



Sustainable Development,
SMEs and New Enterprises
Conference Report



EUROPEAN FOUNDATION
for the Improvement of Living and Working Conditions

Sustainable Development, SMEs and New Enterprises

The European Foundation for the Improvement of Living and Working Conditions is an autonomous body of the European Union, created to assist the formulation of future policy on social and work-related matters. Further information can be found at the Foundation Web site at <http://www.eurofound.ie/>

Sustainable Development, SMEs and New Enterprises

Report of a European conference held at the
European Foundation for the Improvement
of Living and Working Conditions, Dublin
12-13 October 2000



EUROPEAN FOUNDATION
for the Improvement of Living and Working Conditions

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Conference organisation

Preparatory Working Group:

Yorick Benjamin, EDEN, The Netherlands
Carola Bouton, European Commission, Belgium
Torsten Dahlin, Svensk Industridesign, Sweden
Jan Kahr Frederiksen, FTF, Denmark
Mark Hilton, ECOTEC Research & Consulting Ltd, UK
Bernard Le Marchand, FEMGE, Belgium
Gerda Loewen, European Commission, Belgium
Margareta Mårtensson, SAF, Sweden
Christina Theochari, Athens Labour Centre, Greece
Andreas Tschulik, Ministry of Environment, Youth and Family Affairs, Austria
Hans van Weenen, IDEA, The Netherlands
Gerard Zwetsloot, TNO Arbeid, The Netherlands

Research managers

Henrik Litske and Michel Miller, European Foundation for the Improvement of Living and Working Conditions

Information liaison officer/conference rapporteur

John Hurley, European Foundation for the Improvement of Living and Working Conditions

Conference secretariat

Sarah Farrell and Christine Gollin, European Foundation for the Improvement of Living and Working Conditions

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Foreword

Sustainable development is one of the key objectives of the European Union's Treaty of Amsterdam. Since the mid-1980s the environment, and subsequently sustainable development, has been a pivotal element of the Foundation's work programmes. During the period 1997-2000 the Foundation developed activities specifically aimed at the social partners and policy makers involved at European level. Foundation research identified mechanisms to facilitate sustainable development in areas such as economic incentives, product design, environmental management, and training and education.

Another concern of European policy makers is the performance of small and medium sized enterprises (SMEs). Foundation research demonstrates that these companies and new entrepreneurs often hold the key to innovative solutions to environmental problems.

Against this background, the Foundation organised a conference with the target audience in October 2000, the objective being to identify further information strategies for the Foundation's activities on sustainable development.

The report you have in your hands is one of the outcomes of this debate.

Raymond-Pierre Bodin
Director

Eric Verborgh
Deputy Director




Contents

Introduction	1
PLENARY SESSION 1: SUMMARIES OF THE PRESENTATIONS	3
The aims of the conference	3
Eric Verborgh, European Foundation for the Improvement of Living and Working Conditions	
The Foundation's initiatives on sustainable development and SMEs	5
Henrik Litske, European Foundation for the Improvement of Living and Working Conditions	
Supporting sustainable development in SMEs in Eastern Europe	8
Robert Coyle, European Bank for Reconstruction and Development	
Management systems, certificates, labeling: how many can a small company manage?	10
Margareta Mårtensson, Swedish Employers' Confederation	
Sustainable Development Online	12
Yorick Benjamin, EDEN (Netherlands) and John Hurley, European Foundation for the Improvement of Living and Working Conditions	
PARALLEL SESSIONS: SELECTED PRESENTATIONS	15
Environmental and health & safety management and SMEs	15
Gerard Zwetsloot, TNO (Netherlands)	
UK-Ireland Acorn project	17
Michael Jones, Department of Trade and Industry (UK), Norbert Gallagher, Irish Productivity Centre and Gary Prunty, Century Homes (Ireland)	

Health and safety and environmental management in German SMEs	21
Lena Weller, IQ Consult (Germany)	
The branch code path: a successful approach for microfirms	23
Gerard Roorda, HBA (Netherlands)	
SME support for sustainable development: principles and practice	25
Mark Hilton, ECOTEC (UK)	
Case study: Enterprise Ireland's environmental support for SMEs	28
Dorothy Maxwell, Enterprise Ireland	
Case study: Centre per a l'empresa i el medi ambient	30
Beatriz Parrilla Chroszcz, CEMA (Spain)	
Case study: Wastebusters and waste minimisation	32
Lesley Millett, Wastebusters (UK)	
Crops for sustainable enterprise	33
Yorick Benjamin, EDEN (Netherlands)	
Case study: The use of palm tree leaves by SMEs	34
Michel Ferry, Phoenix Research Station (Spain)	
Trends in environmental education and training provision	35
Antonio Corral Alza, IKEI (Spain)	
PLENARY SESSION 2: SUMMARIES OF THE PARALLEL SESSIONS	37
Group I: Product design – practical examples of SMEs	37
Rapporteur: Hans Van Weenen, IDEA (Netherlands)	
Group II: Support systems for SMEs	39
Rapporteur: Mark Hilton, ECOTEC (UK)	
Group III: Training needs of SMEs	41
Rapporteur: Luigi Doria, Università Bocconi (Italy)	
Group IV: Environmental and health & safety management	42
Rapporteur: Gerard Zwetsloot, TNO (Netherlands)	
Open discussion session: summary of main points	44



FINAL ROUND TABLE PRESENTATIONS	45
Contributions from Dominique Bé (European Commission), Luc Hendrickx (UEAPME), Antonio Giacché (ETUC), Michael Niemczyk (Die Effienz Agentur, NRW), Gary Prunty (Century Homes).	
Concluding remarks	52
Eric Verborgh, European Foundation for the Improvement of Living and Working Conditions	
ANNEX A	53
List of presentations and papers submitted for conference	
ANNEX B	55
Conference programme	
ANNEX C	60
Conference participants	
ANNEX D	70
Recent Foundation publications on sustainable development	




Introduction

Background

Small and medium-sized companies and new enterprises play a key role in implementing the policies on sustainable development. The Foundation had these companies particularly in mind when designing its sustainable development programme for 1997-2000. These activities cover eco-design, economic incentives and training.

Aims of the conference

The main aims of this conference were:

- To evaluate, debate and disseminate Foundation initiatives in the area of sustainable development;
- To identify further dissemination strategies and options for SMEs;
- To identify information needs of SMEs.

Organisation

The conference comprised a plenary session and four parallel sessions. The parallel sessions addressed the following themes:

- Product design: practical examples of SMEs;
- Support systems for SMEs: innovative examples;
- Training needs of SMEs;
- Evaluation of draft Foundation report on Factors and Processes leading to Successful Design.

Target groups

The target groups of the conference were:

- The social partners;

- SME support organisations and financial institutions;
- The media;
- SMEs;
- European policy-makers, e.g. government representatives.

70 participants took part including a number nominated by UNICE and ETUC. The conference was publicised on the Foundation's website (www.eurofound.ie). While participation was by invitation only, provision was made to circulate the conference report after publication to all who had expressed an interest in attending.



Plenary session 1 Summaries of the presentations

Chair: Margareta Mårtensson

The aims of the conference

Eric Verborgh, Deputy Director, European Foundation for the Improvement of Living and Working Conditions

Eric Verborgh introduced the host organisation and outlined the mains of the conference.

The European Foundation for the Improvement of Living and Working Conditions is an autonomous body of the European Union, established in 1975, to improve living and working conditions by developing and disseminating knowledge about these issues. Its programme of work consists mainly of research with the aim of advising the Community institutions about the factors that may influence change in living and working conditions.

The Foundation is an autonomous body but is also part of the family of EU institutions. It is governed by an Administrative Board whose membership includes representatives from the European Commission, member state public authorities as well as social partner organisations (employers and trade unions) and which meets twice a year at the Foundation.

The Foundation celebrates its twenty-fifth anniversary this year and the anniversary booklet sets out the role of the Foundation according to four different types of intervention:

- The Foundation is a policy instigator not a policy maker; through our work we assist the policy makers by bringing to their attention new or emerging issues;

- The Foundation is a network builder and facilitator;
- The Foundation is a developed body of knowledge on European living and working conditions.

The Foundation serves as a forum for debate, bringing together public authorities, social partner organisations and other interested parties to discuss issues of common interest.

The specific theme of the present conference is sustainable development, a global issue, and one in which the European Foundation has over the last number of years been pursuing work with a special emphasis on those areas in which the social partners can play a distinctive role. There has been a substantial volume of research done under the following headings:

- Employment and sustainability
- Design for sustainable development
- The role of social partners in sustainable development
- Economic and fiscal instruments for sustainable development
- Education and training for sustainable development

Work on these topics is now nearing its completion in tandem with the current Foundation four-year programme (1997-2000) and the results of the last four year's research will be one of the key subjects of this conference.

The specific theme of this conference is the engagement of small and medium-sized enterprises (SMEs) and new enterprises with the movement towards sustainable development. Discussion and debate on this topic will benefit from recent Foundation research which highlights both the opportunities and difficulties that smaller companies encounter in adapting to more sustainable modes of production and the high level of innovation in certain SMEs geared specifically towards a more sustainable future.

The Foundation's deputy director concluded by wishing the participants a fruitful two days of debate and discussion.



The Foundation's initiatives on sustainable development and SMEs

Henrik Litske, Research Manager, European Foundation for the Improvement of Living and Working Conditions

Henrik Litske outlined the objectives of the conference: to discuss, debate and evaluate the contents of the Foundation's research programme on sustainable development over the last four years.

Given the emphasis in much of the Foundation's work on the activities of small and medium-sized enterprises (SMEs), it was considered fruitful to enlist the support of support organisations in the field which are helping to assist SMEs to become more sustainable and to make these companies a particular focus of this conference.

New enterprises / SMEs are often the home of original and innovative solutions when it comes to sustainable product design and service provision. The SME sector also represents a key preoccupation in the EU policy agenda at present and its role in terms of employment policy and in job creation has received strong recognition in recent years. Both facts are unsurprising given that over 99% of EU companies are small and medium-sized according to the EU definition of SMEs and a substantial majority of EU employment is in such firms.

The Foundation is coming to the end of the current four-year work programme which has been structured around six 'challenges' or thematic areas of which sustainable development was one. Typically, sustainable development is understood as having three pillars, the environmental, the social and the economic. The Foundation's work in the sustainable development challenge has paid attention in particular to the social dimension and has taken this to comprise also the issue of working conditions. Sustainable production and consumption has been a focus while work bearing on the linkages of living conditions, working conditions and environmental issues has reflected the Foundation's efforts to identify integrated approaches to these distinct areas.

With regard to the three main research projects carried out by the unit over the last four years, the following outlines serve to summarise.

In the project Design for sustainable development, the concept of design was interpreted in its broadest sense with the result that the end-product was more a programme of activities than a project in the traditional Foundation mode (national reports leading to a consolidated report). This project incorporated work in different formats in a wide variety of areas

At the outset, the basic concepts and terminology of sustainability and sustainable design were examined and the early publications reflect this desire to lay the conceptual groundwork for the more detailed and focused practical work to follow.

Secondly, we looked at the particular needs of the social partners and sought to identify ways in which they could be made familiar with the sustainability agenda. We realised that there was already in place a number of very active networks of engaged organisations and that these organisations had shown themselves to be enthusiastic early adopters of emerging technologies, notably the internet and world wide web. The Networks directory was compiled to record some of this activity and has itself evolved, two years on, to become a significant world wide web portal in its own right with many hundreds of links and thousands of online visitors every week.

In the evolution of environmental policy over the last generation, the trend has been to focus successively on end-of-pipe solutions (1960-70s), on work and production processes (1970-80s) and more recently on product design itself. The types of question we are now asking include what kind of products do we need?, how should they be designed?, and what will the fate of the product and its constituent parts be over its entire life-cycle?

While there is no fixed definition of a sustainable product or of a sustainable enterprise, the Foundation report entitled *Design for Sustainable development: Practical Examples of SMEs* showcases twenty five small companies and their products / services which deserve the epithet. Such examples of good and best practice can also serve as guidance and example to social partner groups, policy-makers and to SMEs themselves.

A systematic approach to quality, health and safety and, more latterly, environmental performance has been increasingly evident in companies over the last ten years with the growing recognition of standards (ISO 14001, EMAS) and the spreading popularity of certification as badges of commercial performance. Better, more co-ordinated management systems are very important in the areas of quality (TQM), occupational health and safety management (OHS) and environmental management (EMS) and the focus of the Foundation's sustainable development work on integrated management approaches to the above areas reflects both the importance of the social partners to the Foundation and also the central role that enhanced management processes have to play in the improvement of company's performance with regard to the internal and external environment.

Other areas covered by reports in the Design project include:

- Health aspects of sustainable design and the success factors for sustainable design;
- Material use in companies with a special focus on sustainable non-food agricultural crops as alternatives to synthetic fibres;
- Support systems for SMEs in the drive to sustainability at state, EU and sectoral level.

There are a number of organisations dealing with the issue of how economic instruments can be deployed to incentivise companies to adopt more sustainable modes of production. The particular niche contribution of the Foundation's work in this area in its economic incentives for sustainable development project has been to look at current and potential linkages in the use of economic incentives to encourage better performance by companies both in the area of health & safety as



well as in their external environmental performance. The project includes comprehensive coverage of incentive systems in both areas in six EU member states [Germany, Ireland, Portugal, Denmark, France and Italy].

The need for education and training of employees to prepare for the implementation of new management approaches is self-evident and the Foundation's work on training and education for sustainable development has sought to give an overview of the possibilities in this area throughout the EU. Education and training for sustainable development relating to SMEs was the third principal project in this area over the last four years and continues earlier work in a similar area which focused more specifically on environmental training as opposed to sustainable development training. A consolidated report of this project will be published soon and will synthesise earlier work from national reports covering nine member states [Spain, Italy, the Netherlands, UK, Sweden, Denmark, Germany, France and Belgium].

There have been a number of events hosted by the Foundation to further debate and discussion in the sustainable development area and highlights have been the February 1999 conference on The Role of the Social Partners in Sustainable development, a workshop on Environmental Management and Safety & Health held in December 1998 (one of a series of preparatory workshops which will form the basis of the Swedish EU Presidency's work in the area in early 2001) as well as the current conference.

This present gathering is intended to survey in closer detail what work has already been carried out by the Foundation and what methods may be used to disseminate some of this work to a wider audience.

In the next Foundation's next four year work programme (2001-2004), sustainable development has a lower priority. It is not one of the main challenges but it is mentioned in the work programme. This is a political decision that we must accept and which will mean, in practical terms, that the Foundation will not be launching any major research initiatives in the sustainable development area. Nonetheless, the Foundation will still be trying to utilise the work we have carried out up to now and will be looking at the best methods to communicate the findings of our research over the last four years.

Supporting sustainable development in SMEs in Eastern Europe

Robert Coyle, European Bank for Reconstruction and Development (EBRD)

Robert Coyle, Senior Environmental Adviser with the EBRD introduced his organisation and described its environmental work in the central and eastern European countries.

The EBRD was established in 1991 to foster the transition towards market-oriented economies in the 26 countries of central and eastern Europe and the former Soviet Union. This was to be achieved particularly by promoting private entrepreneurial activity. Since 1991 the Bank has approved well over 800 projects with an EBRD financing value of about seventeen billion EURO. The Bank is the largest single foreign direct investor in its region. Also, for every EURO invested by EBRD, a further 2.6 EURO, on average, is mobilised from other sources.

The Bank is directed by its mandate to ‘promote, in the full range of its activities, environmentally sound and sustainable development’. The EBRD is strongly committed to this mandate. Nearly 20% of the Bank’s total annual commitments, which are currently over 2 billion EURO, are devoted to environmental improvements. Of this, approximately half the funding is accounted for by municipal and environmental infrastructure and energy efficiency projects and the other half is associated with environmental improvements on industrial and other infrastructure projects.

Of the subscribed capital, 1.3 billion Euro is committed to SMEs. This is an important commitment and has been a marked new focus of the EBRD looking to assist the indigenous firms of the future. This is especially important in countries – especially the former Soviet Union (FSU) - where small-scale, entrepreneurial activity has been officially suppressed until recently and where large scale, vertically integrated ‘Kombinats’ have dominated the industrial landscape for over a generation. It is important to note the differences between central Europe and the FSU in this regard. Of those employed in the former soviet satellite countries, 70% work in SMEs, not dissimilar to the EU average. In Russia and the FSU however, SMEs still account for only a small proportion of the country’s productive capacity. However, many countries in Eastern Europe have already seen strong growth in SMEs – for example in Poland, Hungary, the Czech Republic and Romania the proportion of employment coming from SMEs is already above 50%.

The EBRD’s activity in the environmental / sustainable development field is informed by a dual approach. On the one hand, the bank attempts to mitigate risks and to minimise liabilities. On the other hand, it proactively seeks to improve the environmental situation of many of its client companies and to quicken the timescale of adoption of the best standards current in Western Europe. The Bank is currently initiating a programme to promote the financing of pro-active environmental and energy efficiency investments. This new initiative aims to overcome financing constraints by building the capacity within local SMEs to prepare ‘bankable’ environmental investment projects which can be submitted for financing, and to increase awareness and understanding of such projects. The project will include the preparation of a number of



environmental/energy efficiency demonstration projects - 'success stories', which would demonstrate to SMEs the feasibility and profitability of financing such projects.

Endemic in many of these countries in their centrally planned past was a high level of resource inefficiency borne of a culture where companies had a limited concept of the value or cost of many of the basic resources necessary for production. In many cases, companies paid little or nothing for energy with the result that vast amounts of energy were casually squandered.

There are a number of ways in which EBRD can – and, in many cases, already does – help SMEs improve their environmental performance.

1. *Understanding environmental performance:* EBRD can, through its technical co-operation (TC) funds, provide finance to fund environmental experts undertake such work. The Bank has already initiated a technical TC programme to provide existing or potential clients with free eco-efficiency audits, which will identify eco-efficiency investments, which can be built into the overall financing package being provided by the bank.
2. *Managing environmental performance:* The Bank is already involved in efforts to develop cleaner production projects in Poland in an attempt to prove them commercially viable and of interest to both companies and financial institutions. If there is a strong demand for financing of cleaner production the Bank could consider financing them with its own funds channelled through local financial institutions.
3. *Supply chain influence:* In a number of Bank operations, there is an aim to further stimulate economic activity both upstream and downstream of the company being financed by the Bank. There is an opportunity for the Bank to encourage its clients to require of its suppliers certain environmental standards in order for its products to be considered eligible for purchase and sale.
4. *Environmental mentoring:* Mentoring can provide low risk, low cost and effective means of providing small companies with concepts and strategies for achieving better environmental results. Discussions are underway to include in the Bank's Turn Around Management (TAM) programme a separate environmental component – Turn Around Management for the Environment – which would identify industrial enterprises which would benefit from the pairing of senior environmental managers from industries in OECD countries with their counterparts in CEE/CIS enterprises.

Management systems, certificates, labelling: how many can a small company manage?

Margareta Mårtensson, Swedish Employers' Confederation (SAF)

In her presentation, Margareta Mårtensson introduced the large variety of management systems, certificates and labels prevalent in Sweden and in other parts of the world and asked how SMEs might begin to negotiate an often confusing array of systems and standards.

Standards for products have been in existence for a long time and were originally created in order to define product-quality and design. More recently, standards for managing people and processes at company level have come into existence and are meant to institute and maintain good housekeeping. Whereas it is rather easy to decide whether or not a product complies with a standard, processes are more difficult to assess and evaluate and the standards relating to them are less easy to interpret and compare.

The first international management standard, the quality standard ISO 9000 came into use in the beginning of 1990s and has been followed by the environmental standards, the ISO 14000 series. All of these standards are voluntary, though in Sweden and Norway, national law requires that management systems be put in place for the working environment and for the external environment.

The standards however were in some cases considered to be either too general or too complex and as a consequence specified standards (QS 9001) or simplified ones (ISO 14001-light) came into use. Different sectors take a different approach to management norms and have adopted their own versions. In Sweden, moreover, Agenda 21 activities resulted in a great number of local solutions and certificates for 'greening the environment', many of them combining labelling of a specific product / process and a certificate attesting management system implementation.

There has also been a trend to broaden out the focus of management systems to integrate areas regarded hitherto as unconnected. In this way, some environmental systems have begun to engage with working environment / health and safety issues as well as quality management.

The growth of management systems has been welcomed by governmental regulators who see this as a way to reduce the need for detailed and specified regulation.

Recent University of Lund research gives some idea of the multiplicity of management systems and norms in place throughout Sweden. Their research found that there are at least 65 different labels and certificates in Sweden relating to different types of management systems. There are also labels for 'green schools', 'green hotels', product labels – notably the widely-recognised Nordic Swan label – as well as environmental product declarations.



There are also new and modified versions of international standards emerging such as the new version of ISO 9000 and an unofficial version of ISO 14000 for the working environment. Certification is also beginning to occur in relation to social accountability, information security, ethical trade, equality in the workplace and fire prevention.

Of course, the multiplication and spread of new types of management system does raise many questions.

Certification may not be a very meaningful indication of company performance if it arises as a reflex response to supply-chain pressures to be seen to be 'doing something'. This can trivialise the business of certification making it largely a paper exercise.

While management systems do have the effect of introducing a systematic approach to the issues of environmental performance, health and safety, quality management etc, there is also the risk that the variety of systems can create overlaps and wasted effort or requires the allocation of more resources than an individual company can afford.

Another risk is that companies, especially smaller companies, become disenchanted by the whole idea of management systems given the plethora of different, often competing systems. For many SMEs, shortage of resources – of time, personnel and money – is the rule and the natural tendency is to ignore complicated, new systems. For these reasons, systems that are simple, compatible and that lend themselves to integration are essential.

There is also a need to give more careful consideration than is currently the case to the need or demand for further new standards/systems before commencing work on developing them.

Sustainable Development Online

Yorick Benjamin, EDEN, Netherlands, and John Hurley, Information Liaison Officer (sustainable development), European Foundation for the Improvement of Living and Working Conditions

A joint presentation by Yorick Benjamin and John Hurley showed how the Foundation was using the internet to promote the message of sustainability and to disseminate its work to a wide audience. The principal topic of the presentation was sustainable development Online (<http://susdev.eurofound.ie>), a specialist subsite of the main Foundation website (<http://www.eurofound.ie>).

Sustainable development Online is a special initiative involving the Foundation's information section, the sustainable development group and external contractors, EDEN (Amsterdam), which after a period of development went public in September 1999.

In its initial phase, four online directories/databases were mounted complementing the existing sources of sustainable development information on the Foundation website (publications, project summaries etc). The four databases covered the following areas:

- *Conferences*: SD-related conferences, workshops and events;
- *Networks*: A directory of network-orientated organisations in the area of sustainable development with a web presence;
- *Training*: A listing of SD/environmental training and education courses in the European Union (part-time/full-time; college-based, distance education, online learning etc);
- *Tools*: Links to the growing number of practical sustainable development resources and software tools being made available on the internet (eg. Life Cycle Assessment applications, eco-profilers, environmental management checklists, manuals and guides)

They have been online since May-June 1999 and have been updated regularly by the contractors, by Foundation staff and by submissions (vetted by EDEN) from outside users. By facilitating online submissions, readers are encouraged to have a stake in the site by contributing themselves to its growing content.

Publicity regarding the databases was initially confined to a small group (less than 100 individuals) of Foundation contacts and SD experts identified by the EDEN. The intention was to develop a 'critical mass' of records/information in each database before publicizing the initiative more widely. It was decided to proceed to a broader publicity effort in September 1999 when the databases contained an aggregate of over three hundred individual records.

There were various components of this broader publicity initiative. The Foundation published and disseminated a one-page leaflet *SD Online* showcasing the new online facilities. The new facilities were also signposted and linked from the Foundation's homepage and sustainable

development homepage as well as in EUR-OP. Most importantly, the contractors, EDEN, carried out a wide email notification campaign to approx. 10,000 individuals worldwide with a specialised interest in sustainable development (including several hundred Foundation contacts in the area) as well as to approx. 40 environmental / SD-oriented mailing lists. In total, it is estimated that 25-35,000 individuals were alerted to the existence of SD Online by this method. Much of this contact information has been gathered over a number of years in various environmental networking initiatives in which EDEN has been involved and from which the Foundation was able to profit.

In May 2000, a fifth database was added covering initiatives to support European SMEs in the move towards sustainable production. The addition of this database was facilitated by an interesting collaboration between the researchers (ECOTEC) who had been contracted by the Foundation to carry out an inventory of such SME support initiatives and EDEN, the SD Online contractors. After consultation between the two groups of contractors, a database was designed to catalogue and inventory all of the various identified initiatives so that when the research was completed and had been evaluated according to the standard procedures for completing research, the Foundation was in a position to make it available more or less automatically on the internet. The database application and format used (Filemaker) allows an automatic conversion of stored information to web-ready format, obviating the need for more painstaking manual methods of preparing written texts for web dissemination.

SD Online – an evolving resource		
Number of records/links in each of the databases		
<i>Database</i>	<i>April 2000</i>	<i>October 2000</i>
Conferences	139	260
Networks	213	310
Tools	96	128
Training courses	103	363
SME support initiatives	61	68
TOTAL	612	1129

Web-publishing represents a timely, convenient and inexpensive alternative to conventional printing of published reports and SD Online's combination of marketing (email circulars) and content provision has proved ideal in disseminating one recent Foundation report, *Design for sustainable development: Crops for sustainable enterprise*. The report which explored the use of fibre crops in the non-food agriculture sector, their potential as replacement for synthetic fibres and the issues involved in such a change was made available as a freely downloadable pdf file on SD Online and its availability publicised using the regular email circular in late September 2000. In six weeks, 672 separate downloads of the report were recorded.

In little more than a year of operation, SD Online has grown into one of the better known web portals for linking to sites of sustainable development interest. Nearly two thousand individuals have signed up for the monthly email updates that keep readers informed about new sites and

about recent developments in the Foundation's related research projects. Nine percent of those registering have emails identifying them as belonging to the following EU bodies - European Commission, European Parliament or Joint Research Centres. Traffic to the site has progressed steadily to the stage where there are over 1,500 user sessions every week and this in part has been prompted by the large number of sites which have themselves linked to SD Online (1022 individual sites), as good an indication as any of the perceived value of the initiative.



Parallel sessions:
Selected presentations

Environmental and health and safety management and SMEs

Gerard Zwetsloot, TNO, The Netherlands

Parallel session: Environmental and health & safety management

Gerard Zwetsloot (TNO Arbeid, The Netherlands) introduced the subject of EHS management and SMEs by pointing out that management systems for environment and for health and safety were initially developed principally for large companies. Systems have been subsequently modified for adoption by smaller and medium-sized companies but this process has raised the question whether or not the same template can serve both larger companies and SMEs. Often, a simplified version of existing systems is not appropriate for SMEs and a more nuanced approach reflecting the strengths and weaknesses of SMEs is required.

The characteristic benefits of existing management systems for better environmental and health & safety performance can be sketched briefly as follows:

- They introduce a systematic approach to management decisions. Given that SMEs often tend to be more improvisatory, less structured in their approach to day-to-day operations, this can constitute quite a culture change;
- Regular auditing ensures that the newly implemented systems are firmly established and serve as a spur to continuous improvement within the company in both areas;
- Organisational learning processes are enhanced.

As most problems with existing management systems impact more on small companies – as distinct from SMEs – the remainder of this contribution deals specifically with this category of SMEs. One of the strengths of small companies is that there is often clearly one leader, owner or chief. His dynamic role in the company is proportionately greater than in larger enterprises where there tend to be several people with high-level responsibility and where impersonal forces assume more significance and questions of business structure tend to be more important than those of individual relations. It is essential that small company heads are fully supportive drivers as without their authority and leadership, systems implementation will be at best partial and half-hearted.

For many small companies, conventional management systems can be very offputting with their combination of specialised jargon, procedures and documentation and their extensive call on valuable resources of time and money. It is the exclusive privilege of larger companies to be able to afford to employ specialists well-versed in the requirements of the various systems.

Small companies are generally short-term oriented. Week-to-week commercial survival is always the principal motivator whereas larger companies are generally, by definition, more established and the main concern is future growth. Business strategy and future planning is much more prevalent in bigger companies and hence the necessity of a systematic approach to management much more obvious.

Given the low take-up of EMS in the SME sector, the question of how to make management systems attractive to small companies is still moot but as a starting point, advice and tools must be user-friendly, jargon-free as far as possible and sector-relevant.

On the positive side, small companies also possess potential advantages which are increasingly evident as the global economy becomes increasingly knowledge-based. Staff and training are becoming more important and certain advantages of small, people-centred organisations over large, structure-oriented organisations are becoming obvious. The practical, ‘can-do’ approach of smaller companies and their capacity for creative, original thinking are key assets in contemporary business culture and it is for this reason that one sees large companies splitting themselves into smaller units in an attempt to emulate the perceived advantages in terms of speed, flexibility and innovation of smaller companies.



UK-Ireland Acorn project

Michael Jones, Department of Trade and Industry, UK, Norbert Gallagher, Irish Productivity Centre, and Gary Prunty, Century Homes, Ireland

Parallel session: Environmental and health & safety management

Michael Jones, Deputy Director at the DTI, introduced a three-part presentation on a new phased implementation environmental management system (EMS) for SMEs currently being piloted in the UK and Ireland and known as the Acorn project.

The pilot scheme has been co-ordinated by the national standards authorities in both member states in conjunction with the Department of Trade and Industry's Environment Directorate in the UK and the IPC, formerly the Irish Productivity Centre in Ireland. The objective is to establish a new form of modular or staged EMS more suited to the needs of SMEs, which will provide recognition at each stage and which will involve close co-operation and mentoring arrangements between larger companies and their SME suppliers.

The original impetus for the development of the Acorn initiative was the lack of EMS implementation in smaller companies and the perception that a significant factor was the complexity of existing standards (ISO 14001, EMAS) which appeared designed principally for larger companies. A staged or phased approach to EMS where SMEs could gain credit for each of five or six separate steps offered one solution to the historical reluctance of SMEs in this area.

Though there are no definitive figures regarding the size of companies with ISO 14001 certification / EMAS registration, it was estimated that no more than 300 of the 1500 ISO 14001 registered companies in the UK would be considered as SMEs despite the fact that the overwhelming majority of companies are SMEs.

The gaining of credit is an essential part of the process as it will enable SMEs to prove to large customer firms that they are committed to a process of environmental improvement.

Staged EMS for SMEs – the six levels of Project Acorn

Level 1	Top management commitment, initial environmental review, initiating culture change and continual improvement process
Level 2	Legal, customer and market requirements
Level 3	Confirmation and management of significant environmental aspects and impacts
Level 4	Launching an effective EMS
Level 5	Checking, audit and review of the EMS (ISO 14001)
Level 6	Data verification, public reporting, EMAS registration

The Acorn project in the UK involves around thirty large, established companies offering their services in a mentoring capacity to 250 of their SME suppliers. The pilot scheme started in the

UK in April 2000 and is due to run until March 2002 and will result in training for 275 SME employees in the use of environmental management tools and systems.

One of the attractions of such a staged EMS is that individual SMEs can choose their own level of attainment, opting for a fast-track or a slow-track approach. For some micro-enterprises, the level one commitments may be regarded as sufficient while other firms may prefer instead to complete the first three levels. Beyond that, those SMEs actively interested in certification can move on to the final two levels to achieve ISO 14001, or to the sixth optional level for EMAS registration, with its public reporting requirements.

Norbert Gallagher, International Director at the IPC (Ireland), outlined some of the preconditions for the successful operation of this type of pilot scheme. In the first instance, a high level of partnership involving a variety of actors was necessary to kickstart project Acorn. The IPC liaised with environmental consultants regarding the initial design of the initiative, were offered constructive advice and criticism by the National Standards Authority of Ireland (NSAI) and thereafter liaised with partner organisations – the British Standards Institution (BSI), the Dept. of Trade and Industry and a private company, 14001 Solutions – when it was proposed to pilot the scheme in the UK. At present, Enterprise Ireland (the national enterprise development agency) has been putting the final touches to the environmental management and audit scheme that will support project Acorn. Launched in early December 2000, this initiative is aimed at improving the strategic capability of SMEs in the management of their environmental management issues and to develop and exploit the market opportunities that improved environmental performance can provide.

A project such as this is always evolving and requires monitoring and continuous change, in a similar fashion to the overall message that the project itself seeks to promote regarding environmental management systems.

An example of how Acorn has adapted to changing circumstances is the increased emphasis on performance indicators. At the outset of the scheme, performance indicators were regarded as peripheral. They are now considered integral and the development of the ISO 14031 standard (environmental performance evaluation) has helped to establish a framework for evaluating the actual concrete benefits of EMS implementation in terms of environmental performance. By putting in place a complete performance-driven systems approach and combining continuous monitoring and improvements, Acorn seeks to bring large companies together with their SME suppliers to develop mutually beneficial programmes for every link in the chain.

Environmental issues have also started to pervade the production processes underlying manufacturing and services. Issues for Acorn in this regard will include:

- Dematerialisation, including miniaturisation, waste reduction and resource efficiency
- New materials, eg polymers that can conduct electricity
- Localised networks



- Product stewardship, increasingly important given a likely extension of manufacturer liability
- Closed loop production
- Remanufacture and recycling

The incremental approach to EMS is built on sound foundations – with pooled expertise committed to continually appraising and upgrading a simple system – and should have a bright future both in the UK and Ireland and thereafter potentially in other member states. With myriad funding possibilities from the EU's Fifth Framework Programme on Research and Development, there is a very real opportunity to extend Acorn if it proves to be a success. Internationally, upwards of thirty countries have expressed an interest in the project.

Gary Prunty illustrated some of the benefits of EMS implementation for an SME using the example of Century Homes, a fast-growing Irish SME in timber-frame construction where the speaker works as Quality and Environmental Manager.

Setting the growth of Century Homes in context, the Irish construction industry has been buoyant over the last ten years with a near threefold increase in the level of annual housing completions over the period 1990-2000 (20,000 to 55,000). To put this in an international context, the current level of completions in Ireland is more than one-third of the estimated 150,000 annual housing completions in the UK which has a population some fifteen times as great.

Given that buildings account for 40-50% of energy use and a similar proportion of CO² emissions, the environmental consequences of decisions taken within the construction industry are obvious. Ireland's ability to meet its Kyoto protocol targets will rely to a significant extent on improved environmental performance of residential units.

Century Homes specialise in timberframe construction, a method that has been traditionally less prevalent in Ireland, where masonry construction has long been the norm, but which is perceived to have positive environmental value and which is commonplace in the USA and Scandinavia. The company produces timber frames with a view to achieving low U-values which helps to reduce heating costs and fuel bills. The main raw material is purchased, planed and cut to length from managed forests in Scandinavia. All off-cuts are either reused or recycled as are all plastic, cardboard, paper and steel strapping through various outlets.

A commitment to quality, excellence and environmental improvement underpins the company's rapid growth and has been assisted in particular by the Irish Productivity Centre with whom the company has liaised in its various management change and certification processes. From its inception in 1990 as a four-man operation and over the course of its development into a large SME (200 staff in 2000), the company has made a firm commitment to being leaders in its field and has to date gained ISO 9002 (quality), the Q - Mark an Irish quality award and Excellence Through People, an externally accredited people management award.

The company was audited for ISO 14001 earlier this year and approved for accreditation. With the experience Century Homes has gained, it now hopes to be in a position to serve as a mentor itself and is currently working with the IPC in Ireland and Europe to compile a list of some of its suppliers who will commit to phased implementation of their own EMS as part of the Irish version of the Acorn project.



Health & safety and environmental management in German SMEs

Lena Weller, IQ Consult, Germany

Parallel session: Environmental and health & safety management

Lena Weller works as a consultant on occupational health and safety (OHS) and environmental management in German SMEs for IQ Consult, a non-commercial consulting company affiliated with the German trade union association (DGB). She introduced a programme in which IQ Consult has been involved entitled KomPAS which assists SMEs in the development of competence and participation in OHS and which has been extended to incorporate environmental management aspects as well.

She outlined the background to the contrasting development of OHS and environmental management systems (EMS) in Germany. OHS has evolved into a highly structured and regulated area with all companies, no matter how small, obliged to make OHS commitments in terms of implementing systemic approaches to health & safety and in terms of mandatory training / consulting.

By contrast, much of the principal business-oriented environmental legislation such as acts relating to air pollution and incident handling applies only to large companies. As a consequence, there is little incentive for environmental improvements at SME level. Implementation of environmental management is voluntary and the consulting /training courses which might prepare a company for implementation of a system are generally commercial and often expensive. These factors have further served to inhibit the move to a systematic environmental approach on the part of smaller companies in Germany.

The attitude of SMEs towards OHS and EMS in Germany is characterised by the following traits, inter alia:

- Reluctance to commit resources, reluctance to undergo changes
- Low standard of information and know-how
- Little participation and lack of defined responsibilities for OHS / EMS in the organisation
- No concept of the time and work involved in implementing management systems.

As an example of different approaches to OHS and EMS by German SMEs, the cases of two small metallurgical companies and their involvement in the KomPas project served as illustration. The approach involved the consultants acting as 'change agents' assisting the two SMEs to adapt to new modes of organisational learning, effectively 'helping them to help themselves'.

The contrasts between the experiences of the two companies and their levels of commitment to a new management culture were drawn out. The commitment at management level of Company A

proved to be very half-hearted and culminated in many of the original management objectives being jettisoned in the course of the two year project. In Company B, new management structures were embraced more enthusiastically, a higher level of commitment at a higher level of management was secured and as a result the company was able to achieve a greater level of linkage between the various management instruments covering OHS management, quality and environmental management.

In Company B it was considered very likely that a regular management structure would endure after the end of the project ensuring an ongoing commitment to OHS improvements whereas at Company A it was considered more likely that the management team established at the outset of the project would be discontinued at its conclusion.

Drawing from the practical experiences in the two companies, the following list summarises some of the internal factors of successful implementation of management systems in smaller enterprises:

- Commitment by management and willingness to undergo change
- Broad participation across all levels of the company organisation
- Designation of a dynamic team-leader who will galvanise those around him / her in adapting to the new management systems
- Reduction of complexity of management systems and processes / ease of use and understanding

The quality of training and consultancy provided by outside consultants is also an essential factor in whether a management system can be successfully integrated in a company's day-to-day processes and the presentation concluded with some guidance to the trainers themselves. They should endeavour:

- To help companies to help themselves,
- To encourage step-by-step improvement
- To offer simple management tools,
- To develop tools and concepts *with* SMEs as opposed to just *for* them
- To avoid specialist jargon and language
- To devise new, more affordable methods of consulting and training.



The branch code path: a successful approach for microfirms

Gerard Roorda, Hoofdbedrijfschap Ambachten, Netherlands

Parallel session: Environmental and health & safety management

Gerard Roorda presented the results of an ongoing initiative undertaken by the Dutch small skilled trades association (HBA – Hoofdbedrijfschap Ambachten) which has sought to develop a new standard for quality management in very small businesses (self-employed individuals, micro-businesses).

At present in the Netherlands there are 600 ISO 14001 certificates and 15000 ISO 9000 certificates which reflects a good general level of management system awareness in Dutch industry. This is not however the case at the micro-enterprise level where a systematic approach to management remains rare.

The branch code path has been developed as a standard to help such micro-enterprises to adapt to a new business environment where stakeholder pressure in addition to other drivers compel the adoption of a quality management approach with a stress on continuous improvement. The new standard covers occupational health and safety, environmental performance and quality management and is intended to be simple, clear and practical for convenient adoption by the targeted smaller businesses. Already, there have been positive results from early pilot schemes involving beauticians and chiropodists.

The branch code path comprises three stages:

1. Standardisation of system (legal practice, good practice, best practice)
2. Implementation
3. Certification

The standard is established in cooperation with the social partners and is based on the normal work processes of a typical firm in a given branch or sector. The standard is comprised of practical guidelines on three levels reflecting regulatory requirements, good practice and best practice.

The implementation stage of the branch code path follows the procedure of the EU in the health & safety field which involves in the first place establishing a risk analysis by filling in a checklist, thereafter evaluating the various outcomes of the company's activities and finally making an action plan. These three steps are supported by training which culminates in training certification.

The certification stage itself is worked out as a general blueprint and is often quite simple. A general calculation suggests that for two thirds of firms covered the branch code is something useful which motivates the company to move towards total quality management standards.

The advantages of the branch code path are that costs are low, it represents a simple way to ensure improvement of internal company functions, is reassuring to stakeholders, customers and employees alike and can generate cost savings as well. One of the benefits is that by being branch/sector-based, it encourages a positive exchange of information and networking amongst small firms and collective development/improvement of guidelines.

Communication with firms and entrepreneurs in a given sector is by direct mail with 12% of those contacted responding to the first mailshot.

At present in the Netherlands, there are codes in place in nine different lines of businesses, with five in development and four more due to come on stream next year.



SME support for sustainable development: principles and practice

Mark Hilton, ECOTEC, UK

Parallel session: Support systems for SMEs – innovative examples from the Foundation database

Work carried out by ECOTEC for the Foundation includes the selection of over sixty European support initiatives aimed specifically at SMEs and designed to facilitate and encourage the move towards sustainable production. This research has been made available as a separate online database on Sustainable Development Online (<http://susdev.eurofound.ie>) where each of the initiatives are described and categorised. Support initiatives take many forms and operate at many different levels:

- National dissemination / support programmes ;
- National funding programmes;
- Local/regional eco-efficiency clubs and networks;
- Regional support centres;
- Business eco-parks;
- Supply chain initiatives.

Encouragingly, all Member States now seem to have initiatives dealing with EMS and eco-efficiency matters. Quite a few have eco-design initiatives of one kind or another while some have initiatives dealing with health and safety alongside environment in an integrated way. A very small number have begun to make progress in terms of ‘sustainable manufacturing’, encompassing such issues as the use of renewable energy and materials (such as non-food agri crops) and the more coordinated use of wastes as a resource.

Progress to date, however, has been disappointing. For example, only around 0.1% of non-micro companies have an accredited environmental management system (EMS) such as ISO 14001 or EMAS. Eco-efficiency schemes have reached tens of thousands of companies but this still represents only a tiny fraction of the millions of European SMEs. Even fewer companies are aware of eco-design and sustainable manufacturing concepts. Attitudes to the environment and understanding of sustainable development remain very poor.

But why is this? SMEs, particularly small and micro companies, face many problems:

- Lack of resources – time and money;
- Lack of capabilities – skills and knowledge;
- Lack of awareness of issues, risks, regulation;
- Lack of training needs analysis (TNA);
- Lack of awareness of tools and techniques;
- Lack of awareness of provisions and their benefits;

- Lack of strategic and holistic thinking;
- Lack of internal communication/integration;
- Lack of shopfloor staff involvement;
- Lack of flexibility and fear of change;
- Lack of external communication (networking);
- Mistrust of other companies in groups.

While there has been a large increase in the number of initiatives targeting SMEs, support provision has not always been correctly tailored to the needs of SMEs. Feedback suggests that SMEs that need support are often bewildered by the variety of initiatives potentially available. In some EU regions there are too many initiatives with little or no coordination between support organisations. Support schemes are often found to be:

- Too abstract/impractical;
- Too general (insufficiently tailored for particular sectors/industries);
- Too passive (e.g. purely providing self-help materials);
- Superficial or lacking in quality;
- Too expensive, time-consuming or inflexible;
- Poorly targeted or promoted.

There has also perhaps been an overemphasis on environmental management systems and certification (which do not guarantee significant improvements) at the expense of eco-efficiency, eco-design, integrated approaches (e.g. including environment, health, safety and quality) and fundamentally more sustainable manufacturing (e.g. based on renewable resources). There has also been too little integration within 'mainstream' education, training and support, for example covering engineering or clerical activities.

Nonetheless, many of the support initiatives showcased by ECOTEC have found innovative and successful ways of introducing the sustainability agenda to the SME sector. The projects examined have highlighted a number of success factors for support initiatives. Education, training and support need to be:

- clearly beneficial in commercial terms to the organisation;
- practical, simple, concise and low cost;
- sector specific/company specific based on needs assessment;
- wide-ranging, in terms of topic coverage;
- integrated (multi-topic) where possible;
- flexible, i.e. modular, distance learning, etc.;
- 'hands on' rather than 'passive';
- delivered locally, also national programmes;



- offered over an extended period, using graduates and retired ‘mentors’ for small firms;
- target key individuals, i.e. the project champion;
- involve various management functions and shopfloor staff in an integrated way.

Where there are a number of initiatives/providers, regional partnerships/networks are needed to:

- ensure proper co-ordination;
- provide clear support ‘channels’;
- reduce confusion, duplication and cost;
- build on and develop personal relationships;
- provide range of support competencies required;
- provide the necessary incentives.

Regional partnerships should therefore involve some or all of the following: local authorities and regulators, chambers of commerce/business support bodies, key industry (employer) bodies, trade unions (to inform/motivate employees), real sector/subject experts (e.g. consultants, university/college staff) plus support staff (e.g. graduates). Funding organisations can be particularly influential, offering financial support (e.g. for start up companies) but only subject to certain conditions being met. Supply chains (through large, powerful companies), can be used to apply pressure to suppliers/customers and provide training and support (mentoring). Finally SMEs should be encouraged to form/join self-help networks, for example environment business, eco-efficiency and joint-EMS implementation clubs.

Overall, progress has been slow and far more must be done and in a more focused and determined way. We now largely know what works and doesn’t work in terms of education training and support, so no more excuses – let’s get out there and do it before it is too late.

Case study: Enterprise Ireland's environmental support for SMEs

Dorothy Maxwell, Enterprise Ireland

Parallel session: Support systems for SMEs – innovative examples from the Foundation database

Dorothy Maxwell introduced some of the environmental initiatives aimed at SMEs currently being provided by the Environment Unit of Enterprise Ireland (EI), the Irish enterprise development agency.

The EI Environment Unit has approximately 45 experienced, multidisciplinary staff providing a wide range of environmental services to Irish industry such as environmental consultancy, training, analysis, financial and information supports.

Since 1996, the Environment Unit of EI has run a range of SME environmental support initiatives designed to improve the environmental performance of indigenous Irish SMEs. These initiatives are aimed at improving the strategic capability of SMEs in the management of their environmental issues and to develop and exploit the market opportunities that improved environmental performance can provide. To date under these initiatives, 185 Irish SMEs have conducted environmental audits and waste minimisation studies, 53 SMEs developed environmental management systems and 13 SMEs have conducted projects on Environmental Product Development.

At present, two initiatives are available for small and medium-sized indigenous Irish manufacturing companies. These are as follows:

Environmental Management Systems (EMS) – an incremental Approach

This EMS initiative provides grant assistance towards the costs of engaging independent consultants to install, in full or part, a certified Environmental Management System. Under this initiative EMS may be installed either on a phased implementation basis using a recognised scheme or directly to either the ISO14001 or Eco Management and Audit Scheme EMS specifications. Grants are available on a matched fund basis up to a maximum of £10,000 under this initiative.

Environmentally Superior Products (ESP)

EI has recently sponsored a number of Irish SME manufacturers under the Environmentally Superior Products – Pilot Demonstration initiative to investigate their potential to produce and sell goods demonstrated to have a reduced environmental impact. The aim of the scheme which currently has 13 SMEs actively involved is to research ways to reduce the environmental impact of a given product which are both technically and commercially feasible and which do not compromise the intrinsic functionality, quality or value of the product. This is the definition of



an Environmentally Superior Product. Some of the products being (re)developed as part of this scheme include:-

- WEEE-compliant electronic circuit-boards
- Computers with re-usable / recyclable parts and longer life, upgradable chassis
- Recyclable toner cartridges
- Outdoor plastic furniture manufactured from reclaimed waste plastics and designed for re-use

While the existing pilot initiative is now closed to new applicants, the merits of extending it beyond the current pilot stage are currently being assessed and it has been proposed to launch a second ESP initiative in 2001.

Case study: Centre per a l'empresa i el medi ambient (Barcelona)

Beatriz Parrilla Chroszcz, CEMA, Spain

Parallel session: Support systems for SMEs – innovative examples from the Foundation database

Beatriz Parrilla Chroszcz described the activities and initiatives that the Centre per a l'Empresa i el Medi Ambient (CEMA - Centre for Enterprises and the Environment, Barcelona), a unit of the Ministry of the Environment of the Government of Catalonia, has carried out to encourage and support companies and business sectors to improve their relationship with the environment.

The main activities and initiatives carried out by the CEMA are:

- Participation in training and diffusion activities and publication of case studies with examples of companies that have implemented minimisation alternatives;
- Assessment to companies in their search for cleaner technologies, in the choice of experts and providing general information on pollution prevention;
- Promotion and follow-up of the carrying out of Minimisation Opportunities Environmental Diagnosis (MOED) in companies and the development of Work Groups;
- Information and assessment of economic instruments (grants, tax deductions, etc.) for companies to improve their environmental performance;
- Carrying out of studies to support pollution prevention policies and analyse cleaner techniques to be implemented in specific industry sectors.

In addition, due to the Collaboration Agreement signed between the Spanish and Catalan Ministry of the Environment, the CEMA carries out activities within the framework of the United Nations Mediterranean Action Plan as Regional Activity Centre for Cleaner Production (RAC/CP) and it also participates in International Projects and develops co-operation activities in Latin America.

CEMA's record of achievements in promoting cleaner production includes, *inter alia*:

- Over 200 Catalan companies have implemented the MOED: expert appraisals of industrial activities to detect pollution prevention and waste minimisation opportunities;
- 61 companies have participated in 8 Work Groups, which have been established to detect pollution prevention and waste minimisation opportunities among companies in an industrial sector or geographical area;
- The operation of a database of cleaner technologies (over 240 records) and of suppliers of environmental goods and services (over 500 records);
- A pilot publicity campaign aimed at promoting 'good housekeeping' practices was carried out at eight participating companies (in the food, chemical and printing industries and in a hotel) and involved 75 staff training sessions.



In acknowledgement of its aims and proactive initiatives with companies, the CEMA has been awarded the 'III Prize Enterprise and Environment' within the 'Best Public Support Initiative for Companies' awarded in October 2000 by the Spanish Minister of the Environment.

At SME level, CEMA has begun to overcome some of the resistances towards adopting cleaner production principles and the advantages of adopting one or other of the CEMA initiatives are becoming more and more obvious for a large number of Catalonian SMEs.

The benefits in terms of increased management efficiency, resource savings, process optimisation, enhanced corporate image and statutory compliance have encouraged firms to take a more pro-active approach and participate in the cultural change leading towards the improvement of the necessarily close relationship between the industries and the environment.

Case Study: Wastebusters and waste minimisation

Lesley Millett, Wastebusters, UK

Parallel session: Support systems for SMEs – innovative examples from the Foundation database

Lesley Millett outlined the various activities of Wastebusters, a leading UK environmental consultancy which specialises in greening the office. Established in 1991, the consultancy has become well-known for publishing the *Green Office Manual*, the authoritative guide to greening the office (2nd edition, October 2000) and for managing Waste Alert, a waste minimisation network designed to help small businesses reduce costs through improved waste management and materials exchange.

Some of the services provided as part of the Waste Alert service include a starter pack with guides on waste reduction and energy/water efficiency, best practice information and a free consultancy visit. A dedicated helpline service and quarterly newsletter are also provided as are opportunities to network with other local businesses. The waste exchange service has proved particularly popular as it allows companies to save on both disposal and purchasing costs while benefiting the environment by diverting potential waste to productive re-use.

At present, the network is active mainly in the London area and has produced savings for member firms averaging £1000 per annum. Up to July 2000, Waste Alert had secured 274 club members and had successfully diverted over 800 tonnes of waste from landfill resulting in savings of more than £230,000 to member businesses.



Crops for sustainable enterprise

Yorick Benjamin, EDEN, Netherlands

Parallel Session: Product design – practical examples of SMEs

Yorick Benjamin presented the conclusions of a recent Foundation research exploring the potential of fibre crops in the non-food agriculture (NFA) sector. The recently published report is entitled *Design for Sustainable development: Crops for sustainable Enterprise* and identifies crop variants that can and are being used as raw material/feed stock for production purposes, trends in the usage of such crops, the organisations, networks and initiatives assisting in the growth of the sector and likely future developments.

Some of the conclusions of the above research can be summarised as follows:

- Renewable resource based industries require reconsideration, reformulation and redesign of the existing production structure. There has been a tendency to regard the simple substitution of a synthetic raw material by a fibre crop as inherently sustainable without looking at the need for changed production facilities and the potential for whole crop use amongst other issues;
- Great opportunities exist for the development of projects that are based on locally available diverse bio-resources and renewable energy;
- Spin-offs may be realised such as community engagement in the workplace, trading in support of the local economy, capacity building in the local community, regional self-reliance and associated security;
- According to existing literature / information on the internet, it appears very likely that new applications will be developed for plant parts, process wastes and residues (total crop usage) which should enhance the development potential of fibre crops;
- Developments in the Common Agricultural Policy (CAP) will impact on progress in EU member states. The traditional emphasis of CAP has favoured large and traditional farming of specific crops and has subsidised much self-evidently unsustainable agricultural practices (eg food mountains and lakes). Agenda 2000 commits the EU to more environmentally friendly farming with local rural development assigned a higher priority than heretofore. Nonetheless, while the trend in the EU may be away from unsustainable agricultural subsidies, at an international level the trend of globalisation and large scale production will continue to offset many of the gains arising from modest developments towards bioregional sustainable production systems based on local resources, knowledge, materials and infrastructure.

This report has been made available for free download on the Foundation website and can be accessed at <http://www.eurofound.ie/publications/sustainability/3791.htm>.

Case study: The use of palm tree leaves by SMEs

Michel Ferry, Phoenix Research Station, Spain

Parallel Session: Product design – practical examples of SMEs

Michel Ferry's presentation on the use of palm-tree leaves by SMEs in the Elche region in Spain gave a further indication of how certain traditional crop uses of date palm trees which had disappeared are now being rediscovered as farmers experiment with more sustainable approaches to crop usage.

Fifty years ago, the date palm had an important economic place in the agrosystem in Elche and its products were used in a number of products – as foodstuff for humans and animals, as floral decoration, for construction purposes, for a variety of handcraft products as well as for firewood. Competition from other products has however led to many of the above uses being abandoned and research is under way to see how new SMEs could profit from the various date palm byproducts that are now consigned to dumps but could once again be redeployed as useful raw material for new production processes.

Promoting the recovery of older crop uses and inventing new applications has a variety of benefits:

- Generates less waste / disposal;
- Provides alternative to traditional building materials;
- Reinforces the city's image as the city of palms by incorporating palm-based products in the city's urban make-up;
- Contributes to maintain productive activities, population in the rural area;
- Serves to maintain both a cultural and an historical patrimony.



Trends in environmental education and training provision

Antonio Corral Alza, IKEL, Spain

Parallel session: Training needs of SMEs

Antonio Corral Alza presented some of the trends in current environmental/sustainable development education and training provision which emerged from research carried out as part of the Foundation's project (1997-2000) on Professional Education and Training for Sustainable development relating to SMEs.

The opportunities for further vocational training are numerous, diverse and encompass all levels from skilled workers, master craftsmen to those at managerial level. There are hundreds of establishments active in running environmentally-relevant programmes and courses and course-type varies considerably in terms of organisation, financing, range of themes covered and length of course.

One of the problems for SMEs arises precisely because of the variety and diversity of environmental/SD courses on offer. They often experience difficulty in identifying suitable courses to meet their requirements, a difficulty exacerbated by the fact that many SMEs remain largely unfamiliar with environmental issues and as such unaware of the type of course that might assist them. Some basic awareness-raising activities by the public authorities could serve to bridge this initial obstacle to SME participation in environmental/SD training.

Case 1: Modular course in environmental protection (University of Koblenz-Landau, Germany)

- No entrance requirements;
- Participants may start at any time;
- Self-study modules undertaken in user-chosen order;
- Each module requires around 40 hours of study;
- Self-assessment against 'checkpoints';
- Modules inexpensive – c. Euro 200-300.

In addition to courses provided by the public sector, trade associations, chambers of commerce and trade unions, independent course providers are becoming increasingly prevalent. Other trends include the growing number of non-full-time courses with more flexible options such as modular, part-time and distance learning courses becoming common.

Content-wise, most sustainable development training tends to lack an integrated focus with quality, health and safety and environmental issues being treated more or less separately.

Case 2: The Hackefors District Joint EMS (Lingköping, Sweden)

SMEs have combined together with the help of the local university and a consultant to develop a joint ISO 14001 system. The ninety companies on the industrial park were already members of the local business association and had developed a joint waste collection, sorting and disposal system in 1996. Thirty companies, mostly micro SMEs, then formed the Hackefors Environment Group to jointly develop an EMS. A steering group of seven environmental co-ordinators and a consultant have developed all of the relevant documentation and help each of the firms to set objectives and gain certification. While still separately audited, by acting together to implement the systems the firm have obtained economy of scale benefits, an estimated 50% cost saving and have learnt from each other. The model is now being used elsewhere in Sweden.

SMEs have specific requirements of and from training courses many of which are not adequately met by existing provision. In summary, smaller businesses are looking for multi-skilled, flexible, problem-solving oriented staff with a good general environmental knowledge allied to specific sectoral expertise. To furnish staff with this type of profile, the preference of SMEs is for courses which are:

- Short and flexible;
- Highly practical in orientation;
- Delivered locally, preferably on site;
- Low cost;
- Sector-specific, preferably company-specific.

Training provision at present tends to be targeted at managers with existing environmental experience and is often pitched at too specialised and academic a level. There is likely to be a strong growth in environmental training demand and provision in coming years at both SME level and in larger companies and it is imperative that training provision be adapted to meet the demands of SMEs.



Plenary session 2 Summaries of the parallel sessions

Chair: Antonio Giacché, AFETT, Brussels

Group I: Product design – practical examples of SMEs

Rapporteur: Hans Van Weenen, IDEA, Netherlands

This was a session of fifteen participants representing different perspectives from Western Europe, Eastern Europe and Latin America.

It was the general consensus of the participants in this session that any new European Foundation programme on Living/Working Conditions which did not integrate sustainable development would be seriously flawed.

If the issue of living conditions is to be taken seriously, then life style changes are inevitable and sustainable consumption will assume as much importance as sustainable production. Simply greening products that nobody needs in the first place is not going to help us towards a sustainable future. New strategies will be needed and these include thorough dematerialisation and the introduction of new product-service systems. A new central issue is 'quality of life' which is not merely about owning or possessing objects but about having access to product functions as part of a system of relationships with people and with nature.

New strategies will require a new mind-set and the focus should be on problem solving and creativity rather than on solutions, seeing change for what it is, a dynamic process.

It is important to realise the extent and depth of the changes that will need to take place before we can truly refer to our societies as sustainable. Changing production inputs to renewable materials will not be sufficient in itself. Authentically sustainable production will necessarily affect and alter the structure of work and of work relationships and will have implications for basic concepts of society, gender as well as in other areas.

For SMEs, there are many needs in the move towards sustainable production but chief amongst these are the needs for information and platforms in which to co-operate and exchange information. The Foundation has provided just such a space at this conference and at previous events. Moving forward, the group was united in calling on the Foundation to continue providing a platform for the meeting of minds and ideas in the sustainable development debate.



Group II: Support systems for SMEs

Rapporteur: Mark Hilton, ECOTEC (UK)

Five principal themes emerged from this parallel session:

1. *SMEs need clear information*

- SMEs need to be clear what support is available to them. It was agreed that a ‘one stop shop’ regarding information and support providers was needed. Support providers need to be adequately signposted.
- Formal networks of support co-ordinators could act as conduits for information.
- There was a general impression that there are too many initiatives and that there has in particular been a proliferation of initiatives with EU funding which are often not sufficiently co-ordinated. The need is for more quality and less quantity.
- Supply chain activities remain extremely important. Large customer firms tend to have a strong influence on SMEs.
- Regarding the involvement of local authorities and regulators, it was felt that they should maintain an arm’s length approach to support provision, offering contacts, advice and funding but not being directly responsible for administering initiatives.

2. *The quality of support is variable*

Some of the available SME support initiatives are of high quality, some of not so high quality. Requirements in terms of advisors / trainers is that they should have a good balance of expertise , commonsense and a sector familiarity rather than academic qualifications.

Training of support providers / trainers and proper accreditation should have a role to play in enhancing the quality of support provision.

3. *SMEs need to be given incentives*

After regulatory compliance, economic benefits are the key inducement to SMEs to alter company behaviour, though the wider benefits of a sustainable approach (social, environmental) need to be promoted as well.

4. *The right people need to be targeted*

It is important to target support initiatives at the right people in SMEs, identifying potential ‘champions’ where possible, individuals with a positive approach to sustainability, often at middle management level who can mediate with the shopfloor and communicate new ideas to senior management.

5. *There is a need for an incremental and an integrated approach*

For many SMEs, many sustainable development ideas are regarded as esoteric. As such, it remains important to introduce new ideas and systems incrementally. Management systems for health and safety, environmental management and quality management should be introduced in sequence rather than simultaneously.



Group III: Training needs of SMEs

Rapporteur: Luigi Doria, Università Bocconi, Italy

Across the EU, the situation regarding SMEs and environmental training remains problematic and the longstanding link between size of company and quality of environmental training is as persistent as ever. Given the traditional well known problems of SMEs in managing environmental issues, it is important to improve the quality of supply of training to SMEs and innovative models to support SMEs, in particular network-based models, may have a significant role to play.

What SMEs need in terms of environmental training has been rehearsed many times. Their requirements are for training that is practical, locally-based, modular, geared towards generalists rather than specialists, and most importantly, industry- and sector-specific. Thus far, the main mismatch between SME needs and training supply has been with respect to sectoral content; course content is often entirely irrelevant to the needs of SME staff taking a course.

SMEs tend to view sustainable development in terms of environmental management and thus have a limited perspective on what is a much broader concept. How training should be adapted to reflect the full meaning of sustainability is an issue that needs to be addressed.

Many new and interesting initiatives at regional / local level are based on participation and shared involvement of local authorities, environmental agencies, companies and trade associations and benefit strongly from a local dimension and a networking approach. Training and advice should not be restricted to technical environmental matters but should encourage such networking and participative approaches. There could be valuable potential synergies between community policy and environmental policy at local level.

Regarding integrated management approaches to health & safety training and environmental training, it is established that managerial and organisational advantages do accrue from a joint approach in both areas. The very fact of systematizing management approaches to certain areas of business performance yields knock-on benefits in other areas.

Integration remains the key word in environmental training where the most important challenges are to integrate different approaches to training, to integrate and involve the different social actors and to ensure an integrated approach to the various SME management challenges anchored by a commitment to environmental training.

Group IV: Environmental and health & safety management systems

Rapporteur: Gerard Zwetsloot, TNO Arbeid, Netherlands

What are the main requirements of SMEs in terms of environmental management systems (EMS) or occupational health and safety systems?

Before answering this question, an important distinction needs to be drawn between small and medium-sized enterprises. In general, while medium-sized firms can handle a simplified or stripped-down version of existing management systems, small firms often cannot. They need instead management systems which have been specifically tailored to their own various needs and which are preferably flexible and modular.

Case-studies from the session illustrated some original approaches to systems implementation in SMEs, notably the pilot scheme phased implementation of EMS in the UK and Ireland (Acorn) and the Dutch branch code path method.

The main drivers for environmental change in companies are commitment (internal) and stakeholder pressure (external). The role of external stakeholders (customers, client companies) has become very important in recent years but without the internal will and commitment to put in place new structures and systems these pressures tend to have little effect.

Commitment should be commitment to improved performance rather than to paperwork or certification.

The most successful approaches to environmental and health and safety systems are based on the premise that implementation should be part of an overall business and strategic approach and should not merely be a reaction to perceived problems in both areas. By integrating environmental performance and health and safety performance as part of overall business performance, firms can avoid the trap of treating these areas as simple 'add-on' activities.

Ideally, EMS and OHS should be integrated with the main financial, accounting systems. Environmental performance should be incorporated in external reporting (eg financial reporting) as this is often the main means of communication to external stakeholders and gives notice of the seriousness of a company's environmental commitment. Reporting should also extend to cover social performance. In time, and in line with the aspirations of the Global Reporting Initiative, firms and other organisations may begin to treat sustainability reporting with the level of seriousness currently reserved for financial reporting.

Systems should not only be about hard objective data but should be about intangibles, both subjective and intersubjective, such as cultural change. It is commonly accepted that an acceptance of and willingness to undergo cultural change and a commitment to continuous



improvement are indispensable for companies seeking to implement new management systems. Some of the indicators of cultural change discussed included:

- A participatory approach
- an external / stakeholder orientation
- a willingness to embrace new ideas and ways of thinking and to overcome the 'not invented here' syndrome.

Discussion, dialogue and openness both inside a company or organisation and externally are key values.

Looking towards the future, a lot of work still needs to be done on EMS and OHS systems in the SME sector. There are still very few examples of best practice. A suggestion for future work in this area would be to research the long-term benefits arising from a systematic approach to management in SMEs.

Open discussion session: summary of main points

- Co-opting SMEs to sustainable production / development is still very difficult but legislation remains a necessary and important option. (O. Busck). Legislation compelling companies to pursue training in respect of occupational health and safety has proved successful in the UK (M. O'Reilly).
- The European Commission should include a chapter in the forthcoming 6th Environmental Action Programme on 'environmental competences' aimed specifically at improving staff capacities. Discussion about management systems often fails to take account of the crucial role that staff can and must play if such systems are to be properly implemented. (O. Busck).
- ISO 14031 (environmental performance evaluation – EPE) provides a useful and complimentary system of environmental performance indicators to the more established ISO 14001 EMS standard though it remains to be seen whether ISO 14031 will be suitable for SMEs. Its introduction recognizes the fact that norms should not just be about adopting new processes but should be reinforced by means of establishing how successful companies are at ensuring that the new processes result in continually improving environmental performance (M.Hilton/M.Jones).
- Integration of sustainable development in accounting / financial functions will require that greater attention is paid to basic financial concepts such as return on investment (ROI) and payback periods. Sustainability initiatives should have a well-argued financial / commercial logic (N. Peacock).
- In terms of environmental / sustainable development training needs, the consensus appears to be that the specific needs of SMEs are for generalists rather than specialists, albeit ones with specific sectoral knowledge and familiarity (B. Le Marchand). Nonetheless, use of the term 'generalist' may be a little misleading and may connote broad but superficial knowledge of environmental issues when, in reality, what industry and especially small industry requires is a range of skills in quite specific areas – eg waste minimisation, packaging regulations etc. (M. O'Reilly).
- The possibility of a common European programme for developing environmental competences has been proposed by the Danes to the European Commission. (B. Fallenkamp).
- Shifting the mindset of manufacturers to concentrate on service provision as opposed to their traditional emphasis on product design and manufacture may encourage producers of goods to maximise product life and minimise lifecycle costs which will generally involve decreased environmental impact (M. Jones).
- The fundamental concerns of sustainable development can be summarised under the acronym LIFE:
 - L for limits, in our use of resources and materials, in the way in which we harvest materials from nature.
 - I for interdependence; if we seriously intrude in natural processes, nature will strike back.
 - F for fundamentals; sustainable development is about readdressing the fundamental structures of our production and consumption. Changes will need to be radical and transformative, eg. Factor 10, Factor 20.
 - E for equity; fair sharing of resources and ideas within communities, across generations and among countries. (H. Van Weenen)




Final round table presentations

Chair: Elisabeth Lagerlöf, NIVA, Finland

Dominique Bé (European Commission, DG-Employment and social affairs) gave an outline of his unit's ongoing work on the subject of Corporate Social Responsibility which incorporates many traditional sustainable development themes.

The original impetus for this work was provided by the very public controversy surrounding the closure of the large Renault car factory at Vilvoorde in Belgium in 1997 where the French automotive company laid off over 3,000 workers without notice or consultation as part of restructuring plans. The outcry against the company's move - incidentally in defiance of a key Community directive on consultation in the context of European works councils – forced the Commission to investigate ways in which they could bring to bear their influence on firms, especially large firms, to adhere to a more responsible corporate policy.

In the first instance, a high level group on the Economic and Social Implications of Industrial Change was set up under the chairmanship of Pehr Gyllenhammar. The group's mandate was to analyse industrial change and to make recommendations as to the measures or instruments that could be developed or, where appropriate, adapted, drawing on best practices in the field of employment and economic growth.

On the basis of an analysis of the forces underlying industrial change, the group was invited to look at ways of anticipating and dealing with change in terms of economic and social policies and identifying the impact of these changes on the different industrial sectors. The group was

also invited to examine the contribution of social dialogue to and the impact of state policies on successful adaptation to industrial change.

The group submitted a provisional report to the Cardiff European Council in June 1998 and a final report to the Vienna European Council in December 1998 entitled *Managing change: High-Level Group on the Economic and Social Implications of Industrial Change - Final Report*.

Its main recommendations are:

- The creation of a European Observatory on Industrial Change to gather and disseminate information on ongoing industrial change to all those concerned (companies, professional organisations and trade unions, state and local authorities, etc.) using every available means of dissemination, in particular the Internet.
- That all large-scale European companies should prepare a 'Managing Change' report. This annual report on the subject of employment and working conditions, drawn up on a voluntary basis, will increase transparency and dialogue within companies and will help in the dissemination of best practices for adaptation to industrial change.
- Increasing workers' employability through the development of lifelong learning and training and by adopting, in partnership, a European Skills Charter to give workers a better idea of their skills situation in relation to the needs of the labour market.
- To encourage companies to adapt their management to the new requirements of the market and to refuse state subsidies to those companies that make workers redundant without having taken the necessary action to safeguard their employability.

Furthermore, the members of the group emphasised the importance of improving and simplifying the rules applying to companies in order to promote the creation and growth of SMEs, especially in the new service sectors: household services, new technologies, entertainment, etc. They recommended launching an Entrepreneurship for Europe programme which would reinforce and coordinate the various initiatives under way at European level, and the creation of an independent Centre for Entrepreneurship in cooperation with European employer organisations, the ERT, the European Business Network for Social Cohesion and the ETUC to serve as a forum for exchanging information on best practices at corporate, regional and national level.

In pursuing some of the conclusions of the Gyllenhammar report, it was realised that it would be unwise to restrict consideration to the social and economic pillars and that it would be necessary to broaden the scope and political understanding of the CSR concept to incorporate the environmental pillar and other issues, a move reinforced by the following declaration at the Lisbon Summit in March 2000:

'The European Council makes a special appeal to companies' corporate sense of social responsibility regarding best practices on lifelong learning, work organisation, equal opportunities, social inclusion and sustainable development.' (ref. 39, Presidency Conclusions, Lisbon European Council, 23/24 March 2000).

The institutional response of the Commission to this call can be seen in the draft agenda for social policy adopted in June 2000 by the Commission. A catalogue of actions are set out in an item relating to CSR. The next step at a political level will be a Communication to be adopted by the Commission in mid-2001 which will define an EU strategy for Corporate Social Responsibility.

As can be seen from the foregoing, CSR is understood in a multifunctional way as a global concept which needs to be approached from different angles. It raises the question of the total impact of an activity on the lives of individuals both within - eg. recruitment & employee retention, wages & benefits, investment in training, working environment, health & safety, labour rights - and external - eg. human rights, fair trading, impact on human health and quality of life, acceptable ratio between advantages and disadvantages for those most affected, sustainable development - to the company.

It is hoped that the various stakeholders will combine to put pressure on companies to adopt CSR practices and different methods are beginning to emerge such as 'social labelling' aimed at consumers and ethical investment products targeting financial institutions and investors. Financial reporting may offer a model for social / CSR reporting which could begin to assume the integral, compulsory function of the former. Finally, the increasingly tight labour market may provide further leverage as companies with a good CSR record enjoy benefits in terms of enhanced attractiveness to potential employees.

The current thinking in the Commission is that today there is a need to define best practices in the hope that those best practices will become the standards of tomorrow. The medium-term objective is the preparation of legislative directives within five years with the prospect that either 2004 or 2005 will be a European year of Corporate Social Responsibility. The research support and collaboration of the social partners and of the European Foundation will be a key part of the Commission's awareness-raising efforts with regard to CSR.

Luc Hendrickx (UEAPME) outlined the requirements of SMEs in terms of integrating sustainable development in corporate planning and policy.

If carried out in a balanced way with adequate consideration to questions of competitiveness and cost-effectiveness, the integration of environmental and an enterprise policy can contribute positively to sustainable development.

To achieve this goal, integration should involve all policies having an impact on economic development and the environment and should result in a single procedure for SMEs integrating environmental protection, health and safety requirements and quality insurance.

In general and with only a small number of exceptions, concepts such as eco-efficiency and sustainable entrepreneurship and practices and benchmarking are common currency in big

industry but not among SMEs. There may be some niche exceptions but in general SMEs remain out of the loop. How should this lack of awareness be addressed?

If we want SMEs to react positively to these new concepts, it is essential to ensure that there will be minimal negative financial impacts arising from participation and also that achieving certain standards (eg. ISO 14001 / EMAS) is not seen as a precondition for working on particular contracts such as public procurements. It needs to be emphasised that many of these standards require a complete change of SME working procedures and incur substantial costs. Simply imposing them on SMEs will result in organisational and financial burdens which will militate against SME support for these instruments. Costly or coercive approaches will not work.

What SMEs need instead are:

- access to information on sustainable development concepts / practice and training on their implementation.
- to be involved through their European and national representatives in an active way in the development and implementation of policy affecting them
- to be provided with financial support enabling them to comply with the organisational and production changes implied by these new concepts. This could take the form of fiscal incentives, long term loans at low interest rates, grants provided by national or Community programmes, initiatives or funds.

Not only enterprise policy but most EU policies should be framed to support SMEs given the important role this sector plays in the EU economy.

Some examples of practical measures suggest themselves. The development of cleaner technologies and their export to third countries could represent a good example of integration of sustainable development and enterprise policy and SMEs which take a lead in this emerging area should be properly incentivised. Also a suitable framework of EU and national support schemes and incentives could be developed for the environmental services sector, predominantly comprised of SMEs especially in such areas as recycling, waste management and environmental consultancy. Furthermore, technical and financial support could be made available to encourage small firms and microfirms to adopt certain voluntary instruments such as the EU ecolabel and EMAS.

UEAPME has been instrumental in drawing the attention of the EU institutions to the gap between EU environmental policy and SME environmental performance. As far as environment policy is concerned, it needs to be recognised that an SME is not a miniature, *bonsai* version of a larger business and that their capacities and competences are of a wholly different order. As such it is essential to ensure that legislation targeting SMEs is simplified and adopted only where strictly necessary, that over-bureaucratic aspects of the implementation phase are eliminated and that a fair and realistic balance is found between environmental protection and SME competitiveness.



Antonio Giacché (ETUC) outlined the main aspects of ETUC's strategy on sustainable development/environmental issues. The overall emphasis of ETUC economic policy in recent years, an emphasis increasingly reflected in mainstream EU policymaking, has been to secure high-quality economic growth while meeting demanding environmental standards and securing advanced levels of social protection. The ETUC has always tried to link working or internal environment issues (i.e. all issues and priorities related to Occupational Health and Safety) with external environmental performance. Experience and good practice cases confirm that companies with a better record in terms of employee health and safety are usually also those that demonstrate a greater respect for the general quality of the environment.

At the 1999 ETUC Congress in Helsinki, the environmental and sustainable development challenges for Europe were considered at EU level and national/regional level. An ETUC memorandum to the Finnish Council Presidency developed further some of the suggestions and outlined a strategy to meet the dual challenge of unemployment and sustainability which highlighted the double dividends to be reaped from a positive, cooperative, initiative-led approach in the two areas. The promotion of cleaner technologies, the elaboration of eco-efficiency indicators, incentives for training (in particular for workers' representatives and 'eco-conseillers'), as well as correctly targeted fiscal incentives, all have the potential to generate substantial synergistic benefits in terms of enhanced environmental performance and improved employment rates.

In a context of globalisation and of rapid industrial and technological change, the ETUC recognises the need to react to new paradigms and to adopt a broader, more coordinated policy approach in which several formerly discrete elements will have to be considered together. The work of the Gyllenhammar group was very welcome in pointing out some of the consequences of the new dispensation and some of the likely institutional developments at EU level which may help European society to manage necessary change in a responsible fashion.

It is ETUC's conviction that environmental and sustainability issues are a motivating force for innovation in the EU economy and that cleaner technologies can be a source of competitive advantage to Europe in the years to come.

Without a clear commitment to worker involvement and to workers' education and training, it will nevertheless prove impossible to derive the full benefit from the EU's leading edge role in environmental technologies and services. The structures need to be put in place to harness this potential and there is in particular a great need for training and education to enhance sustainability competencies. As regards the role of the trade unions, ETUC and many affiliates have been engaged for several years in transnational trade union training projects and courses in this area.

Michael Niemczyk (Die Effizienz Agentur, NRW) raised the vexed issue of definitions and labels and commented that the two principal issues of the conference – SMEs and sustainable development – often exist in a hostile relationship to each other. SMEs tend to regard sustainable

development as an exotic, theoretical construct with little practical relevance to their own activities. He noted that, despite the much heralded three pillar model of sustainable development, the vast majority of discussion and debate at this event had centred on the environmental pillar with the social and economic pillars relegated to a subordinate role.

Of existing sustainable development initiatives, it is possible to take stock of advances made as a result of Agenda 21 specifically in relation to SME activity. The results are not, as yet, very promising in Germany where there is still limited SME involvement in LA21 projects. Similarly, and as borne out by many conference participants, awareness of such things as eco-auditing and eco-labelling is still at a very low level amongst small and medium-sized firms.

He suggested that the first requirement of bridging the gap so that SMEs can take a more positive, pro-active approach to sustainability is to elaborate an SME-relevant set of sustainability practices while realizing that the fundamental priority of all companies, but especially of SMEs, is to make money and generate profits. It is essential that all organisations tasked with facilitating SMEs in the move towards cleaner production, such as Die Effizienz Agentur, NRW, are cognisant of this basic commercial imperative. Legislative and taxation systems need to be structured in such a way that SMEs can pursue their core priority – survival and profit – while respecting their social and environmental obligations.

Looking to the future, SMEs face a difficult path in a steadily globalizing and merger-oriented context. One of the key attributes that will be needed to assist SMEs in the struggle for commercial survival in a more competitive environment are effective management systems. This does not necessarily imply certification nor does it refer exclusively to the need to implement environmental management systems (EMS) though a more structured management approach on the part of SMEs will undoubtedly make them more receptive to EMS adoption.

Prerequisites for this type of development will be initiatives to foster lifelong learning (employees) and the so-called learning organisation (companies) though, once again, awareness of these concepts at SME level, especially amongst employees, remains very limited. Clearly, there remains a lot to be done to assist SMEs to close the sustainability gap and new, innovative thinking as regards support provision will be needed to raise awareness and help the small business sector on a more sustainable trajectory.

Speaking from the vantage point of one actively involved in an environmental capacity in a growing and prospering SME, **Gary Prunty** (Century Homes, Ireland) reiterated the positive advantages of the new Acorn initiative currently being piloted in the UK and Ireland. Already several hundred SMEs have embarked on a phased implementation of environmental management systems assisted by mentor companies and supported by state-backed initiatives in both member states.

Having already benefited from a pro-active environmental strategy in its first decade of existence, Century Homes is already ISO 14001-certified itself and has now been enlisted as a



mentor company to help several of its own smaller suppliers to achieve improvements in their environmental performance according to the five phase Acorn programme.

The Acorn initiative is both original and innovative and responds to a need that has been highlighted at the conference, that of SMEs for a form of structured environmental training and management system which is tailored to their needs and resources. Century Homes is delighted to be involved in the Acorn initiative and feels that Phased Implementation-EMS has significant potential at local, European and international level.

Concluding remarks

Eric Verborgh, Deputy Director, European Foundation for the Improvement of Living and Working Conditions

In his concluding remarks, Eric Verborgh sought to sketch some conclusions from the two days of debate and discussion at the conference and to indicate likely future developments in the Foundation's work.

With reference to the conference's specific focus on SMEs, there clearly remains a difficulty in transferring the results of research and putting them into practice and this problem appears especially marked in the case of SMEs. Further research could be done about transfer of knowledge from the realm of research to that of everyday practice. In similar fashion, sustainable development is a stimulating concept but operationalisation of this concept continues to pose questions.

The European Foundation has just approved its new four year programme for the years 2001-2004. In that programme, sustainable development remains an important background element which we have to take into consideration. It will not however be a leading theme in the programme. The Foundation is currently considering what to do with the body of work that has been generated thus far in this area, how this work shall be disseminated and how it might be shared with other organisations within the EU.

According to the next four year programme, the Foundation will be concentrating activities in three core priority areas – living conditions, working conditions and industrial relations – but will also be seeking to cover a number of 'transversal' themes:

- Promoting better employment;
- Extending equal opportunities for men and women;
- Managing diversity;
- Supporting social inclusion;
- Examining the changing use of time.

In addition, one conclusion of the Gyllenhammar report – the need to set up an Observatory on Industrial Change – has led to a proposal by the European Commission that the Foundation should establish and host the Observatory. At present, the social partners are considering this proposal and will make their opinion known in due course to the Council of Ministers. The Observatory will represent a new commitment and a further challenge to the Foundation with its limited resources.

In conclusion, the Foundation Deputy Director took the opportunity to thank the participants, in particular those who had actively participated in the Foundation's research work in sustainable development.

ANNEX A

List of presentations and papers submitted for conference

Author(s)	Organisation	Title
Stephane Laurent and Les Duckers	Warwick Business School and Coventry University, UK	<i>SMEs and the environmental challenge: Muddling through the systems dynamics of the innovation process</i>
Peter Hanley	Success Unlimited, UK	<i>Optimising and exploiting the natural growth dynamic of SMEs: The benefits and fun of sustainable performance</i>
Ole Busck	Planmiljo, Denmark	<i>Employee participation: an important resource in environmental development in companies</i>
Bart Jansen	VITO, Belgium	<i>How to integrate the ecodesign concept in SMEs: experiences in the Flemish region of Belgium</i>
Peter Neergaard and Bettina Kildegaard Winsten	Copenhagen Business School, Denmark	<i>Excellence in environmental management: An empirical study</i>
Chaan Ming Lin	Hong Kong Productivity Council	<i>Barriers in promoting environmental management in Hong Kong SMEs</i>
Ulla Eikard and Klaus Lindegaard	Plantvision and Aalborg University, Denmark	<i>Development and introduction of new natural fibre technologies in Denmark</i>

Polina Pimenova and Rita van der Vorst	Imperial College of Science, Technology and Medicine, University of London, UK	<i>Barriers, opportunities and challenges in implementing environmentally sound and economically beneficial management in SMEs in NIS transition economies – a preparatory overview</i>
Luis Eduardo Cid Guimaraes	Aston Business School (UK) and Bolsista do CNPq (Brazil)	<i>Endogenous design in small production units (in North East Brazil)</i>

Documentation was also provided in respect of the following presentations:

Plenary sessions: Henrik Litske, Margareta Mårtensson, Dominique Bé.

Parallel sessions: Mark Hilton, Beatriz Parrilla, Dorothy Maxwell, Guy Ahonen, Antonio Corral Alza, Michael Jones, Norbert Gallagher, Gary Prunty, Lena Weller, Gerard Roorda

Documentation that has been made available in electronic format (powerpoint presentations, pdfs, text files) can be obtained on request by e-mail. Contact John Hurley, e-mail: john.hurley@eurofound.ie.



ANNEX B

Conference programme

European Conference on sustainable development, SMEs and new enterprises

Dublin, 12-13 October 2000

Thursday 12 October 2000

PLENARY SESSION 1

Joint chairs: Margareta Mårtensson (SAF, Stockholm); Bernard Le Marchand (FEMGE, Brussels)

- 10.00-10.20 Welcome and aims of conference
Eric Verborgh, Deputy Director, European Foundation for the Improvement of Living and Working Conditions
- 10.20-10.40 The Foundation's initiatives on sustainable development and SMEs
Henrik Litske, Research Manager, European Foundation for the Improvement of Living and Working Conditions
- 10.40-10.50 Discussion
- 10.50-11.10 Supporting sustainable development in SMEs in Eastern Europe
Robert Coyle, Principal Environmental Adviser, European Bank for Reconstruction and Development

- 11.10-11.20 Discussion
- 11.40-11.55 Management systems, certificates, labelling – How many can a (small) company manage?
Margareta Mårtensson, Swedish Employers' Confederation (SAF)
- 11.55-12.05 Discussion
- 12.05-12.25 The sustainable development section of the Foundation's website
John Hurley, Information Liaison Officer – Sustainable development, European Foundation for the Improvement of Living and Working Conditions, and Yorick Benjamin, EDEN
- 12.25-12.35 Discussion
- 12.35-12.45 Structure of the remainder of the conference
Henrik Litske, Research Manager, European Foundation for the Improvement of Living and Working Conditions

PARALLEL SESSIONS

Group I Product design - practical examples of SMEs

Group Chair and Rapporteur: Hans van Weenen, IDEA

- 14.00-14.05 Introduction – programme/purpose of session
Hans van Weenen, IDEA
- 14.05-14.20 Crops for Sustainable Enterprise: Recent European Foundation study
Yorick Benjamin, EDEN
- 14.20-14.35 Case Study 1: Renewable materials for SMEs
Robert Wimmer, Center for Appropriate Technology, Vienna
- 14.35-14.50 Case Study 2: Reviving local markets and sustainable production/consumption practices – examples from Poland
Ewa Charkiewicz, Tools for Transition, Den Haag
- 14.50-15.05 Case Study 3: The use of palm tree leaves by SMEs
Michel Ferry, Date Palms & Farming Systems in Arid Zones, Elche
- 15.05-15.20 Case Study 4: Plant fibres for design by SMEs
Ulla Eikard, Plantvision, Copenhagen
- 15.45-16.00 Questions
- 16.00-17.25 Discussion
- 17.25-17.30 Roundup: Chairman's summary of key points



Group II Support systems for SMEs

Group Chair and Rapporteur: Mark Hilton, ECOTEC Research and Consulting Ltd

- 14.00–14.05 Introduction - purpose of session, programme etc.
Mark Hilton, ECOTEC Research and Consulting Ltd
- 14.05–14.35 Presentation on Support Systems for SMEs - Principles and Practice, covering the Foundation study/database and complementary material.
Mark Hilton, ECOTEC Research and Consulting Ltd
- 14.35–14.55 Case Study 1: Waste Minimisation
Lesley Millett, Waste Alert Clubs, London
- 14.55–15.15 Case Study 2: Centre for Cleaner Production Initiatives, Barcelona
Beatriz Parrilla Chroszcz, Centre for Cleaner Production Initiatives
- 15.45–16.05 Case Study 3 – Eco-Design LIFE Project
Dorothy Maxwell, Enterprise Ireland, Dublin
- 16.05–16.25 Case Study 4 - Small Workplace Programme
Guy Ahonen, Hanken Business School, Helsinki
- 16.25–17.25 Structured Discussion (led by panel) covering:
- SME Needs/Requirements
 - Barriers to SME Support
 - Key Process Steps and Success Factors
 - The Future of SME Support
- 17.25–17.30 Roundup – Chairman’s Summary of Key Points

Group III Training needs of SMEs

Group Chair and Rapporteur: Luigi Doria, IEFÉ, Università Bocconi, Milan

- 14.00–14.15 Introduction to the session - **Luigi Doria**
- 14.15–14.50 SME environmental training needs
Presentation of results from international research - **Luigi Doria**
- 14.50–15.20 Trends in environmental PET provision. New approaches, innovative patterns
Presentation of successful policies implemented in some EU countries
Antonio Corral, IKEI, San Sebastián
- 15.35-15.50 Environmental training for SMEs – Some Irish cases
Mary Kelly / Donal Buckley, Irish Business and Employers Confederation
- 15.50-17.20 Structured discussion covering all the session issues
- 17.20–17.30 Chairman’s summary of key points

Group IV Environmental and Health & Safety Management**Group Chair and Rapporteur: Gerard Zwetsloot, TNO Arbeid**

- 14.00-14.05 Introduction to the session - *Gerard Zwetsloot, TNO*
- 14.05-14.25 EHS Management and SMEs
Gerard Zwetsloot, TNO
- 14.25-14.50 The UK-Irish ACORN project
Michael Jones, Dept of Trade and Industry, UK and Norbert Gallagher, IPC
- 14.50-15.15 A Sustainable Future for Century Homes
Gary Prunty, Century Homes, Ireland
- 15.40-16.05 Health and Safety and Environmental Management in German SMEs
Lena Weller, IQ Consult, Düsseldorf
- 16.05-16.30 The branch code path: a successful approach for micro firms in craft sectors in the Netherlands
Gerard Roorda, HBA, Voorburg
- 16.30 Structured discussion (panel of speakers and Margareta Mårtensson, SAF) on
- typical characteristics of small companies and consequences for EM
 - key choices for small companies
 - how to optimise the added value of EHS Management for SMEs
 - relevance for the social partners
- 17.20 Round up: chairman's summary of key points

Friday 13 October 2000**PLENARY SESSION 2****Chair: Antonio Giacché, ETUC, Brussels**

- 10.00-10.10 Group I: Product design – practical examples of SMEs
Rapporteur: Hans van Weenen, IDEA
- 10.10-10.20 Group II: Support systems for SMEs
Rapporteur: Mark Hilton, ECOTEC Research & Consulting Ltd
- 10.20-10.30 Group III: Training needs of SMEs
Rapporteur: Luigi Doria, IEFÉ, Università Bocconi
- 10.30-10.40 Group IV: Environmental Management Systems
Rapporteur: Gerard Zwetsloot, TNO Arbeid
- 10.40-11.00 Discussion



11.20-12.35 **Final round table presentations**

Chair: Elisabeth Lagerlöf, Nordic Institute for Advanced Training in Occupational Health, Helsinki

- Contributions by:
- **Gary Prunty** (Century Homes) **Luc Hendrickx** (UEAPME),
 - **Michael Niemczyk** (Die Effizienz-Agentur NRW), **Antonio**
 - **Giacché** (ETUC), **Dominique Bé** (DG for Employment and
 - Social Affairs, European Commission)

12.35-12.45 Concluding remarks

Eric Verborgh, Deputy Director, European Foundation for the Improvement of Living and Working Conditions

ANNEX C

Conference participants

Professor Kurt Aagaard Nielsen

Department of Environment,
Technology and Social Studies
Roskilde University
Box 260
DK-4000 Roskilde
Denmark
Tel. +45 4674 2915
Email: aagaard@ruc.dk

Mr Philippe Arkias

CLCBE
10-16 Rue Brancion
75015 Paris
France
Tel. +33 1 5386 1163
Fax +33 1 5386 1151

Dr Yorick Benjamin

EDEN
Dewittenkade 93 hs
1052 AE Amsterdam
The Netherlands
Tel. +31 20 684 8929
Fax +31 20 524 8104
Email: eden@antenna.nl

Mr Donal Buckley

Irish Business and Employers
Confederation
84 Lr Baggot St
Dublin 2
Ireland
Tel. +353 1 660 1011
Fax +353 1 660 1717

Mr Antonio V. Carreira Oliveira

Head of Division
Safety & Environment Industry
Direcção-Geral da Indústria
Avenida Conselheiro Fernando de Sousa
11-5°
P-1099-027 Lisboa
Portugal
Tel. +351 21 389 0092
Fax +351 21 389 0114
Email: antonio.oliveira@dgi.min-
economia.pt

Ms Ewa Charkiewicz

Tools for Transition
Atjehstraat 20
2585 VK Den Haag
The Netherlands
Tel. +31 70 352 0289
Fax +31 70 352 0289
Email: echsvb@euronet.nl

Mr Robert Coyle

Principal Environmental Advisor
European Bank for Reconstruction
and Development
One Exchange Square
London EC2A 2JN
United Kingdom
Tel. +44 20 7338 6590
Fax +44 20 7338 6848
Email: coyler@ebrd.com

Mr David P. Douglas

Scottish Institute of
Sustainable Technology Ltd
Unit 25
Tweed Horizons Centre
Newtown St Boswells
Melrose TD6 0SG
Scotland
Tel. +44 1835 823 507
Fax +44 1835 824 110
Email: penny.casey@scotent.co.uk

Ms Gwyneth Evans

Regional Development Executive
ARENA Network
Business in the Community N.I.
C/O TK-ECC Ltd
770 Upper Newtownards Road
Dundonald
Belfast BT16 0UL
Northern Ireland
Tel. +44 28 90 410 410
Fax +44 28 90 419 030
Email: gwyneth@bitc.org.uk

Dr Stefano Farolfi

CIRAD-TERA
Programme ERE
TA 60/15
Campus de Baillarguet
Bureau F 112
34398 Montpellier Cedex 5
France
Tel. +33 4 6759 3800
Fax +33 4 6759 3827
Email: stefano.farolfi@cirad.fr

Mr Niels Peter Flint

Design Producer
Skt. Jørgens Alle 7 1.tv
DK-1615 Copenhagen V
Denmark
Tel. +45 3323 4061 / 4057 2328
Email: flint@design.dk

Mr Matthias Gelber

14000 & One Solutions Ltd
PO Box 1005
Stoke-on-Trent ST1 3TN
United Kingdom
Tel. +44 070000 14000
Fax +44 070000 14001
Email: mgelber@14001.com

Mr Miguel Gonzalez Ruiz

Fundación Doñana 21
Isaac Newton S/N
E-41092 Sevilla
Spain
Tel. +34 95 503 9752
Fax +34 95 9451 821
Email: fd21@donana.es

Mr Peter Hanley

Chief Executive
Success-Unlimited
223 Washway Road
Sale
Cheshire M33 4AL
United Kingdom
Tel. +44 161 905 2998
Fax +44 161 905 2998
Email: phanleysun@aol.com

Mr Luc Hendrickx

Union Européenne de l'Artisanat
et des PME
4, rue Jacques de Lalaing
B-1040 Brussels
Belgium
Tel. +32 2 230 7599
Fax +32 2 230 7861
Email: luc.hendrickx@ueapme.kmonet.be

Mr Ian Hewitt

Senior Lecturer
Department for Mechanical and
Manufacturing Engineering
Nottingham Trent University
Burton Street
Nottingham NG1 4BU
United Kingdom
Tel. +44 115 848 4107
Fax +44 115 948 6166
Email: ian.hewitt@ntu.ac.uk

Mr Michael Jones

Department of Trade and Industry
151 Buckingham Palace Road
London SW1W 9SS
United Kingdom
Tel. +44 20 7215 1692
Fax +44 20 7215 1089
Email: michael.jones@dti.gsi.gov.uk

Ms Alexandra Justino

EAPS S.A.
Rua Nova da Trindade, 15A
1200 Lisbon
Portugal
Tel. +351 21 322 9194
Fax +351 21 340 1580
Email: alexandra.justino@eaps.pt

Mr David Kelly

Environment Unit
Enterprise Ireland
Glasnevin
Dublin 9
Ireland
Tel. +353 1 8082425
Fax +353 1 808 2259
Email: david.kelly@enterprise-ireland.com

Ms Elisabeth Lagerlöf

Director
NIVA
Topeliuksenkatu 41 a A
00250 Helsinki
Finland
Tel. +358 9 4747 499
Fax +358 9 4747 497
Email: elag@occuphealth.fi

Mr Bernard Le Marchand

Conseiller de la FEMGE
76, avenue Victor Gilsoul
B-1200 Brussels
Belgium
Tel. +32 2 771 5871
Fax +32 2 771 5871
Email: blmconseil@skynet.be

**Mr Chaan Ming Lin**

Hong Kong Productivity Council
Environmental Management Division
3/F HKPC Building
78 Tat Chee Avenue
Kowloon
Hong Kong
P.R.C.
Tel. +852 2788 5618
Fax +852 2788 5608
Email: cmlin@hkpc.org

Dr Eduardo Lopes Rodrigues

Director
EAPS S.A.
Rua Nova da Trindade, 15A
1200 Lisbon
Portugal
Tel. +351 21 322 9189
Fax +351 21 340 1580
Email: eduardo.rodrigues@eaps.pt

Ms Dorothy Maxwell

Environment Unit
Enterprise Ireland
Glasnevin
Dublin 9
Ireland
Tel. +353 1 808 2612
Fax +353 1 808 2259
Email: dorothy.maxwell@enterprise-ireland.com

Professor Peter Neergaard

Copenhagen Business School
3, Solbjerg Pl. 3
2000 Frederiksberg C
Denmark
Tel. +45 3815 2404
Fax +45 3815 2440
Email: pn.om@cbs.dk

Dipl.-Ing. Michael Niemczyk

Projectcoordination
Effizienz-Agentur NRW
(Prisma Consult GmbH)
Haus der Wirtschaftsförderung
Mülheimer Str. 100
47057 Duisburg
Germany
Tel. +49 203 378 7942
Fax +49 203 378 7944
Email: mni@efanrw.de

Ms Beatriz Parilla Chroszcz

Centre d'Iniciatives per a
la Produccio Neta, s.a.
Paris, 184, 3a planta
08036 Barcelona
Spain
Tel. +34 93 415 1112
Fax +34 93 237 0286
Email: cleanpro@cipn.es

Ms Polina Pimenova

Imperial College of Science,
Technology & Medicine, Huxley School
Centre for Environmental Technology
64C Fairholme Road
London W14 9JY
United Kingdom
Tel. +44 20 7386 7930
Fax +44 870 137 2961
Email: p.pimenova@ic.ac.uk

Mr Zeno Reichenbecher

Federal Ministry of Economics
Scharnhorst Str. 34
D-11019 Berlin
Germany
Tel. +49 30 2014 7115
Fax +49 30 2014 5428
Email: reichenbecher@bmwi.bund.de

Dr Gerard Roorda

Head of Research & Development
Hoofd Bedrijfschap Ambachten
Postbus 940
2270 AX Voorburg
The Netherlands
Tel. +31 70 337 1111
Fax +31 70 386 3439
Email: g.roorda@hba.nl

Mr Heitor F. Salgueiro

Deputy Director General
Confederação da Indústria Portuguesa –
CIP
Avenida 5 de Outubro, 35-1°
P-1069-193 Lisboa
Portugal
Tel. +351 21 316 4700
Fax +351 21 357 9986
Email: cip@mail.telepac.pt

Ms Catherine Storey

Glassagh Enviro Consult
Glassaghbeg
Ballinamore
Cloghan
Co. Donegal
Ireland
Tel. +353 74 33181
Email: catherinestorey@eircom.net

Mr Zacharias Tsaraklis

Ministry of Labour & Social Affairs
Technical Inspectorate
Katholikis Ekklesias 1
185 10 Pireas
Greece
Tel. +30 1 410 2569
Fax +30 1 422 2169

Dr Hans Van Weenen

IDEA
Tulpenveld 48
1901 LA Castricum
The Netherlands
Tel. +31 251 658 620
Fax +31 251 658 620
Email: idea@casema.net

Ms Lena Weller

IQ Consult
Hans Böckler Str. 39
Düsseldorf
Germany
Tel. +49 211 430 1354
Fax +49 211 430 1398
Email: lena.weller@iq-consult.de

Mr Alex Young

Centre for Sustainable Design
The Surrey Institute of Art and Design
Falkner Road
Farnham
Surrey GU9 7DS
United Kingdom
Tel. +44 1252 892 904
Fax +44 1252 892 747
Email: ayoung@surrart.ac.uk

Prof. Guy Ahonen

Hanken Business School
PB 479
FIN-00101 Helsinki
Finland
Tel. +358 9 4313 3350
Fax +358 5 0047 7727
Email: guy.ahonen@shh.fi

M. Dominique Bé

Directorate General for Employment
and Social Affairs (EMPL/D/3)
European Commission
200 rue de la Loi
(J-37 6/28)
B-1049 Brussels
Belgium
Tel. +32 2 295 8057
Fax +32 2 296 9771
Email: dominique.be@cec.eu.int

Ms Estefania Blount

CC.OO.
Relaciones Internacionales
Fernandez de la Hoz, 12
E-28010 Madrid
Spain
Tel. +34 91 702 8000
Fax +34 91 702 8114/3
Email: eblount@ccoo.es

Mr Ole Busck

Planmiljø
Ellevej 5
Østrup
DK-3670 Vekso Sjælland
Denmark
Tel. +45 4676 2403
Fax +45 4676 2404
Email: ob@planmiljoe.dk

Mr Mario Catizzone

Visiting Scientist
Naturvårdsverket
Bleckholmsterassen, 36
S-106 48 Stockholm
Sweden
Tel. +46 8 698 1656/1000
Fax +46 8 698 1664
Email: mario.catizzone@environ.se

Mr Antonio Corral

IKEI
Avenida de la Libertad, 20-3°
20004 San Sebastián
Spain
Tel. +34 943 426 610
Fax +34 943 423 501
Email: acorral@ikei.es

Dr Luigi Doria

Università Bocconi – IEFÉ
Viale Filippetti 9
20122 Milan
Italy
Tel. +39 02 5836 3820/3821
Fax +39 02 5836 3890
Email: luigi.doria@uni-bocconi.it

Mr Paul Eilbracht

Design4U
Buitenwatersloot 75A
PO Box 3051
2601 DB Delft
The Netherlands
Tel. +31 15 214 8903
Fax +31 15 214 3323
Email: info@design4u.nl

Mr Bernt Fallenkamp

Head of Department for Environment,
Business Policy & International Affairs
Danish Confederation of Trade Unions
Rosenørns Allé 12
DK-1634 Copenhagen V
Denmark
Tel. +45 3524 6000
Fax +45 3537 3741/3524 6300
Email: bfa@lo.dk

Mr Michel Ferry

Scientific Director
Phoenix Research Station
Apartado 996
03201 Elche
Spain
Tel. +34 965 421 551
Fax +34 965 423 706
Email: m.ferry@wanadoo.es

Mr Norbert Gallagher

Irish Productivity Centre
42-47 Lr Mount Street
Dublin 2
Ireland
Tel. +353 1 662 3233
Fax +353 1 662 3300
Email: norbertg@ipc.ie

Mr Antonio Giacché

AFETT
Boulevard du Roi Albert II, 5
B-1210 Brussels
Belgium
Tel. +32 2 224 0518
Fax +32 2 224 0520
Email: agiacche@etuc.org

Dr Luiz Guimarães

Visiting Researcher
Aston Business School
Flat 106
3 College Walk, Selly Oak
Birmingham B29 6LF
United Kingdom
Tel. +44 121 471 3349
Fax +44 121 471 3370
Email: adocid@aol.com

Ms Tania Hemming

Business Research Advisor
Progress through Training
De Salis Court
Hampton Lovett
Droitwich Spa
Worcs. WR9 0NX
United Kingdom
Tel. +44 1905 795 185
Fax +44 1905 797 666
Email: tania@tfe-group.com

Professor Marc Heselmans

Directeur-generaal
Ministerie van Tewerkstelling en Arbeid
Belliardstraat 51
B-1040 Brussels
Belgium
Tel. +32 2 233 4541
Fax +32 2 233 4231
Email: heselman@meta.fgov.be

Mr Mark Hilton

ECOTEC Research & Consulting Ltd
Priestley House
28-34 Albert Street
Birmingham B4 7UD
United Kingdom
Tel. +44 121 616 3600
Fax +44 121 616 3699
Email: mark_hilton@ecotec.co.uk

Ms Elsmari Julin

NaturResursCentrum Dalarna
Vassbo 24
S-791 93 Falun
Sweden
Tel. +46 243 223 800
Fax +46 243 223 807
Email: elsmari.julin@nrc.se

Dr Christian Kassner

Leoma GmbH
LEOMA and Partners
Luisenplatz 10
45527 Hattingen
Germany
Tel. +49 2324 593121
Fax +49 2324 593122
Email: ck@leoma-partner.de

Ms Sabine Kratz

Zentrum für Europäische Studien
Universität Trier
D-54286 Trier
Germany
Tel. +49 651 994 4150
Fax +49 651 201 3930
Email: kratz@uni-trier.de

Mr Stéphane Laurent

Warwick Business School
University of Warwick
Coventry CV4 7AL
United Kingdom
Tel. +44 2476 522 100
Fax +44 2476 524 650
Email: s.laurent@warwick.ac.uk

Mr Jean Léger

Conseiller en technologie industrielle
PARI-IRAP
121 rue de l'Eglise, Suite 407
Edmundston NB E3V 1J9
Canada
Tel. +1 506 735 2321
Fax +1 506 735 2322
Email: jean.leger@nrc.ca

Ms Gerda Loewen

Directorate General for Employment
and Social Affairs
European Commission
200 rue de la Loi
(J-27 06/62)
B-1049 Brussels
Belgium
Tel. +32 2 295 6439
Fax +32 299 4571
Email: gertraud.loewen@cec.eu.int

Ms Margareta Mårtensson

Environmental Adviser
Development Department
Swedish Employers' Confederation (SAF)
S. Blasieholmshamnen 4A
S-103 30 Stockholm
Sweden
Tel. +46 8 762 6000/6349
Fax +46 8 762 6566
Email: margareta.martensson@saf.se

Ms Lesley Millett, MBE

Director
Wastebusters Ltd
3rd Floor, Brighton House
Brighton Terrace
London SW9 8DJ
United Kingdom
Email: lesley@wastebusters.co.uk

Ms Vanessa Newell

Progress through Training
De Salis Court
Hampton Lovett
Droitwich Spa
Worcs. WR9 0NX
United Kingdom
Tel. +44 1905 795 185
Fax +44 1905 797 666
Email: vanessa@tfe-group.com

Mr Mark O'Reilly

14000 & One Solutions Ltd
PO Box 1005
Stoke-on-Trent ST1 3TN
United Kingdom
Tel. +44 070000 14000
Fax +44 070000 14001
Email: mark.oreilly@14001.com

Mr Nigel Peacock

European and Industrial Programmes
University of Wales, Bangor
Gwynedd LL57 2DG
Wales
Tel. +44 1248 382 501
Fax +44 1248 383 657
Email: n.peacock@bangor.ac.uk

Mr Gary Prunty

Century Homes
t/a Woodrow Ltd
Clones Road
Monaghan
Co. Monaghan
Tel. +353 47 81270
Fax +353 47 30081
Email: gprunty@century.ie

Mr Carlos Relancio

TECA Consultores, S.A.
Costa, 2-4º dcha.
E-50001 Zaragoza
Spain
Tel. +34 976 222 952
Fax +34 976 238 651
Email: crelancio@grupo-teca.com

Mr Hans Rynnel

Svensk Industridesign
Box 5501
S-114 85 Stockholm
Sweden
Tel. +46 8 783 8324
Fax +46 8 661 2035
Email: hans.rynnel@svid.se

Mr Mark Smith

The Open University
34 Ascot Close
Stratford-upon-Avon
Warks CV37 9FN
United Kingdom
Tel. +44 1789 268 291
Email: m.t.smith@open.ac.uk

Mr Per-Åke Strandsäter

ALMI
Klubbhusgatan 13
S-553 03 Jönköping
Sweden
Tel. +46 36 306 507
Fax +46 36 306 510
Email: per-ake.strandsater@almi.se

Mr Luc Van Hamme

Ministerie van Tewerkstelling en Arbeid
Belliardstraat 51-53
B-1040 Brussel
Belgium
Tel. +32 2 233 4543
Fax +32 2 233 4523
Email: luc.vanhamme@meta.fgov.be

**Mr Matti Viialainen**

Deputy Director
The Central Organisation of
Finnish Trade Union SAK
PO Box 157
00531 Helsinki
Finland
Tel. +358 9 77211
Fax +358 9 772 1319
Email: matti.viialainen@sak.fi

Dipl.-Ing. Robert Wimmer

GrAt, Center for Appropriate Technology
Vienna University of Technology
Wiener Hauptstr. 8-10
A-1040 Wien
Austria
Tel. +43 1 984 3166
Fax +43 1 786 4205
Email: r.wimmer@grat.tuwien.ac.at

Dr Gerard Zwetsloot

TNO Arbeid
Polarisavenue 151
2132 JJ Hoofddorp
The Netherlands
Tel. +31 23 554 9449
Fax +31 23 554 9303
Email: gerard.zwetsloot@arbeid.tno.nl

European Foundation

Raymond-Pierre Bodin, Director
Eric Verborgh, Deputy Director
Henrik Litske, Research manager
Michel Miller, Research manager
Janet Smith, Research manager
John Hurley, Information liaison officer
Sarah Farrell and
Christine Gollin, conference secretariat

ANNEX D

Recent Foundation publications on sustainable development

Full details of each publication mentioned below can be found in the catalogue on the Foundation website at <http://www.eurofound.ie>. All free publications are available on request to info@eurofound.ie or may be downloaded directly from the website. Priced publications are available from good bookshops or from of the any sales agent of the Office of Official Publications of the European Communities (see list on their website at <http://eur-op.eu.int>.)

General

Sustainable Development: Practical Initiatives for policy makers and the social partners (EF/99/08/, 18pp). EUR 18. Available free on request in all EU languages.

Sustainable Development: Catalogue of Publications 2000 (EF/99/51/EN). Available free on request.

The Role of the Social Partners in Sustainable Development: Conference Report (EF/99/37/EN). Available online at www.eurofound.ie.

Economic and Fiscal Instruments

Economic Instruments for Sustainable Development: Improving the External and Working Environments (Part 1) (EF/98/52/EN, 84pp). EUR 18.

Economic Instruments for Sustainable Development: Improving the External and Working Environments (Part 2) (EF/99/56/EN, 84pp). EUR 18.

Economic Incentives to Improve the Working Environment in Europe (CD-ROM, EF/97/61/EN). EUR 40.

**Employment and Sustainability**

Employment and Sustainability: Digest Report (EF/98/51/, 11pp). Available free on request in EN/FR/DE/ES/IT.

Education and Training

Training in Environmental Management - Industry and Sustainability. (EF/99/22/EN, 48pp). EUR 16.

Professional Education and Training for Sustainable Development relating to SMEs: Consolidated Report (to be published early 2001).

Design for Sustainable Development

Design for Sustainable Development: Guides and Manuals (EF/97/30/EN, 30pp). EUR 7.

Design for Sustainable Development: Concepts and Ideas (EF/97/29/EN, 40pp). EUR 7.

Design for Sustainable Development: Practical Examples of SMEs (EF/98/64/EN, 102pp). EUR 18.

Design for Sustainable Development: Environmental Management and Safety & Health (EF/98/50/EN, 88pp). EUR 28.

Design for Sustainable Development: Networks Directory (1999-2000). Available online at www.eurofound.ie.

Design for Sustainable Development: Crops for Sustainable Enterprise. (2000) Available online at www.eurofound.ie.

Design for SD: Health Aspects of Workers Dealing with Sustainable Production and Services (EF/00/45/EN, 74pp). EUR 16.

Design for Sustainable Development: Support Systems for SMEs. (2000). Available online at www.eurofound.ie.

Design for Sustainable Development: Success Factors and Processes Leading to Sustainable Design. (to be published early in 2001).

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Sustainable Development, SMEs and New Enterprises

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BELGIQUE/BELGIË

Jean De Lannoy
Avenue du Roi 202/Koningslaan 202
B-1190 Bruxelles/Brussel
Tél. (32-2) 538 43 08
Fax (32-2) 538 08 41
E-mail: jean.de.lannoy@infoboard.be
URL: http://www.jean-de-lannoy.be

**La librairie européenne/
De Europese Boekhandel**
Rue de la Loi 244/Wetstraat 244
B-1040 Bruxelles/Brussel
Tél. (32-2) 295 26 39
Fax (32-2) 735 08 60
E-mail: mail@libeurop.be
URL: http://www.libeurop.be

Moniteur belge/Belgisch Staatsblad
Rue de Louvain 40-42/Leuvenseweg 40-42
B-1000 Bruxelles/Brussel
Tél. (32-2) 552 22 11
Fax (32-2) 511 01 84
E-mail: eusales@just.fgov.be

DANMARK

J. H. Schultz Information A/S
Herstedvang 12
DK-2620 Albertslund
Tlf. (45) 43 63 23 00
Fax (45) 43 63 19 69
E-mail: schultz@schultz.dk
URL: http://www.schultz.dk

DEUTSCHLAND

Bundesanzeiger Verlag GmbH
Vertriebsabteilung
Amsterdamer Straße 192
D-50735 Köln
Tel. (49-221) 97 66 80
Fax (49-221) 97 66 82 78
E-Mail: Vertrieb@bundesanzeiger.de
URL: http://www.bundesanzeiger.de

ΕΛΛΑΔΑ/GREECE

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International Bookstore
Panepistimiou 17
GR-10564 Athina
Tel. (30-1) 331 41 80/1/2/3/4/5
Fax (30-1) 323 98 21
E-mail: elebooks@netor.gr
URL: elebooks@hellasnet.gr

ESPAÑA

Boletín Oficial del Estado
Trafalgar, 27
E-28071 Madrid
Tel. (34) 915 38 21 11 (libros)
913 84 17 15 (suscripción)
Fax (34) 915 38 21 21 (libros),
913 84 17 14 (suscripción)
E-mail: clientes@com.boe.es
URL: http://www.boe.es

Mundi Prensa Libros, SA
Castelló, 37
E-28001 Madrid
Tel. (34) 914 36 37 00
Fax (34) 915 75 39 98
E-mail: libreria@mundiprensa.es
URL: http://www.mundiprensa.com

FRANCE

Journal officiel
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IRELAND

Alan Hanna's Bookshop
270 Lower Rathmines Road
Dublin 6
Tel. (353-1) 496 73 98
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E-mail: hanna@s.iol.ie

ITALIA

Licosa SpA
Via Duca di Calabria, 1/1
Casella postale 552
I-50125 Firenze
Tel. (39) 055 64 83 1
Fax (39) 055 64 12 57
E-mail: licosa@licosa.com
URL: http://www.licosa.com

LUXEMBOURG

Messageries du livre SARM
5, rue Raiffeisen
L-2411 Luxembourg
Tél. (352) 40 10 20
Fax (352) 49 06 61
E-mail: mail@mdl.lu
URL: http://www.mdl.lu

NEDERLAND

SDU Servicecentrum Uitgevers
Christoffel Plantijnstraat 2
Postbus 20014
2500 EA Den Haag
Tel. (31-70) 378 98 80
Fax (31-70) 378 97 83
E-mail: sdu@sdu.nl
URL: http://www.sdu.nl

ÖSTERREICH

**Manz'sche Verlags- und
Universitätsbuchhandlung GmbH**
Kohlmarkt 16
A-1014 Wien
Tel. (43-1) 53 16 11 00
Fax (43-1) 53 16 11 67
E-Mail: manz@schwinge.at
URL: http://www.manz.at

PORTUGAL

Distribuidora de Livros Bertrand Ld.º
Grupo Bertrand, SA
Rua das Terras dos Vales, 4-A
Apartado 60037
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