME
- Industrial Symbiosis: Waste from one factory can be a resource for another

8.4 Other Publications

Environmental Business Management for Cities and Towns, Spring 1997

One of INEM's goals is to transfer experience gained by companies in implementing environmental management to other sectors, as in this case, to municipalities. By adopting the techniques and methods of environmental management successfully applied by business and industry, cities and towns can also achieve savings in energy and water costs, reduce waste, and provide their constituents with a healthier environment.

This special issue of the *INEM Bulletin* presents methodologies two INEM environmental management associations developed in partnership with municipal administrations and companies. It describes a number of measures local authorities have used to improve their environmental performance, successful business and local authority initiatives, and presents a self-evaluation checklist to help cities and towns evaluate their environmental performance.



Fig. 8.32 *Bulletin Cities and Towns Edition*

- Green Tips for Black Numbers: Environmental Protection for Cities and Towns
- The Greening of Industrial Parks: The PALME program
- How “Green” is your Municipality? Take the Environmental Quick Check to find out.

INEM Info Service

When access to the Internet and email became widespread, INEM ceased publication of the *INEM Bulletin*, replacing it with the INEM website and the monthly, email-based *INEM Info Service* in August 1997. This allowed a much more cost-effective and timely dissemination of environmental management news among the INEM network, partners and interested persons. It featured regular updates on the ISO 14000 series of environmental management standards and EMAS, reports on activities of the INEM Main Secretariat and INEM member associations, and links to state-of-the art information and environmental management tools on the Internet.

8.5 The INEM Website

The INEM website was launched in 1997. Its goals were to promote environmental management in general, and the achievements of the INEM network in particular. The focus was on the practical implementation of environmental management, with know-how, case studies, INEM publications in downloadable PDF files, and both interactive web-based and downloadable tools. It was judged to be one of the five best websites for SMEs.

The website also presented information on activities of the individual member and affiliated associations, as well



Fig. 8.33 INEM Website

as initiatives of the INEM Main Secretariat. Each INEM member had its own “home page” to promote its goals and achievements. The main sections of the site were:

What is INEM? provides general information on the network as a whole, including how to join and services provided

Members and Affiliates offers descriptions and contact details of the individual INEM members

Case studies showed how real companies improved their environmental performance

Industry 21 describes the initiatives and programs of the INEM Main Secretariat

Environmental Management Standards provided information on ISO 14000 and EMAS, and highlighted the work of INEM in those areas

Environmental management tools includes the *EMAS Tool Kit for Small Organizations*, *Ecomapping*, and several interactive tools tailored to the needs of SMEs

Environmental management resources provides links to state-of-the-art information available at other sites on the Internet

The password-restricted **INEM Members Corner** offered more than 100 downloadable environmental management reports and tools, such as

Environmental management tools

- EMS Gaps Assessment Protocol
- Profiting From Reducing Water Use: Running a workshop to stimulate action
- Life Cycle Assessment (LCA): A guide to approaches, experiences and information sources

Industry-specific guidelines

- The Better Restaurant and Café Guide
- Cruise Ship White Paper
- Green Finance: Environmental management in banks, savings banks and insurance companies

Environmental management of public institutions

- Best Management Practices for Hospitals and Medical Facilities
- College and University Environmental Management System Implementation Guide
- Environmental Benchmarking for Local Authorities: From concept to practice

Corporate social responsibility

- The Business Case for Corporate Citizenship
- Stalking the Elusive Business Case for Corporate Sustainability

- Selling Sustainable Success: A guide to corporate responsibility for consulting and professional services firms

**Transferring environmental management to
developing countries**

- Guidelines for Transferring Effective Practices: A practical manual for South-South cooperation
- Programme for Pollution Control Evaluation and Rating: A model for promoting environmental compliance and strengthening transparency and community participation in developing countries

Chapter 9

COOPERATION WITH NATIONAL AND INTERNATIONAL ORGANISATIONS

In its efforts to disseminate the principles, concepts and tools of environmental management worldwide, INEM entered into partnership with numerous intergovernmental organisations, United Nations bodies, and international NGOs. The most important of these cooperations are described below.

Asian and Pacific Centre for Transfer of Technology (APCTT)

As part of its policy of decentralization and local capacity-building, INEM began working with the United Nations organisation APCTT in New Delhi to set up the first INEM Regional Secretariat in 1994. The Regional Secretariat was to coordinate activities and founding national business associations for environmental management in the Central Asian region (Indian sub-continent plus Central Asian states of the former Soviet Union).²⁹¹

AIESEC

Present in over 1,000 universities in 107 countries and territories with over 50,000 members, AIESEC is the world's largest student-run organisation. Focused on providing a platform for

youth leadership development, AIESEC offers young people the opportunity to be global citizens, to change the world, and to get experience and the skills to do so.

In May 1999 AIESEC and INEM Hungary launched the Planet project to introduce students in Business and Management Studies to the aims of sustainable development. The aim of Planet is to enable more and more people all around the world to live as responsible world citizens contributing to the sustainable development of our Earth. The means of realisation is a club of young economists with worldwide connections and a global perspective. The members are committed to the sustainable development. They are able and willing to act effectively for the solution of threatening world problems as future leaders of their societies. The Hungarian Association for Environmentally Aware Management (KÖVET-INEM Hungária) provided offices to support dissemination of the idea.²⁹²

Aarhus Business and Environment Initiative (ABEI)

ABEI was established jointly by the private sector and European environment ministers at the 1998 Environment for Europe Ministerial Conference in Aarhus, Denmark, as a response to the BINCA Report. The BINCA Report, compiled by Dr Roman Vhynánek, Director of INEM's member Czech Environmental Management Centre (CEMC), gives an overview of the state of environmental management in 15 countries of Central & Eastern Europe.

ABEI was an organisation of business leaders, business organisations, donor governments and other stakeholder groups. ABEI served as a forum to provide guidance on business-related issues in CEE and NIS, and to promote the implementation of the commitments from the Policy Statement

on Environmental Management in Enterprises accepted at the Aarhus Conference. The group was supported by the OECD, Regional Environmental Centre for CEE, European Commission's Directorate General Enterprise and Directorate General Environment, ERT, INEM, the World Business Council for Sustainable Development and local partner organisations. REC and OECD provided secretariat support for ABEI.²⁹³

INEM Executive Director Dr Zadok S. Lempert, participated in the second ABEI meeting in December 1998 in Paris. He was named to the ABEI Steering Committee. Dr Gergely Tóth, Executive Director of KÖVET-INEM also participated, as KÖVET is one of two national partner organisations.²⁹⁴

INEM, represented by Executive Director Dr Zadok S. Lempert and Information Manager Peter Hundley, also participated in the first ABEI spearheading meeting in Prague on 5 May 2000. Czech business and industry was represented by the Czech Business Council for Sustainable Development (CBCSD), INEM's Czech member CEMC, and a number of individual companies. EU Environment Minister Margot Wallström presented the keynote speech. Participants agreed to hold a follow-up conference on eco-efficiency in October 2000, to be co-organised by CEMC and CBCSD.²⁹⁵ The next spearheading meeting was held on 19 June 2000 in Budapest to secure assurances from the Hungarian Industry and Ministries of Economy and Environment of their full support for ABEI, including the necessary structures to manage the on-going campaign and organisation of a National Roundtable on Eco-Efficiency in November 2000 in Budapest. Participating in the meeting were Ms Wallström, representatives of the Hungarian government, ABEI Co-chairs Tom Garvey and Patrick Nodé-Langlois, Dr Winter, and top industrialists. The meeting was

organised in co-operation with INEM's Hungarian member KÖVET. The meeting began with short speeches by the Hungarian Parliamentary Secretary of State of the Ministry of Economic Affairs, Béla Glattfelder and Ms Wallström. Dr Winter, assisted by KÖVET-INEM-Hungary Executive Director Gergely Tóth, made a presentation on the practical experiences with eco-efficiency, cleaner production and environmental management in Hungary. Subsequent spearheading meetings were then held in Poland and the rest of CEE countries to serve as a catalyst for improving the environmental performance of CEE business and industry. Input was also gathered for presentation to the next conference of European Environment Ministers in Kiev in 2001.²⁹⁶

In 2003 ABEI and REC co-published the Eco-efficiency Toolkit for Central & Eastern European Small and Medium-sized Enterprises on CD-ROM. The Eco-efficiency Toolkit included the Ecomapping tool developed by Heinz-Werner Engel in the framework of INEM's EMAS Toolkit for SMEs project, and the Simple Life-cycle Assessment for SMEs tool created by KÖVET. KÖVET also provided case studies for the Eco-efficiency Toolkit.²⁹⁷

Baltic 21 Industry Sector

Baltic 21 Industry is working towards the vision of a competitive industry in the Baltic Sea Region where eco-efficiency and good working conditions are natural parts and where the continuity of economic, social, technological and environmental improvements is maintained. An integral part of this work is to support collaborative projects that involve enterprises from different countries in the region.

INEM participated in the official launch meeting of the Baltic 21 Industry Sector in Stockholm in March 2000.

Members of the Industry Sector are Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden. Sweden and Russia served as the initial co-lead parties. The European Union, Helsinki Commission, International Baltic Sea Fishery Commission, Nordic Council of Ministers, UN Economic Commission for Europe, Vision and Strategies around the Baltic Sea, European Investment Bank, European Investment Bank, Nordic Environmental Financing Corporation, Nordic Investment Bank, World Bank and several NGOs are also participated in the process. One of the major outcomes of the Industry Sector meeting was the establishment of a Task Force and a Baltic 21 Seal of Approval for projects. The Task Force, comprised of the co-lead parties and representatives of Baltic 21 countries, has responsibility for steering the Sector activities and awarding the Baltic 21 Seal of Approval, which signals that a proposed project meets the requirements of, and has gained the approval of the Task Force. This endorsement facilitated and accelerated evaluation of applications for project funding.²⁹⁸

Baltic Marine Environment Protection Commission (HELCOM)

INEM has held observer status at intergovernmental Baltic Marine Environment Protection Commission – also known as the Helsinki Commission (HELCOM) since October 1997. INEM represents the private sector in the Programme Implementation Task Force (PITF) and acted as co-lead party within the Baltic Sea Joint Comprehensive Action Program (JCP), contributing to the work of the JCP programme element, Institutional Strengthening and Human Resources Development, together with the German Federal Ministry of the Environment and the Union of the Baltic Cities (UBC).²⁹⁹

HELCOM was a Major Partner in INEM's 1st ECO-BALTIC Conference held in March 1995 in Lübeck, Germany. Executive Secretary Ulf Ehlin held a keynote address on "The HELCOM Action Programme: A tool to restore the Baltic Sea". HELCOM also participated in the 2nd ECO-BALTIC Conference held in October 1997 in Gdansk, Poland, again serving as a Major Partner. Executive Secretary Dr Tapani Kohonen addressed the Opening Plenary.³⁰⁰

"The critical environmental situation in the Baltic Sea and in major parts of its drainage area calls for extreme actions to reduce the pollution load, especially in the former socialist countries on the eastern and southern side of the Baltic Sea. INEM and HELCOM wish to highlight these needs, and inform about opportunities of, especially, the private sector."³⁰¹



Fig. 9.1 Ulf Ehlin, Executive Secretary, Helsinki Commission
on the occasion of INEM's 1st ECO-BALTIC Conference
in March 1995, Lübeck, Germany

During the 5th INEM Partnership Exchange in 1998 INEM held a roundtable to discuss the further work and responsibilities for INEM as observer as well as co-lead party within

HELCOM. The meeting was attended by representatives of HELCOM, the German Ministry of the Environment, INEM and its Swedish member organisation Swedish Association of Environmental Managers (NMC).³⁰²

In co-operation with the International Institute for Industrial Environmental Economics (IIIEE) at Lund University, Sweden, INEM compiled a report the education and research needs in the Baltic states. The report, which was financed by INEM's Swedish member NMC, was delivered to HELCOM in Spring 1999.³⁰³

Baltic Sea Chambers of Commerce Association (BCCA)

BCCA was founded on 4 June 1992 as the result of the need recognised by Chambers of Commerce and Industry representing member states of the European Community, the European Foreign Trade Association (EFTA) and the former COMECON countries to establish an organisation with a common ground for industries and businesses operating in the Baltic Sea area. BCCA provides assistance, guidance and support. BCCA served as Major Partner for INEM's two Eco-Baltic Conferences in Lübeck, Germany (1995) and Gdansk, Poland (1997).³⁰⁴

Bellagio Forum for Sustainable Development (BFSD)

The Forum was founded by a group of international donors called together by the Fondazione San Paolo di Torino and the Rockefeller Foundation to a meeting in April 1993 in Bellagio, a small village on the shores of Lake Como, Northern Italy. BFSD is a partnership comprising 16 foundations from 11 countries, which are committed to implementing the goals of sustainable development. The forum is not profit-oriented with offices at the German Federal Environmental Foundation in

Osnabrück. BFSF focuses on promoting partnerships through exchange of expertise and information in the fields of environmental education, communications, technology, policy and research.³⁰⁵

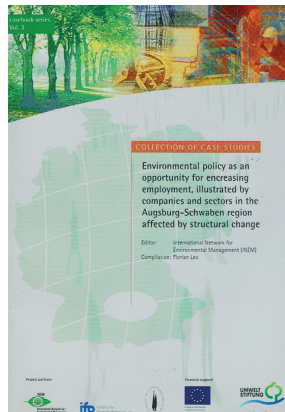


Fig. 9.2 Casebook resulting from the Environmental Policy as an Opportunity for Increasing Employment project

INEM co-operated with BFSF and the ifo Institute for Economic Research in carrying out the German portion of a European Social Fund (ADAPT) study to determine the effect of environmental protection activities on employment in economically depressed regions in five European Union states. The results were published in 2000 by INEM in “Collection of Case Studies: Environmental Policy as an Opportunity for Increasing Employment, illustrated by Companies and Sectors in the Augsburg-Schwaben Region affected by Structural Change” in German and English.³⁰⁶

Carl Duisberg Society (CDG)

CDG, the Foundation for International Training and Development is a non-profit organisation founded in 1949 dedicated

to international management training and personnel development. In cooperation with German and international partner organisations, it organizes training programmes, exchange opportunities, internships, fact-finding and work-study programmes, and language courses for specialist and management staff from all over the world. More than 250,000 persons have taken part in CDG programmes. CDG maintains that sustainable development can only be achieved through the interaction of many different parties.

INEM's cooperation with CDG began in 1993 when it supported INEM's Global Environmental Management Survey project in Argentina with funding for travel. Since then, CDG has invited INEM to various meetings as speakers, for example to its the International Business Forum on Agenda 21 in June 1997 at the United Nations in New York carried out on behalf of the German Federal Ministry of Economic Cooperation and Development (BMZ). CDG worked closely with INEM and other organisations to prepare the event: the Federation of German Industries (BDI), the International Chamber of Commerce (ICC) and the United Nations. The INEM Chairman and Executive Director and members of INEM associations from developing countries spoke at the event.

CDG supported participation of representatives from Africa and Central America in INEM's fourth INEM Partnership Exchange held in May 1997 in Hamburg, Germany. In 1998 CDG invited INEM to nominate candidates from its developing country member organisations to participate in its three to 12-month long environmental management training programmes. The CDG covered all costs of the training, including travel and accommodation. The first INEM candidate, Martin Obichwa from Tanzania, started his six-month training course in October 1998.

INEM held two one-day training sessions for groups from the CDG in November and December 1998. The first group of about 25 participants, came mainly from South-East-Asia and the Near East and the second, about 15 participants, came from several developing countries. Content of the training included an overview of work of the German Environmental Management Association and INEM, implementation of environmental management in companies, case studies with a focus on costs and benefits and the use of environmental mediation to resolve conflicts among local citizens, local authorities and businesses. The following year CDG supported INEM's conference, A Global Perspective on Environmental Management Best Practice held on 12 May 1999 in Shefayim, Israel under the patronage of the Israeli Ministry of the Environment.

In October 2002 CDG and the German Foundation for International Development merged to form InWEnt – Capacity Building International, Germany. InWEnt is a non-profit organisation sponsored by the German government, the federal states and the private sector. InWEnt's objective is the promotion of personnel development, advanced professional training, and dialogue. Its practice-oriented programmes are aimed at international professionals, executives and decision-makers from government, civil society and the private sector.

Between 2000 and 2004, INEM supported InWEnt Instruments of Environmental Management Training Programme for Africa, Asia and Latin American countries. INEM Information Manager Peter Hundley lectured on the ISO 14000 series of international environmental management standards and presented tools for implementing them. **A key element of the training was a hands-on exercise that had participants conduct eco-audits, develop environmental**

objects and define an environmental programme for improving the performance of small industries, specifically an automobile repair company and a printing plant. The INEM Main Secretariat also hosted internships for a number of the participants. For example:

- José Pablo Gomez Araya from Santiago, Chile studied the structure and activities of INEM and its member associations with the goal of establishing the Regional Environmental and Industrial Associated Organisations (REITAO). The goals of REITAO were to disseminate the concepts of and cooperate in the implementation of environmental management in Chilean and Southern Cone businesses and industries. (begin 30 October 2000)
- Eddie K. Luyima from Uganda developed a project to transfer a successful organic fish-farming methodology from India to Uganda with funding INEM facilitated from the United States Agency for International Development. Upon his return to Uganda, Mr Luyima implemented the project in Kampala and the Mukono and Mpigi Districts with the Uganda Environmental Protection Forum. Under the project organic household waste is gathered from the streets and used as fodder in several organic fish farms. The project serves a dual purpose: it removes organic waste from the streets, and it provides healthy fish to the local population. Much of the fish sold in Ugandan markets has been poisoned by pollution in Lake Victoria. The pilot project also created several jobs involving waste collection and fish farming. (begin 5 February 2001)
- Yassar El Syed Hassan Mohamed Khatar from Egypt developed the project “Integrated Solid Waste Management in Egypt and Neighbouring Countries” to introduce a national system for collecting and recycling plastic waste, including

- the construction of a state-of-the-art plastics recycling plant project. (3–31 March and 1 May – 31 August 2003)
- Hassan Omar El Gazzar from Egypt focused on implementation of cleaner production methodologies in specific industries. He reviewed case studies of “best practice” in European enterprises, collecting best practice case studies and ideas for implementation in Egyptian companies. His findings and recommendations were published in the report “Implementing Environmental Management and Cleaner Production in various Enterprises”. (1 October – 31 November 2004).



Fig. 9.3 (from left) Peter Hundley (INEM Information Manager) with CDG interns José Pablo Gomez Araya (Chile), Paul Banoba (Uganda)

Economic and Social Council of the United Nations (ECOSOC)

ECOSOC was established under the United Nations Charter as the principal organ to coordinate economic, social and related work of the 14 UN specialized agencies, functional commissions

and five regional commissions. The Council also receives reports from 11 UN funds and programmes. ECOSOC serves as the central forum for discussing international economic and social issues, and for formulating policy recommendations addressed to Member States and the United Nations system. In November 1992 INEM applied for and was granted Consultative Status with ECOSOC.³⁰⁷

European Bank for Reconstruction and Development (EBRD)

INEM was a member of the EBRD Advisory Committee for the Environmental Training of Central & Eastern European Banks and helped develop a training package for the International Banking Training Centre (Budapest) on how to best integrate environmental considerations into lending criteria and other banking operations. The project began in February 1994.³⁰⁸

INEM Chairman Dr Winter was invited to serve on the EBRD's Environmental Advisory Council (ENVAC) whose role was to advise the EBRD president Jacques de Larosière on industry and environment issues. Dr Winter attended the first meeting in London in September 1995³⁰⁹ and a second in October 1996 in Zagreb, Croatia.³¹⁰ The EBRD also participated in the 3rd INEM Partnership Exchange in February 1996 in Bonn.³¹¹

European Business Council for Sustainable Energy (e5)

European Business Council for Sustainable Energy was launched in Brussels in February 1996 to international acclaim. The Council represents companies with business interests in clean and renewable energy, in efficient co-generation of electricity and heating and in efficient use of energy in buildings, equipment, transport and communication, including the



Fig. 9.4 Public launch of e5. Executive Director Paul E. Metz (second from left) and Dr Georg Winter (centre)

related design, project planning, maintenance, investment and insurance services. Members are international, small and medium-sized manufacturing and service companies, business associations and research institutions. Starting in 1995 INEM Executive Director Troy Davis at the invitation of the NGO Greenwatch began advising the founding committee on structure and goals.³¹² INEM also served as one of the founding organisations. In its April 1997 issue of the e5 Newsletter, the Council announced its cooperation and support for INEM's Industrial Agenda 21 Campaign.³¹³

Förderverein Umweltmediation

In 1999 INEM was invited by its Executive Director Gerd Fuchs to serve on the steering committee of the Förderverein Umweltmediation. It is a non-profit organisation set up to promote the use of environmental mediation in Germany. Environmental mediation is a technique of conflict resolution in which disputing parties attempt to solve their conflict with the assistance of a third-party, independent mediator, who supports the process but has no authority to pronounce

judgement. Environmental mediation is meant to replace to the usual costly and lengthy process of lawsuits in such cases as conflicts over highway construction, which can last more than 10 years and run up hundreds of thousands of euros in legal costs. The goal of Förderverein Umweltmediation is to inform the public about environmental mediation and its advantages and risks. All-important groups of society are represented in the organisation: local and national government, the media, trade unions, employer's federations, environmental groups, attorneys, mediators, and others.

European Partners for the Environment (EPE)

EPE is a network of companies, environmental organisations, public authorities, labour, farmer and consumer organisations and academic institutions with the aim of fostering dialogue and understanding one another's problems in attaining sustainability and creating partnerships to solve these problems. Claude Fussler, Vice-President of Environment, Health and Safety, Dow Europe, one of the founders explained, "Many of us who deal with environmental issues as part of our jobs have concluded that we could make better progress if we had an established channel of dialogue with non-governmental organisations and public authorities. EPE is a fascinating opportunity that may significantly affect how the European business community approaches the challenge of sustainable development."³¹⁴ The EPE launch meeting was held on 1 February 1994 in Brussels. Orée (INEM-France), the Wuppertal Institute for Climate, Environment, Energy, and Dow Europe, a member of ÖBU, INEM's Swiss member, were among the founding members.

Between 1997 and 1998 EPE co-ordinated a multi-stakeholder consultation on continuous improvement. INEM

served on the task force set up by EPE to prepare and coordinate the project. The consultations brought together representatives of non-governmental organisations, industry, trade unions, academia and governments. The final product, *Guidelines on the Principles of Continuous Improvement in EMAS*, was disseminated widely to European business leaders and INEM's worldwide network.

European Roundtable on Cleaner Production (ERCP)

ERCP is a non-profit organisation which provides a European platform for stimulation, development and dissemination of new initiatives to foster sustainable development with the prime focus on Cleaner Production of products, processes and provision of services. It has since changed its name to European Roundtable on Cleaner Production and Sustainable Consumption to reflect its expanded scope.

INEM's Swedish member association NMC supported the 7th European Roundtable on Cleaner Production (ERCP 2001) held on 2–4 May 2001 in Lund, Sweden. The theme was "Sustainable Production and Consumption Systems – Cooperation for Change". INEM participated in the 8th European Roundtable on Cleaner Production (ERCP) in Lisbon in October 1998 in order to further strengthen its link to cleaner production initiatives. The focus was on sustainable product development and sustainable consumption, environmental management systems and performance indicators, and the role of financial organisations and environmental measures in the service sector. INEM also participated in the pre-conference meeting on "Building Learning Communities to Promote Cleaner Production". The following year INEM held a workshop on "Integration of Cleaner Production and Environmental Management Systems" at ERCP 9 where it

presented the results of its POEMS project as an example for a combined approach of implementing cleaner production and environmental management measures simultaneously.

Global Environment Facility (GEF)

The GEF, set up in 1990 as a pilot cooperative venture among governments, the World Bank, United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP), was designated by the United Nations Conference on Environmental and Development (UNCED) as the interim funding mechanism for the conventions agreed in Rio de Janeiro (Climate Change and Biodiversity). The GEF provides grants and technical assistance to eligible developing countries for projects addressing global warming, ozone layer depletion, loss of biodiversity and pollution of international waters. GEF funds are designed to cover the incremental costs of projects that would otherwise not be economically viable.

INEM is a cooperation partner of GEF and as such presented a project on "Harnessing small and medium-sized enterprises to increase market penetration of environmentally superior technologies", to the GEF-funded International Finance Corporation. The project consisted of a series of working groups on how to best draw SMEs into the process. Target countries were Zimbabwe (1994), South Africa (1994), Ghana (1995), the Philippines (1994), Malaysia (1994), Thailand (1995), Chile (1994), Brazil (1994), Argentina (1995), the Czech Republic (1994), Hungary (1994), Poland (1995), Morocco (1995) and Egypt (1995). All countries except Ghana, Thailand, Poland, Morocco and Egypt had INEM associations at the time of the project implementation. In September 1995 Mr Davis participated in the Informal Consultation on increasing involvement of the private sector in the GEF at the

offices of the UNEP Industry & Environment Programme in Paris.³¹⁵

International Chamber of Commerce (ICC)

INEM has cooperated with the International Chamber of Commerce (ICC) on many projects and activities over the years. In fact, INEM founder Dr Georg Winter and the German Environmental Management Association (BAUM), were working with the ICC even before INEM was established.

"I attach a great deal of importance to your participation at Bergen (Bergen Conference 1990 'Action for a Common Future'), because I share your view about medium-sized companies. The ICC must have a strategy for reaching them. On this I hope you will work closely with Nigel Blackburn and Jan-Olaf Willums." — Letter from J. Hugh Faulkner, Secretary-General, International Chamber of Commerce, to Dr Georg Winter, 15 December 1989

The ICC invited Dr Winter and BAUM to help formulate a code of conduct for environmentally conscious businesses in 1989. Over the next year an Expert Group comprising 18 high-ranking personalities from industry and academia developed a 10-point code that served as the basis to the ICC Business Charter for Sustainable Development: Principles for Environmental Management. Since its release in 1991, the Business Charter has been signed by thousands of companies worldwide.

INEM was officially launched at an ICC-organised conference, the 2nd World Conference on Environmental Management (WICEM II) held on 10-12 April 1991 in Rotterdam, Holland. The ICC organised the conference in cooperation with the

United Nations Environment Programme (UNEP) and the United Nations Conference on Environment and Development (UNCED) with support of the United Nations Economic Commission for Europe, the Commission of the European Communities, and the European Environment Bureau. Dr Winter held a speech on “Challenges of Sectorial and Regional Initiatives, INEM – for environmental action”. In order to give the WICEM II delegates a chance to discuss certain important environmental management issues in more depth than could be covered at the conference, the ICC asked some specialized organisations to arrange four Special Seminars in connection with the conference. BAUM was responsible for Seminar II: Environmental Management for Small and Medium-sized Business held on 9 April. Dr Winter addressed the delegates. INEM was publicly launched on the last day of the conference.

On the occasion of the United Nations Conference on Environment and Development in June 1991 in Rio de Janeiro, the ICC invited Dr Winter to speak at a workshop for Brazilian and international business and industry and on “How to Implement the ICC Business Charter for Sustainable Development in Real Life” at the ICC Industry Forum on Environment and Development on 27–28 May 1992 and the Business Charter Workshop on 29 May 1992.

In 1992 the landmark book *From Ideas to Action: Business and Sustainable Development, The ICC Report on The Greening of Enterprise* 92 praised Dr Winter as a “prime example of a tireless industrialist raising both his colleagues’ and the public’s awareness of the need to treat the environment as an asset rather than as a free good”. BAUM was exalted “as a multi-sector non-profit and non-party organisation that has played a decisive role in establishing the movement towards environmental management”. The ICC Report also acknowledged the

role of Dr Winter and BAUM in the drafting of the Business Charter.

In May 1992 Dr Winter returned to Rio de Janeiro to hold a lecture on “Implementing the Charter in Local Companies and Small and Medium-Sized Enterprises” at the ICC’s Business Charter Workshop. The Workshop was organized for Brazilian and international business and industry leaders. INEM and ICC jointly developed and presented recommendations on how governments of CEE countries could better support industry efforts to improve its environmental performance to the Sofia Conference of Environment Ministers on 23–25 October 1995.

In April 1995 the ICC and INEM agreed that INEM would represent the world business community at the United Nations Commission for Sustainable Development. For the 4th Session of the United Nations Commission for Sustainable Development on 30 April 1996 in New York, INEM and ICC co-organized a Business Panel during the “Day of the Workplace”. The ICC and INEM continued their cooperation in the next year, when together with the Federation of German Industries (BDI) and the United Nations, they helped the CDG stage its International Business Forum on Agenda 21 on 16–18 June 1997 also in New York. The IBF was a platform for publicising the contribution of the private sector in implementing Agenda 21, for establishing partnerships between employers and business associations from the South, the East and the North, and for realizing an international exchange of experiences.

International Council for Local Environmental Initiatives (ICLEI)

ICLEI is a worldwide association of 400 local governments (thereof 180 in Europe) dedicated to sustainable development. ICLEI’s mission is to build and serve a worldwide movement of

local governments to achieve tangible improvements in global environmental and sustainable development conditions through cumulative local actions. ICLEI forms a global network of cities and coordinates regional campaigns and thematic networks.

ICLEI and INEM began cooperation in 1993 in the framework of INEM's program to transfer environmental management to the administration of towns and municipalities. ICLEI was a co-organiser of INEM's International Conference on Eco-Management in Tokyo in 1993. The next year INEM co-sponsored and served on the Steering Committee of ICLEI's European Conference on Sustainable Cities and Towns held in Aalborg, Denmark in May.³¹⁶ In November 1995 INEM Executive Director Troy Davis participated in ICLEI's Mediterranean Local Agenda 21 Conference in Rome, serving as a rapporteur at the session "Promoting Industry & Business Participation" and contributed to the final declaration of the conference.³¹⁷

In 2002 INEM co-sponsored and spoke at the conference Regional Cycles: Regional Economy towards Sustainability in Leipzig, Germany. The next year the organisations jointly organised the conference EcoProcura Gothenburg: Mainstreaming Eco-Procurement throughout Europe in Sweden. From 2006–2009 INEM and ICLEI were principal partners in the project "Biofuel Cities European Partnership".³¹⁸

ifo Institute for Economic Research

One of the leading economic research institutes in Europe, the ifo Institute for Economic Research has stood for information and research since its founding in 1949 as a non-profit and independent economic and social research establishment. The Institute bridges the gap between theory and practice for science, business, government and the general public. ifo

sees itself an economics think-tank for business and the public sector. It empirically examines economic issues, provides analyses and forecasts, develops scenarios and visions, informs decision-makers in business, society and government, draws attention to new developments, and prepares the basis on which economic policy decisions can be taken.³¹⁹

The ifo Institute was a partner in the project “An Environmental Policy as an Opportunity for Increasing Employment, illustrated by Companies and Sectors in the Region of Augsburg-Schwaben affected by Structural Change” carried out by INEM in 1997–1998.³²⁰

International Organisation for Standardization (ISO)

In order to determine the need for international standards for environmental management systems ISO established the ad hoc Strategic Advisory Group on the Environment (SAGE). On the recommendation of SAGE, ISO established a new Technical Committee on Environmental Management (ISO/TC 207). It met for the first time in Toronto on 1 June 1993. The Canadian Standards Association was assigned to maintain the Secretariat of ISO/TC 207 on behalf of the Standards Council of Canada, ISO’s Canadian member. ISO/TC 207 created six subcommittees and a working group to carry out its work.

INEM members associations played a key role in establishing and setting the work agenda of ISO. TREE UK supported the British Standards Institute (BSI) in bringing the British Standard BS 5750, which incorporated elements of environmental management to ISO in the early 1990s. BS 5750, which was succeeded by environmental management standard BS 7750, served as a basis for developing the international series of ISO 14000 standards for environmental management systems.

INEM Executive Director Troy Davis reported on ISO efforts to develop environmental management system standards to the first South African Industry Conference on Environmental Management (SAICEM) organised by INEM's member association Industrial Environmental Forum of Southern Africa (IEF) in October 1991. In 1992 the IEF brought Michael Gilbert of the BSI to South Africa to lead a series of workshops on the British Standard 7750 (Specification for Environmental Management Systems). This contributed to a broad awareness of and demand for the standard among South Africa enterprises. The next year IEF participated in the formulation of a South African standard for environmental management systems. This document, in turn, became part of a discussion paper for creating the International Organisation for Standardization (ISO) international environmental management system standard ISO 14001.

Liaison between INEM and ISO/TC 207 subcommittees was officially established on 26 July 1993. As a Liaison A member of ISO/TC 207 was able to participate in all ISO/TC 207 activities, including making recommendations and establishing ad hoc committees. Its only restriction was not being able to vote on the wording of the final standards: that was reserved for national standards bodies. INEM experts were active in SC 1: Environmental Management Systems, SC 2: Environmental Auditing, SC 3: Environmental Labelling, SC 4: Environmental Performance Evaluation, and SC 5: Life Cycle Assessment.

"ISO (the International Organisation for Standardization), which represents the national standards institutes of 114 countries, will publish by the last quarter of 1995 the drafts of the first international standards of the ISO 14000 series on environmental management. ...

I welcome INEM's initiative in focusing this issue of the INEM Bulletin on the work of ISO/TC 207; it will contribute to increasing even further the visibility of ISO 14000 and to letting the market know that such a powerful tool is at hand to help enterprises meet their environmental challenges."³²¹

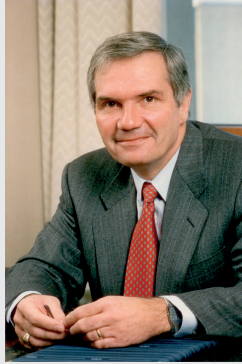


Fig. 9.5 Dr Lawrence D. Eicher,
ISO Secretary General, November 1995

ISO has endorsed and made presentations at a number of INEM's major conferences, including INEM's International Industry Conferences on Sustainable Development in Rio de Janeiro in June 1992, Tokyo in 1993, Lübeck in 1995, and Gdansk in 1997. (See Chapter 6: ISO 14000 activities in the INEM Network for a detailed account of activities.)

National Roundtable on the Environment and Economy (NRTEE)

INEM provided advice on developing a strategy for implementing environmental management in Canadian business and industry at a workshop organised by the National Roundtable on the Environment and Economy in Ottawa in 1992.³²²

Organisation for Economic Cooperation and Development (OECD)

Formal cooperation with the OECD began when representatives from INEM members from Colombia, China and the INEM Main Secretariat served on the Steering Group and participated in a workshop on Development Assistance and Technology Cooperation for Cleaner Production in Developing Countries organized by the OECD in cooperation with UNIDO on 28–30 September 1994 in Hannover, Germany.³²³ The workshop was divided into three sessions: 1) Policies and strategies of promoting cleaner production, 2) Capacity development, and 3) Effective actions.³²⁴

INEM is a member of the OECD Ad Hoc Advisory Group on Industry and Environment (AGIE) and a liaison member of the Business and Industry Advisory Committee. The first AGIE meeting was held in Paris on 12–13 December 1995. Polona Smonig, President of INEM's Slovenian member DREVO and Radomir Matyas, President of INEM's Czech member CEMC were among panellists leading a discussion on how the private sector in Central & Eastern Europe could contribute to improving the environment in the region. Dinah Köhler, INEM Hungary organising committee, Prof Philippe J. Bernard and Esther Peter-Davis of INEM's French member Orée, and INEM Executive Director Troy Davis also participated. The results of the AGIE were used as input to the OCED Task Force for the Implementation of the Environmental Action Plan for Central & Eastern Europe held on the following two days.³²⁵ The OECD Environment Directorate also provided funding and support for a regional conference on 14–15 September 1995 in Ljubljana, Slovenia to elaborate a position paper of INEM's Sofia Preparatory Regional Industry

Network Taskforce (SPRINT '95) for presentation to the Sofia Ministerial Conference: Environment for Europe.³²⁶

United Nations Commission on Sustainable Development (UNCSD)

INEM, according to an agreement with the ICC, has been the primary representative of industry on the UNCSD Steering Committee of NGOs/Major Groups since April 1995. The Steering Committee is charged with facilitating the flow of information and the input from various sectors to the UNCSD.³²⁷

On 19 May 1994, the INEM Executive Director Troy Davis made a presentation to the second session of the UNCSD calling for the step-by-step implementation of environmental management standards in small- and medium-sized enterprises:

“It is necessary in helping SMEs that the principle of gradualism be adopted in environmental standards. Companies must be able to learn and progress step-by-step to higher standards. We have recently suggested to the ISO that this principle be applied to Eco-labelling (the name of the principle for Eco-labelling is the Step Ladder Principle), as it has already been applied to Eco-auditing, also following our request.” He also described INEM’s Industrial Agenda 21 campaign, which aims to provide a motivation for companies to set concrete environmental performance targets.³²⁸

Mr Davis, also took part in the third session in April 1995, stressing that management and know-how transfer are essential to the successful transfer of environmentally sound technologies and that national environmental management organisations are making important contributions to helping industry, and particularly SMEs. He also proposed the organisation of a business/trade unions day during the 4th UNCSD session

the following year. The proposal was accepted, and the “Day of the Workplace” was scheduled for 30 April 1996. INEM’s first Eco-Baltic Conference, held in March 1995 in Lübeck, Germany was cited as a successful model for promoting “multi-sectoral partnerships” in the UNCED’s background paper “The Role and Contribution of Major Groups: Section III (Chapters 23–32), Agenda 21”.³²⁹

On the occasion of UNCED’s 4th Session in April 1996, INEM co-organised the Day of the Workplace on April 30th with the International Chamber of Commerce (ICC) and the International Confederation of Free Trade Unions (ICFTU) at the United Nations in New York City. The Day of the Workplace consisted of presentations and discussions by three panels: a business, a labour and a synthesis panel. The Business Panel, organised by INEM and ICC, presented four case studies: two on large corporations, and two on two small companies, an organic beer brewery from Germany and a Colombian leather tanning factory. The Labour Panel illustrated how good environmental practice can result from work-place agreements and partnerships between management and trade unions. The Synthesis Panel, consisting of a chief executive officer, a trade union leader and a chairperson, summarized the proceedings and highlighted the main lessons learned from the Day of the Workplace presentations.³³⁰

On April 27th INEM held a satellite event, Environmental Management in Small and Medium-sized Enterprises: a Global Perspective, to present case studies of SMEs and to launch its new book, Case Studies in Environmental Management in Small and Medium-sized Enterprises. Case studies were presented by representatives of INEM affiliated organisations. Carlos Barragan (PROPEL Colombia) spoke on sectoral eco-efficiency projects in Columbia, Rachid Nafti (CP3

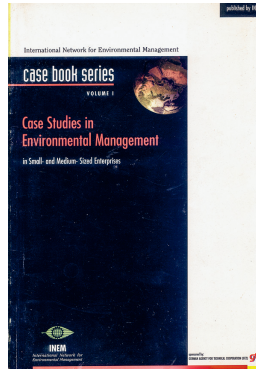


Fig. 9.6 Case Studies in Environmental Management in Small and Medium-sized Enterprises

INEM-Tunisia) on the development of pollution prevention audits for use within SMEs, Dr Vynhánek (CEMC) and Alan Mamou-Mani (Orée INEM- France) reported on their associations' work, and S.P. Chandak (NCPC India) held a talk entitled, "Environmental management myths: what should be done, and what should not be done". In conclusion, the INEM Executive Director presented the casebook, which shows how 13 SMEs from around the world reduced their environmental impacts and increased their market share. Both preparation of the SME Casebook and the INEM satellite event were funded by the German Agency for Technical Cooperation (GTZ) Institutional Capacity-building for Environmental Management programme.³³¹

United Nations Conference on Trade and Development (UNCTAD)

The first joint project was achieved with Mr Davis' participation in the four-day experts' workshop, "Environmental Protection and Foreign Trade Development in China", organized by UNCTAD for the Chinese Ministry of Foreign Relations

and External Trade in Beijing in April 1993.³³² Subsequently Sue S. C. Tang represented UNCTAD at INEM's first INEM Partnership Exchange in December 1993 in Bonn.³³³ In addition, INEM affiliate GT Strategies and Solutions of the USA have provided experts to UNCTAD-ISAR missions.

United Nations Development Programme (UNDP)

Over the years, INEM has held numerous consultations with, and participated in events of, UNDP. One of the first was in November 1991, when INEM Executive Director Troy Davis made a presentation entitled "Promotion by INEM of Integrated Management for Sustainable Development" at a UNDP Workshop in Warsaw.³³⁴ UNDP also has supported and funded a number of INEM projects and conferences. For example,

- UNDP co-sponsored three INEM Partnership Exchanges and covered travel and accommodation costs of participants from Central & Eastern Europe and developing countries.³³⁵
- In co-operation with UNDP-United Arab Emirates and the Zayed International Prize for the Environment, INEM held a two-day seminar, ISO 14001: Environmental Management and Sustainable Development, in Dubai, on 27–28 November 1999 for private and public companies and governmental authorities.³³⁶

United Nations Economic Commission for Europe (UNECE)

INEM was a member of the Working Group of Senior Officials for the Sofia Ministerial Conference held in October 1995 and a member of the Task Force for Implementation of the Environmental Action Plan for Europe.³³⁷ As a result, INEM

play a key role in shaping environmental policies and participated in the European Environment Ministers' Conferences in Sofia, Bulgaria in October 1995, and in Aarhus, Denmark in June 1998.

United Nations Environment Programme, Industry and Environment Office (UNEP IE)

Cooperation with UNEP IE in Paris began even before INEM was founded. For example, Dr Winter was invited by UNEP IE to an expert group meeting on 28 October 1988 in Paris to evaluate and suggest improvements to UNEP's Environmental Training for Industry: A Resource Book of Training Materials for Managers and Trainers. The goal of the working group was to develop a two-day programme of basic environmental awareness for senior executives and operating managers.³³⁸

INEM was regularly invited to participate in UNEP's annual Consultative Meetings in Paris to review industry's progress in implementing Agenda 21 and to discuss industry's position on current environment and development issues. INEM also contributed to and/or promoted several UNEP publications, including the Environmental Management Systems Training Kit, Environmental Management of Industrial Estates, and distributed the quarterly Cleaner Production newsletter in the INEM Bulletin.

United Nations Industrial Development Organisation (UNIDO)

INEM and UNIDO's interests converged in several areas, including promotion of cleaner production technologies and techniques, and exploring South-South cooperation in the transfer of non-CFC technologies. UNIDO experts have participated in all of INEM's IICSDs and INEM Partnership

Exchanges. INEM was granted consultative status to UNIDO in May 1996.³³⁹

INEM's ties with UNIDO reach back more than 20 years, beginning with INEM's collaboration on the Industry Initiatives in achieving the Ecologically Sustainable Industrial Development background paper for the Ministerial Conference on Ecologically Sustainable Industrial Development held in December 1991 in Copenhagen.³⁴⁰

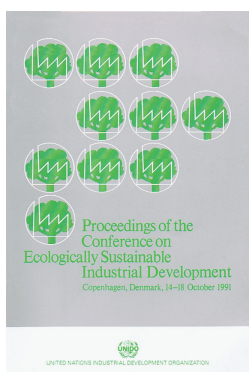


Fig. 9.7 Industry Initiatives in achieving Ecologically Sustainable Industrial Development presented to Ministerial Conference of Ecologically Sustainable Development in December 1991 in Copenhagen.

In June 1992 UNIDO endorsed and participated in INEM's first International Industry Conference on Sustainable Development (IICSD) held in Rio de Janeiro on the occasion of the United Nations Conference on Environment and Development. In endorsing INEM's second IICSD in Tokyo, Mauricio de Maria y Campos, Director-General wrote that, "UNIDO is most pleased to pledge its support to the International Conference on Eco-management organised by the Japan Eco-Life Centre and the United Nations University, in collaboration with the International Network for Environmental Management. UNIDO supports the aims of the proposed Tokyo Declaration

and its call for a global Industrial Agenda 21, without which the overall sustainable development objectives set out in Agenda 21 adopted at UNCED cannot succeed.”³⁴¹ Miquel Rigola, Head of Environment and Energy Branch, Industrial Sectors and Environment Division made a presentation to INEM’s 1st ECO-BALTIC Conference in March 1995 in Lübeck.³⁴² UNIDO endorsed both the 1st and the 2nd ECO-BALTIC Conferences.

INEM made a major contribution to the NGO Forum on Cleaner Industrial Production held by UNIDO on 30 November–1 December 1995 in Vienna. INEM presented a paper entitled, “The role of industrial business associations in cleaner industrial production and in support of cleaner production activities”, and addressed the Forum.³⁴³



Fig. 9.8 INEM delegation to UNIDO NGO Forum on Cleaner Industrial Production, December 1995

INEM and UNIDO also joined forces at the World Business Forum (WBF) of the 2nd United Nations Conference on Human Settlements (Habitat 2) held in Istanbul in May/June 1996. The INEM Chairman served as Chair of the Environment

Workshop of the session “Business Plan of Action”. INEM Executive Director Troy Davis presented a paper at the UNIDO/INEM Roundtable on Eco-Management.³⁴⁴

In October 1998 the INEM Executive Director facilitated the workshop “Institutions for Clean Development Mechanisms: Governance and operational issues domestically and internationally” during UNIDO’s Expert Group Meeting on the Clean Development Mechanism and Sustainable Industrial Development: New Partnerships for Industry in Developing Countries.³⁴⁵

Wuppertal Institute for Climate, Energy, Environment

The Wuppertal Institute for Climate, Energy, Environment (WI) was founded by the government of North Rhine Westphalia. The Institute is located in Wuppertal, Germany. The founding president, Prof Dr Ernst Ulrich von Weizsäcker, is the former Director of the Institute for European Environmental Policy (Bonn, Paris, London). The goal of the cooperation was to facilitate a fruitful exchange between industry and applied science. At his personal invitation, INEM co-published the INEM Bulletin with WI from 1992 to 1997.³⁴⁶

The first cooperation between WI and INEM took place at the Earth Summit in 1992 where Dr von Weizsäcker chaired a session at INEM’s first IICSD at the UNCED Global Forum held in Rio de Janeiro.³⁴⁷

INEM and WI also cooperated in developing the ISO 14000 series of international environmental management standards. Dr Eberhard Seifert and Almut Nöh, WI researchers, represented INEM at ISO TC 207/SC4 which developed standards for environmental performance evaluation. Dr Seifert and Ms Nöh developed and promoted the concept of Micro-Macro Linkages that was a mechanism to assure that company-level

and national, regional and global environmental indicators would be compatible. This Linkage was accepted and incorporated into the draft standard ISO 14031: Environmental Performance Evaluation.³⁴⁸ Dr Seifert also made a presentation to the ISO TC 207/SC4 Roundtable on Environmental Performance Evaluation held in Kuala Lumpur, Malaysia on 10–14 December 1998, after which INEM's Malaysian affiliate ENSEARCH organised a meeting on 15 December 1998 to discuss the implications and further development of the EPE standard and new developments with ISO 14001, in particular the revision process and the discussion on the issue of external reporting.³⁴⁹

Chapter 10

TRANSFERRING ENVIRONMENTAL MANAGEMENT TO OTHER SECTORS

The philosophy of INEM is to create partnerships. Partnerships among businesses resulted in the formation of national business associations for environmental management, partnerships among these associations created INEM. Recognising that national and local governments and international institutions such as the Organisation for Economic Co-operation and Development, the World Bank, the United Nations and the European Union need to set framework conditions favourable for the implementation of environmental measures in business and industry, INEM built partnerships with them. Another key goal has been to develop and strengthen partnerships between the business community and municipalities and local authorities.

Partnerships are key to the spread of environmental management

Several INEM associations explicitly emphasise close cooperation with local authorities. INEM's French member Orée was founded as a collaboration between the business community and local government. One of its major successes was the development of its PALME eco-label for industrial estates. The German Environmental Management Association (BAUM) developed and helped implement environmental management

concepts for the administration of smaller towns and cities in the German states of Bavaria and Mecklenburg-Vorpommern. INEM's Estonian affiliate EMI-ECO runs a Local Government Programme, whose objective is to support sustainable development and capacity-building of public administrations by training and consulting elected officials. INEM's Japanese affiliate, Japan Eco-Life Center (JELC), worked with and advised local authorities on environmental issues. JELC also was selected by the International Council for Local Environmental Initiatives (ICLEI) to set up its Asian Regional Secretariat.

Given the commonality of goals between INEM and ICLEI, a close cooperation developed. ICLEI served as co-sponsor of INEM's 1993 *International Industry Conference on Sustainable Development* held in Tokyo. INEM, in turn, co-sponsored ICLEI's *European Conference on Sustainable Cities and Towns* in May 1994 in Aalborg, Denmark. This conference was the largest gathering of European leaders and officials from local authorities to address the questions of sustainability at the local level, and the implementation of the *Local Agenda 21* mandate of the United Nations. Over 600 representatives from municipalities throughout eastern and western Europe and their counterparts from national governments, the European Commission, research institutions, the private sector and non-governmental organisations participated. Dr Winter gave a keynote speech in which he presented a number of examples of how businesses and local authorities in Germany have worked together to improve the environment and both gained from the co-operation. More than 320 participants, including more than 80 municipalities and the INEM Main Secretariat signed the *European Charter on Sustainable Cities and Towns*.

This cooperation continued in 2002 when INEM co-sponsored and spoke at the conference *Regional Cycles: Regional*

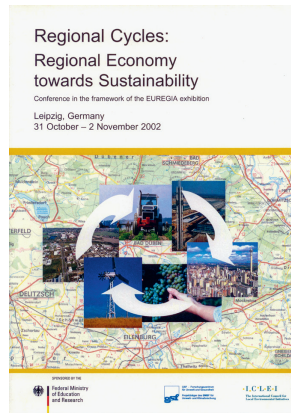


Fig. 10.1 Regional Cycles conference programme

Economy towards Sustainability in Leipzig, Germany. The next year the organisations jointly organised the conference *EcoProcura Gothenburg: Mainstreaming Eco-Procurement throughout Europe* in Sweden. From 2006–2009 INEM and ICLEI cooperated in the project “Biofuel Cities European Partnership.”

ICLEI was not the only partner in INEM’s efforts to transfer environmental management concepts and tools to the administration of cities and towns. INEM was named to the International Policy Advisory Group of the conference *Global Forum ’94: Cities and Sustainable Development – Strategies for a Sustainable Future* held on 25 June – 3 July 1994 in Manchester, UK. INEM played a key role in promoting participation of business, particularly SMEs.

Although INEM invested much time and resources into building partnerships between business and industry and municipalities, it also helped revolutionise the way hospitals, universities and even private households view and interact with the environment. The legacy of these efforts can be seen in energy, water and waste management programmes now

ubiquitous in many public institutions. As a result of education projects and campaigns run by members of the INEM network, consumer demand for energy-saving refrigerators and washing machines, environmentally friendly detergents, organic foods and solar collectors increased dramatically. The new profession of eco-counsellors for private households and local authorities, was created. INEM also initiated a campaign to promote environmental consciousness in the world's major religions.

Environmental management in private households

Environmentalists have calculated that, in developed countries, private households can account for up to 30 per cent of the total pollution of the environment. Dr Winter and Dr Maximilian Gege are convinced that persons who are environmentally conscious in their private lives also exhibit this behaviour at work: an environmentally aware person is a better employee. In 1972 Ernst Winter & Sohn undertook an 18-month pilot project to prove their point. The company employed five environmental counsellors who visited and offered advice to employees in their private homes. These "eco-counsellors" advised on how to

- reduce water consumption
- make better use of electricity
- take the strain off the waste-disposal system by pre-sorting rubbish
- use fewer chemical products in the garden
- replace various ecologically unfriendly products with officially approved alternatives

At the Winter company eco-counsellors were employed periodically, for new staff and when new opportunities for environmentally sound practices and products presented themselves.

The pilot project was financed jointly by the company and the German Federal Labour Agency's job creation scheme. To

further spur the spread the eco-counselling concept Dr Winter and his brother Ernst Michael Winter donated DM 180,000 to the environmental group Friends of the Earth Germany (BUND) to pay the salaries of four eco-counsellors. This, together with the work of the Arbeitsgemeinschaft für Umwelt, Gesundheit und Ernährung e.V. (AUGE), a Hamburg-based organisation set up by Dr Gege to further develop the eco-counselling profession.

AUGE received funding from the Commission of European Communities (CEC) to carry out the pilot project, "Feasibility Demonstration Project for Household and Community Environmental Advisors." It proved quite successful. Heinz Jürgen Pick, a Hamburg biologist and member of AUGE, and his four colleagues were fully booked for weeks ahead. Counselling was provided free-of-charge.

Dr Gege published the AUGE experiences and know-how, with contributions from Mr Pick, Dr Winter and Heike Jung in the book, *Das Öko-Sparbuch für Haushalt und Familie* (The Eco-savings Book for Household and Family). BAUM AG, the successor to AUGE, later published an updated version of the book as an interactive CD-ROM, the Environmental Check for Households – Live healthy and save money.

Dissemination of eco-counselling to additional countries

Dr Winter and Dr Gege presented their concept of eco-counselling at the *Conference on the Protection of the Rhine Natural Environment* in Strasbourg, France on 10 January 1986. The conference decided to promote the professional occupation of eco-counsellor, both in local government and in private companies of the Upper Rhine Valley. Ester Peter-Davis, a well-known French environmentalist based in Strasbourg, was nominated as a project leader to set up a viable

programme. Ms Peter-Davis had published an article about the German experience with eco-counselling in *FORUM*, a Council of Europe publication circulated in 20 countries. The interest expressed by readers motivated her to pursue introduction of eco-counselling in France. She volunteered to marshal financial support and coordinate political consensus, find and train competent candidates (both potential eco-counsellors and their future employers), and create several jobs to test the concept. Following the conference, an initial *Working Party for Environmental Counselling* was set up by Ms Peter-Davis.

The breakthrough came in 1987 when the CEC decided to include the project in a European pilot project on eco-counselling and contracted an agency to extend the model project to Austria, Belgium, France, Italy, Luxembourg, Spain and the United Kingdom.

Institute for Environmental Counselling (Eco-Conseil: Institut pour le Conseil en Environnement) was created in June 1987 by Ms Peter-Davis with 14 founding members to promote environmental education and counselling. Ms Peter-Davis became Founding President. After successfully completing the CEC pilot project, in which four eco-counsellors' positions were created, Institute Eco-Conseil received funding for a feasibility study which led to the creation of an additional four positions in four different French municipalities. These were co-financed by the CEC, the French Ministry for the Environment, the Regional Council of Alsace and the participating municipalities.

The French model was developed over a period of three years with the active help of French municipalities. AUGE provided initial advice and guidance. A total of 400 persons were trained by Institut ECO-Conseil in the first three years. In 1990 French eco-counsellors set up a professional organisation, the Association Française des Eco-conseillers; Dominique

Teisseyre was named President and Françoise Noble, Vice-President. In June 1991 more than 80 eco-counsellors or trainees were active in local authorities and consumer/nature conservation organisations in 51 French municipalities.

An informal European network linking training institutes, eco-counsellors and academics, ensured regular exchanges at European level with workshops held every two years. Institute Eco-Conseil organised the first *European Workshop on Environmental Counselling* with support from the Council for Europe, CEC and the Alsace Regional Council in 1989. About 120 participants from eight countries set up the European Network for scientific cooperation on eco-counselling. The Austrian Union of Eco-Counsellors organised the second *European Workshop* in Vienna in September 1991 with participation from Belgium, Czech Republic, France, Germany, Greece, Hungary, Italy, Luxembourg, Poland, Spain, Sweden, Switzerland and the United Kingdom.

There are now several thousand eco-counsellors in many European countries. Networks of eco-counsellors are active at European level in several European countries. For example, Eco-counselling Europe supports the process of sustainable development at the level of private citizens, municipalities and SMEs and aims to establish eco-counselling networks in Central & Eastern Europe and the Mediterranean region. Eco-counselling Austria serves as an umbrella organisation of all Austrian eco-counselling offices. The Belgian Association of Eco-counsellors promotes and supports their work in Belgium. A second Belgian organisation, Eco-Counselling Enterprise scrl expanded the concept to farmers in a project in the second half of 2006.

In 1992 INEM sought to transfer eco-counselling to Asia, Africa and South America. The project "Eco-Counselling for

the Developing World” was slated to begin as a pilot project in the Philippines, then extended to Thailand and other ASEAN countries. The goal was to set up a training programme for eco-counsellors. Ms Peter-Davis and Institute Eco-Conseil were to be INEM’s main partners in the project. The Philippine member of APPROACH Asia, Philippine Business for Social Progress, was interested in implementing the eco-counselling training through its Social Development Management Institute. Similar projects were explored for Mali and Benin and Argentina. In recognition of her contribution to the further development, professionalisation and dissemination of the eco-counselling Ms Peter-Davis was named to the United Nations Environment Programme Global 500 in June 1993.

“Esther Peter-Davis has been active, for many years, in environmental causes and in numerous grassroots initiatives.

She led one of four European Community pilot projects, during the European Year of the Environment 1987/1988, to test a concept developed in Germany – the eco-counsellor who advises households on how to behave better environmentally. So successful was the project that a separate non-profit association, Institute Eco-counselling was created.

The eco-counsellor is a highly qualified expert/mediator whose main employers are cities and local authorities. Since 1987 more than 60 have been employed. A second institute has been set up in Belgium and a third is in the planning stage. Its training is so successful that it is now being copied throughout France by universities.

Institute Eco-counselling has begun to train the first Eastern Europeans as Eco-counsellors for small and medium-sized enterprises.

She organised the First European Workshop (1989) of Eco-counsellors and was mandated to set up the European Environmental Counselling Scientific Cooperation Network.” — Text from the UNEP Global 500 Award, June 1993

Environmental management of hospitals

The German Environmental Management Association (BAUM) launched a series of initiatives to help hospitals and clinics gain control of their environmental impacts starting in the early 1990s. It held its third *Conference and Exhibition on Environmental Hospital Management* on 27 April 1993 in Leipzig. The two-day event was organised with the support of the German Federal Foundation for Environment (DBU). Presentations covered hospital waste disposal, how to avoid/minimize hazardous materials, hospital hygiene and environmental protection, and eco-auditing and life cycle assessment specifically for hospitals. Workshops were held on energy-saving measures, waste reduction, environmental measures for the hospital laundry, environmental management of hospitals and environmental protection in the daily practice of providing health care. BAUM previously organised congresses on environmental hospital management in Berlin in 1991 and in Kiel in 1992.

This knowledge was transferred by INEM to other countries over the years. For example, INEM Poland carried out a project with the German-Polish Chamber of Commerce to introduce an integrated quality and environmental management system at two Polish hospitals, St. Sophia in Warsaw and Bonifraters in Cracow. The project ran from summer 1998 to December 2000.

Environmental Management Education and Research Network

INEM launched the Education and Research Network (ERN) in 1994 to help universities, research institutes and technical universities exchange ideas and experiences in developing environmental management courses and curricula. The ERN also served as a link between the business community and academic institutions. Initial members were the Wuppertal Institute for Climate, Environment, Energy (Wuppertal, Germany), Institute for Polymer Testing and Polymer Science, University of Stuttgart (Stuttgart, Germany), DePaul University (USA) and Uppsala University (Sweden).

At the personal invitation of Prof Ernst Ulrich von Weizsäcker, President of the Wuppertal Institute, INEM published the *INEM Bulletin* newsletter together with the Wuppertal Institute from 1992 to 1997. Sascha Kranendonk, a Wuppertal Institute researcher and co-editor of the *INEM Bulletin*, made a presentation on “Eco-efficient services: an opportunity for the global business community” at INEM’s second IICSD, the *International Conference on Eco-Management* held on 9–10 September 1993 in Tokyo. In addition, Dr Eberhardt Seifert and Almut Nöh, were part of the INEM delegation to ISO/TC 207, where they convened the Ad Hoc Group on Micro-Macro Linkages in ISO/TC 207/SC4. The Ad Hoc group successfully argued for the inclusion of regional, national and global indicators in the standard on environmental performance evaluation, ISO 14031.

Dr Matthias Harsh of the Institute for Polymer Testing and Polymer Science at the University of Stuttgart, which affiliated to INEM in 1994, participated in meetings of ISO/TC 207/SC5 (Life Cycle Assessment) in 1994 as part of the INEM delegation.

In early 2000 INEM was invited by Uppsala University in Sweden to help develop an environmental management curriculum for the Baltic University Programme network. BUP is a regional university network in the Baltic Sea Drainage Basin set up in 1991. Some 170 universities in 14 countries take part in its activities and about 6000 students are enrolled in its courses. The Programme was coordinated by a secretariat at Uppsala University.

Environmental management of cities and towns

One of INEM's goals is to transfer experience gained by companies in implementing environmental management to other sectors, as in this case, to municipalities. By employing the environmental management techniques cities and towns can also take advantage of energy and water savings, reduce waste, and provide their constituents with a healthier environment.

The French member association Orée (INEM France), whose membership includes both companies and local authorities, has developed an eco-labelling programme for industrial parks that offers to reduce operating costs for companies by encouraging shared environmental investments between them and the local municipality. The municipality benefits from the environmentally enhanced industrial park as it helps attract new investment and innovative companies to the region.

The German member association BAUM (INEM Germany) has also been working with city and town administrations. Since 1992 BAUM Consult Munich has been helping municipalities apply environmental management techniques to their operations. They have compiled their experience into a two-volume guidebook for the Bavarian Ministry for Development and Environmental Questions (BSLU). The *Environmental Quick Check for Municipalities* was developed by BAUM Consult as

part of the Environment Initiative Bavaria programme. In the framework of the project BAUM Kommunal advised four Bavarian communities, Bad Brückenau, Kirchdorf im Wald, Leutershausen and Oberammergau over several years.

During the second half of 1997 BAUM-Germany developed an environmentally friendly industrial park in Tornesch, Germany. The businesses in the 60-hectare facility implemented a number of measures to achieve maximum synergies in both environmental and operative areas. For example, waste generated by one company was used as input for another. Excess heat produced by another firm was used to provide heating to other tenants of the park. Emphasis was also placed on environmentally friendly design of the grounds and buildings: about half of the industrial park remained green areas. Operative synergies were won by cooperation in logistics, marketing, distribution and purchasing.

INEM's member organisation, the Irish Productivity Centre (IPC), launched an environmental science graduate programme in January 1998. It provided internships for environmental science graduates with local authorities in Ireland. Three workshops were organised for the graduates. The programme was funded by the Irish Department of the Environment and the European Regional Fund.

Habitat 2: The Cities Summit

INEM played an active role in planning the World Business Forum (WBF), which held on 30 May–2 June 1996 in Istanbul in conjunction with the United Nations Conference *Habitat II – The City Summit*. INEM served as co-chair of the World Business Forum Council and participated in the Forum. Together with the United Nations Industrial Development Organisation (UNIDO) INEM organized the “Roundtable on

Sustainable Industries for Cities: Can cities and industries work hand in Hand? The scope for symbiosis” held on 1 June 1996 at the WBF.

The WBF showcased leading creative strategies that have proven to be both profitable and socially responsible. The WBF focuses on the role of business as a crucial partner with government and non-profit organisations in the creation of jobs and economic growth, as well as in shaping the public policies which will govern the future of human settlements. Among the keynote speakers at the WBF are Dr William McDonough, Dean of the University of Virginia’s School of Architecture and winner of the US Presidential Award for Sustainable Development. In 1996, Karen Jespersen, Danish Minister of Social Affairs; Olivier Giscard d’Estaing, president of the Business Association for the World Social Summit (BUSCO) Paris and co-founder of the CAUX Roundtable; Monika Griefahn, Minister for the Environment, State of Lower Saxony, Germany; Mauricio de Maria y Campos, Secretary-General of UNIDO, Dr Georg Winter, Chairman of INEM, and numerous corporate CEOs as well as the mayors of many of the world’s largest cities.



Fig. 10.2 Special issue of the INEM Bulletin on environmental management in cities and towns.

INEM Chairman Dr Winter served as Chairman of the *Environment Workshop of the Business Plan of Action* session. INEM Executive Director Troy Davis was both participant and speaker at the *Roundtable on Eco-Management*. A special edition of the *INEM Bulletin* was produced in cooperation with UNIDO on the occasion of the WBF.

The Bremen Initiative

The *Bremen Initiative* is a global campaign to promote partnerships between municipalities and businesses to achieve a sustainable future for cities. It was launched by the City of Bremen in 1999 and it based on the *Bremen Declaration*, the concluding document of the first international conference *Business and Municipality – New Partnerships for the 21st Century* which took place in Bremen, Germany in 1997.

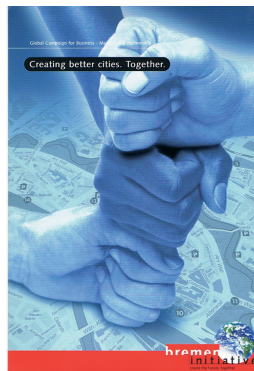


Fig. 10.3 Bremen Initiative conference programme

According to the organisers of the *Bremen Initiative*, “the Initiative focuses on cities because that is where, on the one hand, problems accumulate but where, on the other hand, solutions are more tangible.” Local, national, regional and international framework conditions are critical for the sustainable

partnership-oriented development of communities and the economy in an increasingly mobile society. In order to promote and support these mutual projects the *Bremen Initiative* has launched the *Bremen Partnership Award* to recognize and disseminate best practice. The first Award was presented at the second international conference *Business and Municipality – New Partnerships for the 21st Century* on 4–7 April 2001. It focused on framework conditions for a sustainable future of communities moving towards a mobile society. The European preparatory event, *Mobility – Challenge of the 21st Century: New Technologies – New Policies*, was held on 24–27 June 2000. It put innovative solutions for sustainable mobility, past experiences and present approaches, in the limelight, with a special emphasis on practice.

Participation in international conferences on municipality/business cooperation

INEM Executive Director Troy Davis participated in a panel discussion on “International Associations: The Power of Global Partnerships – Impediments and Incentives for Business/Industry” with Joan Martin-Brown (The World Bank), Alicia Barcena (Earth Council), J. Hugh Faulkner (Business Council for Sustainable Development), Frank Ohnesorgen (International City/County Management Association) and Janice Perlman (Mega-Cities Project) at the international conference *Business of Sustainable Cities: Public/Private Partnerships for Creative Technical and Institutional Solutions*, 22–23 September 1994, Washington, DC, USA at the offices of the International Monetary Fund. The second annual international conference was organised by Earthkind and The World Bank.

INEM served as a member of International Policy Advisory Group for the conference *Global Forum 94: Cities and*

Sustainable Development held in Manchester in 1994. The same year INEM was invited by ICLEI to co-sponsor the *European Cities Conference* held on 24–27 May 1994 in Aalborg, Denmark.

INEM Chairman Dr Winter was invited to participate in the *International Forum on Cities, Companies and Environment*, 21–23 May 2002 in Barcelona. Participants included representatives of municipalities (mayors and heads of environmental departments), manufacturers of environmental technologies, and companies manufacturing green products or adopting cleaner production processes. Coimbra (Portugal), Korolev (Russia), Lafayette (USA), Longueuil (Canada), Moncton (Canada), Namur (Belgium), Northampton (UK), Parma (Italy), Poitiers (France), Syracuse (USA), Vaasa (Finland), Zuengzhou (China), Santiago de Cuba, Bauru (Brazil), Concepción (Chile), Santo André (Brazil) and Agnibil Èkrou (Ivory Coast) sent business delegations.

Environmental management of local authorities in Latvia

The project *Innovative approach to EMAS II implementation in the local authorities of new member states* – or *EMAS 4 New States* for short – was initiated by the INEM member Latvian Association for Environmental Management (LAEM) and the company Biznesa Konsultantu Grupa Ltd (BKG) in 2004. Major project partners included two Latvian local authorities: the Daugavpils City Council and the Naujene Rural Municipal Council, and the INEM's German member association, the German Environmental Management Association (BAUM), which provided expertise in EMAS implementation. Dr Jiří Student, Executive Director of INEM's Czech member CEMC served as consultant to the project. The project ran from May 2005–May 2007.



Fig. 10.4 (from left) Natalia Ladutko, LAEM Project Manager, Inese Bezane, Daugavpils City Council, Ludwig Karg, BAUM, Inta Ruskule, Naujene Rural Municipal Council, Alina Dudele, SIA BKG Head of Board

The aims of EMAS 4 New States were:

- to demonstrate and promote EMAS II in local authorities of new member states, using Latvia as a role model;
- to introduce new effective tools of EMAS II implementation and dissemination;
- to assist new member states in their integration process to the EU, introducing the EU environmental regulation.

The initial meeting of project partners took place on 3 December 2004 in Riga. The partners set up methods of internal and external communications, structured the project management, and elaborated a detailed schedule of activities and the content of launch seminar for Latvian municipalities, NMS and local consultants.

Representatives of participating municipalities together with their consultants went to Germany for a one-week study tour. Participants of the study tour visited Immenstaad hospital, a school in Leutkirch, biogas stations, boiler houses operating on wood chips in Leutkirch, Überlingen, city administrations in Leutkirch, Überlingen and Immenstaad, and a very popular tourist place – Mainau Island – which implemented EMAS in the tourist sector.

Participants of the tour were introduced not only to EMAS implementation process, but also to technical solutions focused on the improvement of environmental performance.

The project adapted the INEM tool *Ecomapping*, which was developed by Heinz-Werner Engel, Executive Director of INEM's Belgian member Association Belge des Eco-Conseillers et Conseillers en Environnement (ABECE) in the framework of INEM's project to develop the *EMAS Toolkit for SMEs*.



Fig. 10.5 EMAS for Municipalities

The guidebook, *EMAS for Municipalities: Implementation guide for the step-by-step cluster approach*, documents experiences gained in the project and has been made available for download on the project website.

Environmental management of industry parks – PALME

In 1994 INEM's French member association Orée launched the PALME project which focuses on the greening of industrial zones and developing a “green” label for them. PALME stands for “Programme d’activités labellisées pour la maîtrise de l’environnement,” that is, “Programme of eco-labelled

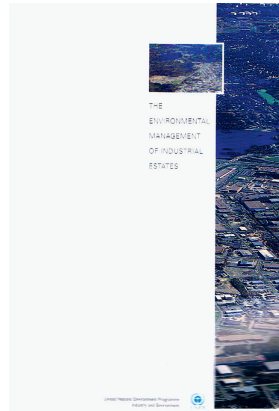


Fig. 10.6 Orée described its experience with PALME in its publication, *Guide to the Environmental Management of Industrial Estates*

environmental management activities.” The need for PALME emerged from a survey of Orée members, which showed that many municipalities were concerned about the low level of competence in pollution control among local SMEs. The SMEs noted that they did not have the human resources necessary to research numerous options for pollution control, nor the financial resources to invest in them.

The basic PALME concept was developed by the consultancy Développement Environnement Maitrise de l’INnovation (DEMAIN). The methodology reduces operating costs of companies by providing managerial and technical assistance and helps manage permits and contracts between firms and government. Development of PALME was supported by the French Ministries of Industry and Environment, as well as several environmental organisations.

PALME is not simply an eco-labelling scheme for industrial sites, but a comprehensive system for integrating environmental management goals into the management of industrial zones. Participants are given advice on management systems,

technology and investment. PALME reduces operating costs of individual firms by reducing material, energy and waste management costs and encouraging joint environmental investments between on-site companies and the local municipalities. It is expected that these environmentally friendly industrial areas will attract new investment in general, and innovative companies in particular, to the region, thereby helping to improve the overall quality of life. Three pilot industrial zones, Sophia Estérel (Riviera), Châlon sur Saône and Eco-Normandie, plus two networks of industrial zones in Haute-Saône, and the regional park in Lueron developed the criteria and procedures for PALME.

Orée was asked the United Nations Environment Programme, Industry and Environment office in Paris to put its experiences with greening of industrial estates into a book, *Environmental Management of Industrial Estates*, published in 1997. The report includes guidelines for the design and operation of industrial estates and a set of worksheets to assist managers in assessing environmental conditions and the environmental infrastructure. Case studies from various countries show how the principles have been applied.

Environmental management of farms

INEM's Belgian member Eco-Counselling Enterprise and its director Mr Engel expanded environmental management to the agricultural sector in the project, *Innovative Environmental Management in Agriculture: Local authorities, farmers and eco-counsellors get a grip on EU agrarian reform and its simplification in the field*. Eco-Counselling Enterprise scrl ran five practical, two-day workshops for more than 65 representatives of local authorities, farmers and eco-counsellors in the Wallonian region of Belgium between June and December 2006.

World religions and environmental management

In addition to economic motivation, basic ethical principles are essential for the entrepreneur committed to environmental protection. The world religions, when formulating their basic principles and demands for environmental business management, require close contacts with representatives from business and the economies of the respective regions.

The project *World Religions and Environmental Management* organised by INEM set new signs with its endeavours to integrate environmental ideas into civil society. The German Federal Foundation for the Environment (DBU) supported this initiative to mobilize the great world religions and the business community in a “Coalition for Ecology,” working together to inject new momentum into a movement for integrated environmental protection. An international expert meeting of representatives of world religions on ethics and environmental management was held at the DBU in Osnabrück, Germany on 21 November 1995.

The Expert Meeting provided an overview of the status of the discussions on environmental protection and environmental

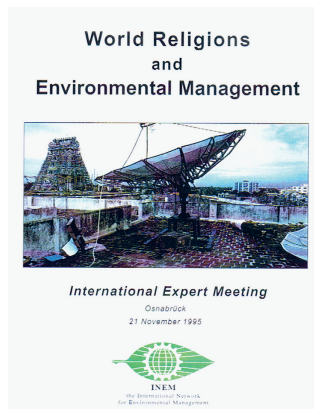


Fig 10.7 World Religions Expert Meeting report

management within their circles, and lead to an agreement on the best manner in which the project was to be continued. The proceedings of the Expert Meeting and the individual presentations were published in the form of a conference reader in English and German.

A follow-up meeting was held in April 1996 in Hamburg at which representatives of regional Hamburg research institutes and experts on various world religions met to discuss the ability of various religious communities to motivate managers in their respective cultures to adopt environmental management. The majority of participants agreed that the religious communities could exercise their influence; however, they all agreed that this influence has to be mobilized with appropriate sensitivity to each respective cultural and religious circle. Prof Dr Pye from Marburg University prepared an extensive bibliography on the theme. It was slated for publication in 1998.

Sustainable Management for All Local Leaders (SMALL)

To achieve break-through successes in improving the sustainability of the society INEM set a priority on the small actors. For this reason, the association launched the global Sustainable Management for All Local Leaders (SMALL) initiative in 2002.



Fig. 10.8 Think Big, Act Small: The Global SMALL Initiative

INEM Chairman Dr Georg Winter began developing the concept for a global campaign to build cooperation among all sectors of society for sustainable development in early 2000: “The many millions of small and medium-sized actors in other areas of society shall also have the opportunity to shape the economic frameworks of their national and the world’s economies and make their contributions to sustainability. Therefore, the global Sustainable Management for All Local Leaders (SMALL) initiative shall also be a goal for SMALL farms, SMALL local authorities, SMALL decentralized energy suppliers and other actors.”

Dr Winter unveiled the SMALL initiative at the *International Forum Cities, Companies and Environment*, 21 May 2002 in Barcelona with his keynote address on “Think Big, Act Small: The Global SMALL (Sustainable Management for all Local Leaders) Initiative for Sustainability” at the Opening Plenary. The conference released the *Barcelona Declaration*, which commits the signatories to making progress over the next five years:

- Consumer organisations agree to promote the purchase of environmentally friendly products, and their proper disposal.
- Business organisations agreed to promote adoption of the Barcelona Declaration by companies.
- Public authorities agreed to ensure that over 10% of their purchases of products and services would comply with environmental criteria.

The first phase of the Global SMALL Initiative, the SMALL Company Initiative, targets executives of all local enterprises, especially small and medium-sized companies. The goal of this 10-year campaign was to reach a critical mass of SMEs with simple information and actions aimed at improving their

environmental and sustainability performance. Dr Winter stated that, “Taken as a whole, SMEs contribute substantially to the well-being of the economy and society. They are the most important producers and service providers and are the basis for continuity and stability in social life. They provide the most job training and employment. They are flexible and innovative, anchored in their communities and local cultures. Collectively, their environmental impact is immense. SMEs shall be encouraged and assisted to make their contributions to sustainability.”

Dr Winter next promoted the SMALL Company Initiative during his keynote address to the Plenary Session “A Business Perspective” at the international conference *Regional Cycles: Regional Economy towards Sustainability* held on 31 October – 2 November 2002 in Leipzig, Germany.

In cooperation with the Club of Budapest International the SMALL initiative was to be expanded to addition target groups in 2003. These include small credit providers, small local authorities, small farms, small energy producers and local educational institutions. The plan calls for the preparation of environmentally progressive and economically attractive case studies that would be distributed to non-governmental organisations active in the target spheres. The goal of the case studies is to start a chain reaction of imitation, a domino effect of positive action. According to Dr Winter, “Good solutions are contagious.”

Dr Winter promoted SMALL at a number of other international conferences, including *Integrative Approaches towards Sustainability* held on 26 March 2003 in Jurmala, Latvia and the *International Conference on Sustainable Management in Action 2003* on 4 September 2003 in Geneva. On 9 February 2004 Dr Winter held a lecture on “Success Factor SMALL (Sustainable Management for All Local Leaders) – Counterweight

to Globalization” as part of the *Systematic Thinking: Lecture and Discussion Series*, November 2003–2004, organized by the Chamber of Industry and Commerce of the Stuttgart region. The Series was held in partnership with the Breuninger Foundation, the Club of Budapest International and the Global Contract Foundation.

“The many millions of small and medium-sized actors in other areas of society shall also have the opportunity to shape the economic frameworks of their national and the world’s economies and make their contributions to sustainability. Small and medium-sized enterprises are the ‘hidden giants of the economy.’ In their totality they can contribute the most to the easing the environmental burden on the earth and to the sustainable sustenance of the population.” –
Dr Georg Winter, speaking on the SMALL Initiative

Chapter 11

SOME KEY PROJECTS OF INEM SINCE THE YEAR 2000 (Overview by Ludwig Karg)

The following is an overview of key projects in which INEM as an organisation has been involved since the year 2000.

BALTEMA (2002–2005)

The main goals of the project “Unternehmensverband für umweltbewusstes Management für die Baltischen Länder” (BALTEMA) was to raise awareness among Baltic enterprises about the advantages of environmental management and to build up capacity to implement it. The specific project goal was to support the establishment of non-profit business associations for environmental management in the Baltic States. These associations should promote the introduction, implementation and use of environmental management through information and education in all sectors of the economy.

Key actors in the efforts for capacity building and the establishment of 3 cooperative institutions in the Baltic countries were INEM members Hungarian Association for Environmentally Aware Management (KÖVET), Estonian Institute for Sustainable Development (SEI-Tallinn), Latvian Pollution Prevention Centre (LPPC), Institute for Environmental Engineering (APINI), Kaunas University

and Lithuanian Environmental Management and Audit Institute (EMAI). The project was co-financed by Deutsche Bundesstiftung Umwelt (DBU).

SMART – Sustainable Management Action Research and Training (2003–2005)

Under a framework agreement between CDE and INEM, the Sustainable Management Action, Research and Training action program has been developed mainly to raise awareness about Environmental Management Systems, tools and techniques for implementation in small and medium sized enterprises (SME) in African ACP countries (Egypt, Algeria, Tunisia, Morocco, South Sudan, Libya) and in 5 Caribbean countries. The goal was to promote and facilitate the implementation and certification of internationally recognized Environmental Management Systems, like ISO 14001 and EMAS in small and medium sized enterprises. In 2005, a Prospective Study in Southern Africa and the Indian Ocean was carried out, covering more African countries (Angola, Botswana, Madagascar, Malawi, Mauritius, Mozambique and Zambia).

Strategic cooperation with IFC as a contribution to SME Toolkit

With the support of INEM, the International Finance Cooperation (IFC) developed and maintained a toolkit for Small and Medium Enterprises (SME). The toolkit helped SME's to develop their business on the easiest way. INEM cooperated with IFC to develop the easy-to-use tools for environmental and social responsibility issues.

EMAS for New Member States (2005–2007)

The project “Innovative approach in EMAS II implementation in the local authorities of new member states” (EMAS4NewStates) aimed to achieve one of the objectives of EU 6th Environmental Action Programme: ‘Encouraging wider uptake of the Communities Eco-Management and Audit Scheme’. Using Latvia as a role model, 10 municipalities received direct support to implement environmental management in their public administrations. Case studies, the tools developed for that capacity building process and further guidance have been published for other New Members States in a well accepted guideline.

The project was funded by the Life programme and most activities implemented together by INEM members and BAUM Consult GmbH München/Berlin.

In parallel Eco-Counselling Enterprise srl and INEM members have carried out an 18 months project to train 25 consultants of 5 new Member States to the EMAS easy methodology and support them in their implementation of EMAS in 50 Small and Medium Enterprises (SMEs). The aim of the project was to provide support to the implementation of the EMAS Regulation in Estonia, Latvia, Lithuania, Poland and Hungary by promoting the EU EMAS Scheme and building capacity for the application of the EMAS. The project provided support in terms of practical capacity building of EMAS implementation in these new Member States in particular regarding small and medium sized organisations and enterprises (SMEs). It built on the “EMAS Tool Kit for Small Organisations” which had been developed in 1998 as a result of co-operation among INEM organisations from Western and Central and Eastern Europe with experience with both small and medium sized enterprises and environmental management.

Eco-Companies in the Alpine Space (2006–2008)

The Interreg project “Alpine Space Promotion of Eco-companies Transboundary” (ASPECT) aimed at overcoming the structural challenges of Eco-companies by facilitating the exchanges between Alpine Space SMEs and clusters, by stimulating transnational research projects and benchmarking, and by organizing the promotion of the various sectors involved (acoustics, waste prevention, water treatment, environmental metrology, renewable energy, ...). The project enabled support organizations and public authorities to better integrate these SMEs in sustainable economic and spatial planning. As an experimental stimulation on a concentrated European “laboratory”, ASPECT helped making eco-companies more competitive, thus driving economic growth in the Alpine Space while enhancing polycentrism within and between alpine territories on key economic sectors for sustainable development. INEM supported project partners from all 7 Alpine countries with its capacity to reach out to a broad variety of stakeholders in the field of sustainable businesses.

Biofuel Cities (2007–2009)

“Biofuel Cities” was a project supported by the European Commission’s Directorate General for Transport and Energy to establish a platform for biofuel stakeholders. The project integrated European research and pilot applications of biofuels in European local governments. It aimed to accelerate the market introduction of biofuels and energy-efficient vehicles based on local sustainable mobility policies, and stimulate continued market penetration of biofuels through identifying strategic Research & Development needs and policy development.

The project managed to build a European Partnership in which biofuel end-users, deliverers, and frame-workers, such

as feedstock providers, industrial and commercial end-users, research institutes, and local governments, are encouraged to network. INEM represented both the biofuel producing and consuming economy. With a quarterly newsletter it included companies which play an important role for the introduction of sustainable practices for transport. They often run vehicle fleets and are the best candidates for introducing not only energy efficiency measures, but also new and renewable fuels which might in one or the other case require that fuelling infrastructure is set up.

Energy awareness campaign on climate change in Russia (2011–2013)

The project focussed on ‘train the trainers’ activities for local NGOs mainly in the St. Petersburg and Leningrad Oblast. The INEM consortium organized meetings with local/regional authorities, mass media and EU NGOs and developed training material. Based on EU experience, an Action Plan for a regional awareness campaign on energy efficiency and climate change issues was developed and implemented alongside an NGO Cooperation Statement and a new Association Charter. The lead partner of the project was INEM member KÖVET Association for Sustainability (Hungary), other partners from INEM e.V. (Germany) have been involved as well as the Environmental Center for Russian Industry (ECRI, Russia).

Activating and Learning from Local Investments in Energy Savings (2018–2020)

The ALLIES project was a transnational project funded by EUKI, the Europäische Klimaschutzinitiative (EUKI – www.euki.de), a programme of the German Government. The experiences from the project as well as tips for interested parties and

imitators are summarized in a practical guidance, which can be found at https://allies-project.eu/data/documents/ALLIES_whitebook_final.pdf.

Partners in Hungary, Poland and Germany established new types of measures and organizations to activate investments in cost-effective energy efficiency projects. The key approach: involving citizens and local businesses on regional level as investors and facilitators for energy efficiency projects in enterprises and municipal premises. Investments generate steady returns for reinvestment and provide citizens with tools to contribute to climate change mitigation as well as local economic and environmental sustainability.

ALLIES represents a funding niche for energy efficiency beyond self-financing, bank credit and public finance. The advantages of this model include that investments in energy efficiency can be implemented on a balance sheet-neutral basis. No equity is needed and bank credits are not necessary, which does not worsen the rating. Available private equity can be used for other purposes and beneficiaries can benefit from energy cost savings right from the start. In addition, the image of a company improves as an energy and climate-conscious organization.

The ALLIES concept builds on the REEG model of regional energy efficiency cooperatives as it has been developed for Germany by INEM member BAUM with governmental support. In ALLIES, the role of INEM was capacity building, networking and dissemination mainly in the New Members States.

Chapter 12

50 YEARS OF ENVIRONMENTAL MANAGEMENT AS AN INTEGRATED SYSTEM – SMEs AS ENVIRONMENTAL PIONEERS (Prof Dr Jan Hensmann, University of Münster)

In 1972, the United Nations Conference on the Human Environment, the first UN Conference on the environment, convened in Stockholm. In the same year, the Club of Rome published its report on “The Limits to Growth”. The global economy was already confronted at that time with the demand for environmentally conscious reorientation.

The most determined response came from small and medium-sized enterprises (SMEs). Still in 1972, in his company Ernst Winter & Sohn, the Hamburg entrepreneur Dr Georg Winter was pushing the development and implementation of an “Integrated System of Environmentally Oriented Business Management” (Winter Model).

What was new about it: From now on, all management levels and operational departments (including marketing, product development, manufacturing technology, materials management, energy and water conservation, waste disposal and recycling, human resources, and so on) were no longer

focused solely on profitability, but simultaneously on the goal of maximum environmental protection.

In 1984, Dr Georg Winter initiated the founding of the Bundesdeutscher Arbeitskreis für Umweltbewusstes Management (B.A.U.M. e.V.), a business association whose goals included the dissemination of the Winter Model on the national level in Germany. In 1991, Dr Georg Winter then founded the International Network for Environmental Management (INEM e.V.), for the international dissemination of the Integrated System of Environmentally Oriented Management, along with other activities.

Dr Georg Winter's book on the Winter Model, "Das umweltbewusste Unternehmen" (Business and the Environment) first appeared in 1987. With its practical checklists, it reached five German editions and was translated to twelve languages.

In the foreword to the first edition (1987), Stanley Clinton Davis, Member of the Commission of the European Communities, wrote: "[The] European business community now has a comprehensive and practical handbook on the environmentalist approach to business management ... The book is based on the tried and tested 'Integrated System of Environmental Business Management' (Winter Model), which covers all the main aspects of management ..."

In a foreword written in 1988 for the French edition, Jaqueline Aloisi de Lardere, Director of the EU Department for Industry and Environment under the United Nations Programme for the Environment (PNUE), highlights the book's international significance: "This book not only provides a model for European companies. Its principles and very practical recommendations can and should be applied worldwide ... The Department of Industry and Environment under the United Nations Programme for the Environment will therefore

be happy to support, together with the European Commission, the widespread international dissemination of this book.”

In 1988, Dr Georg Winter was awarded the “Diploma Meritorium for the Environment Year 1987” by the European Union’s Directorate General for the Environment.

The Integrated System of Environmentally Oriented Business Management also gave the European Union decisive impetus in the development of the Eco-Management and Audit Scheme (EMAS), also known as the EU Eco-Audit. The international standard for environmental management ISO 14001, first published by the International Organization for Standardization in 1996, was able to draw on many years of international experience with the Winter Model.

In 1994, in his foreword to Georg Winter’s book “Blueprint for Green Management”, the American author Tom Peters, at the time widely celebrated as a business guru, wrote: “The ‘Winter Model’, which is the concept behind this book, is a comprehensive, ready-to-use approach [to] environmental management [...]”

Helmut Schmidt, in his 1998 book “Weggefährten – Erinnerungen und Reflexionen” (Companions – Memories and Reflections), had very personal words for Dr Georg Winter, who won the German Environmental Award in 1995: “Winter has combined creativity, quality and profitability with energetic environmental protection in an exemplary manner.”

And so, in a critical period of transformation and development for environmental protection from 1972 onwards, it was a medium-sized company from Hamburg – in close cooperation with the European Union – that set economic history in motion with its invention, implementation, development and dissemination of systematic environmental business management. The resistance that existed initially, for example among some

business associations, soon gave way to creative collaboration. Today, the Winter Model is widely used in innovative, future-oriented companies of all sizes worldwide.



Fig. 12.1 Dr Georg Winter speaking at the Palais de l'Europe in Strasbourg, 1986

In January 1986, at the international conference on “The Upper Rhine Environment – Balance and Perspectives”, which was held in the Palais de l'Europe of the European Parliament in Strasbourg, Georg Winter presented the main features of the “Winter Model” to the conference plenum. The official final declaration passed by the conference included a request to the association for cross-border cooperation to promote the Integrated System of Environmentally Oriented Management (Winter Model).

ABOUT THE AUTHOR



Peter Hundley, 1999

Peter Hundley was born in Ulm, Germany, on 8 September 1953. He was and remained an American citizen. Peter Hundley helped shape the development of the International Network for Environmental Management (INEM) for many years, starting from the early days of the organization. He supported the founding of business associations for environmentally oriented business management in different countries and, in doing so, contributed to the expansion of INEM's membership.

He participated actively in INEM projects and won over supporting institutions such as the German Federal Environmental Foundation through his expertise, creativity and reliability. For his research of economic history for this

documentation, he made use of the collected documents about INEM in the comprehensive Winter family archive in the HAUS DER ZUKUNFT in Hamburg.

Unfortunately, Peter Hundley cannot witness the publication of his book. He passed away on 7 April 2015. Peter Hundley always acted out of his deep ecological convictions. For him, “lazy compromise” was unacceptable. He recognized ecological window dressing immediately. He was the striking opposite of a conformist yes-man. He was held in the highest regard as a conversation partner, both by down-to-earth environmental activists and by representatives of industry, politics and administration.

Several co-authors contributed to the completion of the book “Toolmakers for the Future” by Peter Hundley.

Appendix A

INEM MEMBERS AND AFFILIATES

In total the INEM comprised 73 Member and Affiliated organizations in 47 countries from 1991–2010. An additional nine organizations in seven countries had formed INEM association Organizing Committees. A list with a short description of activities is provided below.

ARGENTINA

**Asociación para el Desarrollo de la
Gestión Ambiental (ADEGA)**

**Association for the Development of
Environmental Management**

Dr Maria del Carmen Longa Virasoro, Executive Director

Inspired by the enthusiasm displayed during the INEM's *International Industry Conference for Sustainable Development* in Rio de Janeiro in June 1992 a small group of “Porteños”, as residents of Buenos Aires are called, joined together to launch an environmental management association. An attorney (Dr Maria del Carmen Longa Virasoro), an economist (Haracio Pérez Losada) and a chemical engineer (Lilian Brodtmann) formed the organizing committee. ADEGA was created after the model of the German Environmental Management

Association (B.A.U.M.). Key goals are the promotion and implementation of environmental management systems, especially in SMEs. Activities include the carrying out INEM's Global Environmental Management Survey in Argentina, a training seminar for environmental auditing, analysis and implementation of standards and guides for environmental management in Argentine industry, dissemination of information on organic farming to Argentine producers.

In 1992 ADEGA participated in a Carl Duisberg Gesellschaft seminar on environmental management.

In 1993 German Agency for Technical Cooperation (GTZ) and SwedeCorp provided funding for the Global Environmental Management Survey in Argentina.

On 23–25 August 1994 ADEGA in cooperation with the German Friedrich Ebert Foundation held an international seminar on environmental law with more than 150 participants per module.

Established in June 1992, affiliated to INEM in December 1993, resigned in November 1995.

AUSTRALIA

Environment Management Industry Association of Australia (EMIAA)

John Cole, Principle Executive Officer and Secretary

Fiona Wain, Chief Executive Officer

EMIAA was founded in 1991 by then Prime Minister Bob Hawke. Its mission is to serve as a focal point for the interaction of those who face environmental problems and those who possess the skills, technologies or products to solve them.

EMIAA is the national industry association representing and helping organizations in the business of providing environmental management goods, systems and services. EMIAA helps its members network, access overseas markets, deal with government, and promote policies consistent with sustainable development and supportive of the environment management industry. Launched by the then Prime Minister of Australia, Mr Bob Hawke, EMIAA works very closely with Australian Federal and State Government agencies, and its 240 corporate and organizational members span the spectrum of environment management capacity in Australia.

Established in 1991, affiliated to INEM in 1993.

Australia Centre for Cleaner Production (ACCP)

Simon Clay, Director

The Australia Centre for Cleaner Production (ACCP), established in 1994, is a non-profit organization, affiliated with the Royal Melbourne Institute of Technology (RMIT) in Melbourne. The Centre's charter is to promote and facilitate the adoption of Cleaner Production by Australian organizations. Since 1994, ACCP has managed the Victorian EPA's Cleaner Production Partnerships Programme (CPPP), a program designed to provide financial and technical assistance to Victorian organizations for the purpose of implementing Cleaner Production.

ACCP aims to achieve the dual goals of international competitiveness and environmental excellence through cleaner production. The Center offers a broad range of services to public and private organizations both in Australia and internationally. These services cover industrial organizations, government-owned enterprises and agencies, education

facilities and research groups. The services include consultancy, training and technology transfer in cleaner production.

Established in 1994, affiliated to INEM in 1995. ACCP dissolved in 2000.

Ecointegrity Incorporated

Roger Carthew, Chief Executive Officer

Ecointegrity, a non-profit association with both individual and corporate membership, offers SMEs the means to continually improve their environmental, quality and social performance through an integrated management system. This audited, integrated EMS is designed to lead to the granting of certification marks. Volunteer members perform various roles which contribute to the overall reach and effectiveness of the organization.

Affiliated to INEM in 2005.

AUSTRIA

Österreichische Gesellschaft für Umwelt und Technik (ÖGUT)

Austrian Society for Environment and Technology

Dr Herbert Greisberger, Executive Director

ÖGUT is a non-party association which provides a platform where economic, political and environmental interests can come together. Activities include working groups, strategic consulting, pilot projects, program management, studies/publications, events, environmental award.

Full Member of INEM in 2005.

**Bundesweiter Arbeitskreis für umweltbewusstes
Management (BAUM-Austria)**

Austrian Network for Sustainable Management

Hans Werner Autz, Executive Director

BAUM-Austria was founded in Spring 1989 on initiative of private enterprise. It is registered as an independent, non-political, charitable association. As a member of the International Network for Environmental Management (INEM), B.A.U.M.-Österreich participates in international cooperation and is integrated in the exchange of experience on the further development of environment management and sustainable development. B.A.U.M. contributes to the implementation of national and international sustainable development goals.

In December 1996 BAUM-Austria founded the BAUM Eco-audit Institute – a non-profit organization – for the assessment of environmental management systems. Expert teams assist companies in the validation and certification of environmental management systems according to EMAS. The service is also open to non-member companies.

Established in 1989, BAUM-Austria is a Founding Member of INEM.

BELARUS

**Belarusian Association for Environmental Management
(BAEM)**

Dr Sergey Dorozhko, Executive Director

The aims of BAEM are to promote the knowledge about environmental management and to motivate Belarusian businesses

intellectual and scientific potential for environmental improvement. Activities include environmental management training courses, pollution prevention methods, and publications. BAEM provides environmental management training courses for enterprise managers on such topics as environmental management systems, pollution prevention methods, impact assessment approaches. It also publishes guides, textbooks and an information bulletin. BAEM coordinated the Belarusian translation and adaption of Dr Georg Winter's book, *Blueprint for Green Management*.

Established in 1999, affiliated to INEM in October 2001.

BELGIUM

Association Belge des Eco-Conseillers et Conseillers en Environnement (ABECE)

Belgian Association of Eco-Counselors

Heinz Werner Engel, President

ABECE advises local authorities and sectoral federations of professional and educational institutions and helps shape regional and local environmental policies. Main activities are information and experience exchanges, workshops, seminars, publications, tool development and pilot projects.

In early 2000 ABECE and the Belgium Federation for Enterprises developed and published a guide, *Pourquoi et comment gérer l'environnement de votre entreprise? Une brochure de la FED sur le project ISO 14000-EMAS*, on why and how to implement an EMS according to ISO 14000 or EMAS. The French-language guide was distributed to Belgian

companies and was made available for download on the ABECE and INEM websites.

Affiliated to INEM in 2000, Full Member in 2002.

Eco-Conseil Entreprise srl (ECE)

Eco-Counselling Enterprise

Heinz Werner Engel, Administrator

ECE develops sustainable strategies for public and private organizations in Europe and in developing countries. Main offerings: consultancy in environmental and sustainable management systems, training and capacity-building for employees and environmental professionals (traditional and correspondence learning). ECE also develops innovative methodologies and tools like EcoMapping and EMAS/ISO Easy for EMS implementation in micro enterprises, the service sector, government agencies and institutions. ECE also consults enterprises in the service sector in Europe, and in developing countries.

Affiliated to INEM in 2003.

RESSOURCES asbl –

Network of non-profit making companies involved in recovery and recycling

Thibault Jacquet, President

Ressources is a network of non-profit making companies involved in waste recovery and recycling in Wallonia and in Brussels. They support their members by giving visibility to their activities and involving them in innovative projects and partnerships with private and public actors.

Main activities are seminars, publications, pilot projects in companies, and workshops.

Affiliated to INEM in 2005.

BRAZIL

**Sociedade para de Incentivo e Apoio ao
Gerenciamento Ambiental (SIGA)
Brazilian Society for the Support of
Environmental Management**

Prof Dr Dalia Maimon, President

SIGA, the Portuguese word for “follow,” brings together business associations, government institutions and small and medium-sized private sector companies focused on a common objective: the implementation of environmental management systems aligned with the principles of sustainable development. SIGA believes it is essential to implement partnerships to achieve its objectives and has developed designs for both the public and the private sectors. Activities include training on environmental management and environmental marketing, publications and research.

Established in 1991, Full Member in November 1992.

BULGARIA

Clean Industry Center (CIC)

Branimir Natov, Advisor on Environmental Policy

The Bulgarian Industrial Association created the non-governmental, non-profit Clean Industry Center in 1995 to support national, local, and sectoral industry associations and enterprises in achieving sustainable development. CIC fosters the restructuring of Bulgarian industry via cleaner production, waste minimization, low-cost solutions to environmental problems, as well as the implementation of modern environmental management systems.

Established in 1995, affiliated to INEM in 1996.

CANADA

Canadian Chamber of Commerce (CCC), Focus 2000 Division

Tim Reid, CEO and Chairman

Jean-Denis Barry, Coordinator, Focus 2000 Project

Canadian Chamber of Commerce (CCC) represents 500 local and regional chambers of commerce and boards of trade and over 170,000 businesses across Canada. Through FOCUS 2000, its services to small business division, CCC provides practical help on competitiveness issues. The main thrust since the Earth Summit in Rio de Janeiro in 1992 has been environmental management. According to CEO Tim Reid, "Environmental management has become one of the main competitiveness issues, with its gamut of both challenges and opportunities. There is an urgent requirement for enhanced cooperation between trade associations and between governments and the private sector."

Associate Member of INEM in April 1993.

CHINA

National Information Center of Environmental Science and Technology (NICEST)

Zhao Feng, Director

NICEST is an active membership organization dedicated to communicating information about achievements in environmental science and providing an information exchange for businesses, government and institutions throughout China. NICEST has set up the National Network of Environmental Sciences & Technology Information with more than 300 members, the National Network for Environmental Programs with more than 300 members, the National Network for Foreign Communications, and the National Chemical Confederation on Waste-Water Treatment.

Established in 1990, affiliated to INEM in May 1993.

COLOMBIA

Promoción de la Peceña Empresa Eco-Eficiente en Latinoamérica (PROPEL)

Corporation for the Promotion of Small Eco-efficient Enterprises in Latin America

Carlos H. Barragan, General Manager

PROPEL is a non-profit environmental management organization which was established in 1991 as an initiative of the Swiss Foundation for Sustainable Development (FUNDES). PROPEL's mission is to contribute to the sustainable development of especially small and medium-size businesses in

Latin America. Finding eco-efficient and technical solutions at reasonable cost are major objectives, as are increasing productivity and profitability by reducing material- and energy input. PROPEL develops appropriate technologies and provides training, technical assistance, information and funding. PROPEL has programs in Colombia, Chile, Ecuador, Bolivia, and intends to expand to other Latin American countries. PROPEL's mission is to contribute to the sustainable development of Latin America by promoting eco-efficient management and technical solutions to SMEs in the region. It defines eco-efficiency as "an increase in productivity and competitiveness, accompanied by a decrease in the consumption of resources and energy, and a reduction in waste and emissions."

Established in July 1991, Full Member of INEM in November 1994, resigned in 1999.

CZECH REPUBLIC

Ceské ekologické manažerské centrum (CEMC)

Czech Environmental Management Center

Dr Jiří Študent, Executive Director

CEMC is an association of Czech businesses and businesspersons. It was founded in 1992 with the aim of spreading knowledge about environmental management within Czech industry. Right from the start CEMC has had close links with the Ministry of Industry and Trade and the Ministry of the Environment. CEMC's mission is to contribute to the reduction of risks to the environment posed by industrial and other activity, while at the same time helping to improve the efficiency of business enterprises. CEMC functions both as a source of

information about eco-efficiency and as a catalyst, assisting in the introduction of environmental management.

Established in 1992, affiliated to INEM in 1996, Full Member of INEM in May 1997.

Ceské centrum cistsí produkce (CCPC)

Czech Cleaner Production Center

Dr Anna Christianova, Executive Director

CCPC plays a catalytic and coordinating role in promoting cleaner production in the Czech Republic. Its objective is to improve the environmental performance and the competitive advantage of industry by means of cleaner production by involving all relevant stakeholders in the implementation of cleaner production programs with the goal of making Cleaner Production programs self-sustainable.

Established in 1994, affiliated to INEM in 1996.

DENMARK

Foreningen ELM Danmark – Erhvervslivets Ledelsesforum for Miljøfremme (ELM Danmark)

Forum for Environmental Promotion for Business Leaders

Frede Bjerg Petersen, Coordinator

ELM Danmark was founded as a non-profit, independent organization on 2 July 1991 by five well-known Danish companies, Brodene Hartmann A/S, an important producer of moulded paper pulp packaging from 100 % recycled paper, was the prime initiator of ELM. Brødrene Hartmann A/S, InvestMiljø A/S, the Danish State Railway, Renholdningsselskabet af 1898, and

Rendan A/S, Ramboll, Hjannemann & Højlund A/S, Jiffy A/S, Danapak Flexibel A/S, Deloitte & Touche and DIEU became initial members. ELM Danmark applied for membership in INEM on 11 September 1991.

ELM Denmark aimed to encourage companies' responsibility towards the environment, continue the development of the integrated system of environmental management, and facilitate exchange of information via meetings, conferences and consultancy services. Activities include seminars, and counseling and project management in cooperation with external organizations.

Established in July 1991, Full Member of INEM in September 1991. Dissolved by its General Members Meeting in March 1999.

Norskov Miljø

Camilla Jørgensen, Executive Director

Consultancy focusing on SMEs, assists in the implementation of quality and environmental management systems (ISO 9000, ISO 14001, EMAS, OHSAS 18001 and EMA), preparing environmental reports, and helps with environmental labeling. Norskov Miljø also assists trade associations in developing management tools for their members.

Established in 1992, affiliated to INEM in September 2003.

ESTONIA

Eesti Keskkonnajuhtimise Assotsiatsioon

**Estonian Association for Environmental Management
(EAEM)**

Valdur Lahtvee, Chairman

The main objective of EAEM, established in 2003 under INEM's BALTEMA program, is to bring together enterprises, organizations and individuals who need help, support and information related to corporate environmental management for solving environmental problems, reducing impact to the environment and ensuring sustainable development of the society. The Association would like to act as a moderator between enterprises and state institutions and the whole society while representing and protecting its members' interests in environmental issues.

Established in April 1993, Full Member of INEM in September 2003.

**Säästva Eesti Instituut,
Stockholmi Keskkonnainstituudi Tallinna Keskus (SEI-T)
Estonian Institute for Sustainable Development,
Stockholm Environment Institute – Tallinn**
Valdur Lahtvee, Executive Director

SEI-Tallinn is an independent, international research institute specializing in sustainable development and environmental issues established in 1992. Main activities are project development and management, publications, applied research, training, networking, and conferences, seminars, workshops.

Established in 1992, affiliated to INEM in October 2001.

**Pollution Prevention Center at the Estonian Management
Institute (EMI-ECO)**
Anne Randmer, Director

EMI-ECO is a non-profit organization which contributes to sustainable development in Estonia by disseminating knowledge

of effective resource management, measurable economic and environmental benefits from pollution prevention activities. It provides training, technical assistance and on-site consultancy to industries, government and other institutions.

In 1999 EMI-ECO completed a year-long cleaner production project targeting the Estonian wood and furniture industry. In two companies more than 20 cleaner production measures were identified and ten were completed. Five to six additional ones, which required larger investments, were prepared for the application of a so-called "soft loan" from financial intermediaries. The project was sponsored by the Ministry of the Environment of Finland and the Ministry of the Environment of Estonia. A similar project will be carried out in the Estonian engineering industry in the year 2000. In addition, two construction material production companies were assisted in implementing an environmental management system in preparation for ISO 14001 certification. A similar ISO 14001 project targeting the electronics industry was carried out in February 2000.

Established in 1994, affiliated to INEM in 1996.

FRANCE

**Organisation pour le Respect de l'Environnement
dans l'Entreprise (Orée)**

**Organization for the Respect of the Environment
in the Enterprise**

Philippe Marzolf, Executive Director

Orée was founded on 28 November 1992 at the European Parliament in Strasbourg, France by a mixture of companies and local authorities with a mission to bring together

representatives of the two groups and develop partnership projects. Orée is an old French word to describe the edge of a forest. Orée is the first organization in France to develop partnerships between communities and companies based on concrete projects. A primary objective of Orée is to disseminate information and provide SMEs and small communities with help on environmental management. Founding companies include Procter & Gamble, Yves Rocher, Banque Populaire, les Dépôts Pétroliers de Fos, Propétrol, CIC, Clarins, and Avenir-Havas Media. In addition, local authorities, Netcom (an environmental press group), and Institut Eco-conseil. Orée built a network covering all of France's 22 regions. Orée's main objectives are to act as a forum for the exchange of information, knowledge and experiences in all environmental matters. Orée provides a system of technical assistance to SMEs and brings together SMEs and local authorities to achieve a greater synergy in resolving environmental problems. Orée has launched the PALME project which deals with the greening of industrial zones and their eco-labeling. Orée is an initiator of the European Partners for the Environment (EPE) network.

Established in November 1992, Full Member of INEM in 1993, resigned in 1999 (switched to "passive" membership).

ARPE Midi-Pyrénées

Mathilde Angeleri, Counsellor for Environmental Management

ARPE Mid-Pyrénées is a non-profit organization founded in 1991 by the Regional Council of Midi-Pyrénées in France. It aims to improve the environment of the Midi-Mid-Pyrénées region. One of our actions is the promotion of environmental management especially to small and medium-sized

industries and very small agribusinesses in the territory of Midi-Pyrénées.

Established in 1991, affiliated to INEM in 2004.

GERMANY

Bundesdeutscher Arbeitskreis für umweltbewusstes Management (BAUM)

German Environmental management Association

Dr Maximilian Gege, Executive Director

BAUM was founded in 1984 by a group of German entrepreneurs who wanted to support each other in the implementation of environmental management in their companies. Initiator and founder of BAUM was Dr Georg Winter, co-founder Dr Maximilian Gege. BAUM supports the practical realization of integrated and pro-active environmental management by providing and promoting research results, as well as measures proven effective in practice. The main instruments for the above-mentioned goals are information and experience exchanges, employee motivation, events, common and political action, and research. More than 500 companies of all sizes and sectors, non-profit organizations and individuals are members of BAUM.

Established in 1984, BAUM is a Founding Member of INEM.

BAUM Group

Ludwig Karg, Chief Executive Officer

The main goals of the BAUM Group are to advise enterprises in implementing sustainable business processes and designing future-oriented products, advise public authorities on national, regional and local levels on developing and implementing concepts for sustainable development, to develop and coordinate international research, knowledge-transfer and networking.

Established in 2001, affiliated to INEM in October 2001.

Aachener Stiftung Kathy Beys**Aachen Foundation Kathy Beys**

B. Stephan Baldin, Chairman

The Aachen Foundation is a private environmental foundation with a strong entrepreneurial background. The Foundation's main topic is sustainable development, its main goal is to promote the protection of the natural environment and the living conditions of man and animal. National projects include the annual *Aachen Fora for Sustainability* and concepts for a Resource-Input-Optimization (RIO) Economy, which consists of RIO products, services and systems. Regional projects are carried out in the tradition of "think globally, act locally." The Foundation was a cooperation partner of INEM's international conference *Business Opportunities Arising from an innovative Development Policy* held in October 2001 in Berlin.

Established in 1988, affiliated to INEM in October 2001.

**Institut für Kunststoffprüfung und Kunststoffkunde (IKP)
Institute for Polymer Testing and Polymer Science
at the University of Stuttgart**

Dr Matthias Harsh, Director

In 1994 IKP enlarged its Life-Cycle Analysis (LCA) activities on a worldwide basis, focusing on specific energy and material flows of selected raw materials. Additionally, IKP offers consulting services (weak-point analysis, cost-reduction potentials, etc.) within LCA. IKP participated in meetings of ISO/TC 207/SC5 (Life Cycle Assessment) in 1994 as part of the INEM delegation. IKP offers its services to INEM organizations at special conditions.

Affiliated to INEM in 1994.

GREECE

**Hellenic Institute of Environmental Management
(HIEM – INEM Hellas)**

Labros Bouklis, General Secretary

INEM Hellas aims to increase environmental awareness of Greek companies and society. Main activities are seminars, conferences, projects. In 1999 Dr Peter Marx, Environmental Control and Quality Manager of the Athens International Airport (AIA) joined the efforts to create a Greek business association for environmental management, taking on the position of President of the Hellas-INEM Organizing Committee. According to the decision of the Airport's Board, AIA supported INEM Hellas efforts to promote environmental awareness and environmental management practices in Greece.

Established in 2001, affiliated to INEM in October 2001.

HONDURAS

Fundacion para la Inversion y Desarrollo de Exportaciones (FIDE)

Foundation for Investment and Development of Exports

Antonio Young, Executive President

The Foundation for Investment and Development of Exports is a non-profit, private foundation dedicated to strengthening the business and investment climate in Honduras. FIDE has cooperated with INEM since 1996, and as a result of INEM's initiatives, FIDE created an Environmental Center and expanded its operations to organic product certification. In early 2000 FIDE developed an environmental certification services unit in co-operation with Digart Ltd. of Switzerland. FIDE also formed part of the Joint Implementation office in Honduras.

Affiliated to INEM in 1997.

HUNGARY

Környezettudatos Vállalatirányítási Egyesület (KÖVET-INEM Hungary)

Hungarian Association for Environmentally Aware Management

Csaba Bodroghelyi, Executive Director

KÖVET is an association to promote environmentally aware business management to enterprises. It acts as a platform for ongoing information exchange, with the aim of finding new ways for industry to reduce its environmental impacts, and to use this knowledge for competitive advantage. KÖVET's

long-term goal is to assist organizations to become sustainable and responsible to society.

KÖVET organizes training workshops and seminars, conferences and demonstration projects. It publishes guidebooks, collects and distributes environmental management literature, maintains an ongoing information exchange. It is experienced in implementing small- and large-scale European Union and other publicly financed projects.

Established in 1995, Full Member of INEM in February 1996.

INDIA

National Cleaner Production Centre (NCPC)

Surya Prakash Chandak, Director

The National Cleaner Production Centre was established at the National Productivity Council. The setting up of NCPC is part of an initiative taken by the United Nations Industrial Development Organization and United Nations Environment Programme on building cleaner production capacity in developing countries. The main objectives of NCPC are to propagate the Cleaner Production concept in industries, particularly in small-scale industries. The Centre has focused on four broad ranges of activities: information dissemination and awareness creation, training in cleaner production assessment, demonstration projects, and interventions at the policy level. In addition, NCPC has published an introduction to Cleaner Production entitled, *Cleaner Production – All You Wanted to Know but Could Not Ask*.

NCPC was one of the first organizations to test the UNEP/ICC/FIDIC *Environmental Management Systems Training*

Resource Kit in the field. The Czech member of INEM, Czech Environmental Management Center was one of the main developers of the Kit.

Affiliated to INEM in 1995.

IRELAND

Irish Productivity Centre (IPC)

Norbert Gallagher, Head of Unit, Environmental Business Management

By 1992 the Irish Productivity Centre already had accumulated 20 years of experience in working with small and medium enterprises. Traditionally, IPC carried out practical “no-nonsense” in-company consulting on distribution, raising capital, costing systems, etc. In 1992 it responded to an increasing need for environmental management and developed an innovative training scheme for SMEs on environmental awareness and materials utilization. “At IPC we decided to help implement environmental management practices in Irish SMEs through a practical, collaborative training program. We are particularly building on existing experience from other organizations which work with SMEs such as BAUM, INEM’s German member and the Canadian Chamber of Commerce Focus 2000 program,” said Norbert Gallagher.

Established in 1963, affiliated to INEM in December 1993.

Irish Environment and Business Association (IEBA)

Robert Rowan, Chief Executive

Goals of IEBA are to provide companies with a mechanism to demonstrate in practicable ways their concern for the

environment. IEBA's Enviro-Mark program provides an easy-to-use and easy-to-access vehicle for Irish organizations in the private, public and voluntary sectors to certify their environmental performance. Enviro-Mark is a five level, incremental Internet-based environmental management systems certification program. IEBA aims to bring environmental management systems certification to the over 95% of SMEs in Ireland that cannot and will not achieve certification to ISO 14001 and EMAS, thereby having a significant and positive impact on the environmental performance of all our members.

Established in 2000, affiliated to INEM in 2000.

ISRAEL

Society of Industry for Environment (ALVA)

Michael Gill, Coordinator

ALVA was formed with some support by INEM in 1992. ALVA's goals include the distribution of information, through literature and seminars, on the integration of business with environmental protection, and the establishment of an information center on environmentally sound products and environmental standards for various product groups. Activities include environmental information exchanges among industrial companies, supply chain management.

ALVA was founded on 9 December 1991 by Ormat Turbines, the Israeli Manufacturers Association, and the Society for the Protection of Nature, and was officially launched with a presentation by INEM and extensive press attendance in early 1992. The initiators of ALVA were Ormat Turbines with the Israeli Manufacturers Association and the Society for the Protection

of Nature. The Minister of the Environment pledged extensive support.

Established in December 1991, affiliated to INEM in 1992.

Israel Economic Forum for the Environment (IEFE)

Gavrush Shemesh, Chairman

IEFE was established in 1994 incorporating 180 leading businesses, as well as academics in the fields of environmental sciences, economics, and business administration. Its main goals are to minimize the environmental impacts of industrial operations and to help industry and business to reconcile the conflict between the needs of development and the environment. IEFE, in conjunction with the Standards Institution of Israel, held an ISO 14001 training course during the months of October - December 1999. The course consisted of 80 hours of lectures and workshops. IEFE hosted the INEM Partnership Exchange in 1999.

Established in 1991 (as ALVA), affiliated to INEM in 1992. Reorganized as IEFE in 1994, affiliated to INEM in 1996. IEFE became Full Member in INEM in 1999.

JAPAN

Japan Eco-Life Center (JELC)

Ken Morishita, Secretary-General

Christian Semonsen, International Liaison

The Eco-Life Center's activities include organization of the Eco-Life and Business Network meetings, provision of information on environmentally friendly businesses and products,

project coordination, research and development of environmentally friendly products, conferences, and publications. JELC has cooperated with the Japan Environment Association on the development of the Japanese eco-labeling system (Eco-Mark) and with the Japanese Consumers Cooperative Union on sustainable lifestyles. Members include Co-op Japan, Taiyo Kobe Mitsui Bank and Tokyu Railways. JELC was co-organizer of INEM's second International Industry Conference on Sustainable Development.

Established in June 1991, Full Member in 1992. JELC left INEM in 1995.

JORDAN

Jordanian Network for Environmentally Friendly Industries (JNEFI)

Friends of Environment Society

Raouf Dabbas, President

JNEFI aims to increase environmental awareness and provide assistance to youth and industry. Activities include environmental training, workshops, field visits and exchange programs, and environmental services for the industrial sector.

Established in 1994, affiliated to INEM in October 2001.

LATVIA

Latvijas vides pārvaldības asociācija (LVPA)

Latvian Association for Environmental Management (LAEM)

Alina Dudele, Executive Director

LAEM builds capacity in sustainable development in Latvian business and society. It assists Latvian enterprises and municipalities in implementing environmental management, cleaner production, and sustainable patterns of consumption and production. LAEM organizes experience exchanges and roundtables with manufacturers, legislative and financial institutions, and develops and carries out demonstration projects in co-operation with local and foreign experts. LAEM trains Latvian companies, local authorities and other interested parties, tailoring training programs to various audiences, e.g., awareness-raising for top management.

Established in 2003, Full Member of INEM in September 2003.

Latvijas Piesarnojuma Profilakses Centrs (LPPC)

Latvian Pollution Prevention Center

Janis Plavinskis, Director

LPPC is a non-profit organization working towards promotion and practical implementation of preventive environmental and health protection strategies such as Cleaner Production, Environmental Management Systems and others, thus contributing to the improvement of quality of life and environment in Latvia. LPPC offers consultations and multi-level training on a wide range of environmental protection issues and performs data-collection and analytic research projects. To maintain the highest possible competence level, LPPC cooperates with local and foreign partner organizations.

Established in 1995, affiliated to INEM in 1998.

LITHUANIA

Inžinerinės Ekologijos Asociacija (IEA)

Engineering Ecology Association of Lithuania

Dr Rimas Budrys, President

EEA represents the interests of environmental protection of the Confederation of Lithuanian Industrialists. EEA contributes to the preparation of environmental legislation, programs and projects. Activities include pollution prevention and ablation of hazardous materials. EEA specialists assisted in preparing a national program for hazardous waste management in 1997. EEA also had developed expertise in ISO 14001 implementation by sending specialists abroad for training, for example, to Sweden. Beginning in 1997 EEA introduced ISO 14001 international environmental management standards to Lithuanian companies and government agencies. By 1998 EEA had 10 trainers qualified to provide courses and lectures on ISO 14001 implementation. The Lithuanian Environmental Protection Ministry and the Ministry for the Economy recognized EEA as an implementing institution for ISO 14001 environmental management systems.

Established in 1994, affiliated to INEM in 1996.

Aplinkos vadybos ir audito institutas

(AVAI INEM-Lithuania)

Environmental Management and Auditing Institute

Dr Eduardas S. Davidavičius, Head of Institute

At the beginning of 1999, the Confederation of Lithuanian Industrialists and the Engineering Ecology Association created the Institute of Environmental Management and Auditing

(AVAI). The main goals of AVAI are to assist Lithuanian enterprises in implementing environmental requirements, and in integrating into the EU. Activities include consultations, environmental management system implementation, publications and projects.

Established in 1997, affiliated to INEM since 1998.

Aplinkos Inzinerijos Institutas (APINI)
Institute of Environmental Engineering at the
Kaunas University of Technology
Prof Jurgis Staniskis, Director

The Institute of Environmental Engineering (APINI) was established in 1991 as an independent, interdisciplinary, research institute affiliated with Kaunas University of Technology, the largest school of higher education in Lithuania. APINI assists organizations to prepare and introduce low-cost waste and pollution minimization measures, including managerial improvements and good-housekeeping practices, and helps companies to integrate pollution prevention and cleaner technologies and environmental management systems into their long-term business plans. APINI provides technical assistance to enterprises and conducts seminars and training courses for industry and other relevant parties in co-operation with local and foreign specialists.

Established in 1991, affiliated to INEM in 1998.

MALAYSIA

Environmental Management and Research Association of Malaysia (ENSEARCH)

Dr Jin Lee, Honorary Secretary-General

Environmental Management and Research Association of Malaysia (ENSEARCH) is a professional organization recognized and supported by government agencies, private enterprises and leading individuals and institutions formed on 24 February 1984. ENSEARCH is an independent, non-profit national body of all interested parties in the field of environmental research and management. The governing council of ENSEARCH is equally composed of professionals from government, private consultancies, academic and research institutions, contractors, suppliers and other environmental service industries. The aims of ENSEARCH are to help Malaysians to be environmentally aware and committed to take personal responsibility to manage and mitigate the impacts of their corporate, professional and daily living activities on the environment. ENSEARCH organised meetings, seminars, conferences and publications.

Established in 1984, Full Member of INEM in November 1994.

MOZAMBIQUE

Forum Empresarial para o Meio Ambiente (FEMA) Business Forum for Environmental Management

João Viseu, Executive Director

FEMA is a non-governmental, non-profit organization that links companies from industrial, agricultural, commercial, transport and service sectors of the Mozambican economy. It aims at sustainable development of renewable resources and optimal use of non-renewable resources by promoting a balance between the environmental impact of economic activities and the quality of life for all Mozambicans.

Established in 1996, affiliated to INEM on 25 January 1996.

THE NETHERLANDS

Stichting Nationaal Milieucentrum (NMC)

National Environmental Centre of the Netherlands

Hans Meulenbeld, Managing Director

NMC organized the 1995 European Roundtable on Cleaner Production on 1-3 November 1995.

Full Member in October 1995, resigned in 1997.

Centre for Energy Conservation and Environmental Technology (CE)

Jan-Paul van Soest, Director

The Centre for Energy Conservation and Environmental Technology (CE), founded in 1978 in Delft, joined INEM as an affiliate at the beginning of 1993. CE is an independent not-for-profit research and consultancy agency specialized in developing innovative solutions to environmental problems. CE aim is to assure continuing wealth and useful employment through a reduction in the use of energy, environment and resources. CE consists of a foundation and an association. The

association includes the Business Group with a membership of 200 companies, including most Dutch energy firms and many large multinationals like 3M, Ahold, Akzo, Dow Benelux, Lever BV and Procter & Gamble, and 11 non-governmental organizations, including environmental and consumer groups. The foundation carries out research and consultancy.

Established in 1978, affiliated to INEM in 1993, resigned in 1997.

THE PHILIPPINES

Philippine Business for the Environment (PBE)

Grace F. Favila, Executive Director

Six months before the Earth Summit, held in June 1992 in Rio de Janeiro, a group of leaders of large business in Manila, concerned by the growing degradation and wanton destruction of the country's natural resources, formed the Philippine Business for the Environment. A non-stock, non-profit group, PBE was formed to assist Philippine business address environmental issues and concerns by conducting environmental enhancement projects, training, education and awareness seminars, assistance in the development of regulatory policies, and intermediate between communities, business and government in environmental issues.

PBE is working for an economically developed, yet environmentally healthy Philippines where business and industry act responsibly to protect the environment for the present and future generations, through the pursuit of sustainable development programs, i.e., where economic growth is balanced with environmental responsibility.

Established in 1992, Full Member of INEM in November 1992, resigned in 1999.

POLAND

Polskie Forum ISO 14000 – INEM Polska

Polish Forum ISO 14000 – INEM Poland

Andrezej Ociepa, Executive Director

INEM Poland was officially launched on 10 October 1997 on the occasion of INEM's 2nd *Eco-Baltic Conference* in Gdansk, Poland. Andrzej Gerhardt, of the Centrum Srodowiska I Rozwoju was named Interim Executive Director. The goal of INEM Poland is to help Polish companies improve their environmental performance. Initial activities included production of a newsletter, a series of seminars on ISO 14001 environmental management systems, a survey on the status of environmental management in Polish companies (part of INEM's GEMS program), and translation and adaption of the second English edition of Dr Georg Winter's book *Blueprint for Green Management* into Polish. It was published in December 1998. By the time INEM Poland became a Full Member in INEM on 9 May 1999, it had carried out another project that implemented quality and environmental management systems in two Polish hospitals.

The project (funded by the DBU) for founding INEM Poland began in January 1997. INEM Poland became Full Member of INEM in May 1999.

ROMANIA

Centru de Prevenire a Poluari (CPP)

Pollution Prevention Center Bucharest

Dr Vladimir Gheorghievici, Director

PPC's main goals are to assist managers and specialists in industrial plants to implement pollution prevention programs and environmental management systems. PPC acts as a clearing house on information for environmental products and services, and performs environmental impact assessments, environmental mass balances and risk analyses for energy and industrial and waste treatment plants.

Established in 1995, affiliated to INEM in 2002.

Fundatia pentru Parteneriat (FPP)

Romanian Environmental Partnership Foundation

Eco Business Program

Judith Molnár, Eco Business Program Manager

The main goal of REPF is to support the improvement of the environment and the development of the communities in Romania by contributing to the formation of a sustainable society that enhances democratic values. The Eco Business Program encourages public/private partnerships and improves the competence of SMEs by addressing environmental issues in everyday business activities. Program objectives include encouraging small businesses to implement environmental management systems, in order to lower costs and increase competence.

Established in 1999, affiliated to INEM in 2004.

RUSSIAN FEDERATION

Institute of Natural Resources Management (INRM)

Dr Aleksej E. Ignatiev, Director

INRM specialist in environmental consulting in the Russian Federation. It performs HSE audits, advises on economic compensation for natural resource use, and develops environmental policy and legislation, and implements environmental management systems. INRM disseminates information on implementation of the ISO 14000 series of environmental management standards. INEM performs environmental impact assessments of gas and oil production and transportation.

Established in 1991, affiliated to INEM in 1995.

Ecoline

Tatiana Guseva, Research Director

EcoLine tries to promote and disseminate environmental management system approaches in Russia by improving institutional conditions, training, awareness raising and direct consultation. EcoLine also produces publications on environmental management systems. EcoLine maintains a website that features sections on environmental management with an open forum and informal register of ISO 14001-certified companies in Russia. Ecoline also participates in ISO/TC 207 Environmental Management Standards process.

Established in 1995, affiliated to INEM in October 2002.

SLOVAK REPUBLIC

Asociácia priemyselnej ekológie na Slovensku (ASPEK)

Association of Industrial Ecology in Slovakia

Andrej Soltes, Section Director

ASPEK is a non-governmental, voluntary and independent non-profit organization that brings together industrial production companies and other entities which cause environmental pollution and strive for its solution on one hand, and consulting, design, production and other companies delivering services and products, contributing to the solution of industry environmental problems on the other.

Established in 1993, Full Member of INEM in February 1996.

Slovak Cleaner Production Centre (SCPC)

Dr Viera Fecková, Director

SCPC aims not only to assist companies in solving environmental problems, but also to achieve a change of values and priorities benefiting environmental protection. Its mission is to spread, promote and support the use of pro-active methods in environmental protection.

Established in 1994, affiliated to INEM in 1996.

SLOVENIA

Institut za Ekoloski Management (DREVO)

The Institute for Environmental Management

Polona Blagus Smonig, Executive Manager

DREVO was established by the Association of Slovenian Managers (Manager) in 1992. (“Drevo” is the Slovene word for tree.) Its main goals are to promote environmental management in Slovenia and to exchange experience with other sister organizations all over the world. DREVO organizes conferences and seminars, participates in international conferences and symposia, and conducts research and pilot projects on national and international level. A major project in 1993-1994 was the implementation of an Environmental Accounting methodology developed by INEM’s Swiss Affiliate ÖBU. In September 1995, DREVO hosted the SPRINT ’95 meeting to prepare CEE industry input to the pan-European Sofia Ministerial Conference: Environment for Europe held on 25–27 October 1995.

Established in 1993, affiliated to INEM in 1993, dissolved in 1999.

SOUTH AFRICA

Industrial Environmental Forum of Southern Africa (IEF)

Jon Hobbs, Coordinator

On 21–22 March 1990 ESKOM, South Africa’s leading energy provider, organized the conference *The Business of Environmental Management* in Johannesburg to inform Southern African business and industry about the Winter Model and the roles and benefits of national business associations for environmental management. More than 400 decision-makers attended. IEF was subsequently founded in August 1990 by Eskom and a group of South Africa’s leading businesspersons and industrialists who were concerned about deteriorating environmental

quality and the implication that industry and commerce are principal agents in this trend.

IEF is the only member organization of INEM that explicitly aims to go beyond its own borders, working on a regional basis with Mozambique, Zimbabwe, Namibia.

Established in August 1990, Full Member of INEM in 1992.

SPAIN

Ingurumen Jarduketarako Sozietate Publikoa (IHOBE) Public Society for Environmental Management of the Basque Country

Ander Elgorriaga, Coordinator CP, EMS and Ecodesign

IHOBE is a publicly owned company that strives to activate all the actors of the Basque Country to improve environmental performance of industry and local authorities. Its main activities focus on environmental and sustainable strategic planning, sustainability in municipalities – Local Agenda 21, innovation and improved environmental performance in companies. Every year about 1 million technical guidelines in the form of PDF files are downloaded from IHOBE's website, making it the most popular website on the environment in Spanish.

Established in 1983, affiliated to INEM in 2000.

SWEDEN

Näringslivets Miljöchefer (NMC) Swedish Association of Environmental Managers

Anne Örtegren, Secretary of the Board

The Swedish Association of Environmental Managers (NMC) is a network for environmental managers, which was founded in February 1994. The main objective of NMC is to develop environmental management in the Swedish industry and economy by creating an interchange of experience and knowledge between environmental managers. Another aim is to provide information and education for its members. To achieve this, NMC arranges frequent meetings and seminars, field trips and courses as well as a web-based platform for information and communication between members. In June 2007, NMC had 270 members, representing a broad spectrum of the Swedish commercial and industrial sector, e.g., engineering, forestry, chemistry, energy, commerce, transportation and finance, as well as the public sector.

The previous INEM member association, Svenska BAUM dissolved in 1992, and its chairman, Mr. Rolf Henriksson, who also served as INEM Vice-Chairman, was named to the NMC Board of Directors.

Established in October 1990 as Svenska BAUM, disbanded in 1992, reorganized as Swedish Association of Environmental Managers in February 1994. Changed membership status from Full to Affiliated Member in 2001. Svenska BAUM was Founding Member of INEM.

SWITZERLAND

**Schweizerische Vereinigung für ökologisch bewusste
Unternehmungsführung (ÖBU)**

Swiss Association for Environmental Management

Gabi Hildesheimer and Sabina Döbeli, Executive Directors

The main goals of ÖBU are to move the Swiss economy towards sustainability. Its main activities include conferences, projects, political lobbying and trainings. ÖBU also develops tools and case studies to help Swiss companies improve their environmental performance. Through action groups, seminars and a steadily growing network, ÖBU seeks to promote the importance of environmental issues in business management, experience exchange and practical development and application of the instruments of environmental management. ÖBU supports pilot projects and cooperation between business and universities. ÖBU also publishes reports based on both practical experience and scientific texts.

Established in 1989, affiliated to INEM in 1992, Full Member of INEM on 29 February 1996.

TANZANIA

Kituo Cha Uzalishaji Bora Na Hifadhi Ya Mazingira Tanzania (CPCT)

Cleaner Production Centre of Tanzania

Prof Cleophas L. C. Migiro, Coordinator

The goals of CPCT are to promote ecologically sustainable industrial development in Tanzania. Activities include seminars, workshops, newsletters, brochures, in-plant demonstrations/assessments, environmental impact assessments, case studies, video.

Established in 1995, affiliated to INEM in 1997.

TAIWAN

Taiwan Environmental Management Association (TEMA)

Dr Shen-yann Chiu, Director

Founded in 1988, TEMA has a vision to become a premier organization for promoting and implementing environmental management systems in Taiwan. TEMA serves its membership by providing technical information, and training and networking opportunities. The association also assists government agencies spearheading in the ISO 14000 program by promoting the EMS concept, maintaining high implementation quality, developing associated tools and procedures, and formulating effective public policies.

Founded in 1988, affiliated to INEM in October 2001.

TUNISIA

Centre de production Plus Propre (CP3 INEM-Tunisia)

Rachid Nafti, Director

CP3 INEM-Tunisia promotes cleaner production practices and environmental management systems that will enable small- and medium-sized industries in Tunisia to save money, improve productivity and reduce pollution. CP3 INEM-Tunisia offers technical, analytical and information support to facilitate the introduction of environmental management systems and clean technologies. CP3 INEM-Tunisia contributed to the Environmental Good Housekeeping Guide for Small and Medium-sized Enterprises, which was developed by the

German Agency for Technical Cooperation (GTZ) and disseminated worldwide by INEM.

Affiliated to INEM in 1995.

Centre International des Technologies de l'Environnement de Tunis (CITET)

Tunis International Centre for Environmental Technologies

Belgacem Hanchi, Director General

CITET was established to strengthen capacities in environmental protection and the sustainable management of natural resources in Tunisia, Africa, and the Arab and Mediterranean countries. CITET coaches companies in environmental good practice and ISO 14001 implementation. It also provides technical assistance and promotes cleaner and environmentally friendly technologies. CITET participates in international cooperation programs and seeks to develop new international cooperation projects.

Established in 1990, affiliated to INEM in 2004.

THE UKRAINE

Environmental Education and Information Center (EEIC)

Dr Vladimir Tikhii, Executive Director

EEIC was founded in 1993 by the Ukrainian Ministry for Environmental Protection and the University of Kiev Mohyla Academy. In 1994 EEIC joined the Environmental Management Training Centers Network, which is managed by the Regional Environmental Center for Central & Eastern Europe (REC)

based in Budapest. In 1995 EEIC was re-registered as a non-profit, non-governmental organization. EEIC aims to introduce modern methods of environmental education and management, and to build capacity for tackling the environmental problems of the Ukraine and work towards sustainability.

Established in 1993, affiliated to INEM in 1995.

UNITED ARAB EMIRATES

Zayed International Prize for the Environment

Dr Eisa M. Abdellatif, Director

The Zayed International Prize for the Environment is a non-profit organization that aims at promoting and encouraging outstanding and pioneering achievements towards environmental protection and sustainable development. The Zayed Prize awards one million dollars to the best environmental achievements worldwide. INEM, in co-operation with the United Nations Development Programme (UNDP)-United Arab Emirates and the Zayed Prize held a two-day seminar on ISO 14001 in Dubai on 27–28 November 1999. Subsequently, INEM's Executive Director Dr Zadok Lempert signed a Memorandum of Understanding (MoU) with Colonel Bin-Fahad, Chairman of the Zayed Prize and Mr. Adel M. Khalifa of UNDP-UAE to introduce environmental management to UAE industries. In addition, the Zayed Prize will act as an organizing committee for creating an INEM association in the Emirates.

Affiliated to INEM in 1999.

UNITED KINGDOM

Technology, Research and Enterprise for the Environment (TREE UK)

Ian Blair, Chairman

Mike Carver, General Secretary

The TREE Student Initiative (Team of Responsible Entrepreneurs for Environmental Management) was founded at Leeds Polytechnic by a group of English and German students in March 1989. The TREE Student Initiative organized the conference, *The Greening of Management: Challenge of the 90s – Taking an active stance in environmental management*, on 27 March 1990 in London. It was attended by over 50 organizations, leading to the foundation of the British Environmental Management Association (TREE UK) in 1990. Among its accomplishments, TREE UK supported the British Standards Institute in bringing the British Standard BS 5750 to the International Organization for Standardization (ISO 9) in Geneva, as a contribution to the definition of internationally standardized environmental standards.

TREE SI remained the youth branch of BEMA, providing a link between education and business, and ensuring that as students' careers progress, their decisions will be influenced by environmental management.

Established in 1990, Full Member of INEM in September 1991. Dissolved in 1993.

Engineering Employers' Federation East Midlands Association (EEFEMA)

Richard Putnam, Principal Training Executive and European Projects Manager

Tom A.M. Chalmers, Project Coordinator

EEF is a manufacturers' organization helping thousands of companies to evolve and compete in a fast-changing world. EEF is dedicated to the future of manufacturing. Specific programs focus on resource efficiency, cutting energy costs, eliminating waste, and environmental legislation and regulations. In August 1992 Dr Winter made a presentation on "Business and the Environment" at the conference, *Greening the Supply Chain*, organized by EEF EMA in Barleythorpe.

Affiliated to INEM in August 1992.

**14000 & One Solutions, part of White Young Green
Environmental Ltd.**

Matthias Gelber, Director of EMS

The consultancy 14000 & ONE Solutions Ltd. provides environmental management systems services, consultancy, training, coaching, and international project management. Mr. Gelber served as INEM's representative to ISO/TC 207, served as ISO 14000 resource person for INEM organizations, and has provided ISO 14001 training under a number of INEM projects.

Established in 1999, affiliated to INEM in 2000.

UNITED STATES

Greentrack Strategies – GT Strategies and Solutions

Ira Feldman, President

Leading USA-based provider of strategic environmental and sustainability services helping both private sector and public

sector organizations achieve environmental excellence and adopt sustainable business practices. Ira Feldman and other Greentrack senior staff participate actively in domestic USA and international policy and standards-setting initiatives, serving as USA delegates or “experts” to the International Organization for Standardization (ISO), the Global Reporting Initiative (GRI), and various United Nations activities such as UNEP-FI and UNCTAD-ISAR.

Established in 1996, affiliated to INEM in 1999.

DePaul University, College of Commerce

Jeanne M. Maloney, Executive Assistant to the Dean

Affiliated to INEM in 1995.

VIETNAM

Vietnam Productivity Centre (VPC)

Thi Bich Hang, Director

Established in 1997 under the Directorate for Standards and Quality, VPC acts as the core of Productivity and Quality Movement in Vietnam and implementing agencies for the Asian Productivity Organization programs. VPC offers a diverse range of services to local enterprises, including ISO 14000 and ISO 9000 consultancy and training. One of the greatest success stories of VPC is its Green Productivity Program, which is recognized by the International Green Productivity Association as being “a pioneer in Green Productivity implementation for improving quality of life at the community level”. The goal is to improve the environmental and socio-economic situation of

communities and to then expand GP into the industrial sector. The approach within industries is to integrate GP with an EMS such as ISO 14000.

Established in 1997, affiliated to INEM in 2004.

ZIMBABWE

Environmental Forum of Zimbabwe (EFZ)

James W. Harrower, Chairman

EFZ was established in 1992 by a group of leading businessmen in Zimbabwe who were concerned about deteriorating environmental quality and the implication that industry and commerce are amongst the principal agents in this trend. A 10-point Code of Conduct was adopted to provide a guiding framework within which the Forum addresses its goal of achieving greater harmony between meeting development needs whilst ensuring the long-term quality and viability of the environment.

Established in May 1992, Full Member of INEM in June 1993. Resigned in July 1996.

Cleaner Production Centre of Zimbabwe (CPCZ)

Lewin Mombemuriwo, Director

CPCZ was formed in 1994 by UNIDO/UNEP-IE in connection with the Environmental Forum of Zimbabwe with the objective of assisting industry and commerce to obtain sustainable improved performance, improve productivity and reduce pollution. CPCZ specializes in training industry in the use of cleaner technologies to reduce the amount of waste and pollution it produces.

Established in 1994, affiliated to INEM in 1995.

INEM ORGANIZING COMMITTEES

CHILE

Red Inter Empresarial de Gestion Ambiental (RIEGA-INEM Chile Organizing Committee)

Nicola Borregaard

Centro de Investigacion y Planificacion del Medio Ambiente

Established in 1994 by Mr. Oscar Knust, re-established in 1996.

CROATIA

INEM Croatia Organizing Committee

Nenad Maljkovic

Croatian Business Council for Sustainable Development

Established in 1997.

GHANA

INEM Ghana Organizing Committee

Neustadt Amarteifo

EMPRETEC Ghana Business Advisory Service

Established in 1997.

NEPAL

INEM Nepal Organizing Committee

Rajesh Kazi Shrestha

Nepal Chamber of Commerce

Established in 1994.

PAKISTAN

INEM-Pakistan Organizing Committee

Dr Junaid Ahmad

Federation of Pakistan Chambers of Commerce and Industry

Established in 2000.

RUSSIAN FEDERATION

INEM-Central Russia Organizing Committee

Dr Yuri V. Piskulov

Environmental Committee of the Russian Chamber of
Commerce and Industry

Established in 1997.

INEM-Northwest Russian Organizing Committee

Stanislav Ozjabkin

SOFDEC Ltd.

Established in 1997.

INEM Ural Organizing Committee

Dr Sergey A. Medenkov

Asha Steel Mill

Established in 1994.

SPAIN

INEM Spain Organizing Committee

Alberto Guerra Suárez

Gerente

Established in 1997.

Appendix B

THE TOKYO APPEAL

Towards an Industrial Agenda for Sustainable Development

At the Earth Summit in Rio de Janeiro in June 1992, the United Nations adopted *Agenda 21*, a blueprint for concerted action to achieve sustainable development, and in its Chapter 30 called on industry and business to “be full partners in the implementation of sustainable development,” a strategy for social and economic development which does not jeopardise the Earth’s environmental integrity.

We recognise that in recent years, business and industry have made significant efforts towards reducing the impact of industrial activities on the environment, including the investment of considerable resources into the development of environmental management systems and environmentally benign technologies. Yet, we acknowledge the need to further define the role of business and industry in implementing policies for sustainable development.

The next step for business and industry, one year after the Rio Earth Summit, is to operationalize their role towards achieving Sustainable Development by creating an Industrial Agenda 21 which includes quantifiable and measurable objectives.

The *Industrial Agenda 21* should be set by the industry of each country, taking into account cultural, social and

technological differences, and the needs of other sectors. These efforts might eventually lead to a *Global Industrial Agenda 21*.

We believe that the challenge of sustainable development requires not only improved in-house environmental performance, but also active and responsible involvement by corporations in their local communities and at the regional and global levels. As a part of this involvement, we believe that the development of creative partnerships between small and large companies and between business and other sectors is essential to the successful implementation of the Industrial Agenda.

For example, we encourage cooperation with local authorities worldwide, recognising their efforts to implement *Local Agenda 21*. We also recognise the special needs of developing countries and call upon industry to encourage capacity-building. In addition, governments need to help create a stable economic and political framework compatible with the goals of sustainable development, and which is introduced in reasonable and predictable steps.

Therefore, we call upon all interested corporations and industrial and commercial organisations to participate in a process of dialogue to define this agenda, and encourage individual business sectors or corporations to create their own Industrial Agendas for Sustainable Development.

Appendix C

THE INDUSTRIAL AGENDA 21

An Action Plan for the Implementation of Agenda 21

We the undersigned, believe that responsible entrepreneurship can play a major role in improving the efficiency of resource use, minimizing wastes and protecting human health and environmental quality. We recognize that the pursuit of economic growth and a healthy environment are inextricably linked. We believe that environmental management must be given the highest priority since it is a key to moving to sustainable practices. As part of this move, and in accordance to Chapter 30 of *Agenda 21: The United Nations Programme of Action from Rio*, we will endeavour to ensure that our policies and business actions promote sustainable development by adopting the following actions:

- We shall adopt an environmental code of conduct.
- We shall strive to develop policies that result in operations and products that have lower environmental impacts.
- We shall strive to make environmentally sound technologies available to affiliates in developing countries without prohibitive costs.
- We shall encourage overseas affiliated to modify procedures in order to reflect local ecological conditions and share information with governments.
- We shall strive to form partnerships with our suppliers to help them improve their environmental performance.

And, going beyond the suggestions of *Agenda 21*,
– We shall establish and publish quantifiable and measurable
environmental goals for our company.

We encourage other businesses and industries to endorse the Tokyo Appeal and develop an *Industrial Agenda 21* for their own firms. Furthermore, we encourage business and industry to cooperate with industry associations to develop *Industrial Agendas 21* for their sectors, and their countries. Ultimately, we hope that these *Industrial Agendas 21* could be combined and transformed into a *Global Industrial Agenda 21*.

Signed _____

Title _____

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