ENVIRONMENTAL PRINCIPLES
TRAINING PACKAGE

Trainer’s Manual
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Within the first five years of its existence, the UN Global Compact Initiative has grown to be the largest corporate citizenship initiative in the world. Today the initiative involves over two thousand company participants from all regions. Since the beginning UNEP has been closely involved as a core UN agency in the initiative, acting as guardian of its environment principles and building on its longstanding experience in engaging the private sector in voluntary action for sustainable development. Throughout, we have always underlined the importance of reporting and communicating progress on implementation of the principles. It is only by reporting and communicating progress openly that companies, labour unions and other stakeholder organisations will be able to learn from experience and accomplish continual improvement.

The response from leading the business in all regions to the invitation from the UN Secretary-General to integrate the basic principles on environment, human rights, labour standards and anti-corruption has been impressive. More recently, we have seen how mainstream investors are beginning to show interest as UNEP, the Global Compact and business partners led the development of principles for responsible investment. Business today needs to mainstream, scale up and think in terms of not only “sustainable investment” but also “investment in sustainable development”.

After the initial campaigning years of the UN Global Compact, the challenge today is to focus more closely on quality of implementation. It is to this call that the Global Compact Environment Principles Training Package is answering. Previous studies on the impact of the UN Global Compact showed room for improvement in developing tools and resources for companies to understand and implement the principles. In a 2004 impact study, participants gave a widespread call for toolkits on the implementation of the principles. Interviews with many participants showed that seeking practical know-how is a major motivation for joining the UN Global Compact as global corporate environmental and social responsibility initiative.

The Global Compact Environment Principles Training Package is providing a practical kit for trainers, managers and employees to improve their understanding of how to implement the three environment principles. In general, it provides an up to date introduction to corporate environmental responsibility. This is a key component of corporate societal responsibility, as currently discussed in the development of new international standards and called for in the 2002 Johannesburg Declaration. In addition, the package also makes the link with quality management, introducing the Global Compact Performance Model that was developed and used as framework for the 2004 Raise the Bar publication.

It is especially significant that we also launch this training package in Chinese, underlining its value to the training of suppliers and emerging company leaders in the developing world. I encourage you as old and newcomer participants in the Compact, as well as service providers and fellow international agencies to make use of this comprehensive package. It is there for your use and adaptation to your needs. Join us in this effort to build capacity for greater environmental care in business operations world-wide.

KLAUS TOEPFER
Executive Director
United Nations Environment Programme
“What does corporate environmental responsibility require from a company today? Think of just two of the challenges business face world-wide. Expanding population in developing regions is creating large markets dominated by the young. Escalating demand for energy propels economic development but threatens our climate. How can your company take on new risks and opportunities in a responsible manner? How do you apply precaution? How do you promote environmentally sound technologies? These questions are relevant to companies of different sizes in all regions. This package provides practical guidance and an overview of new trends in addressing these. Trainers and practitioners alike are invited to join us with fellow UN agencies such as UNDP, UNIDO and others in rolling out this training programme in a growing number of countries and languages.”

MONIQUE BARBUT
Director
UNEP Division of Technology, Industry and Economics (DTIE, Paris)

“As we passed the first deadline for Global Compact participants to issue their Communications on Progress by mid-2005, it was clear that we need to strengthen our effort in promoting transparent communication on implementation. The learning spirit of the Compact is also to communicate what works and what doesn’t. This brings us to the demand for practical guidance and capacity building. I welcome this Global Compact Environment Principles Training Package as an excellent contribution in responding to this demand. I encourage training institutions, business organisations and fellow UN agencies to make full use of it.”

GEORG KELL
Head
UN Global Compact Office (New York)

“The World Business Council for Sustainable Development (WBCSD) has been closely involved in the development of the Global Compact Performance Model during the past three years. I welcome the introduction to the model and the practical business case approach found in this training package. I am sure it will be of tremendous value to business communities everywhere, in particular new market leaders from Asia, Africa, Latin America and the Middle East.”

ODD GULLBERG
Chief Operating Officer, WBCSD (Geneva)
“The development of this training package has been inspired by discussions at Global Compact Learning Forms, meetings of international experts in the development of the publication *Raise the Bar* (2004) with the Global Compact Performance Model, as well as ongoing work and training materials of UNEP and its partners in the fields of corporate responsibility, sustainable production / consumption and environmentally sound technologies.

We would like to thank Jonathon Hanks of *Incite Sustainability*, as well as Claire Janisch and Karoline Johnson for developing the text of the Global Compact Environmental Principles Training Package. In addition, we are grateful to Surya Chandak, Guido Sonnemann and Xiaofei Pei of UNEP DTIE and to Lothar Meinzer of *BASF Aktiengesellschaft* for their detailed comments on draft text and structure. The project manager is Cornis van der Lugt of UNEP DTIE.

We are grateful to our corporate sponsors *Veolia* and *EDF* for enabling the translation, design and printing of this training package.”
UNITED NATIONS GLOBAL COMPACT

Environmental Principles Training Package

BACKGROUND INFORMATION
THE UNITED NATIONS GLOBAL COMPACT (UNGC)

At the World Economic Forum in January 1999, UN Secretary-General Kofi Annan called on business leaders to join an international initiative aimed at bringing business together with UN agencies, labour, NGOs and other civil-society actors to foster partnerships in the pursuit of a more sustainable and inclusive global economy. The Global Compact was born.

While corporate citizenship has emerged as a distinct business approach in the past decade, the Secretary-General recognised that there was a need for a global initiative to assist companies in the development and promotion of values-based management world wide.

The Global Compact encourages innovation, creative solutions and good practices among its participants. As a voluntary corporate citizenship initiative, it is not a substitute for regulatory structures or other codes. It relies on the enlightened self-interest of companies, labour and civil society to initiate and share substantive action in pursuing the principles upon which the Global Compact is based.

With the Global Compact rooted in internationally accepted principles, its participants can feel confident that their actions are being guided by values that are universally supported and endorsed.

An important emphasis of the Compact is on promoting corporate change through the use of a learning approach that facilitates discussion between the various parties and that builds new partnerships for implementing future projects. This training package supports the learning approach of the Global Compact (UNGC).
THE TEN PRINCIPLES OF THE GLOBAL COMPACT

Human Rights
1. Businesses should support and respect the protection of international human rights within their sphere of influence; and
2. Make sure their own corporations are not complicit in human rights abuses.

Labour
3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. The elimination of all forms of forced and compulsory labour;
5. The effective abolition of child labour; and
6. The elimination of discrimination in respect of employment and occupation.

Environment
7. Businesses should support a precautionary approach to environmental challenges;
8. Undertake initiatives to promote greater environmental responsibility; and

Anti-Corruption
10. Businesses should work against all forms of corruption, including extortion and bribery.
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GLOBAL COMPACT TRAINING BASICS

The Training Manual

This manual forms part of a package that has been designed for individuals and institutions that are seeking to implement and support the Global Compact.

This Trainer’s Manual – with its accompanying PowerPoint slides and speaker’s notes – has been designed specifically to assist trainers to design and run a training programme aimed at providing a solid understanding of Principles 7-9 (the “environmental principles”) of the Global Compact.

The manual has been written for trainers who will be training the following groups of people or organisations:

- company managers and employees;
- company trainers;
- business organisations;
- consultants;
- business schools, and
- public officials involved in corporate environmental management.

The material has been structured so that it can be used as a basic toolkit that (where necessary) can be added to depending on the delegates’ needs, the particular region, local communities and other contextual requirements or specifications.

This Manual has been designed primarily for those who are new to the Global Compact, whilst also having value to those who have a sound general understanding of the Compact based on the Global Compact Resource Package (2004).

The material in the training manuals is designed to provide for the needs of a full range of companies from medium sized enterprises in developing countries, to large multinationals with head offices in the developed world. As outlined below, the success of the course will depend on the ability of the trainer to use his or her discretion in tailoring the material according to the nature and experience of the relevant target audience.

Whether the training is carried out for representatives of various businesses or within one business or company, it will be more varied and stimulating if the material is presented to more than one individual. A group presentation allows for changes in pace and for discussion of a variety of problems and experiences. It allows resources, experience and skills to be shared, which creates a richer course for all.

Depending on the audience, trainers may want to invite representatives from various industrial sectors and from different functional divisions within a company (such as management, production, quality control or marketing), as this will serve to bring the discussion and debate alive, particularly in the later modules where implementation is covered.
The Trainer’s Manual should be read in conjunction with the more comprehensive Delegates’ Manual which contains detailed case studies, background readings and practical exercises.

Trainers and delegates can also make use of the Global Compact Resource Package which contains an overview of the history and general background details on the Global Compact. A copy of the Resource Package is available at www.uneptie.org/pc/pc/tools/globalcompact.htm

NOTE: Appendix 1 provides a useful framework for understanding the interdependencies and linkage between the three UNGC environmental principles, each of the training modules, and the various environmental management tools. The interrelationship between each of these elements is presented using the UN Global Compact Performance Model as an underlying Framework for Action. The Performance Model is introduced in some detail in Module 4, Session 1. The table in Appendix 1 serves as a valuable checklist for implementing the environmental principles of the Global Compact.

The Programme Approach

This Global Compact Training Programme on the three environmental principles is action-oriented, with the material based primarily on the day-to-day experiences of companies who are dealing with these principles at a practical level. The principles and methods that are imparted in the training programme have benefited from solutions that have been found to work within companies. The programme is also direct and participatory and promotes sharing and interaction among delegates who will benefit from one another’s knowledge and experience.

The programme develops knowledge and skills together – focusing on knowledge about the fundamental principles and at the same time teaching skills and techniques to apply these principles within their companies.

The material exists electronically, and as such, allows the trainer to design and adapt the material – depending on the needs of the target group.
Components of the Global Compact Training Programme

The course is organised into five teaching modules. These modules could be covered as part of one full course, or dealt with individually for specific types of training tailored to suit a particular audience.

The following five modules are provided for in the programme:

**Module 1:** Introduction to the Global Compact

Module 1 introduces delegates to the Global Compact and its approach. It comprises a slide presentation and speaker’s notes on the history, objectives and activities of the Global Compact. More detailed background material is provided for trainers and delegates to use as the basis of further discussions and activities. Trainers need to be aware of, and make use of, the Global Compact Resource Package, available on [www.unep.org/pc/pc/tools/globalcompact.htm](http://www.unep.org/pc/pc/tools/globalcompact.htm), which contains information on the history of the Global Compact, and general background details.

**Module 2:** The Business Case for the UNGC Environmental Principles

Module 2 demonstrates the importance of undertaking initiatives that support the Global Compact’s three environmental principles. The section unpacks the concept of sustainable development and looks at the business case for implementing environmentally sound business practices.

**Module 3:** Understanding the Environmental Principles (7, 8 and 9)

Module 3 introduces each of the three environmental principles and explains their implications for companies at a practical level, using a combination of slides, case studies and exercises.

**Module 4:** From Principle to Practice: Case Studies in Implementation

Module 4 provides delegates with an understanding of how the principles can be implemented within a company. The module makes use of case studies to outline what other companies have done and to provide delegates with an opportunity to gain practical experience in solving problems that arise from the absence of the three environmental principles.

**Module 5:** Business and Sustainability Initiatives: An Overview

Module 5 is an optional module that provides a useful overview of the more prominent business initiatives that have been developed over the last ten years to promote environmental responsibility and sustainability.
Recruiting and Selecting Delegates

The following promotional activities or methods are suggested to recruit and select delegates for the course:

- **Hold orientation seminars at local business events:** Implementers could hold orientation meetings at local conferences (for example on corporate social responsibility, or at meetings of various business associations in a country).

- **Advertise or place press releases in local newspapers and business magazines:** Placing adverts in the media is a useful way to promote a training programme. It is advisable to place these adverts in the business media (trade magazines, business associations’ journals etc). Newspapers with a wide circulation should be used.

- **Display banners and posters:** Banner and posters placed at business events may attract the attention of potential candidates.

- **Mini Global Compact Seminar:** The objective of a mini seminar would be to instil interest in the concept of the Global Compact and in the training programme itself. It is an opportunity to advertise the programme in a setting where questions can be answered directly and networking can take place. It is useful to arrange a high-level keynote speaker to draw delegates and to demonstrate the importance of high-level support for the Global Compact.
ORGANISING THE PROGRAMME

Budget Preparation
The budget for the programme should cover all training costs including contingencies. The list below will guide you in preparing for an appropriate budget:

- facilitator’s fee;
- hire of the venue;
- audio-visual equipment hire;
- training materials (notepads, flipcharts, whiteboard, pens);
- meals and accommodation;
- postage for materials or documents to be mailed;
- transport costs for delegates;
- fees/compensation for resource persons, and
- contingency of 10%.

(Note on the participation fee: There is a link between the level of the fee and the level of personal commitment. Offering the course for free is likely to encourage people to come out of curiosity and to potentially not complete the course. Asking for a fee encourages delegates to attach greater value to and complete the course. At the same time the fee should not be so high as to deter too many potential delegates.)

Facilitator Selection
What is your training capacity? As an individual, are you an experienced trainer? Do you have a network and potential market for your training activities? If you are an organisation, do you have a training unit or services department that can offer and market these materials to companies? Have you assessed the market opportunities for offering the training programme? How does the programme fit in with the other services you provide?

It can be offered at various levels, depending on the trainer’s capacity to deliver. These levels can be divided into four main categories, national level, sub-national, and company and facility level. It is recommended that trainers conducting the course should have the following competencies to run the programme:

- **Subject knowledge:** A background in environmental management systems, ISO 14000, sustainable consumption, Agenda 21 and corporate social responsibility in companies will help the trainer to bring the material to life by adding a level of practical experience. Ideally the trainer will also have experience with different sizes of enterprises, or at least only offer training to companies in industries and companies with which s/he is familiar. A list of additional training materials, resources and kits on specific areas of environmental management/corporate sustainability is presented in Module 4: Session 3. This should help you to enhance and add interest to your modules – where you see fit.

- **Training and management skills:** The trainer should have the following abilities:
  - Good presentation and communication skills
  - Awareness of adult education processes
  - Technical skills
  - Training implementation and administration skills
– Interpersonal skills
– Problem solving and decision-making skills
– Leadership qualities.

Venue Selection

It is important to find a venue that is convenient and accessible to delegates to ensure their full attendance and timely arrival. Consider the advantages of a residential workshop as opposed to a non-residential seminar.

The following should be considered when selecting a venue:

- Size (adequate for break-away sessions)
- Cost (within budget as above)
- Layout (good lighting and ventilation, low noise levels, few external interruptions, toilet and catering facilities, flexible seating arrangements).
Programme Training Methods

Lectures and Slide Shows
A lecture is a one-way channel of communication between the trainer and the delegates. The slide show usually follows the following basic process:

- Introduction – the aim of the course is explained.
- Presentation – the main information is given.
- Clarification – the trainer asks delegates for any questions.
- Closure – the main points are summarised.

Do’s and don’ts of lecturing
- Do not read off your notes while presenting.
- Endeavour to make the lecture as participatory as possible by asking questions and inviting response.
- Do not distribute handouts before the lecture as delegates will tend to read rather than listen.
- Lectures can be combined with other approaches such as exercises and brainstorming.
- Although questions and discussions should be encouraged, always keep track of time and do not allow these sessions to run over time; delegates should always be given the opportunity to come to you at the end of the session to ask specific questions.
- Keep an eye out for the shy members of the group and attempt to draw them into discussions, without putting them on the spot.
- Make a committed effort to remember names, and use these as much as possible; in large groups it is useful to have the delegates have their names on cards in front of them.

Housekeeping
Before getting started with the course, you should ensure that the following basic administration points are covered to avoid unnecessary disruption during the course:

- fire procedures (nearest exits and assembly points);
- location of toilets;
- breaks and where meals will be served;
- accommodation (when they need to check-in and check-out and general orientation to hotel is applicable);
- any transport details;
- messages;
- relevant phone numbers, and
- reminders to switch off mobile phones.


**Discussion Sessions**

You can use a range of different types of question techniques and interventions available to get discussions going, encourage participation and ensure clarity in the discussion. For example:

- Open questions: “What do you think about …? How would you have …?”
- Closed questions: “So should we be covering X or Y?”
- Reflective questions: “So you believe that …?”
- Observations: “It seems to me that you are saying / what you’re suggesting is …?”
- Summarising: “In summary …”
- Paraphrasing: “In other words …”
- Elaboration: “Could you expand on that?”
- Examples: “To illustrate this you mean …? What examples do you have of …?”

The most important thing to remember is to give delegates the opportunity to think and respond. When faced with a silence, trainers’ sometimes fill it with another question. It can be better to give delegates time to think and the space to answer. Following are some example of good questions to get groups thinking or brainstorming around a subject:

- “What will an environmentally responsible company look like? How will we know when we get there?”
- “Where are we now?”
- “What will stop us getting there?”
- “What will help us get there?”

**Breakaway (or “Syndicate”) Groups**

When you want to break delegates into groups, consider first who should be working together and whether you need to mix the groups up or whether they should be working in specialist subject groupings.

Before splitting delegates into groups give them a full brief of what you are asking them to do in their groups. In that brief include:

- what they will be focusing on;
- the timing of the respective exercises;
- what the end output will be, and
- how it will be presented to the group.

Ask them to clarify to you exactly what they will be doing. Let them know that you will be circulating to see how they are getting on and they must therefore let you know where they are going to be if they leave the room to work somewhere else. Give out any material that they will need. Remind them again of the timings for being back in the room.

It is useful in the debriefing session to ask groups to summarise their discussions and not repeat the full depth again. If groups have been working on the same topic it is often useful to ask one group to provide feedback in depth and then to ask the other groups to feedback any additional points or ideas.

Flipcharts are an excellent way of getting groups to provide feedback, as they then have to distil
their discussion into a few key points. It also acts as a visual aid in the feedback process. It is usu-
ally best to get the groups to appoint their own scribe and rapporteur.

If you are concerned about time and keeping sessions focused, then having just one member of
the group to provide feedback will keep things moving.

**The Case Study Method**

Case studies and exercises are presented at the end of each module, and present the delegates
with an opportunity to role-play, debate issues, brainstorm challenges presented by certain case
studies and plan strategies aimed at implementing the Global Compact back in their own compa-
nies. Delegates are asked to analyse and diagnose the problems set out in the case study.

The following steps are advised when using these case studies:
- **Introduce the case study:** ask delegates to read these individually
- **Analyse the case study:** in small groups or individually
- **Discussion:** in small open discussion
- **Closing:** summarise the solutions and key learning points.

It is important that you – as the trainer – plan ahead, read and become familiar with all the case
studies that you will be using. As you read the case studies, you will want to look at the relevant
exercises and discussion questions in the delegates’ manual.
- Ask yourself the following: “What major points do you want the students to see and learn?”
- Establish what you want to accomplish with each set of case studies. Create a list of major
  points to be discussed.
- When guiding small group discussions, make sure that delegates are very clear on what is
  expected of them, and how much time they have to complete the assignment.
- Your job is to encourage active participation and lively discussion.

**Brainstorming**

Brainstorming is a method used to generate ideas. It stimulates delegates to find different ways to
solve a problem. It is useful as a way for delegates to get as many ideas out as possible. To do
this, delegates need to suspend judgement and allow the thoughts to come out without debating
them, no matter how offbeat they may seem. Brainstorming sessions are not ‘debates’ – rather
they are opportunities to extract ideas that may then form the basis of discussion later on.

The following suggestions should be considered to help making brainstorming sessions more
effective:
- Get delegates into groups of four or five and provide them with a flipchart and some pens.
- Encourage them all to write and not just to have one scribe as this helps to capture more ideas.
- Keep the time relatively flexible so as to let them keep going in the ‘investigate’ stage for as
  long as they are coming up with ideas (typically they will have an initial burst of between five
to fifteen minutes and then slow down).
- When you see them running out of ideas you should then move them into the ‘shaping’ part
  of the session. Another way of getting delegates to think more creatively is to ‘draw’ their
  ideas instead of using words on flipchart. This can help to stimulate creative thinking.
The FISH model for Effective Brainstorming:

The following helps structure a brainstorming session:

- **F – Frame**: Ensure there is common understanding on what you are all about to do (for example: “For the next 10 minutes we are going to brainstorm the merits of Cleaner Production”).
- **I – Investigate**: Provide the group with the opportunity to identify as many ideas as possible.
- **S – Shape**: Shape the discussion by focusing on those ideas that are potentially the most interesting and important. You can do this by asking delegates to look at the ideas they came up with and score off the ones they feel would not work or that are less appropriate.
- **H – Harvest**: Identify the main points that you will take away from the session. You can do this by asking delegates to pick three or four of the most important points or ideas that are left on the flipchart that they can take away and do something about. You also need to agree at this point as a group what will happen with the ideas that have been produced. Who will take them on? How will they be developed further? It is really important that there is a strong end outcome and that you walk away with something tangible at the end.

If you think about a FISH’s shape (see diagram below) this gives a clue about where the majority of time is spent (namely during Investigate and Shape).

![Diagram of FISH model]

**Feedback during Brainstorming**

- Do not allow for any critical remarks between delegates.
- Encourage self-criticism. People are more willing to accept the criticism when they have recognised their own strengths and weaknesses. Start by encouraging them to appraise themselves and then build on their own insights.
- Describe actual behaviour, not the individual, their personality or attitudes. Focus on what they actually said or did and avoid your own personal idiosyncrasies in judging performance.
- Be helpful rather than critical. They need information on where they are failing but negative feedback can destroy their confidence and motivation. Balance out and keep a sense of perspective.
- Be specific whether you are criticising or praising. Detailed information is more likely to reinforce what happened rather than vague or woolly statements.
- Concentrate on areas that they can do something about. It is frustrating to be reminded of something over which you have no control.
Be selective. Give as much information as they can use. Too many examples or points will dilute the praise and could lead to complacency or defensiveness.

Be forward looking. Always try to offer constructive comments that offer alternatives on what could be done differently in the future.

**Exercises**

Delegates are asked to undertake particular tasks that require solutions and which test their understanding. An exercise is a practice or test of knowledge learned. In this course, exercises have been designed for each module and/or session, and include the reading of excerpts with questions, group discussion and debate opportunities, brainstorming sessions and case study analysis.

For all these sessions, the trainer is provided with notes with suggestions on how best to conduct the exercises, the recommended time allocation and tips on how to conduct the report back sessions.
COURSE EVALUATION

Evaluation of a training course requires both a short and long-term view. The short-term view comes from immediate feedback from the delegates in the form of body language, the level of enthusiasm, participation and comments during the discussion sessions. This may lead to adjustments to the pace of the presentations, the complexity of the course content, or to the level of the discussion sessions.

Evaluation forms can also be used both as a way of getting feedback about the programme and also reinforcing the key learning that people have made and what they will be doing following the programme. It can also be a place to get feedback about the specific venue, the materials used and so on.

The end-of-day evaluation form (which could be done verbally by the trainer) is designed to give the trainer quick feedback about how the course is going and the overall impression of the delegates. This allows him/her to adjust the structure/pace/content of the following day (if necessary). The end-of-course evaluation helps the trainer check the quality of the course with the delegates and to revise the course for the next group accordingly.

When coming to the end of the course, do not leave the end-of-course evaluation form to the very end. It is often useful to ask delegates to complete the forms at the start of the last day or otherwise give them time before your final summary of the key points. The more time they have, the more constructive the feedback.

Two evaluation forms are included in the back of the delegates’ Manual. It is up to the trainer to decide which one to use, to make copies of these and distribute them accordingly.
OPTIONS FOR IMPLEMENTATION

The training programme and materials should be adapted according to the country context, the level of management, the extent of the delegates’ existing knowledge base, and so on. As trainer, you are expected to select from the package and adapt the material accordingly.

There is more than sufficient material on each topic in the five modules. The onus is on the trainer to select the most appropriate and relevant slides to fit the group, and to time the course accordingly.

The success of the course will depend on the trainer’s ability to select the most suitable material, and to ensure the ‘best fit’ according to the nature and experience of the target audience.

It is NOT anticipated that a trainer simply runs through the entire course as provided here, but rather that he or she uses elements of the course material that is most appropriate for the target audience.
Module 1

INTRODUCTION TO THE GLOBAL COMPACT
MODULE 1: INTRODUCTION TO THE UNGC

TIME: 2 hours (suggestion only)

OBJECTIVES
The objectives of this session are to:
- provide an opportunity for delegates to introduce themselves;
- clarify expectations;
- discuss the course agenda and objectives;
- introduce the Global Compact;
- provide an overview of the three environmental principles, and
- outline the benefits of participating in the Global Compact.

SUGGESTED PROCEDURE
If possible, before beginning the course, you should arrange for the delegates to have read the background reading relevant to this module and its exercises. These readings are in the Delegates’ Manual, and include:
- Kofi Annan’s speech to the World Economic Forum
- The Rio Declaration on Environment and Development
- The Johannesburg Declaration
- The Stockholm Declaration
- Three extracts/critiques on the Global Compact.

If resources allow, each delegate should be given a complementary copy of the Global Compact Resource Package. More details on availability can be found at: www.uneptie.org/pc/pc/tools/globalcompact.htm

The session begins with a welcome and introductory “ice-breaker” session. The nature of this session will depend on the size of the group and the level of seniority in the group. It is by no means an essential component of this module.

While a suggested ice-breaker is outlined below, you as the trainer should feel free to tailor this to suit the circumstances. You should aim to spend no more than 30 minutes on the exercise.

Once the introduction and ice-breaker session has been completed, revert to the PowerPoint slides that outline the course objectives, the timetable and the route map. You may also wish to place the basic schedule for the course on a flipchart. The advantage of doing this is that it can be left up in the room allowing the trainer to refer back to it to remind delegates of what has been covered and where they are going next in sessions. Make a note of any objectives that have been identified by delegates and that are not addressed in the curriculum and ensure that this is incorporated into one of the sessions or exercises later in the seminar. If a topic of interest is raised by delegates that cannot be incorporated into the agenda try and arrange for a lunchtime debate or session at some stage in the seminar.

It is suggested that you spend approximately 11/2 hours on the PowerPoint presentation (this
includes the ice-breaker session), followed by a minimum of 15 minutes for questions. Spend approximately 45 minutes on Exercise 1-1. The slides are available online at: http://www.unep.fr/outreach/compact/index.htm.

**Speaker’s Notes**

**Slide 1**  
**Title Slide**

Use this opportunity to welcome the class and to introduce yourself (if required).

**Slide 2**  
**Introductions and “Ice-breaker”**

If this is the first time that the group of people has come together it is important that they get to know each other. There are various ways in which this can be done. The following proposed “ice-breaker” and introductions exercise is **one option** in which this can be achieved. As the trainer you may feel more comfortable to use another, less detailed approach depending on the nature of the class delegates.

Ask delegates to draw a stick figure on their flipchart and to address the following areas (using words or images):

- **Names in group**

- **HEAD:** What do you as a group think are the key characteristics of people who work in your respective fields?

- **HANDS:** What skills / experience do you bring (shows combination of skills eg between us 35 years of experience in enviro field, John has degree in x, Sally worked as a planner for x, Peter represents 500 workers, etc.)

- **FEET:** What do you want to walk away with by the end of the course i.e. objectives for being here? You could have shared objectives or individual objectives with names against these.

- **OPTIONAL:** Personalise the stick figure – discuss what interests / hobbies etc you have in common as group and draw these onto stick figure (i.e. all like soccer so draw in football boots, birding, so include a pair of binoculars, etc.) This helps to get people talking and to find things in common.

*The aim of this introductory exercise is to get people talking quickly and to share things about themselves. It also helps to surface their objectives and can immediately open the discussion on a topic relating to the programme. The drawing and personalising part helps relax the individuals and also gets more creative thinking started as it stimulates right brain thinking.*
The groups will each have 20 minutes to discuss and produce their flipchart. They will then be asked to do brief presentations to go through key points from their flipchart with other groups. If possible, try to keep this to 10 minutes, although this will vary considerably depending on the size of the class.

**Slide 3  Course objectives**

Explain that the course has been designed to meet the following objectives:

- to introduce the Global Compact and its three environmental principles – for existing and relative newcomers to the Compact;
- to convince managers that it is in their company’s interests to undertake activities in support of the Global Compact, and
- to help delegates develop strategies and programmes that support the three principles.

**Slide 4  Course structure**

Explain that the course will be split over five modules, comprising the following *(note: this may vary depending on the specific training needs and objectives of your particular course, and the final structure)*:

- **Module 1: Introducing the Global Compact (UNGC)** – The main objectives of this module are to introduce the course, to provide an overview of the UNGC, reviewing how it has developed since it was proposed in 1999.

- **Module 2: The Business Case for the UNGC Environmental Principles** – This module provides an overview of corporate sustainability and outlines the business case for environmental responsibility, demonstrating the importance of these for business. This is achieved through a combination of presentation and discussion sessions – depending on the delegates’ needs and level. The module is split into two sessions.

- **Module 3: Understanding the UNGC Environmental Principles** – The module is split into three sessions, one per principle.

- **Module 4: From Principle to Practice: Case Studies in Implementation** – In this module, delegates are introduced to a large cross section of tools for sustainability. They will be encouraged to work through a diverse range of case studies, solve problems, design strategies and debate the issues that emerge from these. The main objective of this module is to equip delegates with the full ‘toolbox’ that will enable them to return to their company and (where relevant) to incorporate the UNGC environmental principles into their businesses.

- **Module 5: Business and Sustainability Initiatives: An Overview** – This module is optional, but provides a sound overview of all the current environmental and sustainability-related management standards, codes of conduct and sectoral business initiatives. Most of these have been developed over the last decade, with a number of the initial standards being developed around the time of the 1992 Rio Earth Summit. The module should serve to motivate and inspire the delegates by showing them how corporations are making sense of sustainable development in different ways. It will help them to understand all the various tools in the broader context of environmental sustainability codes, standards etc, as well as to introduce them to the range of initiatives and resources available from which to draw ideas and to learn from.
The Global Compact – Background

At the World Economic Forum in January 1999, UN Secretary General Kofi Annan called on business leaders to join an international initiative aimed at bringing business together with UN agencies, labour, NGOs and other civil-society actors to foster partnerships in the pursuit of a more sustainable and inclusive global economy. While corporate citizenship has emerged as a distinct business approach in the past decade, the Secretary General recognised that there was a need for a global framework to assist companies in the development and promotion of values-based management world-wide.

Refer delegates to the Global Compact Resource package found at www.uneptie.org/pc/pc/tools/globalcompact.htm for additional background information.

Understanding the Global Compact

Explain that the Global Compact is not a UN agency but a network that exists to promote an initiative. At its core is the Global Compact Office with six UN agencies – the Office of the High Commissioner for Human Rights (OHCHR), the International Labour Organisation (ILO), the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), United Nations Industrial Development Organisation (UNIDO) and United Nations Office on Drugs and Crime (UNODC).

In addition to the United Nations, which acts as a convenor and facilitator, each of the following relevant social actors are represented in the Global Compact network:

- **Companies**, whose actions it seeks to influence.
- **Labour**, in whose hands the concrete process of global production takes place.
- **Civil society organisations**, representing the wider community of stakeholders.
- **Governments**, who defined the principles on which the initiative is based.

The Global Compact aims to encourage innovation, creative solutions and good practices among its participants. As a voluntary corporate citizenship initiative, it is not a substitute for regulatory structures or other codes. It relies on the enlightened self-interest of companies, labour and civil society to initiate and share substantive action in pursuing the principles upon which the Global Compact is based.

With the Global Compact rooted in internationally accepted principles, delegates in this course can feel confident that their actions are being guided by values that are universally supported and endorsed.

The emphasis in the Global Compact is to bring about corporate change through the use of a learning approach that facilitates discussion between the various groups and builds new relationships for future projects. In adopting such an approach, rather than a policing regulatory approach, the Global Compact has gone into “uncharted territory”, and this has invited some criticism from those who would like it to have sharper teeth in the form of monitoring and verification. However, as stated, these are not areas within the mandate of the Global Compact.
Slide 7  The benefits of participating in the Global Compact

There are many benefits associated with subscribing to the Global Compact. By engaging in it, business leaders demonstrate a position of leadership with regard to corporate citizenship, sharing experiences and learning with like-minded companies and organisations, building relationships with other companies, government bodies, labour, NGOs and international organisations, and partnering with UN agencies.

The Global Compact is one of the only initiatives that seek to shift the debate about the role of business in society and emphasises open markets. In addition, it is unique in providing companies with access to UN expertise, which is among the most specialised in the world. The Global Compact also offers a simple framework for engagement without expensive certification and tick-the-box type monitoring.

Slide 8  The Ten Principles

The Global Compact is based on a series of documents that are almost universally accepted within the international community. These include the Universal Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at work, the Rio Declaration on the Environment, and the UN Convention Against Corruption. The Global Compact draws on these documents, for the universal values they express, as the basis of the ten principles. The Global Compact asks companies to integrate these principles into their core business operations and to pursue projects and corporate activities that advance the principles and broad UN goals. One of the overriding objectives is to embed the principles (hence corporate citizenship) into corporate-management strategy and decision-making. In signing the Global Compact, the business community is saying that it is prepared to stand up and be judged by its actions rather than its words.

Slide 9  Environmental Principles

Read these out: Businesses are encouraged to …

7. Support a precautionary approach to environmental challenges;
8. Undertake initiatives to promote greater environmental responsibility; and

Slide 10  Key Characteristics of the Global Compact

Explain that there are three key characteristics that define the Global Compact, and these include the fact that it represents a learning approach, it comprises a diversity of actors and approaches and that it is a decentralised network. Each of these characteristics is then explored in more detail in the following slides.

Slide 11  Key Characteristics: A Learning Approach

The central idea here is that the relative significance of the principles of the Global Compact will differ a great deal between companies, and that companies may choose to focus on vastly differ-
ent elements of a chosen principle. An important underlying objective of these principles is to encourage innovation and creative solutions. Companies may often face dilemma situations when attempting to implement what seem, at first glance, to be simple principles. An important goal of the UN Global Compact is to assist companies in addressing these dilemmas – including possible trade-offs between the different principles – by sharing their respective experiences with other UNGC participating companies.

**Slide 12** Key Characteristics: Diversity of Actors and Approaches

A central component of the Global Compact is the diversity of actors involved. These include non-governmental organisations (NGOs), trades union, companies, business organisations and academia. Each one of these groups is involved in various capacities in the Global Compact.

The Global Compact is not about “preaching to the converted” but rather aims to induce change in those sectors of business where improvement is needed. It tries to achieve this by bringing together partners from business and other organisations to learn from each other. The Global Compact allows for shared learning between companies, even those that compete with each other for markets and capital. Such companies have realised that the complex challenges of sustainable development need an active balance of cooperation and competition. In this sense, the Global Compact operates as a catalyst for shared learning. There is also another important reason for identifying and sharing good implementation practices: none of those actively committed wants to see the Global Compact, as it extends its reach, turn into a ‘two-speed’ initiative with only a small number committed while others drag their feet and act as free-riders.

**Slide 13** Key Characteristics: A Decentralised Network

The Global Compact is not a large bureaucracy. Only a handful of staff works in the UN Global Compact office, with delegated co-ordinators in the agencies. This is largely because the Global Compact is owned by the organisations that participate in it, and it exists more through their actions, as opposed to those of the UN. In this way, it is a call to action with the UN and its agencies playing a co-ordinating role rather than a driving force.

**Slide 14** UNEP Division of Technology, Industry and Economics

UNEP, as one of the six core agencies, is guardian of the environmental principles in the Global Compact. The focal point for this in the UNEP is its Division of Technology, Industry and Economics (UNEP DTIE) based in Paris, France.

UNEP DTIE has the following activity areas:

- Chemicals management [www.chem.unep.ch/](http://www.chem.unep.ch/)
- Ozone management [www.uneptie.org/ozonaction/](http://www.uneptie.org/ozonaction/)
- Energy and transport [www.uneptie.org/energy/](http://www.uneptie.org/energy/)
- Environmentally sound technologies [www.unep.or.jp/](http://www.unep.or.jp/)
- Economics, finance and trade [www.unep.ch/etu/index.htm](http://www.unep.ch/etu/index.htm)
Key Characteristics: What the UNGC is not

It should be clear at this stage, that the Global Compact is not any of the following:
- a code of conduct;
- a mechanism to check compliance;
- a mandatory set of guidelines;
- a regulatory system, or
- an attempt to shift governmental responsibilities to business.

Useful references

You could mention the following as useful references and guides, which you should encourage delegates to source in their own time:
- The UN Global Compact Resource Package – available from the UN Global Compact website: www.uneptie.org/pc/tools/globalcompact.htm
- Raising the Bar (edited by Fussler, C; 2004)

Exercise 1.1 – Critically reviewing the UN Global Compact

Read Extracts 1-3 (below), then undertake the following activities:

1. Split the class in half, with one half role-playing as Global Compact proponents and the other as its critics. Initiate a debate with the following title: “The Global Compact: An excuse for business-as-usual or the basis for shared responsibility?”

2. In groups, draw up a table with two columns, one with the Global Compact proponent's arguments, the other with its critics. Discuss these, and if possible try to distil them into a few key words.

3. Each group will present their respective tables, and the class will come up with a definitive set of arguments for and against.

The aim of this exercise is to provide delegates with an opportunity to identify and critically review some of the strengths and potential weaknesses of the Global Compact, based on three extracts. This will take the form of a structured mini-debate amongst the delegates. Allow at least half an hour for this exercise.

In the course of the discussion and debate, try and encourage delegates to consider the following areas:
- The extent to which the Global Compact can be distinguished from other international initiatives (such as ISO 14001), and what added-value the Global Compact brings in comparison to these other initiatives.
- Consider who actually drives the initiative? Is it the UN, big business, multi-stakeholders or individuals? What is their motivation for doing so?
- Critically review the issue of quality control, the entry and exit rules, the monitoring and follow-up activities, and annual communications and reporting.
- Consider integrity and trust issues: will the Global Compact inspire real change, or can it be used as a basis for simple window dressing?
- Understand the concerns that many have with the idea that the UN is working more closely with big business; this is opposed by some NGO groups (as reflected for example by the Campaign for a Corporate Free UN).
- Is the implementation of the principles realistic? How can their implementation be enhanced? Consider such issues as management tools, the extent of internal capacity, and flexibility / relevance to local needs.
Module 2
THE BUSINESS CASE FOR THE GLOBAL COMPACT ENVIRONMENTAL PRINCIPLES
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MODULE 2: THE BUSINESS CASE FOR THE UNGC ENVIRONMENTAL PRINCIPLES

Session 1: Setting the Scene – The State of the Global Environment

TIME: Between 2-4 hours (depending on which exercises are chosen and the nature and level of the group)

OBJECTIVES:
The objectives of this session are to:
- provide an overview of the current state of the natural environment, critically assessing whether there is cause for concern;
- provide a brief review of how corporate environmental responsibility has emerged over the past three decades, and
- set the context for the next session in which delegates will review some of the key business case arguments for implementing effective environmental management tools and practices.

SUGGESTED PROCEDURE:
The day before this session is scheduled, encourage delegates to read the following material in their manuals:
- Extract from the GEO3 synthesis
- Case study 2-1: Norsk Hydro.

The case study serves as a reference point in this module. There are no specific exercises relating to it. Make sure that you, as trainer, have read it and are familiar with it before the lecture, so that you are able to make use of it as much as possible throughout the session, particularly when reference is being made to the various decades/eras of corporate sustainability.

It is suggested that you spend approximately 1 hour and 30 minutes on the PowerPoint presentation (this includes time for Exercise 2-1 referred to in slide 2), 45 minutes on each of the Exercises 2-2 and Exercise 2-3, followed by a minimum of 10 minutes for questions.

Speaker’s Notes

Slide 1  Title slide

Slide 2  The State of the Planet: Is there Cause for Concern?
Start the session by showing delegates a picture of Earth from space. Ask the delegates to identify any environmental concerns that they may know about – at a global and a national level. Record all of these concerns on a flip-chart. In doing so:
- Ask the delegates to explain the issue that they have identified and make sure that there is no misunderstanding within the group (note for instance that people often confuse the depletion of the ozone layer with climate change).
- Test the level of agreement within the group on each of the issues that is identified.
- Ask them to relate any incidents in which they have come face-to-face with any of the concerns that they have identified.

**Slide 3  The State of the Planet: Issues of Concern – An overview**

This slide summarises some of the key findings of the recent survey on the global state of the environment that was undertaken under the auspices of the United Nations Environment Programme (provided in “Global Environment Outlook Three” – or GEO3).

It is suggested that you use this slide to draw attention to the UNEP study and to summarise some of its key findings. It is useful to compare this brief checklist with the issues that were identified by the workshop delegates.

- Which (if any) of the issues listed here were not identified?
- Are there any additional issues that the delegates highlighted?

The next few slides examine some of the main areas of concern in a little more detail. These are intended to serve as a basis for discussion, and can be used in a flexible manner by the trainer.

**Slides 4-5  The State of the Planet: Climate change**

Climate change represents one of the most significant of all the current environmental threats. Slide 4 shows how there has been a significant recent increase in global average surface temperature. During the 20th century, global average surface temperature increased by about 0.6 degrees Celsius. This represents an unprecedented increase over the past thousand years. This warming is expected to continue, with increases projected to be in the range of 1.4 to 5.8 degrees Celsius between 1990 and 2100. While the exact nature and timing of the impacts are uncertain, it is anticipated that they will include crop failures, diseases spreading into new areas, droughts, heat waves, a rise in sea-levels and changes in eco-systems.

**Slide 6  The State of the Planet: Resource Depletion – Freshwater**

Using a number of the key statistics below, expand on the fact that access to freshwater is arguably the world’s most urgent resource issue.

- Every year about 5 million people die due to a lack of access to water and sanitation.
- Approximately 30% of people live in countries which suffer moderate-to-high water stress, and by 2025 more than 4 billion people will be living in water stressed countries.
- Between 1900-1995, global freshwater consumption rose six-fold, more than double the population growth rate.
- More than 20% of the world’s freshwater fish species have become extinct, threatened, or endangered in recent decades.
- In 60% of the European cities with more than 100 000 people, groundwater is being used faster than it can be replenished.
After reaching 1 billion for the first time around 1800, the world’s population has since increased exponentially, reaching six billion by late 1999. Despite declining fertility rates, population is expected to increase to 8.9 billion by 2050. Nearly all of this growth will be concentrated among the poorest population in developing countries, taking place in the regions of the world least able to absorb large increments of people, threatening sustainable development and producing further deterioration in levels of living and quality of life. Without achieving the goals of the Programme of Action of the International Conference on Population and Development (ICPD) – particularly universal access to gender sensitive and quality reproductive health services – it will be difficult to achieve a more favourable balance between population and available resources.

The total environmental burden of human activity is a function of three factors: population, affluence and technology. The product of these three factors determines the total burden of human activity on the stocks of natural capital, on which many of the other capital stocks depend. For sustainability to be attained, the environmental burden of human activity will need to be reduced by decreasing the human population, changing consumption patterns, and/or changing the technology used to create wealth. Human population dynamics – coupled with consideration for the effects of poverty and excessive consumption – has a profound impact on each of the planet’s five main capital stocks. It affects the assimilative and regenerative capacity of the natural environment and has significant implications for health, nutrition and education, as well as impacting on the nature and distribution of wealth and technology.

It is important to highlight that it is not population levels per se that are the main cause of environmental degradation, but rather the associated consumption and production patterns. An important challenge in terms of environmental management is to find an appropriate balance in terms of inter- and intra-generation equity: how to meet the basic needs of the existing population (such as food, shelter, health, education, and clothing), without unduly impacting on the capacity of future generations to meet their own needs.

As is highlighted in some of the following slides, finding this balance will require significant innovation in terms of our current production and consumption patterns.

With the ongoing growth in personal income, there has been a general increase in the personal consumption of all types of products and services, ranging from basic needs through to more luxury items.

Such high levels of consumption by the world’s affluent can have a disproportionate impact, particularly on natural capital stocks and human health. One-fifth of the world population is responsible for more than 80% of total personal consumption. This is clear from the graph, which shows a comparison between Germany and a developing nation, where the consumption of energy, pas-
senger cars and steel, and the resultant production of toxic waste, greenhouse gases, CFCs etc is compared.

To further illustrate this disparity, consider the following:
- One child born in the industrial world adds more to consumption levels in one lifetime than 40 children born in developing countries.
- The 20% of the world’s population living in the highest income countries are responsible for 86% of total private consumption compared with the poorest 20%, who account for only 1.3%.
- In the next 25 years, the world will experience a two billion gain in population, almost all in developing countries, least able to bear the burdens of additional services and care.

**Slides 10-11** Inequalities in consumption
- These slides highlight the current levels of inequality in consumption patterns, and raise an important dilemma: as more and more people in developing countries seek to enjoy the same consumption patterns of those in developed countries, there will be a potentially significant increase in resource use and waste/pollution generation, unless new models of production and consumption are used.
- There are currently 1.3 billion people living on less than US$ 1 a day. The overall consumption of the richest fifth of the world’s population is 16 times that of the poorest fifth. Nearly 160 million children are malnourished, over 880 million people lack access to health services, and 1.5 billion lack access to sanitation and clean water.

**Slide 12** The State of the Planet: Unsustainable Consumption

We now have the emergence of a Global Consumer Class (GCC). This refers to people who live at or above the poverty level in Western Europe and have access to goods such as television and the Internet, therefore being subject to the values spread by these media. There is a very rapid growth in developing countries of the size of the GCC. Yet the relative share of people who belong to the GCC is still very low in China or India (19% of the total population in China, 12% in India). As a result there is further demand for growth and the prospect of increased social and environmental stress on the planet.

So from a consumption perspective, we have a three part world:
- wealthy nations, where consumption continues upward
- rapidly developing countries, such as China and India, where consumption is surging, and where the consumption potential is huge
- the poorest countries, where consumption is actually on the decline.

In this last category, which includes much of sub-Saharan Africa, household spending has actually declined in real terms by 20% over the past two decades.

For countries in this position, it is clear that we need to be talking about consumption increases, to the point that their people are able to live healthy lives that are full of opportunity.
Refer delegates to the Worldwatch Institute website for further reading (http://www.worldwatch.org/).

**Slide 13** The State of the Planet: Car growth in China

A significant indicator of the potential concerns associated with a rapidly growing country is car ownership. In ten years there will probably be as many cars in China as in the US today, with a current growth of approximately 11,000 cars per day. This will have significant ramifications for the natural environment, both in terms of the resource implications associated with increased production, as well as – more significantly – the associated dramatic rise in pollution. Key to addressing this concern will be the need to redesign the technology associated with manufacturing and/or operating motor vehicles, including as far as possible a shift to smaller, more fuel efficient motor vehicles (as in the slide). Accompanying this should be the drive to address current consumption patterns.

**Slide 14** The State of the Planet: Ecological Footprints

Ecological footprint analysis is a graphic approach for conceptualising the environmental impact of a particular individual (or organisation, product, service or political region), and for understanding how this relates to the overall carrying capacity of the planet.

The Ecological Footprint is an estimate of human pressure on global ecosystems, expressed in ‘area units’. Each unit corresponds to the number of hectares of biologically productive land required to produce the food and wood people consume, the infrastructure people use, and to absorb the CO₂ produced from burning fossil fuels; thus the footprint takes into account the total impact people have on the environment. The world’s Ecological Footprint is a function of population size, average per capita consumption of resources, and the resource intensity of the technology used. During 1970-96, the world’s Ecological Footprint rose from 11,000 million area units to more than 16,000 million area units.

Encourage delegates to visit: www.redefiningprogress.org/programs/sustainabilityindicators/ef/

They can also find additional information on ecological footprints in Chambers, N., Simmons, C. and Wackernagel, M., (2000) Sharing Nature’s Interest Ecological Footprints as an indicator if sustainability, London: Earthscan Publishing Ltd.

**Slide 15** The State of the Planet: Four Earths

If we continue with our current production and consumption trends it has been estimated that we would need four planet Earths by the end of the 21st century. These extra planets would be needed to provide the resources necessary to maintain rapidly growing consumption patterns, as well as to effectively absorb the associated wastes and pollution that is generated. The problem of overshoot remains. Overshoot reflects our ability to exceed temporarily the carrying capacity of the earth, helping people to live better in the short run but putting our natural capital into decline in the long run.

**Slide 16** Mixed messaged from consumers

The activities of the 2 community are driven by a range of stakeholder interests, in particular by government regulation, the expectations of shareholders and financial markets, and by the end consumer. While consumers have the potential to play an important role in promoting environmental sustainability by exerting their power in the market place, they often provide a mixed message. Many consumers profess to being concerned about environmental and social issues, while at the same time seeking to satisfy personal needs and wants through increased consumption. On the whole, however, it is suggested that – with some exceptions – consumers are typically not exerting a sufficiently powerful message in the market place for improved environmental performance, nor demonstrating a sufficient willingness to change their own personal consumption patterns.

**Slide 17** The need for increased resource efficiency

Following from the last three slides it is should be apparent that if we are to avoid ongoing environmental degradation, there will need to be a significant increase in global resource efficiency. This issue is neatly captured in the following two quotations. Read these out to the class:

“20% of the world’s population consumes 80% of its resources. If everyone consumed at this level, it would take four extra planets to provide the necessary resources. Global marketing of this consumer lifestyle is headed for natural disaster.”

*The Ecological Footprint*

“Resource use and pollutant discharge will need to decrease to less than 10% of current OECD levels to reach sustainable equilibrium by 2040”

*Netherlands Council for Environment and Nature*

**Slide 18** Implementation Gap

Read out the following quote from the Johannesburg Plan of Implementation. This was an important outcome of the 2002 World Summit on Sustainable Development, and one which highlights the need for fundamental changes in production and consumption patterns if sustainability is to be achieved.

‘Fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development. All countries should promote sustainable consumption and production patterns ... Governments, relevant international organisations, the private sector and all major groups should play an active role in changing unsustainable consumption and production patterns.’

*WSSD Johannesburg Plan of Implementation, September 2002*
The State of the Planet: The ‘Factor Four’ Improvements

It should now be clear that economic growth needs to be de-linked from environmental and social degradation by addressing the relationship between the fulfilment of human needs and the consumption/production of goods and services. Action is needed to re-orientate social and economic development to remain within the carrying capacity of the earth. Some prominent thinkers have suggested that we need a new industrial revolution where greater provision is made for preserving natural capital. Important elements of the required shift within the business sector include:

- dramatically increasing resource productivity, through redesigning products and processes;
- eliminating the concept of waste (by building on biologically inspired production models, where “waste” becomes a nutrient);
- re-investing in natural capital, and
- re-orientating consumer choices of individuals, industry and public institutions towards more sustainable lifestyles and purchasing decisions.

Recent studies by groups such as the Rocky Mountain Institute and the Wuppertal Institute have identified numerous profitable opportunities in which it may be possible to double economic growth while halving resource use (the so-called “factor four” improvements).


The State of the Planet: The Need for Change

Based on the all of the previous slides, it should be clear why many people believe that if we are to achieve environmental sustainability, we need to significantly change the way we currently do business. This sentiment is captured in the following statement made by the former CEO of a large multinational chemicals company.

“We cannot continue to do what we have always done, only incrementally better, and expect to achieve sustainability.

*If sustainability is to be achieved, we will have to rethink virtually all of our industrial processes.*

Edgar S Woolard – Former CEO of Du Pont

Sustainable Consumption and the rebound effect

This slide highlights the need to understand the interrelationship between improved resource efficiency on the one hand and more sustainable consumption patterns on the other. While significant improvements have been made in resource efficiency (through the implementation of initiatives such as eco-efficiency, cleaner production, pollution prevention and waste minimization), these environmental gains have generally been off-set by the increases in production associated with growing consumption patterns.

This is known as “the rebound effect.” Although the problems associated with production processes are increasingly understood, there are generally significant gaps in our understanding of the
consumption (use) and disposal of products, with environmental impacts of consumption patterns not being sufficiently integrated into economic and social policies.

**Slide 22  Promoting sustainable consumption and production**

An important challenge underlying business responses to environmental issues is to contribute to an effective de-linking between environmental damage and economic growth. This will entail, for example:

- Developing new product-oriented strategies (that for example adopt a life cycle perspective in their design and manufacturing processes).
- Understanding what drives consumption patterns.
- Developing an integrated approach to sustainable consumption and production, in which environmental damage is delinked from economic growth and where sustainable consumption is integrated effectively into the policy decision-making.

**Slide 23  Sustainable Consumption**

There is no sustainable consumption without sustainable production and vice versa. It is important to appreciate that these two elements work hand-in-hand. From a business perspective, this typically requires greater integration of sustainability concerns throughout the company’s portfolio of activities, for example within the marketing function.

**Slide 24  How have corporates responded?**

Having briefly identified some of the key environmental concerns and highlighted the need for a significant change in current production and consumption patterns, explain that it will be useful to now to reflect on where the business community has come from in terms of addressing environmental and social concerns, and to consider how the business community may in future respond to these issues.

**Slide 25  Some business approaches**

The diagram in this slide is useful for serving as the basis for a discussion of the various approaches that business may adopt in addressing some of the current environmental concerns.

Before presenting the three curves, explain the two axes to the delegates.

- The vertical axis shows the improvement in environmental quality (the higher up the axis, the greater the environmental improvement).
- The horizontal axis reflects the amount of time taken to achieve the improvement (the further right along the axis the longer the time).

After explaining the axes, you should then explain each of the three curves using some examples:

- **Incremental change** – the first curve is indicative of some of the readily available options for environmental improvement that exist in most companies; these so-called “low hanging fruit” (typically associated with eco-efficiency and cleaner production measures) can be used to
achieve a useful improvement in environmental quality over a very short period of time - but there are limits to the level of environmental improvement that can be achieved, as demonstrated by the flattening out of the curve.

- **Redesign** – the second curve shows that more significant environmental improvements can be achieved by redesigning existing products, processes and services; although these improvements will eventually be greater than those achieved through the incremental change, these improvements will generally take longer to achieve.

- **Rethink** – the final curve is used to suggest (as per the quote in the previous slide) that the most significant improvements in environmental quality may require a “rethink”; these changes will typically be longer to achieve than those associated with “redesign” – and will require a longer time to allow for investment in research and development – but will ultimately be of a higher level.

For a better understanding of the above options, it is useful to consider them in the context of some specific examples. In the automotives sector for example the stages could be represented as follows:

- Implementing cleaner production / eco-efficiency measures within the manufacturing and assembly processes (incremental change).

- Change the design of the vehicle to provide (for example) for greater fuel efficiency and reduced emissions, for increased use of recycled materials in construction, and for easier disassembly at the end of the vehicles life (redesign).

- The most significant environmental improvement however are likely to be achieved by a “rethink” – for example by moving from fossil fuel to hybrid / fuel cell vehicles, by revisiting the current reliance on individual automobiles in favour of greater use of public transport systems, and/or by promoting more widespread shared leasing of vehicles.

A similar set of examples may be found in the pulp and paper sector. Incremental improvements may be quickly attained, for example, through end-of-pipe treatment and/or cleaner production. More significant improvements (over a longer period of time) may be achieved by redesigning the process involved in producing pulp and paper (reducing the volume and nature of effluents and air emissions). The final – most radical solution – may be to identify alternatives to using paper to produce books (for example by shifting to recyclable polymers). Encourage delegates to read the following title for more innovative options: McDonough, W. and Braungart, M. (2002) *Cradle to Cradle: remaking the way we make things* New York: North Point Press

There are of course other examples that you may choose to use to highlight various options identified above.

### Slide 26 A Brief History of Corporate Environmentalism: The Phases

It is possible to identify a number of distinct phases of corporate responses to managing environmental (and social) concerns. A useful distinction is that presented in the slide which suggests the following five broad phases:

- Before the 1960s: Blissful Ignorance
- 1960s and 1970s: Confrontation / Reluctant Compliance
While these different phases are of course broad generalisations, and seek mainly to characterise the response of leading companies only, they may be seen as a useful typology of corporate responses more generally.

As you work through these phases, make reference to case study 2-1, to illustrate how one company responded to the ever changing external pressures.

A Brief History of Corporate Environmentalism

These two slides provide a useful diagrammatic overview of the various phases referred to above. While they take slightly different approaches, the broad message in each of these is the same: namely that there has been a significant increase in the level of awareness – and some important changes in response – regarding environmental concerns within the corporate sector. In the next few slides we examine each of the phases in a little more detail.

The 1960s and 70s – Reluctant Compliance

Rachel Carson’s *Silent Spring*, which examined the damage wrought by chemicals, was the source of a growing public consciousness regarding the natural environment. It marked the beginning of the era of compliance, where corporate citizenship meant obeying the law. This was further reflected in the 1970 Earth Day demonstrations, and later epitomised by the publication of the Club of Rome’s *Limits to Growth* and The Ecologist’s *A Blueprint for Survival* in 1972, both of which forecast dire environmental consequences from current economic growth patterns.

1972 also saw the Stockholm Conference on the Human Environment – the first international gathering to consider a full range of global environmental issues. The Conference resulted in the establishment of the United Nations Environment Programme (UNEP) and produced the historic Stockholm Declaration.

The initial response of the business community focused mainly on actively resisting any efforts for increased regulation, with the environmental lobby seen by business leaders mainly as an obstacle to economic growth. Driven largely by a reactive compliance-minded framework, a number of the larger companies in the 1970s slowly began to build internal technical capacity on environmental issues, with some of the more progressive companies developing environmental impact assessment and basic environmental auditing tools. At a technological level most companies relied on installing pollution control measures, rather than reviewing opportunities for pollution prevention by changing their products or processes.

The 1980s – “Beyond Compliance”

A number of significant events in the early 1980s marked the beginning of the next phase of more enlightened corporate sustainability practice.
The leak of methyl isocyanide at a Union Carbide plant in Bhopal in 1984, and the 1986 Sandoz chemical spill in Switzerland catalysed increasing public scrutiny of corporate environmental behaviour. The Bhopal accident claimed 1500 lives and blinded thousands. It was a violent wake up call to all, and it became clear that corporate environmental practice had to change. It marked the beginning of an increase in communications and dialogue with concerned citizens.

At a policy level, a significant development was the publication in 1987 of *Our Common Future* (also known as the Brundtland report), which put the concept of sustainable development squarely into the international policy arena.

All of this was reflected in the changing management practices of many companies. More and more companies were developing environmental and/or social policies that contained specific performance commitments, including in many instances a commitment to adopting more stringent requirements where laws did not exist or were deemed inadequate.

These policies were generally accompanied by the establishment of dedicated environmental staff functions, and by increasing line management integration of environmental and social responsibilities. The period was characterised by the growing adoption of pollution prevention and cleaner production techniques, as epitomised by 3M’s (a US-based multinational company) 3P (Pollution Prevention Pays) programme, an initiative that has saved the company hundreds of millions of dollars world-wide.

The decade also saw greater degree of networking between companies on environmental and social issues, as well as the establishment in 1984 of the chemical industry’s Responsible Care programme, one of the world’s first major voluntary industry initiatives on environmental issues.

This resulted in an increase in the “business and sustainability toolbox”, which included such tools as life cycle assessment, eco-labelling and environmental and social audits. The late 1980s also saw a dramatic increase in the development of international and regional agreements and treaties on environmental and social issues. One of the most successful of these was the 1987 Montreal Protocol regulating the emissions of ozone depleting substances. One of the reasons for its success was the strong backing of businesses which had alternative technologies at the ready.

**The 1990s – “Changing Course”**

Various international efforts to find a co-ordinated solution to global concerns culminated in the Rio Earth Summit in 1992. An important outcome of these efforts was the launch in 1991 by the International Chamber of Commerce of their Business Charter for Sustainable Development. In the years following the Rio Earth Summit the corporate response to sustainable development reflected the increasing institutionalisation of sustainable development within the firm, as well as a growth in the development of more innovative technological solutions.

The decade since Rio has seen the development and widespread implementation of certified management systems (such as ISO 14001 and SA 8000), an increase in environmental and social
reporting practices, and greater integration of social and environmental considerations within corporate strategy.

Following incidents such as Shell’s proposed sinking of the Brent Spar oil storage and tanker loading facility in the North Sea, more and more companies have been striving to adopt proactive stakeholder engagement strategies.

Institutionally, the business response has been co-ordinated and facilitated by the establishment of organisations such as the World Business Council on Sustainable Development (WBCSD) and its various regional offices, and by the development of numerous sectoral and theme-specific initiatives, including the financial sector.

Some of the leading companies began demonstrating innovative approaches to reducing the environmental and social footprint of their activities, moving beyond simple process-focused eco-efficiency measures towards greater use of product-oriented tools such as life cycle assessment, design for the environment and product stewardship. In many instances, significant improvements in efficiency and dematerialisation have been achieved with innovative strategies that involve moving from the manufacture and provision of products, to the supply of services.

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**Slide 32** Beyond 2000 – “Walking the Talk”?

A number of observers of the business response to environmental and social issues – sometime collectively referred to as “corporate social responsibility” or “corporate citizenship” – have suggested that the next phase could be one of increased public and private sector partnership, and a greater sharing of responsibility for addressing societal concerns.

In considering the future response, it is important to reflect on the following key drivers on companies to pursue more environmentally responsible management practices:

- Growing NGO and community pressure for **greater corporate transparency** and accountability; distrust of business.
- Increasing activism of **institutional investors** and the financial community on environmental and good governance issues, compounded by a growing disenchantment with traditional analytical approaches (especially post-Enron).
- Tightening global and domestic **regulatory pressures** on environmental issues.
- An increasing appreciation within the boardrooms of the **business case** for sustainability, and a growing acceptance amongst some of them of the need to address sustainability concerns.

These first three of these various key strategic trends are outlined in the following slides, while the fourth of these is examined in more detail in the next session.

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**Slide 33** Corporate Environmentalism: Strategic trends

There is growing NGO pressure for greater corporate transparency and accountability, accompanied by an increasing distrust in the activities of business. A number of NGOs (some of which are
indicated in the slide) are using Internet-based tools to monitor the activities of large companies, and many NGOs are calling for an international convention on corporate accountability.

**Slide 34  Corporate Environmentalism: Strategic trends**

Institutional investors and the financial community are becoming increasingly active on environmental and good governance issues. This is compounded by a growing disenchantment with traditional analytical approaches. Recent key initiatives in this regard include the Dow Jones Sustainability Index, the FTSE4Good index, and the Equator Principles relating to project finance. (These initiatives are examined in more detail in the slides in Module 5)

**Slide 35  Corporate Environmentalism: Strategic Trends**

There is evidence of tightening global and domestic regulatory pressures on environmental issues. Key issues in this regard include: the growing number of multilateral environmental agreements (some of which are indicated in this slide), the move towards an integrated product policy in the European Union, and calls within some jurisdictions for a reform of corporate law.

**Slide 36  Climate change litigation**

A related key trend is the increase in litigation on environmental issues, as evidenced by a number of recent initiatives relating to climate change issues. These include for example:

- Internationally: The launch of the *Climate Justice Program*, an alliance of 70 NGOs, lawyers, academics and individuals in 29 countries that seeks enforcement of existing laws to hold the perpetrators of climate damage accountable and liable.
- Australia: The Climate Action Network Australia notified directors of the top 200 listed companies of the financial risks and legal obligations of climate change. They targeted major GHG emitters, as well as property financiers. Companies are expected to respond by undertaking risk assessment of climate change exposure.
- USA: In July 2004, eight US States and New York City launched a public nuisance lawsuit against five of the US’s largest power companies.

**Slide 37  The next phase?**

The following trends may be seen as indicators of the nature of the next phase of corporate responsibility to social and environmental concerns:

- **Sustainability Reports**: Many companies are publishing sustainability reports in addition to the traditional annual reports. The nature of these reports and the role of the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) are examined in more detail in later modules.
- **Strategic Partnerships**: Businesses are increasingly forming partnerships with NGOs and civil society organisations in order to understand and create possible business opportunities associated with emerging environmental concerns. Environmental Defence, Rainforest Action Network and the World Wide Fund for Nature are three examples of organisations working with multinational companies on a variety of issues.
Financial Markets: The financial sector is increasingly putting pressure on companies to improve their environmental performance. This is evidenced by the growth in the number and scale of corporate social investment initiatives, the increasing number of sustainability indices (such as the Dow Jones Sustainability Index and the FTSE4Good), and new initiatives such as the London Principles and the Equator Principles. An important trend in this regard is the extent to which environmental issues are increasingly becoming “mainstreamed” within financial markets, as financiers come to appreciate the significant risks and potential opportunities associated with environmental management issues.

Academia: Environmental and sustainability issues are also becoming more and more integrated with the curricula of technical, business and professional courses. A small but growing number of universities are offering MBA programmes that incorporate environmental management and sustainability in their curricula and activities. In addition, an increasing number of top companies are holding seminars and workshops on sustainability in order to educate employees and launch company-wide initiatives. (Note: a comprehensive list of business schools that provide teaching and research in areas relevant to the Global Compact is found in the Global Compact Resource Package, www.uneptie.org/pc/pc/tools/globalcompact.htm).

Media: Many prominent publications now feature articles on top environmental business leaders, the “greening” of the bottom line, the value of beyond compliance initiatives such as product take-back systems, and other components of sustainability.

Corporations in the new society?

The following quotation from a well-known management guru, underlines the argument that companies are increasingly facing pressure to build and maintain their social legitimacy (which encompasses the need for responsible environmental management):

“In the next society, the biggest challenge for the large company - especially for the multinational - may be its social legitimacy: its values, its missions, its vision.” Peter Drucker

You should make mention here of the concept of “licence to operate.” This is essentially the level of acceptance of the company by its stakeholders and can be ‘granted’ by stakeholders such as regulators, politicians, local communities, the general public, the media and civil society.

Corporate Sustainability: Features of an ideal company?

Leading practitioners and activists on corporate social responsibility have identified a number of possible features that they suggest would characterise a company that has successfully integrated sustainable development within its core business strategy. Such a company might look as follows:

- Environmental, social and economic development is integrated within the company’s strategic outlook, and is based on a detailed understanding of the company’s contribution to each of the five capital stocks.
- Efforts are taken to quantify the full social and environmental costs of the company’s activities.
- The emphasis is on constant innovation, based on whole systems thinking throughout the full life cycle of the company’s products and services.
The company implements ethics-based business principles and sound corporate governance practices that provide for the rights and interests of all relevant stakeholders, and not only the interests of company shareholders.

The company’s activities are informed by a commitment to transparency and accountability, with opportunities being made available for the informed participation of stakeholders in all relevant decisions that affect them.

The company uses its influence to promote meaningful change amongst its peers, within its neighbouring communities, and throughout its supply chain, recognising that for sustainability to be achieved it is not enough simply to change one’s own company, but improve the performance of others.

The company is willing for open dialogue with multi-stakeholders.

The company uses its influence amongst its peers and encourages other companies and trade associations in the sector to develop support programmes and training initiatives.

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**Some useful definitions**

**Transparency**: Transparency is the quantity and quality of information a company provides its various constituents including shareholders and other capital providers, suppliers, customers, employees, etc.

**Accountability**: Accountability is about ‘organisational responsiveness’, or the extent to which an organisation takes action on the basis of stakeholder engagement.

**Stakeholder/s**: An individual or group with an interest in the success of an organization in delivering intended results and maintaining the viability of the organization's products and services.

**Corporate governance**: Systems and processes for ensuring proper accountability, probity and openness in the conduct of an organisation's business. These focus particularly on the composition of the company Board and the responsibilities of Board members, including Chief Executives.

**Corporate citizenship**: A values-based way of conducting business in a manner that advances sustainable development, seeking positive impact between business operations and society, aware of the close interrelation between business and society as well as of companies, like citizens, having basic rights and duties wherever they operate. Some, for example the outcome texts of the World Summit on Sustainable Development, speak of Corporate Environmental and Social Responsibility (CESR).

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**Exercise 2.1 – Identifying environmental concerns**

During the slide presentation, you will show a picture of Earth from space. Ask the delegates to individually list all the environmental concerns that they have at a global and a national level. In doing so, ask them to:

- Explain in some detail two of the issues that they have identified.
- Describe any incidents that they have experienced that relate to the issues that they identify.

This exercise has been designed to be incorporated into the lecture session. Spend about 45 minutes on this whole session. The report back session should be seen as a useful gauge as to the level of understanding and the calibre of the class. Pitch your subsequent presentations accordingly.
Exercise 2.2 – Key definitions

Divide the delegates into groups of about five people each and ask them to note down definitions (as they currently understand them) of the following terms:

- Cleaner production
- Corporate social responsibility
- Corporate citizenship
- Corporate social investment
- Socially responsible investment
- Environmental impact assessment
- Environmental auditing
- GHG emissions
- ISO 14000
- Stakeholders
- Triple bottom line

The aim of this exercise is to ascertain the level of understanding of the group, and to serve as a useful guide to you, as trainer, on how to pitch the sessions. Allow for some level of discussion on each definition at the report back stage, and then present the definitions below, which they can note down. Allow around 15-20 minutes for this exercise.

Definitions (as a general guide) follow:

- **Cleaner production**: Cleaner production refers to the continuous application of an integrated preventive strategy applied to processes, products and services with the aim of increasing eco-efficiency and reducing risks for human and the environment.

- **Corporate social responsibility**: Corporate social responsibility (CSR) is the continuing commitment by business to behave ethically and to contribute to economic development, while improving the quality of life of the workforce and their families, as well as that of the local community and society at large. Some texts (for example the WSSD texts), speak of Corporate Environmental and Social Responsibility (CESR).

- **Corporate citizenship**: A values-based way of conducting business in a manner that advances sustainable development, seeking positive impact between business operations and society, aware of the close interrelation between business and society as well as of companies, like citizens, having basic rights and duties wherever they operate.

- **Corporate social investment**: Corporate social investment refers to the activities that a company undertakes in spending a portion of its corporate earnings on social causes. This expenditure is often measured as a percentage of post tax profits.

- **Socially responsible investment**: Socially Responsible Investment (SRI) is an investment strategy in terms of which investors, when selecting and managing investment portfolios, consider a company’s social, environmental and/or ethical performance, in addition to the company’s financial performance.

- **Environmental impact assessment**: The assessment of the environmental impacts likely to arise from a major action (i.e. legislation, a policy, a programme or project) significantly affecting the environment.

- **Environmental auditing**: The systematic examination of the interactions between any business operation and its surroundings. This includes all emissions to air, land, and water;
legal constraints; the effects on the neighbouring community, landscape and ecology; and the public’s perception of the operating company in the local area. Environmental auditing does not stop at compliance with legislation. Nor is it a ‘green-washing’ public relations exercise. Rather it is a total strategic approach to the organization’s activities.

- **GHG emissions:** The main greenhouse gases are water vapour, carbon dioxide, ozone, methane, nitrous oxide and chlorofluorocarbons (CFCs). All but CFCs occur naturally. Collectively, these gases make up less than one per cent of our atmosphere, sustaining what is called the Earth’s “natural greenhouse effect.” Without this, Earth would be 30 degrees cooler – essentially, a frozen planet.

- **ISO 14000:** Developed under the auspices of the International Organisation for Standardisation, the ISO 14000 series addresses various aspects of environmental management, including environmental management systems (EMS), auditing, performance evaluation, eco-labelling, and life cycle assessment.

- **Triple bottom line:** An expanded baseline for measuring performance, adding social and environmental dimensions to the traditional monetary yardstick.

### Exercise 2.3 – Understanding sustainable development

1. What do you understand by the term sustainable? Illustrate your answer using examples of situations in which activities, practices or processes are sustainable or might become unsustainable.

In general, sustainability conveys a sense of an activity, or process continuing, often indefinitely. Accept any answers or examples such as: mining becoming unsustainable once all of the minerals have been extracted, or the fishing industry in a particular region becoming unsustainable once fish stocks have been depleted.

Sustainability from an environmental perspective is really about leaving future generations with the same capacity and options that we have at present. For the planet to provide future generations with the same capacity and options, the following general rules should be considered:

- Pollution and waste emission should not exceed the capacity of the environment to assimilate (absorb) waste.
- The rate of the use of renewable resources should not exceed the rate of regeneration (for example, in the case of fish stocks, we should not fish beyond the “maximum sustainable yield” of these stocks).
- The rate of use of non-renewable resources (e.g. fossil fuels) should not exceed the rate at which sustainable renewable substitutes are developed.
- We should preserve biodiversity – if resources become extinct or severely threatened, the valuable services that these resources could potentially offer (such as medicinal) will be lost.

2. What do you think is the relationship between sustainable development and:
   a) Population growth
   b) Technological innovation
   c) The use of finite or non-renewable resources?
The following thoughts may be useful:

- An increase in population will tend to give rise to increases in resource use and a concomitant increase in the production of pollution and waste. This could make development less sustainable.

- Technological innovation could give rise to decreases in (a) resource use and (b) the production of pollution and waste – which could in turn make development more sustainable. This would apply in situations where existing technology is replaced by more resource-efficient technology. Alternatively, technological innovation could give rise to increases in (a) resource use and (b) the production of pollution and waste – which could in turn make development less sustainable. This would apply where new technologies give rise to price cuts which in turn give rise to increase levels of consumption; or where they give rise to the consumption of entirely new goods and services.

- Renewable resources can in principle be used sustainably if the rate of consumption is less than the rate of replacement – sometimes known as the maximum sustainable yield (MSY). Finite resources can be used more or less quickly and more or less efficiently; but they cannot in principle be used indefinitely and, therefore, cannot be used sustainably. It is sometimes argued that the MSY of renewable resources and the finite nature of non-renewable resources impose a limit on the total level of economic activity that can be sustained in the long run. However, it is also argued that this limit can be circumvented more or less indefinitely by substituting one resource for another as stocks become depleted.

3. Do you think you share the values of sustainable development? To help you get your thoughts into perspective, consider the following:

Rank the following in order of importance/concern (for you personally). Rank from 1-10, with 1 meaning you hardly ever think about it, and 10 being something you think about constantly (and would wish to change, if you could):

- Climate Change
- Making more money
- Waste and consumerism
- Upgrading your cell phone
- Habitat destruction
- Buying a bigger car
- Discrimination at work
- Your next holiday
- Climbing the corporate ladder
- Genetically modified crops.

Ask the delegates to share these lists with the group. Ask them then to consider the list again and to identify the extent they have each taken action on the various issues. They should share their lists with the group, considering whether there is a difference between awareness and action.

Spend some time explaining how sustainable development requires a change of mindset – which
is a challenge in itself. It demands that we have to start thinking further into the future, more often than not, on behalf of people you may never have met, or indeed, who have not yet been born. It also means we have to start thinking beyond our immediate borders (community or country), and to think of the ramifications of what we do (as a company) in the national, international and global context. It requires that we begin to consider a far broader set of stakeholders.

In essence, sustainable development is about:
- many intangible things (which one cannot often see)
- issues and impacts that span decades
- challenging conventional ways of doing and seeing things
- rethinking values.
Module 2: The Business Case for the UNGC Environmental Principles

Session 2: The Business Case – The Business Benefits of Corporate Environmentalism

**Time:** Between 2-4 hours (depending on which exercises are chosen)

**Objectives:**
The objectives of this session are:

- to understand the various business (i.e. financial) benefits associated with sound environmental management practices;
- to appreciate the role (and limitations) of relying on the business case for ensuring sustainable development, and
- to understand some of the constraints against more widespread implementation of the business case.

**Suggested Procedure:**
The day before this session is scheduled, encourage delegates to read Executive Summary of Sustainability and Business Competitiveness (this is included in the Delegates’ Manual).

It is suggested that you spend approximately 45 minutes on Exercise 2-4, which comes under slide 2 of the PowerPoint presentation. The remaining slides should take approximately 1 hour. Exercise 2-5 should take approximately 45 minutes. Allow a maximum of 15 minutes for questions and discussion at the end of the session. All the slides are available online at: http://www.unep.fr/outreach/compact/index.htm.

**Speaker’s Notes**

**Slide 1**
Title slide

**Slide 2**
The Business Case: Understanding the Business Benefits of Corporate Environmentalism

The following quotation is useful as an introduction to the session.

“As the private sector has grown in size, influence and reach, so too have the demands for increased corporate responsibility. They are unlikely to go away. The ‘business case’ for corporate responsibility is becoming clearer, louder and more urgent.”

*Jane Nelson – International Business Leaders Forum*

After reading through the quote, ask the delegates to work through Exercise 2-4. Get them to spend 10 minutes (individually) to complete the questions in their manuals. Next, divide them into groups of five, and encourage them to take turns to discuss their answers to the questions. They should select a scribe and a rapporteur to provide an overall report back to the class.
This session should allow for the sharing of ideas, concerns and expose some of the key challenges faced by the different members of the group. Spend a maximum of 45 minutes on this exercise (including 10 minutes to complete questions).

**Slide 3**  The Business Case for Environmental Management

In assessing the extent of the business case for improved environmental management, it is important to examine the extent to which there is available quantitative evidence to support this argument. In this regard it is important to look at:

- statistical research on share price and financial performance;
- evidence from ethical investment analysts and sustainability rating agencies;
- case study evidence, and
- arguments of leading sustainability thinkers/researchers.

Various recent reviews of all of the above forms of evidence generally come to the same conclusion as that outlined in the following quotation:

“There is a growing body of evidence to support the assertion that integrating sustainability principles into business practice can generate business benefits. However to date none have been able to offer irrefutable evidence of ‘cause and effect’. Importantly, however, none have found a negative correlation …”


**Slide 4**  The Business Case for Environmental Management

Two well known studies in the business case for corporate sustainability have been undertaken by UNEP, SustainAbility (a leading consultancy and think tank) and the International Finance Corporation (IFC). The first study (*Buried Treasure: Uncovering the Business Case for Sustainability*) looked primarily at evidence resulting from corporations in developed countries, while the second study (*Developing Value: The Business Case for Sustainability in Emerging Markets*) focused specifically on emerging economies.

The *Developing Value* study looked at more than 240 examples in over 60 countries, and identified the following issues as the most significant business opportunities associated with pursuing more sustainable approaches to business:

- saving costs through improved efficiencies;
- increased revenues by improving the environment and benefiting the local economy;
- reducing risks through stakeholder engagement;
- improved access to capital;
- building brand value and reputation;
- developing human and intellectual capital; and
- improving access to capital through better governance.
The first of the studies mentioned above (*Buried Treasure: Uncovering the Business Case for Sustainability*) developed a Sustainable Business Value Model which links ten dimensions of sustainable development performance with ten more traditional measures of business success. The aim of this matrix is to provide a brief interpretation of the existing relationship between each of the sustainability dimensions and each business success measure, as supported by formal research or case studies.

Key Elements of the Business Case Argument

In examining the business case for improved environmental performance it is important to consider that while there may be many untapped “win-win” business opportunities (with positive environmental and economic results), generally these benefits will not be sufficient (under current market conditions) to address most of the existing environmental challenges.

The following elements of the business case should be identified.

- Developing a robust business case is a necessary but not sufficient element in mainstreaming sustainable development. The scale of what needs to be done to meet the Millennium Development Goals is far greater than can be met by the total benefits generated by today’s business case approach.
- The full scope of the business case is much more sophisticated than most business leaders realise.
- There is growing emphasis on the importance of the role of intangible assets (such as brand value).
- Ultimately governments are responsible for framing the market conditions within which the business case is made – the revision of framework regulatory requirements may be required to maximise the business case for sustainability.

Key constraints

There are many instances in which the business case is severely constrained by short-term market signals. The business case for sustainable development in any company can be constrained by a number of factors:

- Corporate myopia: a failure by many companies to even seek out a business case for improved environmental management.
- The financial benefits from eco-efficiency investments may not be sufficiently “material” to gain either senior management or investor buy-in. For large multinationals, even potential savings of tens of millions may not pass this test of materiality.
- What works as a “niche product” (for example fair trade coffee in high street coffee shops) may not translate into mainstream commercial strategies.
- Even a positive return on a sustainability investment may not be positive enough if the same amount of capital deployed in a different way can generate a much better return on investment.
- Capital markets are generally ill-equipped to evaluate a company’s business case for improved environmental management, but they are beginning to scale up capacity and increase their activities in this field.
Predominant focus on short-term shareholder returns. In addition to the above constraints, companies may fail to exploit the economic advantages of being more pro-active for the following reasons:
- insufficient technical expertise;
- a lack of information;
- middle management inertia;
- ignorance of marginal cost curves;
- insufficient resources to focus beyond core business functions;
- a reluctance to borrow capital, and
- uncertainty about future returns.

Ask the delegates whether they agree with the above-proposed list and whether they have specific examples from their own experience that support any of the issues. Ask them to discuss how joining the UNGC helps to address these constraints, i.e. access to information and guidance, inspiration through case-studies, bringing partners from business and other organisations to learn from each other.

**Slide 8  The Business Case: Overview of the Main Benefits**

This slide provides an overview of the main sets of themes under which the various business benefits will be reviewed. Briefly introduce these four main sets of business benefits, starting from the bottom left (licence to operate) and working up to the top right (new markets) noting how they relate to the risk and rewards axes. Explain that each of the following four themes will be reviewed in more detail:
- Licence to operate.
- Cost and liability reduction.
- Market access.
- New markets.

**Slide 9  The Business Case: Forces Driving Corporate Change**

Before unpacking each of the business case drivers, it is important to highlight that these should be seen in the context of other external drivers, most of which were identified during the previous session.

These external drivers include:
- **Environmental pressures** – reflect on how businesses may be directly affected by the various environmental concerns identified in the previous session (e.g. increasing water scarcity may drive up the price of water).
- **Social/societal pressures** – note the role of growing NGO and community pressures on corporate behaviour (for example how the internet can be used as a mechanism for increased scrutiny of corporations); mention also how the financial community is increasingly getting involved, as reflected in the growth of socially responsible investment funds and increasing evidence of shareholder activism on environmental and social issues.
- **Legal and regulatory trends** – identify some of the important recent policy developments that are impacting on business (these include the growing move to integrated product policy and extended producer responsibility in Europe, and the increase in the number and extent of multilateral agreements on environmental issues – such as climate change, the ozone layer, and chemicals and waste management).

- **Technological change** – technological developments (including in particular information and communications technology – ICT) are also having a significant impact on the way that businesses operate.

- **Market related forces** – in a number of industry sectors and/or markets evidence of sound environmental practices is becoming either an important condition of market entry, or a valuable source of competitive advantage.

After identifying these issues, you should then make the following points:

- Risks and opportunities associated with environmental management exist throughout the value chain.
- Aligning business strategy with the major drivers of change can increase growth and reduce uncertainty.
- Improved social and environmental performance is increasingly becoming a competitive issue that is important in the context of intensifying competition within the global market.

**Slides 10-11 The Business Case: Licence to Operate**

The first set of business case benefits relate to a company’s “licence to operate” within existing or new markets and/or within different communities and jurisdictions. Following are some examples of how sound environmental management practices can create opportunities and value for companies:

- **Licence to Operate**: Evidence of a history of responsible corporate behaviour can assist in securing the approval of regulatory authorities regarding new business activities, and contribute to reduced costs associated with compliance and permitting. Environmentally responsible behaviour is also important in building positive relationships with local communities and other external stakeholders each of whom can have a bearing on a company’s social “licence to operate.”

- **Proactive Legislative Compliance**: Effective environmental management practices will often result in reduced costs associated with subsequent legislative requirements; companies that adopt responsible management practices will typically predict and be proactive in addressing legislative developments, and will thus usually incur savings over those who adopt a more reactive approach.

- **Employee Relations**: There is a competitive market for attracting and retaining the best-and-the-brightest employee. Graduates considering their employer of choice are increasingly looking beyond the specific job function to consider the company’s value systems and operational practices. A number of companies have found that effective and visible sustainability initiatives can help to attract and retain talented and committed employees, as well as contributing to their ongoing motivation.

- **Brand Image**: The marketplace is becoming more environmentally sophisticated, with increasing implications for a company’s intangible assets such as its brand image and...
reputation. Appealing to the ecological and social as well as economic sensibility of consumers can increase customer loyalty. It has been estimated, for example, that since 1990, McDonald’s has enhanced its brand image by buying recycled products worth $3 billion without paying a price premium or otherwise increasing costs. Conversely companies that fail to identify and respond to consumer interests can incur significant additional costs, as Shell’s experience with the proposed sinking of an oil platform in the North Sea in the mid 1990s (the Brent Spar) indicated (see slide 8). Similarly, as some recent experience with Coke and McDonald’s indicates (see slide 9), a failure to identify and respond to stakeholder concerns may result in the company brand being used against them.

**Slides 12-13 Images**

The images on these slides relate to the discussion around brand image above. You could expand on the Brent Spar, Coca-Cola and McDonald’s cases. Note also the quote included in the slide relating to the changing emphasis of consumers on brand issues.

**Slides 14-15 The Business Case: Reducing costs and liability**

The second broad set of business case benefits relates to the reduction of costs and liability associated with effective environmental management. Responsible environmental management is increasingly seen as a proxy for good management in general. Reasons for this include:

- **Improved operating efficiencies and enhanced productivity:** Effective environmental management practices can result in significant cost savings associated with reduced waste and pollution disposal costs, and lower input and resource expenses. Environmentally sustainable buildings are often more cost-effective to build and operate, and provide a comfortable working environment that can result in a healthier, happier and more productive workforce.

- **Reduced risks and liability:** Proactive environmental management can also result in reduced costs (for example with legal liability and possible clean up costs arising from polluting activities). Many companies have found that ineffective environmental management practices in the past have come back to haunt them, in the form (for example) of significant site remediation costs and/or legal action from regulatory officials or personally affected individuals. The recent lawsuits relating to asbestosis highlight the potentially significant sums that may be involved.

**Slide 16 The Business Case: Reducing costs and liability**

A recent study of 13 US pulp-and-paper companies highlights the potential for environmental issues to have a significant impact on the financial bottom-line of companies. This study, conducted by the World Resources Institute, found that under what was seen to be a very plausible scenario involving more stringent environmental legislation, the financial exposure of some companies could amount to around 10% of the company’s market value.
The Business Case: Reducing costs and liability

This graph highlights that the issue of climate change is already having significant implications for the insurance industry who are enduring significant losses associated with the increase in natural catastrophes. A recent international study (the Carbon Disclosure Project: http://www.cdproject.net/) suggests for example that:

“The discounted present value of potential carbon liabilities within a single emissions-intensive manufacturing firm could represent as much as 40% of its entire market capitalisation under certain plausible scenarios”

The Business Case: Improved Market Access

The third broad set of business case benefits relates to the potential financial advantages associated with improved market penetration and improved access to capital:

- **Improved market penetration:** With increasing consumer awareness of environmental and social issues there is the potential for companies to benefit by demonstrating environmental and social responsibility in the design, manufacturing, distribution, packaging and use of their products. In some markets and for certain products, such differentiation can provide the opportunity for higher margin and/or higher sales volumes.

- **Improved access to capital:** Provision for environmental and social concerns in corporate strategy is seen by many in the investment community as a proxy for sound financial and risk management. The recent growth in socially responsible investment funds, the increasing number of sustainability indices (such as FTSE4Good and the Dow Jones Sustainability Index), and the development of initiatives such as the Equator Principles. The Extractive Industries' Transparency Initiative and the Carbon Disclosure Project, is indicative of the growing interest of the financial community in sustainability issues (slides 15 and 16). This in turn is having an impact on companies who in a number of instances are finding that the implementation of effective sustainability strategies can reduce the cost of capital.

- **Condition of entry:** In a number of cases a company’s environmental performance is also a *de facto* condition of market entry. Increasingly, larger companies are including environmental considerations within their procurement policies, with their suppliers being required to demonstrate socially and environmentally responsible behaviour.

The Business Case: Access to New Markets

Perhaps the most exciting of the business case benefits relates to the potential for accessing completely new markets. As Professor Stuart Hart puts it in an award-winning article in the Harvard Business Review:

“Over the next decade or so, sustainable development will constitute one of the biggest opportunities in the history of commerce.”

With growing populations and increasing demands for resource-intensive lifestyles, coupled with the existing evidence of certain resource constraints, it is highly likely that there will in the near future be significant changes in the pricing of a number of key resources (such as water and fossil-fuel based energy). A number of forward-looking companies are thus seeking opportunities associated with the development of renewable energy sources or new forms of personal transport.
Applying environmental principles to the design and manufacture of products has helped several leadership companies bring entirely new product lines to market. DuPont, Herman Miller and Patagonia are among those that have spurred innovation both inside their own companies and with their suppliers by applying environmental principles to product design and development, and in so doing have ensured market benefits.

Exercise 2.4 – Understanding the business case

Ask delegates to spend five minutes completing the questions. Divide them into groups of five (preferably into homogenous groups from the same company or sector), where you will take turns to discuss your answers to questions 1, 3 and 4. They should select a scribe and a rapporteur to provide an overall report back to the class.

1. Are environmental issues seen to be a key business driver for your firm? If yes, is this because of:
   a) The firm’s values and principles
   b) The values and principles of the staff
   c) Pressure from potential customers
   d) Pressure from NGOs and other stakeholders
   e) Competitive advantage through new products and services
   f) Competitive advantage through lower costs and better processes
   g) The effect on brand image and value
   h) Regulatory requirements

Rank the importance to your company of each of the above potential factors.

2. Where is the main challenge in dealing with environmental sustainability?
   a) Understanding the business case
   b) Understanding stakeholders’ expectations
   c) The firm’s ability to measure improved performance
   d) The technologies at the firm’s disposal
   e) Customer’s willingness to purchase more sustainable products / services
   f) Legislative and regulatory frameworks

Rank the importance to your company of each of the above potential factors.

3. Which of the following (all sustainable development spin-offs) would you see as being the most beneficial to your business? Rank them from 1-5, with 1 as the most beneficial.
   a) The launching of one or more new products/services
   b) Making major improvements to existing products/services
   c) Establishing new processes
   d) Making major improvements to existing processes/operations
   e) Developing new ways of doing business
This session should allow for the sharing of ideas and concerns and expose some of the key challenges faced by the different members of the group.

You should allow enough time for each of the groups to unpack their respective answers to the questions. Ensure that the ranking process in each question is well justified and reasoned by each group.

**Exercise 2.5 – Envisaging an environmentally responsible company**

Divide delegates into groups. As in the previous exercise, try and split them into groups containing people from similar companies or industry sectors. Ask each group to carry out the following task:

- Take two or three sheets of flipchart paper and put them in a line horizontally along the wall. Go to the far right hand side of the sheet, write ‘**Future Success**’ and get each group to give some ideas about what a sustainable company would look like. As they give ideas, the scribe should write them up around the words Future Success.

- Each group scribe should then draw a ‘road’ from the word success across the flipcharts back to the starting point. Write the word ‘**Current**’ and ask members of the group to give ideas about the current status of the company.

- The next step is to ask the group to look along the ‘road’ from Current to Future Success position and start thinking what barriers could come in the way and what could help them to get there (the drivers). Get them to brainstorm the **Barriers** and the **Drivers** onto post-it notes. Ask them to use a classification system on their post-it notes to indicate the level or size of a barrier or driver. Different coloured markers could work here (red for high, orange for medium and green for low level). On their post-it notes they would then have a symbol for level of barrier or driver plus the specific point which they would then place along the road between Current and Success. They could also use the road as a timeline. Get all groups to contribute ideas and then ‘cluster’ the similar ideas and see where differences and similarities are in perception of barriers and drivers between groups.

- The next step could be to ask groups to place a circle around the drivers and barriers that they feel they can **directly control**, to put a dotted circle around the ones they can **influence**, and finally to place a flag shape around those which they feel they have **no direct control** over.

- The final step could be to get them to write up an **action plan** of what needs to happen now. The things they can control/influence – what actions are they going to take, by whom, by when. What will they do about things they feel they cannot control or influence – do they need to get more information or to speak to someone else.
Module 3

UNDERSTANDING THE GLOBAL COMPACT ENVIRONMENTAL PRINCIPLES
MODULE 3: UNDERSTANDING THE UNGC ENVIRONMENTAL PRINCIPLES

Session 1: Principle 7 – The Precautionary Approach

TIME: 2 hours

OBJECTIVES:
The objectives of this session are:
- to provide a sound understanding of the practical implications of implementing UNGC Principle 7 – the precautionary approach, and
- to test this understanding through the use of case studies (note: these case studies are included separately in the accompanying Delegates' Manual).

SUGGESTED PROCEDURE:
If possible, before beginning the course, you should arrange for the delegates to have read the background reading relevant to this module and its exercises. These are in the Delegates’ Manual, and include:
- Case study 3-1: Sasol (South Africa)
- Case study 3-2: British Telecom (UK)
- Case study 3-3: Aracruz (Brazil)

Start the presentation, and then, as outlined in slide 2, facilitate a 15 minute discussion around the delegates' understanding of the precautionary approach. To get the discussion going, prompt delegates with the following questions which you could write up on a flip-chart:
- Can you think of a project/activity that your company has either had to drop, or to significantly change, due to environmental concerns?
- In making this decision, what precautionary actions were adopted?
- How were the environmental risks identified? Were any external stakeholders involved?
- What tools did the company use in this process? (possible examples include environmental impact assessments, environmental and health risk assessments, and public participation techniques)
- What alternatives were considered?

Continue with the presentation. Make sure you have the Wingspread Statement definition up on the board throughout the session, as it will be referred to often.

The PowerPoint presentation (including the 15 minute discussion above) should take no more than 1 hour. Allocate 1 hour to Exercise 3-1.
Speaker’s Notes

Slide 1  Title slide

Slide 2  Principle 7

Read the principle out:

Business should support a precautionary approach to environmental challenges

Ask the delegates what they understand by this, and to provide an example of any instances when such an approach may have been applied in their business activities.

To help in this process, ask them to consider the following questions (some of which you may choose to have written up on a flipchart or white board):

- Can you think of a project/activity that your company has either had to drop, or to significantly change, due to environmental and health concerns?
- In making this decision, what precautionary actions were adopted?
- How were the environmental/health risks identified? Were any external stakeholders involved?
- What tools did the company use in this process? (possible examples include environmental impact assessments, environmental and health risk assessments, and public participation techniques)
- What alternatives were considered?

The aim of this discussion is to get the delegates to identify some of the main concerns and implications at a practical level, ideally within the context of a specific practical example that one (or more) of them may have been involved in. During the rest of the session these issues will be unpacked in more detail.

Slide 3  The Precautionary Approach: A Brief History

Before examining the practical implications of the concept it is useful for delegates to have a very brief appreciation of the history of the concept, and the extent to which it is increasingly being used (albeit at times with some controversy) in various multinational environmental agreements.

The conceptual origin of the precautionary approach as a distinct principle of environmental policy-making may be dated back to various developments in environmental law in the 1960s and 70s in Europe, most notably:

- The Swedish Environment Protection Act (1969), which introduced the concept of “environmentally hazardous activities” for which “the mere risk (if not remote) is to be deemed enough to warrant protective measures or a ban on the activity”.
- The German *Vorsorgeprinzip* (“forecaring”) Principle, which was implemented in the German clean air policies of the 1970s; this principle called for prior care, foresight and forward planning to prevent harmful effects of pollution.
Since then the precautionary approach has been articulated in a number of international declarations and multinational environmental agreements, including:

- **The UN Framework Convention on Climate Change (1992)** – which calls on Parties to take “precautionary measures to anticipate, prevent or minimise the causes of climate change and mitigate its adverse effects”.

- **The UN Convention on Biological Diversity (1992)** – which states that “where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimise such a threat”.

- **The Stockholm Convention on Persistent Organic Pollutants (2001)** – uses the precautionary approach as a standard for adding to its original list of twelve regulated chemicals.

- **The Cartagena Protocol on Biosafety (2003)** – allowing countries to apply a precautionary approach regarding decisions on importing genetically modified organisms.

### Slide 4 “Approach” or “Principle”?

The difference between the precautionary approach and the precautionary principle is a contentious issue, and one that has bedevilled the negotiation of multilateral environmental agreements, with considerable debate evidenced in particular in the differing positions of negotiators in Europe and North America. Generally, the precautionary “principle” is seen to be more stringent than the “approach.”

The difference between the two concepts involves both (i) a legal debate and (ii) an ethical debate with different interpretations. The debate essentially boils down to:

- Whether precaution should be applied in an absolutist (principle) or flexible (approach) manner.
- Shifting the burden of proof completely to project proponents (principle), or recognizing that there is a responsibility in seeking jointly with stakeholders an appropriate definition of “acceptable risk” when addressing complex issues (approach).

The UN Global Compact makes specific reference to the precautionary “approach” rather than to the “principle.”

### Slide 5 The Rio Declaration Definition

A useful starting point for a discussion on the precautionary approach is to consider Principle 15 of the 1992 Rio Declaration (from the 1992 Earth Summit).

Read out the Principle, focusing on the last sentence in particular:

“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

Draw attention to the following key concepts: “serious or irreversible damage”; “lack of full scientific certainty”, and “cost-effective measures to prevent environmental degradation”.

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Explain that the precautionary approach is intended as a guide to public policy decision-making. It responds to the realisation that humans often cause serious and widespread harm to people, wildlife, and the general environment. According to the precautionary approach, precautionary action should be undertaken when there are credible threats of harm, despite residual scientific uncertainty about cause and effect relationships.

Draw attention to the fact that current knowledge of environmental systems is still not sufficient to be able to predict the effect of many human activities on the environment with any certainty. Ask delegates to identify some examples of this. Prominent current examples include the debates concerning the effect of fossil fuels on the global climate, the possible impacts of genetically modified organisms on the natural environment, or the health implications of mobile phone technology. A good example of a case where – with the benefit of hindsight – a more precautionary approach could be used is that relating to the decision regarding the use of CFCs; initially seen as an extremely beneficial substance, they were subsequently found to result in the depletion of the ozone layer. The cartoon slides at the end of this presentation could be used to provide an example of this.

Highlight the fact that the precautionary approach is founded by the common-sense advice to “err on the side of caution.” Note that in the past we have tended to assume that industrial emissions are “innocent until proven guilty” of causing any harm to the environment. The precautionary principle suggests that some emissions should be considered “guilty by virtue of their nature”, and that as such every attempt should be made to reduce these, even where there is no proof of them having a negative effect on the environment and health.

Essentially, the precautionary approach is seen as a ‘better safe than sorry’ principle that focuses on the benefits of prevention rather than cure, particularly in the context of potentially irreversible environmental damage. As such, effective application of the precautionary approach may often result in economic savings, for example in terms of reduced liabilities and clean-up costs and through improved resource efficiencies. However, at times, full application of the principle may also result in some significant costs for a company, particularly over the short-term, which is one of the reasons why a number of sectoral business organisations have in the past resisted the adoption of the precautionary principle, preferring either to adopt reference to the precautionary approach or no reference at all.

The Wingspread Statement

After considering the approach outlined in the UN Rio declaration, it is suggested that you now ask the delegates to consider the implications of a more encompassing definition that was developed at a conference of prominent academics, NGOs, and government officials from Europe and North America (the so-called “Wingspread Declaration”).

Read this definition to the class, placing emphasis on the last two sentences, which highlight the need for transparency and the need to examine the range of alternatives.

“When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are
not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.”

1998 Wingspread Statement

NOTE: The above definition is intended for use as an exercise to examine Principle 7, and should not be seen as the basis of the Global Compact Principle.

Slide 7 The Precautionary Approach: Key Elements

Using Principle 7 of the Rio Declaration and the Wingspread Statement as your basis, you should then identify the following key components of the definition: (Note: it may be useful to have the two definitions written up beforehand on a flipchart so that you can cross-reference to them throughout the session)

- **Taking anticipatory action to prevent harm in the face of scientific uncertainty**: Any activity should be evaluated based on the best available science. Knowledge gaps should be considered alongside existing information. Whenever possible, the timeframe for taking action should encourage preventing harm, before it occurs. One effective way of taking anticipatory action is to set policy goals, which aim to protect human health and the environment, and to work towards these goals over time. The duty to prevent harm is shared by the government, business and community groups, and the general public.

- **Exploring alternatives, including the “no action” option**: For most activities, a range of alternative products or actions is available. It makes sense to choose the action or product which causes the least harm. The alternative of “no action” should also be considered when assessing the various alternatives. When alternatives are not readily available, it is necessary to take this into account and to begin developing such alternatives.

- **Considering the full cost of environmental and health impacts over time**: Costs analysis should account for the full range of costs associated with a product or service over its life-cycle, including manufacturing, use and disposal. The intention is to provide a more integrated approach to analysis and decision-making.

- **Increasing public participation in decision-making**: Public participation in a democratic process ultimately results in a better decision. Also, when the full range of stakeholder viewpoints are incorporated into decision-making, the decision is more likely to be implemented as intended. Ensuring transparent, inclusive and open decision-making processes is essential to increasing public involvement. Public education about environmental and public health issues is needed to provide local residents with tools for evaluating alternatives. In order to reach a good decision, residents must be empowered to assess potential short- and long-term impacts for a range of alternatives.

- **Shifting responsibility for providing evidence to proponents of an activity**: This means that the proponent of an activity, process, new technology, chemical or product will bear the responsibility for providing evidence regarding its safety. This is in contrast to the traditional norm, which requires the public to provide evidence of harm. The proponent of an activity is, therefore, responsible for providing complete and accurate information on the potential
human health and environmental impacts of the activity, as well as monitoring the activity over
time and disclosing this information to the public. The proponent of an activity is also
responsible for costs incurred if an activity is not performed in a safe or healthy manner.
Industry assurance bonds or reclamation bonds are one way to ensure funds are available for a
cleanup.

**Slide 8  A Business Approach**

It can be argued that the precautionary approach is a useful business philosophy for two reasons:

- **It makes sound business sense:** Although preventing environmental damage entails both
  opportunity and implementation costs, remediating environmental harm can cost much more
  (e.g. treatment costs, company image).
- It also leads to innovation with long-term benefits:
  - Production methods that are not sustainable (i.e. that deplete resources and degrade the
    environment) have a lower, long-term return.
  - Improving environmental performance means less financial risk, an important consideration
    for insurers.
  - RandD related to the creation of more environmentally-friendly products can have
    significant long-term benefits.

Precaution involves the systematic application of risk assessment (hazard identification, hazard
characterisation, appraisal of exposure and risk characterisation), risk management and risk com-
unication. The key element of a precautionary approach, from a business perspective, is the idea
that: “Prevention is better than cure”. In other words it is more cost-effective to take early action
to ensure that irreversible environmental damage does not occur than to try to remedy it once it
has happened.

**Slide 9  Managing Uncertainty**

Nevertheless, interpretation of the precautionary approach can present difficulties for companies.
They will better assess any potential harm if:

- They have a thorough understanding of current environmental impacts and of baseline
  environmental conditions within their sphere of influence.
- They have developed a life-cycle approach to business activities to manage uncertainty and
  ensure transparency.

**Slide 10  Tools to assess uncertainty**

With respect to assessing uncertainty and options for a precautionary approach, a number of use-
ful tools are available to gather the necessary information on the potential issues and impacts
associated with technological, process, planning and managerial changes. Explain that these are
fleshed out in much more details in Session 2 of Module 4, but for now, a brief description is as
follows:

- **Environmental Risk Assessment** – establishes the potential for unintended environmental
damage alongside other risks.
- **Life Cycle Assessment (LCA)** – explores the opportunities for more environmentally benign inputs and outputs in product and process development.

- **Environmental Impact Assessment** – ensures that the impacts of development projects are within acceptable levels.

- **Strategic Environmental Assessment** - ensures that impacts of policies and plans are taken into account and mitigated.

These tools provide the data that organisations need when deciding what actions to take.

**Examples of precautionary activities**

There are a number of activities that can form part of implementing a precautionary approach. These include:

- Building in safety margins when setting standards in areas where significant uncertainty still exists.

- Banning or restricting an activity whose impact on the environment is uncertain.

- Promoting Best Available Technologies.

- Implementing Cleaner Production and Industrial Ecology approaches.

- Communicating with stakeholders about risks.

**The Precautionary Approach and the decision-making process**

An underlying aim of this session is to provide delegates with a good understanding of the practical implications of the precautionary approach. What does it mean in the context of everyday business decision-making processes?

Building on the definitions provided in Principle 7 of the Rio Declaration and the 1998 Wingspread Statement it is suggested that a precautionary approach essentially encompasses five broad sets of activities. (Note: to enhance delegates’ understanding of the practical implications of these activities, you should view these activities in the context of a particular decision by a company; see for example the accompanying case studies):

Take the delegates step-by-step through each of the following activities:

- The first step is to assess whether in fact a precautionary approach is required. This requires that the potentially negative effects are identified, and that the scientific data relevant to these risks is evaluated. The precautionary approach is only invoked when, due to the insufficiency of the data or their inconclusive or imprecise nature, it is impossible to determine the risk in question with sufficient certainty.

Once it has been decided on the basis of this evaluation that the precautionary approach is required, then it is suggested that the following precautionary activities should be implemented:

- Undertake an assessment of all reasonable alternative options, noting the environmental, health and economic costs and benefits of each approach, with the burden of proof of acceptable harm shifting onto the organisation whose activities raised suspicion of harm in the first place.

- Adopt transparent, inclusive, and open decision-making processes that involve interested parties in the study of the various risk management options.
- Implement an ongoing process of research and monitoring, with the decision/s periodically re-examined, based on any new available information.
- Implement the proportionality principle, such that the costs of action to prevent hazards are not disproportionate to the likely benefits in both the short and term.

**Slide 13** Assessing when to invoke the precautionary approach

A critical first step in implementing the precautionary approach effectively within the corporate process is to assess whether the precautionary approach needs to be invoked in the context of a particular corporate decision. The European Commission provides useful guidance on this issue in the following statement:

"Whether or not to invoke the Precautionary Principle is a decision exercised where scientific information is insufficient, inconclusive, or uncertain and where there are indications that the possible effects on the environment, or human, animal or plant health may be potentially dangerous and inconsistent with the chosen level of protection."

This issue needs to be addressed on a case-by-case basis. This raises the following key questions for a company:

- When is the available scientific information no longer “insufficient, inconclusive or uncertain”?  
- What actions should the industry proponent take to provide assurance of this? Can you prove a negative?  
- How (and who?) to judge the “acceptable” level of risk to society?

Some guidance on the practical implications of these questions is provided in the accompanying case studies. Providing useful answers to these questions is facilitated through effective application of a range of possible tools aimed at assessing uncertainty and addressing the associated potential risks. These are outlined in the following slide, and are explained in more detail in subsequent Modules.

**Slide 14** Considerations relating to stakeholder engagement

Implementing an effective stakeholder engagement process is an important component of adopting a precautionary approach in a company, and is a critical part of the process of jointly defining an acceptable level of risk when confronted with complex issues (such as biotechnology) that often pose ethical dilemmas.

The following key considerations should guide a stakeholder engagement strategy. Discuss these with the delegates, and ask them to consider how these are being applied in their own operations.

- Significant potential for mutual benefits.
- Stakeholders should be viewed as potential assets and opportunities, rather than as liabilities and risks.
- Understand that public perceptions may be driven by feelings not facts, and that instinctive feelings matter.
- Continue to solicit input from stakeholders – and be adaptable.
Unsatisfied stakeholders must not be dismissed – rather show that their demands may conflict with other legitimate stakeholder needs.

Maintain effective communication with the media, recognising their interests in promoting a controversial story.

**Slides 15-16  The Precautionary Approach: The case of CFCs**

These cartoons can be used as part of a discussion on the implications for the precautionary approach of the experience with introducing CFCs, using as much of the information below as you see fit:

Despite many years of scientific research, our knowledge of environmental systems is still not sufficient to predict with certainty the effect of many human activities on the environment. The use of chlorofluorocarbons (CFCs) provides an example of how the hazardous nature of an activity can go unrecognised for many years, and raises interesting questions regarding the applications of the precautionary approach.

Initially heralded for their non-toxic, non-corrosive and non-flammable properties, CFCs were introduced in the 1940s (including uses in air conditioning units and as aerosol propellants). During the 1970s some experts predicted that emissions of CFCs persisting in the atmosphere could lead to damaging ozone depletion in the stratosphere. The first observation of ozone depletion over the Antarctic was not reported until 1985. The Montreal Protocol ([www.unep.org/ozone/index.asp](http://www.unep.org/ozone/index.asp)) was signed in 1987, resulting in the phasing-out of the use of CFCs – nearly 50 years after their introduction.

Initially some policy-makers and business groups questioned the need to stop using CFCs, arguing that there should be greater scientific certainty to show that it caused harm before production should be halted. In terms of the precautionary approach, however, “where there are threats of serious or irreversible damage, lack of full scientific certainty (should) not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” (Rio Declaration).

Full implementation of the precautionary approach would have suggested that – in the context of serious damage (arguably the case with CFCs and the ozone hole) – companies and regulators should not have waited until there was greater scientific certainty before acting. In terms of the precautionary approach, all available alternatives should be assessed, and the burden of proof of safety should be shifted onto the proponent/s of a potentially harmful activity. This new approach harnesses scientific uncertainty to protect the environment and human health, but also demands a reduced pace of innovation, requiring careful consideration of possible future consequences.

Following the CFCs incident, a number of environmental NGOs (such as Greenpeace) have called for applying the precautionary principle to all chlorine-based compounds, arguing that their existing uses should be phased out, and prohibiting new uses unless they can be proven to be perfectly safe.

It is important to emphasise that the precautionary approach can have profound implications for “business as usual” (i.e. growth and innovation at any cost). For example, requiring companies to
systematically assess alternatives would by itself affect current innovation activities. An effective assessment of alternatives requires an evaluation of what the activity is trying to achieve and how to identify the least-damaging way of accomplishing this. It also requires us to consider whether we might we be better off without the particular innovation.

**Slide 17-18** The Precautionary Approach: Practical Implications

To ensure the effective adoption and implementation of the precautionary approach within relevant corporate decision-making activities, it is suggested that the following activities should be undertaken by a company that has committed itself to the precautionary approach:

- Ensure top management understanding of the implications of the principle and ensure a visible commitment to this.
- Develop and implement a code of conduct with a commitment to health and environment.
- Develop and implement company guidelines and procedures aimed at ensuring the consistent application of the approach throughout the company.
- Ensure that an existing (or if necessary new) managerial committee or steering group oversees the company’s application of the precaution approach, with a particular focus on risk management activities relating to sensitive issues.
- Implement a structured stakeholder engagement process aimed at ensuring effective communication of information regarding uncertainties and potential risks; make use of mechanisms such as multi-stakeholder meetings, workshop discussions, focus groups and public polls combined with use of website and printed media.
- Undertake and provide support to independent scientific research on the issue involved, working with relevant national and international institutions.
- Join industry-wide collaborative efforts to share knowledge and deal with issues relating to production processes/products around which high levels of uncertainty, potential harm and sensitivity exist.
- In the context of a contentious project decision that needs to be taken, implement the decision-making steps outlined earlier.

**Slide 19** The Precautionary Approach: Final Thought

The aim of this final slide is to highlight the potentially significant implications for business of implementing the precautionary approach to its full extent. This final slide builds on the discussion outlined earlier relating to the use of CFCs.

**Exercise 3.1 – The precautionary approach in practice**

1. The precautionary approach places the burden of proof on a company to demonstrate that its activity or technology is not harmful to the environment. Consider this statement in the context of a recent (potentially controversial) specific decision/activity in your own company/industry and discuss this in your group. In doing so, revisit some of the questions raised in the Sasol case studies. Consider also the following:
   - Do you think the approach that Sasol took represents effective implementation of the “precautionary approach”? If not, then why not?
What other measures should the company have taken on this issue?

2. With reference to case study 3-2 (BT) and 3-3 (Aracruz), consider the following:
   - Who are the primary stakeholders in this situation? Draw up a list and identify their main interests on this issue.
   - Do you think the approach that the company took on this issue represents effective implementation of the “precautionary approach”?
   - If not, then why not?
   - What other measures should the company have taken on this issue?
   - Has your company faced similar situations in the recent past (or perhaps it faces such a situation at present?) If so, how has your company responded? On the basis of the case studies presented here, do you think that the response should have been different? Share your thoughts on this issue with the other participants.

For both of the above studies, as trainer you should encourage some good discussion amongst the participants, with the aim of critically evaluating the full implications of the precautionary approach and some frank reflection on how their respective companies have responded in similar situations. Consider the company responses in the context of the issues raised on slides 17 and 18.

In the context of stakeholder engagement processes, it is useful to consider the following general lessons (see slide 14):
   - At a general level, while it is acknowledged that stakeholder engagement processes may be time consuming and resource intensive, there is nevertheless seen to be significant potential for mutual benefits; for these to materialise it is important to see stakeholders as potential assets and opportunities, rather than as liabilities and risks.
   - The public often makes judgements based on perceptions, rather than on what may be perceived as “sound science.” Taking the initiative with effective and transparent communication can help to narrow the gap between perceptions and fact.
   - It is important to continue to solicit input from stakeholders and to be adaptable to possible changes in stakeholder demands. Stakeholder concerns should be reviewed regularly, with any associated action plans adapted as required.
   - There are almost always going to be stakeholders who are unsatisfied with the proposed outcome. It is important that these stakeholders are not dismissed, but rather that efforts are taken to illustrate, in a non-patronising manner, how their demands might conflict with other legitimate stakeholder needs.
   - In a project of this nature, ongoing and appropriate communication with the media should be maintained. They should be kept informed in an open and friendly manner, minimising any potential for perceived technological arrogance.
   - It is important to build networks and to promote the leverage of knowledge, resources and expertise both within the company, as well as externally, including in particular with industry associations.

3. At times, full implementation of the precautionary approach may mean that a company will have to halt an otherwise profitable business venture. In this regard, some companies may draw attention to the “proportionality principle” in terms of which “the costs of action
to prevent hazards should not be disproportionate to the likely benefits in both the short and long term.” (European Commission; 2000). Similarly, it has been argued that “to deny consumers the benefits of innovative, beneficial products while forcing companies to prove the impossible – that their product is completely safe and absolutely risk free – is a prescription for disaster.” (American Council on Science and Health; 1998).

However, other more cautious observers may wish to recall the experience of CFCs. Once praised for the significant benefits they were seen to deliver with lower risk to the then current alternatives, they were subsequently found to damage the ozone layer with important resulting environmental and health implications.

Consider the above arguments in the context of a similar decision that your company may be facing. What do you think is reasonable for a company to do? When does implementation of the precautionary approach become the responsibility mainly of government?

It is important here to prompt further reflection on the full implications of the precautionary principle, and to appreciated that it can have profound implications for “business as usual” (i.e. growth and innovation at any cost). For example, requiring companies to systematically assess alternatives would by itself affect current innovation activities. An effective assessment of alternatives requires an evaluation of what the activity is trying to achieve and how to identify the least-damaging way of accomplishing this. It also requires consideration as to whether we might be better off without the particular innovation.

As the Sasol and CFC case studies demonstrate, full implementation of the precautionary approach raises some important questions that may be very controversial to answer as an individual company (see slide 13):

- When is the available scientific information no longer “insufficient, inconclusive or uncertain”?
- What actions should the industry proponent take to provide assurance of this? Can you prove a negative?
- How (and who?) should judge the “acceptable” level of risk to society?

Encourage the delegates to share their views on these issues. Ask them if possible to provide examples of particular situations that they may have faced where

- The company should have implemented a more precautionary approach
- It may be seen as unreasonable to expect the company to do more than they have done, and that carrying some degree of residual risk is a better option that trying to shift the burden entirely on the company to prove no risk

It may be useful in this regard to ask the delegates to share their views regarding the current debates associated with genetically modified organisms.
The response of Boots (a UK-based retail pharmacy chain) to the use of CFCs in aerosols

“In the early 1980s, the ozone depletion theory was still in its infancy and was not generally accepted. One brand owner found this to their cost when attempting to relaunch their reformulated market leader antiperspirant as CFC-free. Consumers reaction to the revised product was so poor that it had to be withdrawn from the market within weeks. The brand owner concluded that, despite the question marks surrounding the role of CFCs in depleting the ozone layer, a precautionary approach should be taken. Boots, however, tackled the issue differently.

Through careful formulation, it was initially possible to reduce the amount of CFCs per product use by 70% on average (and 100% in some types of products) while still ensuring that the product continued to be acceptable to the consumer.

A lesson here, maybe, is that it is sometimes more effective to take a phased approach to removing a particular ingredient and retain customer satisfaction. As the case against CFCs grew stronger, a new generation of CFC-free products was developed, well in advance of any legal requirements.”

www.boots-plc.com/environment/

4. Read the attached extract from Boots’ website and consider the following questions:
   - What is the key lesson that you gain from this brief extract?
   - Do you think that Boots, in being “well in advance of any legal requirements” could nevertheless claim to be applying the precautionary approach?
Checklist: Practical Implications of Principle 7

The following brief checklist is intended to provide general guidance to companies in assessing the extent to which they have effectively adopted and implemented the precautionary principle within relevant corporate decision-making activities.

<table>
<thead>
<tr>
<th>OPTION</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you ensured top management understanding of the implications of the principle and ensured a visible commitment to this?</td>
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<tr>
<td>2. Have you developed and implemented a code of conduct with a commitment to health/environment?</td>
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<td>3. Have you ensured a thorough understanding of current environmental impact and baseline environmental conditions within your organisation's sphere of influence?</td>
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<td>4. Have you developed a life-cycle approach to business activities to manage uncertainty and ensure transparency?</td>
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<tr>
<td>5. Have you developed and implemented company guidelines and procedures aimed at ensuring the consistent application of the approach throughout the company?</td>
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<tr>
<td>6. Do these guidelines and procedures include the following provisions:</td>
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<tr>
<td>Built in safety margins when setting standards in areas where significant uncertainty still exists.</td>
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<tr>
<td>Banning or restricting an activity whose impact on the environment is uncertain.</td>
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<tr>
<td>Promoting Best Available Technologies.</td>
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<tr>
<td>Implementing Cleaner Production and Industrial Ecology approaches (refer to Module 4 for more on these).</td>
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<td>Communicating with stakeholders about risks.</td>
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<td>RandD related to the creation of more environmentally-friendly products, processes/services that could have significant long-term benefits.</td>
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<td>7. Have you ensured that an existing (or if necessary a new) managerial committee or steering group oversees the company's application of the precaution approach, with a particular focus on risk management activities relating to sensitive issues?</td>
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<tr>
<td>8. Have you implemented a structured stakeholder engagement process aimed at ensuring effective communication of information regarding uncertainties and potential risks; made use of mechanisms such as multi-stakeholder meetings, workshop discussions, focus groups and public polls combined with use of website and printed media? The following key considerations should guide a stakeholder engagement strategy:</td>
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<td>Significant potential for mutual benefits.</td>
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<td>Stakeholders should be viewed as potential assets and opportunities, rather than as liabilities and risks</td>
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<td>Understand that public perceptions may be driven by feelings not facts, and that instinctive feelings matter (the experience of Shell over Brant Spar is particularly relevant here).</td>
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<tr>
<td>Continue to solicit input from stakeholders - and be adaptable.</td>
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<td>Unsatisfied stakeholders must not be dismissed - rather show that their demands may conflict with other legitimate stakeholder needs</td>
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<tr>
<td>Maintain effective communication with the media, recognising their interests in promoting a controversial story.</td>
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<td>9. Have you undertaken and provided support to independent scientific research on the issue involved, working with relevant national and international institutions? The responsibility for providing evidence lies with your organisation:</td>
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<td>Your organisation, as the proponent of an activity, process, new technology, chemical or product will bear the responsibility for providing evidence regarding its safety. This is in contrast to the current norm, which requires the public to provide evidence of harm.</td>
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<td>OPTION</td>
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<tr>
<td>Your organisation is, therefore, responsible for providing complete and accurate information on the potential human health and environmental impacts of the activity, as well as monitoring the activity over time and disclosing this information to the public.</td>
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<td>Your organisation is also responsible for costs incurred, if an activity is not performed in a safe or healthy manner. Industry assurance bonds or reclamation bonds are one way to ensure funds are available for a cleanup.</td>
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<tr>
<td>10. Have you joined industry-wide collaborative efforts to share knowledge and deal with issues relating to production processes/products around which high levels of uncertainty, potential harm and sensitivity exist?</td>
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<td>11. In the context of a contentious project decision that needs to be taken, have you implemented these decision-making steps:</td>
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<td>The first step is to assess whether in fact a precautionary approach is required. This requires that the potentially negative effects are identified, and that the scientific data relevant to these risks is evaluated. The precautionary approach is only invoked when, due to the insufficiency of the data or their inconclusive or imprecise nature, it is impossible to determine the risk in question with sufficient certainty.</td>
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<td>Once it has been decided on the basis of this evaluation that the precautionary approach is required, then it is suggested that the following precautionary activities should be implemented:</td>
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1) Undertake an assessment of the alternative options, noting the environmental, health and economic costs and benefits of each approach (consider using the available tools). Guiding principles include:

- **Take anticipatory action** to prevent harm in the face of scientific uncertainty.
- **Explore alternatives**, including the alternative of “no action”:
  - For most activities, a range of alternative products or actions is available. It makes sense to choose the action or product that causes the least harm. The alternative of “no action” should also be considered when assessing the various alternatives. When alternatives are not readily available, it is necessary to take this into account and to begin developing such alternatives.
- **Apply risk assessment** systematically (hazard identification, hazard characterisation, appraisal of exposure and risk characterisation), risk management and risk communication.

To help in decision-making, consider the following useful **tools** for gathering the necessary information on the potential issues and impacts associated with technological, process, planning and/or managerial changes (refer to Module 4 for more on each tool):

- **Environmental Risk Assessment** – establishes the potential for unintended environmental damage alongside other risks.
- **Life Cycle Assessment (LCA)** – explores the opportunities for more environmentally benign inputs and outputs in product and process development.
- **Environmental Impact Assessment** – ensures that the impacts of development projects are within acceptable levels.
- **Strategic Environmental Assessment** - ensures that impacts of policies and plans are taken into account and mitigated

2) **Adopt a transparent, inclusive, and open decision-making processes** that involves interested parties in the study of the various risk management options. Guiding principles:

- Increase public participation in decision-making:
- Ensure transparent, inclusive and open decision-making processes, as they are essential to increasing public involvement.
- Provide public education about environmental and public health issues to local residents so they can evaluate alternatives.
In order to reach a good decision, residents must be empowered to assess potential short- and long-term impacts for a range of alternatives.

3) Implement an ongoing process of *research and monitoring*, with the decision/s periodically re-examined, based on any new available information.

4) Implement the *proportionality principle*, such that the costs of action to prevent hazards are not disproportionate to the likely benefits in both the short and term.
MODULE 3: UNDERSTANDING THE UNGC ENVIRONMENTAL PRINCIPLES

Session 2: Principle 8 – Environmental Responsibility

TIME: 3 Hours (suggestion only)

OBJECTIVES:
The objectives of this session are:
- To provide a sound understanding of the practical implications of implementing UNGC Principle 8 – environmental responsibility.
- To test this understanding through the use of case studies (note: these case studies are included separately in the accompanying Delegates’ Manual).

SUGGESTED PROCEDURE:
The day before this session is scheduled encourage delegates to read one or more of the following (note: you should select which are the most appropriate depending on the nature of the delegates and their respective company activities):
- Case Study 3-4: Novo Nordisk
- Case Study 3-5: Yawal System – Poland
- Case Study 3-6: The Climate Neutral Network
- Case Study 3-7: Sonae: Delta Cafés socially responsible coffee
- Case Study 3-8: Washright Campaign
- Case Study 3-9: Adidas-Salomon
- Case Study 3-10: Funds-R-Us

Note: all case studies are included separately in the accompanying Delegates’ Manual). When reading these case studies, delegates should identify and keep a note of:
- The key lessons / messages from the case study.
- Their thoughts on the relevance of the case study for their company.

It is suggested that you spend approximately 45 minutes on the PowerPoint presentation. Exercises 3-2, 3-3 and 3-4 should take approximately 45 minutes each.

Speaker’s Notes
NOTE: The following slides should be read in conjunction with those provided in Module 4. You may wish to integrate a number of slides from Module 4 into this Module, depending on the nature and background of the delegates.

Slide 1  Title slide

Slide 2  Principle 8
Read out the principle

*Businesses should undertake initiatives to promote greater environmental responsibility.*

As indicated in Module 2, despite progress in certain aspects of environmental performance, significant challenges remain if we are to address growing environmental concerns.

Given the increasingly central role of the private sector in global governance issues, the public is demanding that business manages its operations in a manner that not only enhances economic prosperity and promotes social justice, but also ensures environmental protection in the regions and countries where it is based.

Through Principle 8, the Global Compact provides a framework for business to make a meaningful contribution to addressing environmental concerns.

**Slide 3  A Change of Approach**

As outlined in more detail in Module 2, there are convincing reasons to believe that if we are to achieve environmental sustainability, then business may need to “rethink” a number of its activities. One way for business to demonstrate its commitment to greater environmental responsibility is by changing its *modus operandi* from the ‘traditional methods’ to a more responsible approach to addressing environmental issues. These include making the following transitions:

- Inefficient resource use ➔ Resource productivity
- End-of-pipe technology ➔ Cleaner production
- Public relations ➔ Sound corporate governance
- Reactive ➔ Proactive
- Management systems ➔ Life-cycles, business design
- Passive communication ➔ Multi-stakeholder dialogue
- Linear/throughput approach ➔ Closed-loop approach
- Confidentiality ➔ Openness and transparency

**Slide 4  The shift towards Cleaner Production strategies**

A schematic overview of the timing and nature of these general changes (and in particular the shift from end of pipe pollution control to cleaner production – as an example) is presented in this slide. Make the point that many of these approaches will be explained in greater detail in Session 2 of Module 4.

**Slide 5 What environmental responsibility means for business**

Chapter 30 of Agenda 21 suggests that for business, environmental responsibility entails:

> “[the] responsible and ethical management of products and processes from the point of view of health, safety and environmental aspects”

The 1992 Rio Earth Summit highlighted the fragility of the planet. The message to companies was
spelled out in Chapter 30 of Agenda 21, in which the role of business and industry in the sustainable development agenda is discussed.

On the ‘responsible and ethical management of products and processes’ from the point of view of health, safety and environment, it states:

“Towards this end, business and industry should increase self-regulation, guided by appropriate codes, charters and initiatives integrated into all elements of business planning and decision-making, and fostering openness and dialogue with employees and the public.”

**Slide 6** Integrating Environmental Responsibility into Business

In the decade since the Rio Summit, the imperative for business to conduct its activities in an environmentally responsible manner has not lessened. The Malmö Ministerial Declaration of May 2000 states that:

“A greater commitment by the private sector should be pursued to engender a new culture of environmental accountability through the application of the polluter-pays principle, environmental performance indicators and reporting, and the establishment of a precautionary approach in investment and technology decisions. This approach must be linked to the development of cleaner and more resource efficient technologies for a life-cycle economy and efforts to facilitate the transfer of environmentally sound technologies”

This statement effectively expresses the links between the three Environmental Principles (7-9) of the UNGC. The Malmö Declaration also welcomed the Global Compact as ‘an excellent vehicle for the development of constructive engagement with the private sector’. Two years later, government heads called for greater ‘corporate environmental and social responsibility and accountability’ in the Johannesburg Declaration and Plan of Implementation of the 2002 World Summit on Sustainable Development.

It has become clear that, given the central role of the private sector in global governance issues, the public demands that corporations manage their operations in a manner that not only enhances economic prosperity and promotes social justice but also ensures environmental protection. Through Principle 8, the Global Compact provides a framework for business to take forward some of the key challenges made in Rio, and earlier at the ‘Earth Summit’ in Stockholm in 1972.

**Slide 7** Business Case for Environmental Responsibility

A change in business strategy to more Environmentally Responsible business practices brings with it a number of benefits. The United Nations Environmental Programme (UNEP) has identified the following reasons why a company should consider improving its environmental performance:

- Improve resource productivity – for example through the application of cleaner production and eco-efficiency measures.
Companies are being rewarded by responding appropriately to economic instruments, such as taxes, charges, and trade permits.

- Environmental regulations are becoming tougher.
- Favourable insurance cover for lower risk (‘cleaner’) companies.
- Easier lending terms from banks.
- Positive effect on a company’s image.
- Prospective employees tend to prefer working for an environmentally responsible company.
- Environmental pollution threatens human health.
- Customers are demanding cleaner products – environmental aspects of products and processes playing an increasing role in competitiveness.
- Fear of international trade barriers formed by new standards for environmental performance.
- Effective environmental management can reduce liabilities.

You may also refer to the slides used in Module 2.

**Slide 8** Characteristics of Environmental Responsibility

It is suggested that before listing these characteristics you ask the delegates to identify what they understand to constitute important characteristics of environmental responsibility. Keep a record of their inputs on a flip chart, and then compare them with the following suggested characteristics:

- applying a precautionary approach (see principle 7);
- adopt the same operating standards regardless of location;
- integrating environmental considerations through the supply-chain;
- facilitating transfer of environmental technology (see principle 9);
- contributing to environmental awareness in company locations, and
- communicating openly with the local community.

**Slide 9** Checklist of good governance

The table included in this slide comes from a recent report by CERES and the Investor Responsibility Research Centre that examines the interface between climate change management and good corporate governance practice. The table is useful in providing a checklist of good governance activities (similar to those outlined in the previous slide) that companies can adopt with the aim of effectively integrating environmental responsibility on a specific issue within their core business activities.

The report identifies 14 specific actions that companies are taking to implement governance responses to climate change. Although the focus of the report is specifically on climate change it provides a useful example of the kinds of governance activities that leading companies are implementing on significant environmental issues.

**Slide 10** Obtaining management commitment for environmental responsibility

An important underlying requirement for environmental responsibility to be driven effectively within a company is for there to be senior management commitment. You should ask the delegates to consider the following series of questions and to write down the answers in their workbooks. The
aim of these queries is for delegates to start considering what the key environmental issues are for their companies, and who has (or should have) responsibility for managing them.

- Who in the company currently has authority to issue policies and strategies?
- Who has responsibility for environmental issues at the most senior level?
- What are the most critical environmental issues facing the company?
- What are the main risks and opportunities associated with these issues?
- Which line managers are most directly affected by these issues?
- Have you quantified the financial implications of the risks/opportunities?
- What are the resource implications of addressing the risks/opportunities?
- What further information is needed to develop an environmental plan?

**Slide 11** Tools for Corporate Environmental Responsibility

For ease of reference, the range of environmental tools available to companies wishing to promote greater environmental responsibility has been divided into the following categories:

- Management Tools.
- Assessment Tools.
- Monitoring and Auditing Tools.
- Reporting and Communication Tools.

Point out that in Module 4, Session 1, you will be assessing these tools in more detail from a broad management framework perspective, during which you will address the question of ‘which tool to use and when?’

The aim at this stage is to simply list some of the tools that are available within each subset. In Module 4, Session 2, each of these will be examined in more detail, and in most instances will be illustrated by means of practical case studies.

**Slide 12** Environmental Management Tools

Draw the delegates’ attention to the following examples of environmental management tools. You should be familiar with each of these and prepared to explain each of them in a little more detail. Note also that they will be fleshed out in Module 4 later in the course.

- **Environmental Management Systems (ISO 14001, EMAS, etc.)**
  
  An Environmental Management System (EMS) is a planned and co-ordinated set of management actions, operating procedures, documentation and record-keeping, implemented by a specific organisational structure with defined responsibilities, accountabilities and resources, and aimed at the prevention of adverse environmental impacts as well as the promotion of actions and activities that preserve and/or enhance environmental quality.

  Environmental management systems can help companies to approach environmental issues systematically and to integrate environmental care as normal part of their operations and business strategy.
Environmental Management Strategies:

Introduce delegates to the following types of environmental management strategies:

- Cleaner Production (including eco-efficiency) and Sustainable Consumption;
- Life-cycle management;
- Design for the Environment (DfE)/ Eco-design;
- Product stewardship activities;
- Product-services systems, and
- Industrial ecology.

Explain that CP/SCP, DfE, training and communication, product stewardship and industrial ecology are environmental responsibility strategies that can be identified for a company (as part of or external to a management system).

An environmental strategy and policy is a starting point for businesses to integrate environmental aspects into their operations. Tools to ensure systematic attention and the achievement of policy and objectives include, among others: environmental management systems and environmental auditing/assessments. These help control and improve the environmental performance in line with the company environmental policy.

Additional tools – such as environmental life-cycle assessment, total cost assessment, environmental impact assessment – help the company with decision-making on environmental management issues.

Slide 13  Business Benefits of Environmental Management Tools

An environmental management system is intended to help companies to:

- Identify and control the environmental aspects, impacts and risks relevant to the organisation.
- Achieve environmental policy, objectives and targets, including compliance with environmental legislation.
- Define a basic set of principles that guide your organisation’s approach to its environmental responsibilities in the future.
- Establish short medium and long-term goals for environmental performance, making sure to balance costs and benefits, for the organisation and for its various shareholders and stakeholders.
- Determine what resources are needed to achieve those goals, assign responsibility for them and commit the necessary resources.
- Define and document specific tasks, responsibilities, authorities and procedures to ensure that every employee acts in the course of their daily work to help minimise or eliminate the enterprise’s negative impact on the environment.
- Communicate these throughout the organisation, and train people to effectively fulfil their responsibilities.
- Measure performance against pre-agreed standards and goals, and modify the approach as necessary.

NOTE: Additional details on key aspects of EMS are provided in Module 4.
Environmental Assessment Tools

Draw the delegates’ attention to the following examples of environmental assessment tools. You should be familiar with each of these and prepared to explain each of them in a little more detail. (Look at Module 4 for details)
- Environmental Impact Assessment
- Environmental Risk Assessment
- Cleaner Production Opportunity Assessments
- Environmental Technology Assessment
- Life-Cycle Assessment
- Total Cost Assessment

Business Benefits of Environmental Assessment Tools

Environmental issues have increasingly important implications for enterprises and other organisations. Depending upon how an enterprise or other organisation reacts, environmental concerns can positively or negatively affect the extent to which the organisation achieves its goals. The natural environment presents risks as well as opportunities. Successful enterprises increasingly are trying to manage these risks and opportunities. They do this for at least 2 main reasons: either to save money, by lowering costs and reducing exposure to liabilities, or to make money, by expanding market share or accessing new markets.

An environmental risk might be contamination of a product to the extent that it is unacceptable for foreign markets, injury or illness of workers or local communities, or a pollution problem which undermines the position of the enterprise in the national or international market.

An environmental opportunity might be the reduction of energy and resource consumption and therefore the costs of production (by reducing pollution or recycling wastes), or it might involve selling the product to a market which imposes environmental requirements.

Enterprises throughout the world are introducing Environmental Management Systems to manage environmental risks and opportunities more systematically and efficiently and use Environmental Assessment Tools to help to identify the risks and opportunities for their organisation.

Environmental Monitoring and Auditing Tools

Similarly environmental monitoring and auditing tools can be used by an organisation to assess the status of environmental performance, particularly to identify environmental aspects and impacts of processes against objectives and targets.

Draw the delegates’ attention to the following examples of environmental monitoring and auditing tools. You should be familiar with each of these and prepared to explain each of them in a little more detail. (Look at Module 4 for details).
- Environmental Performance Indicators
- Environmental Auditing
- Pollution and Waste Audits
- Supply Chain Audits and Assessments
Slide 17 **Business Benefits of Auditing and Monitoring Tools**

Environmental auditing tools help a company to:
- Assess the status of environmental reporting, management and performance.
- Identify environmental aspects and impacts of processes and products.
- Gather and analyse information for sustainability reporting.
- Determine key performance indicators and monitor against objectives and targets.

Slide 18 **Environmental Reporting and Communication Tools**

Draw the delegates’ attention to the following examples of environmental assessment tools. You should be familiar with each of these and prepared to explain each of them in a little more detail. (Look at Module 4 for details)
- Corporate Environmental / Sustainability Reports
- Ecological Footprints
- Stakeholder Engagement Activities
- Developing Partnerships for Progress
- Environmental Labelling Programmes

A programme of internal communication within an organisation will form part of the EMS. In addition to this, it is necessary to consider the external communication of the enterprise. External communication is an essential element of an EMS, but not all the aspects dealing with external communication have been taken into account in the standards on EMS. Environmental Reporting is a very useful tool, which is still (largely) left to the discretion of the enterprise to be used or to be disregarded. Other options that may benefit the enterprise in external communication activities include stakeholder engagement activities, partnerships and environmental labelling programmes (examined in more detail in Module 4).

**Exercise 3.2 – Environmental responsibility in practice**

1. Slide 3 identified a number of changes in management approach that are generally required if environmental responsibility is to be embedded in a meaningful manner within a company’s activities. For each of these proposed changes, try and identify some current activities in your company that reflect both the left hand column and the right hand column. Share and discuss these with your group. Are there examples of activities that others have identified that you could implement in your company?

<table>
<thead>
<tr>
<th>Inefficient resource use</th>
<th>Resource productivity</th>
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<tbody>
<tr>
<td>End-of-pipe technology</td>
<td>Cleaner production</td>
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<tr>
<td>Public relations</td>
<td>Sound corporate governance</td>
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<td>Reactive</td>
<td>Proactive</td>
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<tr>
<td>Management systems</td>
<td>Life-cycles, business design</td>
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<tr>
<td>Passive communication</td>
<td>Multi-stakeholder dialogue</td>
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<tr>
<td>Linear/throughput approach</td>
<td>Closed-loop approach</td>
</tr>
<tr>
<td>Confidentiality</td>
<td>Openness and transparency</td>
</tr>
</tbody>
</table>
Encourage the delegates to think carefully through their current activities and as far as possible to identify activities that represent both columns, and to share their experiences with each other. In looking through each of the above options, they should also consider the opportunities for integrating environmental sustainability criteria into:

- Product design and development.
- The manufacturing process.
- Company branding.
- Packaging.
- Product pricing.
- Distribution activities.
- Advertising, sales promotion, PR.

2. Drawing on your own experiences, discuss the available mechanisms for raising awareness of environmentally responsible practice in your business/industry. Discuss this in your group, draw up a shortlist and report back to the class.

In the discussion, encourage delegates to consider the following:

- Examples of awareness-raising both internally and externally.
- Leading by example and informing, entertaining, analysing and educating differently.
- The use of different vehicles for awareness-raising include:
  - Sustainability reports.
  - Company website (inter/intranet).
  - Company newsletter.
  - Product information (eg. product declarations and eco-labels).
  - Consumer surveys and panels.
  - Stakeholder dialogue.

Delegates should be encouraged to consider the extent to which these information and awareness-raising activities are a genuine and honest reflection of current activities, or whether they are being used for window dressing?

Exercise 3.3 – Reviewing the case studies

1. What would you consider as being the key to the success of the sustainability initiative described in case study 3-4? If you were to launch a similar initiative in your company, what would your suggestions for actions list include? Discuss in groups and report back to the class.

Allow for free discussion and sharing of ideas on this exercise.

2. With reference to case study 3-4, what do you see as being the main reasons for the success of these initiatives? Do you think your company could carry out a similar set of actions with a similar degree of success. If not, why not? Carry out this exercise on your own. Some delegates may be requested to report back to the class.

Clearly, the benefits of the shared beliefs of management, along with workforce support are at
the forefront of this company’s success. The use of tools such as EMS and audit instruments has clearly been beneficial.

Allow delegates time to consider the various barriers to change (with respect to any CP measures, process or technology changes, communication with authorities, etc).

3. With reference to case study 3-6, do you see the potential for your company, services or products to become ‘Climate Cool’. If yes, explain how you would go about this. Discuss in your group and report back to the class.
Allow for free discussion and sharing of ideas on this exercise.

4. In groups, and with reference to case study 3-8, discuss what would be the key challenges/hurdles in such an initiative, particularly given the broad based target audience (Europe-wide). Look at how these could be overcome.
Delegates should identify at least some of the following in their discussions:
- Support from authorities is critical with such an initiative; particularly if it takes the form of an official endorsement (e.g. joint announcement, use of resources etc).
- Involvement of stakeholders and partners to convey the message (such as consumers associations) is important from the beginning of the project.
- Importance of developing material recognisable and applicable to the whole of Europe. Note the inherent difficulties that this might create (appropriate visuals, translations etc).
- Need to ensure that the message would remain the same throughout Europe and that no distortion would be made.
- Ensuring no brand (or company) leverage would be made by using the Code visuals in some way.
- The project would probably need consistent ‘re-launches’ in order to maintain visibility.

Exercise 3.4 – Improving environmental performance
You are the recently appointed CEO of Funds-R-Us (Case Study 3-10). Faced with increasingly negative press about the various projects you support, you have to come up with appropriate guidelines to help improve FRUs image and corporate sustainability track record. In groups, come up with a list of up to eight key recommendations.

Following are some suggested considerations for FRU:
- Invest in projects that directly benefit local communities or lead to a minimum level of environmental or social benefit.
- Challenge private companies to invest in emerging sectors that provide public benefits such as renewable energy, sustainable agriculture, environmentally sound tourism, natural resource conservation and locally owned businesses (these sectors should be prioritised in FRU’s portfolio).
- Invest in companies that demonstrate a commitment to corporate responsibility and have a track record of meeting high standards of social and environmental performance.
- Adopt a development screen that establishes clear development objectives to evaluate
whether or not projects will contribute positively to development. This would clarify the kinds of results FRU aims to achieve from their investments, elaborate for staff and clients how it measures development impact and reduce the time and resources spent on projects that do not match the organization’s priorities for development results on the ground.

- Develop investment criteria through a consultative and participatory process that seeks input from a variety of stakeholders and civil society. The objectives could include, for example:
  - a project which generates long-term local employment
  - supporting women entrepreneurs
  - facilitating the transfer of environmental technology,
  - promoting investment in environmentally sound businesses

- FRU’s policy framework should be expanded to include best practice standards from information disclosure to standards for the mining industry to consultation with local communities. This is particularly important if FRU wants to be in a position to challenge and lead the private sector to operate more responsibly.

- Assist commercial banks and private insurers in establishing environmental and social review standards and management systems for their investments.

- Improve information disclosure by clarifying the definition of business confidential information and allowing the public release of all project-related information, including information about projects that are financed through financial intermediaries.

Checklist: Practical Implications of Principle 8

*The following brief checklist is intended to provide general guidance to companies in assessing the extent to which they have effectively integrated “environmental responsibility” within their corporate activities.*

<table>
<thead>
<tr>
<th>OPTION</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>12. Have you implemented a formal or informal environmental management system as a structured approach for effectively integrating environmental responsibility into core business practice?</td>
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<tr>
<td>13. Have you identified and prioritised the various environmental aspects and impacts of the company. These may include (but are not limited to) a consideration of the following issues:</td>
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<tr>
<td>Resource use (e.g. energy, water, and raw materials)</td>
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<td>Liquid effluent discharge</td>
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<td>Air pollution (including greenhouse gas emissions)</td>
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<td>Solid waste and hazardous substances management</td>
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<td>Noise and visual pollution</td>
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<tr>
<td>14. Have you set objectives and targets based on impacts (these targets should be SMART)?</td>
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<td>Specific – in terms of the aspect of work to which they relate</td>
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<td>Measurable – in terms of quantity and quality</td>
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<tr>
<td>Achievable – within work constraints</td>
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<tr>
<td>Relevant – to the aims and objectives of the company</td>
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<tr>
<td>Time constrained</td>
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<td>OPTION</td>
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<tr>
<td>15. Have you developed and communicated a corporate environmental strategy that is relevant to the activities of the company and that provides a clear basis for the development and implementation of the objectives and targets? Key elements of a responsible policy that contribute to Environmental Responsibility include</td>
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<tr>
<td>Applying a precautionary approach</td>
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<td>Adopting the same operating standards regardless of location</td>
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<tr>
<td>Ensuring supply-chain management</td>
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<td>Facilitating technology transfer</td>
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<tr>
<td>Contributing to environmental awareness in company locations</td>
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<tr>
<td>Communicating with the local community</td>
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<tr>
<td>Promoting pollution prevention and cleaner production practices</td>
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<tr>
<td>16. Have you ensured top management commitment and accountability? This may entail for example:</td>
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<td>Ensuring representation at Board level for environmental issues</td>
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<td>Assigning formal responsibilities to top management</td>
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<tr>
<td>Identifying the affected persons and key issues by asking:</td>
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<tr>
<td>Who in the company currently has authority to issue policies and strategies?</td>
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<tr>
<td>Who has responsibility for environmental issues?</td>
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<tr>
<td>What are the most critical environmental issues facing the company?</td>
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<tr>
<td>What are the main risks and opportunities associated with these issues?</td>
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<tr>
<td>Which line managers are most directly affected by these issues?</td>
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<tr>
<td>Have you quantified the financial implications of the risks/opportunities?</td>
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<tr>
<td>What are the resource implications of addressing the risks/opportunities?</td>
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<tr>
<td>What further information is needed to develop an environmental plan?</td>
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<tr>
<td>17. Have you developed and implemented procedures and guidelines aimed at assisting the company to achieve its specified objectives and targets?</td>
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<td>18. Have you developed sustainability indicators?</td>
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<td>19. Have you measured, audited, assessed and reported progress in the company’s performance against these indicators? (Refer to assessment, auditing and reporting tools outlined below)</td>
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<td>20. Have you implemented incentives for employee environmental performance (for example including the achievement of performance objectives within the individuals’ performance appraisal assessments)?</td>
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<td>21. Have you adopted relevant voluntary charters and codes of conduct (for example the Responsible Care Charter if a chemical company)?</td>
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<td>22. Have you included environmental considerations in supply chain management?</td>
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<td>23. Have you benchmarked your company against your peers?</td>
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<tr>
<td>24. Do you have transparent and unbiased communication with stakeholders (refer to communication tools outlined below)?</td>
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</tbody>
</table>
Make use of the following tools for Corporate Environmental Responsibility

<table>
<thead>
<tr>
<th>OPTION</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td><strong>Environmental Management Tools</strong></td>
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<tr>
<td>1. Introduce an <strong>Environmental Management Systems</strong> (ISO 14001, EMAS, etc.) to manage environmental risks and opportunities more systematically and efficiently and to help your enterprise:</td>
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<tr>
<td>Identify and control the environmental aspects, impacts and risks relevant to the organisation</td>
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<td>Achieve environmental policy, objectives and targets, including compliance with environmental legislation</td>
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<td>Define a basic set of principles that guide your organisation’s approach to its environmental responsibilities in the future</td>
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<tr>
<td>Establish short medium and long-term goals for environmental performance, making sure to balance costs and benefits, for the organisation and for its various shareholders and stakeholders</td>
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<td>Determine what resources are needed to achieve those goals, assign responsibility for them and commit the necessary resources</td>
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<tr>
<td>Define and document specific tasks, responsibilities, authorities and procedures to ensure that every employee acts in the course of their daily work to help minimise or eliminate the enterprise’s negative impact on the environment</td>
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<td>Communicate these throughout the organisation, and train people to effectively fulfil their responsibilities</td>
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<td>Measure performance against pre-agreed standards and goals, and modify the approach as necessary.</td>
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<td><strong>2. Environmental Management Strategies:</strong></td>
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<tr>
<td>Cleaner Production, Sustainable Consumption and eco-efficiency</td>
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<td>Life-cycle management</td>
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<td>Design for the Environment/ Eco-design</td>
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<td>Product stewardship activities</td>
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<td>Product-services systems</td>
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<tr>
<td>Industrial ecology</td>
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<tr>
<td><strong>3. Use <strong>Environmental Assessment Tools</strong> to help to identify the risks and opportunities for your organisation</strong></td>
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<tr>
<td>Environmental Impact Assessment (EIA)</td>
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<td>Environmental Risk Assessment (ERA)</td>
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<td>Cleaner Production Opportunity Assessments</td>
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<td>Environmental Technology Assessment (EnTA)</td>
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<td>Life-Cycle Assessment (LCA)</td>
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<tr>
<td>Total Cost Assessment (TCA)</td>
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<tr>
<td><strong>4. Use <strong>Environmental Measurement and Auditing Tools</strong> including:</strong></td>
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<tr>
<td>Environmental Performance Indicators</td>
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<tr>
<td>Environmental Auditing</td>
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<tr>
<td>Pollution and Waste Audits</td>
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<tr>
<td>Supply Chain Audits and Assessments</td>
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<tr>
<td>Ecological Footprints</td>
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<tr>
<td><strong>5. Make use of the following <strong>Environmental Reporting and Communication Tools</strong> for internal and external communication with stakeholders:</strong></td>
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<tr>
<td>Corporate Environmental / Sustainability Reports</td>
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<tr>
<td>Stakeholder Engagement Activities</td>
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<tr>
<td>Developing Partnerships for Progress</td>
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<tr>
<td>Environmental Labelling Programmes</td>
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</tbody>
</table>
Summary of steps – an example for an existing process/product/service:

<table>
<thead>
<tr>
<th>OPTION</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>1. Decide to manage environmental risks and opportunities by implementing an Environmental Management System.</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>2. Develop a company policy and strategy that incorporates environmental responsibility. (e.g. Cleaner Production Strategy)</td>
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<tr>
<td>3. The strategy chosen will encompass or lead to one or more of the following: environmental auditing, pollution and waste audits, supply chain audits and assessments, ecological footprint, and environmental performance indicators.</td>
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<td>4. The result of this will be the identification of options for improved environmental responsibility.</td>
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<tr>
<td>5. These options may require more detailed assessments to assist decision makers on determining their feasibility and long-term sustainability- e.g. design for environment, life-cycle assessment, eco-efficiency, industrial ecology, total cost assessments, environmental impact assessment and/or environmental technology assessment.</td>
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<tr>
<td>6. The results of these can then be communicated by reporting on your existing ecological footprint/ your existing environmental performance indicators together with a report on your identified options for improved environmental responsibility as a result of the decisions you made from the information identified by these tools.</td>
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<tr>
<td>7. The benefits to the company will be to inform decisions to reduce environmentally-related risks and identify opportunities for creative new ideas that save the company money, that open up new markets, that reduce liability, etc.</td>
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</table>

Summary of steps – an example for a new process/product/service:

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<thead>
<tr>
<th>OPTION</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>1. A new business idea can be developed using tools such as Design for Environment.</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>2. To ensure the precautionary approach in adopting a new idea, it can be assessed using EIAs, LCAs, EnTAs, TCAs to determine the risks.</td>
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<tr>
<td>3. The accepted new activity can then be implemented and operated according to the strategies of CP/eco-efficiency/industrial ecology.</td>
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<tr>
<td>4. Once the business is up and running under an EMS, regular audits can be undertaken to ensure the business remains environmentally responsible and to identify further opportunities for continuous improvement (this may be voluntary or required by law/agreement/etc).</td>
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<tr>
<td>5. The EMS will help tie all the different aspects together by providing a structured approach</td>
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MODULE 3: UNDERSTANDING
THE UNGC ENVIRONMENTAL PRINCIPLES

Session 3: Principle 9 – Environmentally Friendly Technologies

TIME: 2 hours (suggestion only)

OBJECTIVES:
The objectives of this session are:
- to provide a sound understanding of the practical implications of implementing UNGC Principle 9 – environmentally friendly technologies, and
- to test this understanding through the use of case studies.

SUGGESTED PROCEDURE:
The day before this session is scheduled, encourage delegates to read one or more of the following case studies (note these case studies may also be used for Module 4):
- Case Study 3-11: Toyota (Global)
- Case Study 3-12: Columbian tannery (Curtigran Ltda)
- Case Study 3-13: CP in a Czech slaughterhouse
- Case Study 3-14: Nokia Mediamaster 110 T
- Case Study 3-15: Re-Define
- Case Study 3-16: BT wind powered buildings
- Case Study 3-17: Climatex Lifecycle
- Case Study 3-18: Ford Motor Company

(Note: all case studies are included separately in the accompanying Delegates’ Manual). When reading these case studies, delegates should identify and keep a note of:
- The key lessons / messages from the case study.
- Their thoughts on the relevance of the case study for their company.

It is suggested that you spend approximately 45 minutes on the PowerPoint presentation. Exercise 3-5 should take approximately 1 hour. The slides are available online at:

Allow a maximum of 15 minutes for questions and discussion at the end of the session.

Speaker’s Notes

Slide 1
Title slide

Slide 2
Principle 9

Read out the principle

Businesses should encourage the development and diffusion of environmentally friendly technologies.
Mention here that the terms environmentally friendly and environmentally sound technologies are interchangeable, the former being the more colloquial and commonly used term.

**A Definition of Environmentally Sound Technology (EST)**

Environmentally sound technologies are those which –

“... protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for which they were substitutes. ESTs are not just individual technologies, but total systems which include know-how, procedures, goods and services, and equipment as well as organisational and managerial processes.”

It is important that you point out here that this broad definition not only includes end-of-pipe (EOP) and monitoring techniques but also those practices that explicitly encourage more progressive preventative approaches such as Cleaner Production (CP) technologies.

EOP wastewater treatment technologies could, for example, be considered as an environmentally sound technology, but this should be so only after all efforts have been implemented to minimise the wastewater contamination and volume in the first place, and after every effort has been made for re-use/recycling of the treated water and/or contaminant in another process with the aim of ‘closing-the-loop’ as far as possible. In other words, a simple end-of-pipe treatment technology may be considered an EST but should be part of a preventative approach of the business (such as CP/eco-efficiency), rather than a technology on its own. The aim is to move away from the ‘react and treat’ approach to a more proactive ‘anticipate and prevent’ approach when it comes to selecting technologies for your company.

For this reason, there is a strong emphasis on preventative technologies and processes. Other environmentally friendly technologies (relating for example to the minimisation of parts for a product, cradle-to-grave assessment and consequent re-design, increased use of renewable energy through creative building design, and so on) will be explored in the various case studies.

**ESTs: A long term challenge**

Encouraging the development and diffusion of environmentally sound technologies is a longer-term challenge for a company that will draw both on the management and the research capabilities of the organisation (depending of course on the size and nature of the company’s activities).

Environmentally sound technologies may be seen to comprise:

- Organisational and managerial processes such as:
  - Cleaner production
  - Eco-efficiency
  - Industrial ecology (technologies that allow the waste from one factory to be used by another)
Specific technologies, goods and services, and equipment such as:

- End-of-pipe (EOP) treatment technologies
- Renewable energy sources
- Alternative production processes that are less polluting and/or more resource efficient
- Closed-loop systems

Engagement with Principle 9 will depend to some extent on the size and nature of the business. However all companies should strive to pursue the business benefits that come from a more efficient use of resources.

As this principle captures both ‘hard’ technologies and ‘soft’ systems the potential entry points are broad. Many existing technologies can become more ‘environmentally sound’ by changing the management and operation practices associated with the technology – for example implementing stricter control measures or changing washing procedures to minimise waste (“soft”).

It is not necessary to assume that environmental responsibility will involve the purchase of new environmentally sound (“hard”) technologies. Strategies such as CP, eco-efficiency and industrial ecology allow the business to identify all techniques aimed at minimising environmental impacts of existing processes that may include the adaptation of existing technologies or the purchase of new technologies. Module 4 will address CP, eco-efficiency and industrial ecology in more detail. The decision regarding which alternative technology to use for an existing or new process can be assisted by undertaking an Environmental Technology Assessment (EnTA). More detail on this is also included in Module 4.

**Slide 5  How ESTs are achieved**

ESTs (adaptation of existing technologies or the purchase of new technologies) may be achieved as a result of a business decision to improve the environmental performance of a process at a basic factory site or unit level, by five principle means:

- Changing the nature of raw material and energy inputs
- Changing the organisation and management practices
- Changing the process or manufacturing technique and/or equipment
- Reducing, recycling and/or reusing waste materials (internally and externally)
- Introducing changes to the product and/or packaging design

Each of these steps is outlined in more detail in the accompanying diagram (slide 6).

Cleaner Production Assessments can be used to assess the opportunities for ESTs at factory level. CP is addressed in more detail in Module 4.

**Slide 7  The Business Case for ESTs**

Effective use of ESTs enables business to realise both environmental and economic benefits. The potential *economic benefits* associated with ESTs include:

- Reduced raw material, energy and water costs
- Reduced waste disposal and transportation costs
- Increased returns by selling waste materials for reuse
- Reduced potential liabilities, risks and accidents
- Potential marketing benefits (improved corporate image)
- Improved employee morale, recruitment, retention and productivity
- Increased innovation

Potential **environmental benefits** associated with ESTs include:
- Reduced use of finite resources
- Reduced quantity of waste and effluent generated
- Reduced noise and air pollution
- Reduced transportation of waste
- Improved working conditions

In this session, point out that since ESTs generate less waste and residues, the continued use of inefficient technologies can represent increased operating costs for business. In addition, it results in a retrospective focus on control and remediation rather than on prevention. In contrast, the avoidance of environmental impacts through pollution prevention and ecological product design increases efficiency and overall competitiveness of the company and may also lead to new business opportunities. As ESTs reduce operating inefficiencies they also lead to lower occupational exposure levels and pollution emission, and contribute to reduced rates of accidents.

**Slide 8  Strategic level approaches to ESTs**

To encourage the use of environmentally sound technologies they should be included in the company policy. Therefore, information on their environmental performance and the associated cost benefits should be provided and partnerships between suppliers and contractors that use these technologies should be created.

In order to introduce ESTs, a company will need to consider all or some of the following options:
- Establish a corporate or individual company policy on the use of ESTs.
- Increase internal awareness of the benefits of ESTs.
- Improve company culture and practices to facilitate ESTs.
- Refocus research and development towards design for sustainability.
- Benchmark against Best Available Technologies.
- Identify alternative ESTs.
- Introduce life cycle assessment (LCA) in the development of new technologies and products, so as to take into account impacts in manufacture, use and at the end of life of the product.
- Employ Environmental Technology Assessment (EnTA) - an analytical tool designed to assist the sustainability decision-making processes related to technology adaptation, implementation and use.
- Examine investment criteria and the sourcing policy for suppliers and contractors to ensure that tenders stipulate minimum environmental criteria.
- Co-operate with industry partners to ensure that ‘best available technology’ is available to other organisations.
- Make information available to stakeholders that illustrate the environmental performance and benefits of using ESTs.
Sometimes the environmental, human health and safety impacts of a proposed technology investment are overlooked by those advocating the use of a new or upgraded technology. An important aspect is the ability to recognise the most appropriate (“cleaner”) technology among all the options under consideration. Without an appropriate method for evaluating technology options in terms of their environmental and related impacts, the process of implementing a process technology may not result in the best environmental and related outcomes.

ESTs encompass technologies that have the potential for significantly improved environmental performance relative to other technologies. Such technologies are the total systems that include know-how, technical procedures, goods and services, equipment, and organisational and managerial procedures. In order to make the best use of ESTs, there is a need to increase our ability to assess, analyse and choose technologies based on our own needs and development priorities, and then adapt these technologies to specific local conditions.

There are a number of tools that can be used to assess ESTs. The table below provides an overview of some key assessment tools.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Environmental Technology Assessment (EnTA)</th>
<th>Environmental Impact Assessment (EIA)</th>
<th>Environmental Risk Assessment (ERA)</th>
<th>Life Cycle Assessment (LCA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Assesses implications of a technology and guides choices of technology</td>
<td>Identifies and predicts the environmental impacts of a project, policy or similar initiative; provides basis for decision on acceptability of the likely impacts</td>
<td>Risks to the environment and public health are estimated and compared in order to determine the environmental consequences of the initiative under consideration</td>
<td>Evaluates the environmental burdens associated with a product, process or activity, explicitly over the entire life cycle</td>
</tr>
<tr>
<td>Initiator</td>
<td>Proponent of technology; investor; stakeholders who may be impacted</td>
<td>Applicant for regulatory approval</td>
<td>Proponent of project or other initiative; investor; stakeholders who may be impacted</td>
<td>Proponent of project or other initiative; investor; stakeholders who may be impacted</td>
</tr>
<tr>
<td>Timing</td>
<td>Scoping tool at the pre-investment stage, before the development of a formal/full proposal</td>
<td>Prior to decision whether or not the initiative should proceed</td>
<td>At any time, as determined by the initiator</td>
<td>At any time, as determined by the initiator</td>
</tr>
<tr>
<td>Regulatory Status</td>
<td>None – often used to screen options before more detailed assessment</td>
<td>Often required under environmental protection legislation, especially for larger projects or for proposed projects in environmentally sensitive areas</td>
<td>None – may be used to give support to conclusions of assessments required by law</td>
<td>None – typically used by producers or consumers to assess the environmental merit of the product, process or activity</td>
</tr>
</tbody>
</table>

Source: The Assessment, Transfer and Uptake of Environmentally Sound Technologies: Background to and Overview of Environmental Technology Assessment (EnTA), John E. Hay, UNEP/DTIE/IETC

Each assessment tool can in fact complement the other tools, helping to focus the different phases of the assessment, and thereby promoting a better understanding of the effect a technology has upon the environment. Not included in the above table is Cleaner Production Assessment – this is covered in slides 4 and 5. Each assessment tool is covered in more detail in Module 4.
Further Information on ESTs

Module 4 will provide further information on the assessment tools. This slide provides an overview of additional information sources on ESTs.

- **UNEP International Environment Technology Centre** - [http://www.unep.or.jp/](http://www.unep.or.jp/) This UNEP website provides an introduction to EST, a searchable directory and related links, such as MaESTro - [http://www.unep.or.jp/maestro2/](http://www.unep.or.jp/maestro2/) MaESTro is an information tool which contains information on a full range of environmentally sound technologies, institutions and information sources related to water pollution, environmental management, human settlements, hazardous substances, solid waste, wastewater, water augmentation and more. The information is updated by IETC as well as by EST contributors, individual users, organisations and institutions.


- **The Small Business Innovation USA Program** – [http://www.sba.gov/sbir/](http://www.sba.gov/sbir/) The SBIR is a part of the Environmental Protection Agency’s (EPA) research and development efforts to protect human health and the environment. Through the SBIR Program, EPA makes awards to small, high-tech firms for research and development of cutting-edge technologies. The Program is intended to spawn commercial ventures that improve our environment and quality of life, create jobs, increase productivity and economic growth, and improve the international competitiveness of the U.S. technology industry.

- **EPA Environmental Technology Verification Program** – [http://www.epa.gov/etv/](http://www.epa.gov/etv/) ETV looks to verify the environmental performance characteristics of commercial-ready technologies through the evaluation of objective and quality assured data. ETV’s goal is to provide potential technology purchasers and permittees with an independent and credible assessment of what they are buying and permitting.

- **The Inter-American Program for Environment Technology Cooperation** – [http://www.IDRC.ca/industry/index_e.html#inter-american](http://www.IDRC.ca/industry/index_e.html#inter-american) This initiative aims to respond to the challenges faced by small and medium size enterprises in Latin America and Caribbean countries to adopt cost-effective, environmentally sound technologies and management practices. The Program consists of six roundtables on issues involved in environment management in six key industry sectors and of a number of successful case studies presented by participating companies.

**Exercise 3.5 – Introducing environmentally sound technologies**

1. Conduct a hypothetical risk assessment of your current business or industry. Consider and discuss how CP and improved technologies (hard and soft issues) might reduce any risks you have identified.

Encourage the delegates to share their ideas regarding the various possibilities that may exist within their companies (even if only at a general level) for improving energy and water efficiency, reducing the use of certain (e.g. toxic) raw materials, and/or minimising the generation of waste at source.
Delegates should be encouraged to identify technical (hardware) and managerial (software) possibilities within their operations relating e.g. to (see slide 6):

- Raw material, water and energy inputs
- Organisation and management techniques
- Equipment and process technology
- Changing the nature of their final products
- Managing wastes, through prevention at source and internal/external recycling

After identifying some possible options at a general level, ask the delegates to consider the extent to which these options have been investigated in the past. In doing so, they should try and identify any barriers that may have impeded the introduction of environmental sound technologies within their companies. Stimulate discussion on the possible implications for implementing any of the identified measures aimed at promoting cleaner production within their operations. Ask them to consider both the potential economic and management costs and benefits, as well as to begin to quantify the potential environmental benefits. (Slide 7 could be used as a basis for this discussion).

2. Consider the following statement: CP is not sufficient for sustainable development. There is a need for responsibility to extend to consumerism. Sustainable production and consumption are two sides of the same coin – you cannot have one without the other.

The aim of this discussion is for participants to appreciate that while introducing ESTs – and implementing cleaner production and eco-efficiency practices – can have significant benefits, on their own such measures will be insufficient for achieving sustainability if there continues to be increasing consumption. It is important to consider the implications of this for the business community, particularly in the context of business models that thrive on selling more products. Prompt delegates to consider options for switching from selling products to providing related services, and also to review the role of business in stimulating higher levels of consumption. Ask the delegates to identify possible actions that business can (and is?) taking to promote more sustainable consumption patterns.

3. For each of the case studies, delegates should consider the following:

- Identify the possible barriers and drivers for introducing environmental sound technologies and/or implementing cleaner production practices.
- Note how for most of these case studies the companies (especially the SMEs) had external support in the form of funding and/or technical assistance for identifying and implementing environmental improvements (CP). Discuss how SMEs benefit from shared support. Is it possible to do it on your own? What are the barriers to doing it alone? What are the options for support?
- What are the benefits of case studies – how can businesses share information and awareness through case studies? Do you think the successes of one industry is applicable to other industries?
**Checklist: Practical Implications of Principle 9**

*The following brief checklist is intended to provide general guidance to companies in assessing the extent to which they have effectively made provision for environmental technologies within their corporate activities.*

<table>
<thead>
<tr>
<th>OPTION</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Have you established a corporate or individual company policy on the use of ESTs?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>2 Have you formed partnerships between suppliers and contractors that use these technologies (for example have you obtained or provided information on the environmental performance of technologies used)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Have you examined investment criteria and the sourcing policy for suppliers and contractors to ensure that tenders stipulate minimum environmental criteria?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Have you co-operated with industry partners to ensure that ‘best available technology’ is available to other organisations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Have you increased internal awareness of the benefits of ESTs?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>6 Have you improved company culture and practices to facilitate ESTs?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>7 Have you investigated ways to make existing technologies become more ‘environmentally sound’ by changing the management and operation practices associated with the technology – for example implementing stricter control measures or changing washing procedures to minimise waste?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>8 Have you refocused research and development towards technology, service and product design for sustainability?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>9 Have you introduced life cycle assessment (LCA) in the development of new technologies and products, so as to take into account impacts in manufacture, use and at the end of life of the product?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>10 Have you benchmarked against any guidelines outlining Best Available Technologies?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>11 Have you identified alternative ESTs?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>12 Have you made information available to stakeholders that illustrate the environmental performance and benefits of using ESTs?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>13 Do your ESTs encompass total systems that include know-how, technical procedures, goods and services, equipment, and organisational and managerial procedures?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>14 Do you use an appropriate method for evaluating technology options in terms of their environmental and related impacts to ensure that the process of implementing a process technology will result in the best sustainability outcomes?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>15 In order to make the best use of ESTs, have you analysed and chosen technologies based on your needs and development priorities, and then adapted these technologies to specific local conditions?</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>16. Have you made use of the following tools to assist in the development and implementation of ESTs?</td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>

*The decision regarding which alternative technology to use for an existing or new process can be assisted by an Environmental Technology Assessment (EnTA) - an analytical tool designed to assist the sustainability decision-making processes related to technology adaptation, implementation and use. Use EnTA to assess implications of a technology and guide selection of technology. Use EnTA as a scoping tool at the pre-investment stage, before the development of a formal/full technology proposal.*

*Use Environmental Impact Assessments to identify and predict the environmental impacts of a project, policy or similar initiative and to provide a basis for decision on acceptability of the likely impacts. Use EIA prior to decision on whether or not the initiative should proceed.*
<table>
<thead>
<tr>
<th>OPTION</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use <strong>Environmental Risk Assessment</strong> to estimate and compare risks to</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>the environment and public health in order to determine the environmen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tal consequences of the initiative under consideration. Use ERA at any</td>
<td></td>
<td></td>
</tr>
<tr>
<td>time, as determined by the initiator.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use <strong>Life Cycle Assessments</strong> to evaluate the environmental burdens</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>associated with a product, process or activity, explicitly over the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>entire life cycle. It can be used at any time – from R&amp;D to assess</td>
<td></td>
<td></td>
</tr>
<tr>
<td>alternatives to once implemented to determine options for improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of existing technologies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use <strong>Cleaner Production Opportunity Assessments</strong> to identify all</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>techniques that can minimise environmental impacts of existing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>processes that may include the adaptation of existing technologies or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the purchase of new technologies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each assessment tool can in fact complement the other tools, and be</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>used to help focus the different phases of the technology development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and implementation, thereby promoting a better understanding of the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>effect a technology has upon the environment. (Refer to Module 4 for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>more detail on each of these tools)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Environmental Principles Training Package

Module 4

FROM PRINCIPLE TO PRACTICE
MODULE 4: FROM PRINCIPLE TO PRACTICE

Session 1: Steps to Sustainability/
The Global Compact Performance Model

TIME: 2 hours

OBJECTIVES
The objectives of this session are to:

- Briefly review some of the procedural requirements for companies to participate in the Global Compact.
- Provide an overview of some of the critical steps that companies can take towards effectively implementing the three environmental principles of the Global Compact.
- Provide some practical case studies that illustrate what various leading companies have done in terms of promoting environmentally responsible behaviour, using these as a means for identifying useful lessons for the delegates.
- Outline the benefits of participating in the Global Compact’s Global Learning Forums:

SUGGESTED PROCEDURE
The day before this session is scheduled, encourage delegates to read the following:

- Seven Steps To A Greener Company: From Green Trimmings to a Green Soul
- Case Study 4-1: Interface

It is imperative that you – as the trainer – read through the speaker’s notes prior to the day’s training. There are a number of case studies which are highlighted in certain sections (pertaining to slides), and you should be familiar enough with these to be able to illustrate a point, or provide an example. Delegates should be made aware of these, and the suggestion made that they read the more detailed case study after the session.

(Note: all case studies are included separately in the accompanying Delegates’ Manual). When reading these case studies, delegates should identify and keep a note of:

- The key lessons / messages from the case study.
- Their thoughts on the relevance of the case study for their company.

It is suggested that you spend approximately 45 minutes on the PowerPoint presentation. Exercise 4-1 should take approximately 1 hour. Allow a maximum of 15 minutes for questions and discussion at the end of the session.

Speaker’s Notes

Slide 1 Title slide

Slide 1 How to participate in the Global Compact
NOTE: This slide relates only to companies that have not yet signed on to the Global Compact. However, while it is of particular relevance to such companies it is suggested that there is nevertheless merit in including reference to this, so that delegates understand the mechanisms for joining. This may need to be updated to reflect any changes to UNGC requirements.

To participate in the Global Compact, a company:
- Sends a letter to the UN Secretary General expressing support for the Global Compact.
- Publicly advocates the Global Compact and its principles in its mission statement and reports, press releases, speeches etc.
- Submits an annual posting on the Global Compact website detailing concrete steps that have been taken in acting on these principles, and any lessons learned.
- Publishes a description of the ways in which it is supporting the Global Compact and the ten principles in its annual report.
- Joins with the UN in partnership projects of benefit to developing countries.
- Sets in motion changes to business operations so that the Global Compact and its principles become part of strategy, culture and day-to-day operations.

If there is time, you could briefly explain how the company Novartis went about participating (see box)

<table>
<thead>
<tr>
<th>Participating in the UN Global Compact – The Novartis experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>In July 2000, the chair and CEO of Novartis publicly announced that the company would support the Global Compact as a catalyst for concrete actions.</td>
</tr>
<tr>
<td>A few weeks later, a new version of the Novartis code of conduct was issued containing a reference to the Global Compact, including the Universal Declaration of Human Rights.</td>
</tr>
<tr>
<td>From the start, the implementation of the Global Compact principles was seen as an open-ended process where the aim was to keep it alive and continually renewed by injecting new impetus.</td>
</tr>
<tr>
<td>A steering committee was set up to ensure a company-wide commitment to the Global Compact, consisting of senior personnel from various Novartis Group companies.</td>
</tr>
<tr>
<td>A Global Compact clearing house was created which initiated a survey to identify potential deficits against the principles of the Global Compact in the company and with its business partners.</td>
</tr>
<tr>
<td>Responsibility for follow-up was assigned to specific employees. It was seen as vital that all employees were sufficiently informed so they understood what the strategy and new corporate citizenship guidelines inspired by the Global Compact meant in practical terms. An interdepartmental communications team developed a ‘roll-out kit’ for all potential users of the guidelines.</td>
</tr>
</tbody>
</table>

Note: For a more extensive description of the implementation of the Global Compact at Novartis, visit www.parallaxonline.org/peglobalhuman5p.html

Explain that in the following session, you will outline the recommended road map to help a business embrace the Global Compact’s three environmental principles. The approach is based on the Global Compact Performance Model (developed under the leadership of Claude Fussler of the WBCSD in 2003).

Refer delegates to the following reference which they may find useful:
At this stage it may be useful to point to the table in the Delegates' Manual (Appendix 1) which outlines some key steps to implementing the Global Compact. These steps are based loosely on the Performance Model (which is explained in more detail below). Delegates should see this as a basic framework only. Encourage them to add to it and adapt it to suit their own individual needs and the needs of their company. The table has been designed for delegates to add their own notes in each step.

Slide 3 The Deming Cycle

The Global Compact Performance Model is seen as an adaptable structure similar to the prevalent quality excellence model that links principles, business processes and results.

The model provides a way of achieving continuous improvement and for sharing experience. Its application helps organisations gain a better understanding of the relations between principles, codes and standards and how to integrate them into daily business activities with the help of a new group of management tools. The purpose of a performance model is the maximisation of outputs with the minimisation of inputs. Targets are more likely to be met or exceeded with less time, effort and financial resources. The execution will also provide a clearer understanding about why a particular approach works, and how it may be improved. Individual skills may be enhanced, as will the capacity of the organisation. The goal is to strive for ever lower rates of failure (pollution, accidents, public health crises, and so on), also known as “continual improvement.” Most quality management models are built on the principle of continuous improvement in a context of continuously more demanding, competitive benchmarks. The organization adopts a never ending cycle of improvement steps. This cycle is named, after its author, the Deming Cycle or the Plan-Do-Check-Act cycle.

In the context of integrating the Global Compact, this means that a company would make a first assessment of where it stands relative to the Global Compact’s three environmental principles. The process would be as follows:

- **Act**: set specific performance objectives
- **Plan**: consider resources and steps required to achieve the objectives
- **Do**: what has been identified to reach the objectives
- **Check**: the results against the objectives and plans
- **Act**: to correct deviations, integrate learning from doing and setting a new set of objectives for further improvements.

The continuous improvement cycle works through the various elements of the corporate model. It propels the organisation on a course of continuously more demanding benchmarks. Every cycle brings the organisation to a new level of mastery and control that is focused on the needs of the ‘customer’. The ‘customer’ can also include the community and the environment, or whoever and whatever the organisation decides to include in its sphere of influence and responsibility.

**NOTE**: Further detail on some of the practical environmental management steps involved in the Deming Cycle are provided in slides 14-16 of Module 4, Session 2.
The GC Performance Model: four management elements

The framework contains four categories of management elements:

- **Vision:** What organisation do we want to become?
- **Enablers:** Who will get us there and by which means and practices? This will involves a review of:
  - Leadership
  - Empowerment
  - Policies and Strategies
  - Resource allocation
  - Processes and Innovation
- **Results:** What improvements will we make and what impacts will these have on people, society and the value chain?
- **Reporting:** How do we measure and communicate our achievements?

Each of the model’s sections represents the criteria against which to assess an organisation’s progress towards excellence. Each of the criteria has a high-level definition, supported by a number of explanatory elements – enablers and results. The enablers are those elements that define how the organisation operates, and the results group are those elements that define what the organisation achieves and contributes. The figure depicts the close integration of those elements into the performance model. Each of these elements are further unpacked in the following slides, with specific reference to relevant tools, and case studies applicable to each.

The performance model is applicable to all organisations regardless of sector, size or geography. Nevertheless, each organisation will apply specialised tools that represent its specific circumstances and know-how. GC Tools are covered in more detail in Session 2 of Module 4.

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**Explanation of icons**

- **Codes and Standards**
  The globe icon represents the direction obtained from universal declarations, principles, codes, regulations, standards and literature.

- **Management Tools**
  The tool icon represents any management tool or conceptual instrument that is recommended as a way of engaging with the Global Compact.

- **Communication and Partnership**
  The handshake icon represents any form of employer/employee involvement, partner/stakeholder interaction, dialogue or communication.
Forming the Vision

Many companies change as a result of a particular event or crisis that triggers a reaction (a classic example of this from an environmental perspective was the significant changes in approach that were introduced in Shell following the negative publicity that it received over Brent Spar events in Nigeria).

The three environmental Global Compact principles will enrich the company vision and this is where they must be integrated. Vision is best grounded in dialogue with employees and key stakeholders. It is however a key responsibility of top management to make sure that a vision is formulated.

GETTING THERE

**Codes and Standards**

- Review the three Global Compact environmental principles.
- Refer to the Stockholm, Rio and Johannesburg Declarations.
- Analyse major economic, social and environmental world trends (e.g. the Millennium Development Goals for 2015). [www.developmentgoals.org](http://www.developmentgoals.org)
- Refer to the UNDP’s Business and Millennium Development Goals briefing, which provides a framework for action on how companies and business coalitions can work with the UN system to achieve the Millennium Goals. [www.iblf.org/csr/csrwebassist.nsf/content/f1d2b3aad4.html](http://www.iblf.org/csr/csrwebassist.nsf/content/f1d2b3aad4.html)
- Refer to the Factor 4/Factor 10 and Eco-Efficiency studies. [www.wupperinst.org](http://www.wupperinst.org)
- Refer to ‘Values in Action: Formalising Your Company’s Values’ from the BSR, 2001. [www.bsr.org](http://www.bsr.org)

**Management Tools**

- Refer to the SIGMA Management Framework. [www.projectsigma.com](http://www.projectsigma.com)
- Refer to the Wuppertal Institute’s Compass (Companies’ and Sector’s Path to Sustainability). [www.wupperinst.org](http://www.wupperinst.org)
- Select an Environmental Management Strategy (Module 4, Session 2)
- Refer to the UNEP Cleaner Production Declaration ([http://www.unep-tie.org/pc/cp/](http://www.unep-tie.org/pc/cp/))
- Include environmental issues within your scenario planning.

**Communication and Partnership**

- Make use of Communication Tools to undertake employee and stakeholder dialogue (Module 4, Session 2)

**Case studies**

- RMC Group – used the SIGMA Management Framework ([www.rmc-group.com](http://www.rmc-group.com))
- European Aluminium Industry – used Compass to detect and facilitate sector-wide sustainability improvements ([www.oekoeffizienz.de/english/content/agzu/index.html](http://www.oekoeffizienz.de/english/content/agzu/index.html))
Enablers (1)

Identify Leadership

This is about management driving the vision through the organization. Leadership implies being personally involved where it matters, serving as a role model of values and action and as a supporter of the teams who are responsible for reaching the objectives derived from the vision (see Policies and Strategy). The leadership team must be accessible to the staff and should create coherence between the Vision and each of the other enablers listed below.

It should be a top priority to ensure that senior management is familiar with and has expressed the company’s commitment to the business case for sustainability. A sustainability champion should be identified at executive level.

The company with a successful sustainability initiative usually has visionary leadership at executive level. A so called ‘sustainability champion’ should be the person who identifies business opportunities and inspires others in the company to adapt sustainability measures.

Some of the most innovative initiatives have been shown to come from experts and conceptual leaders in the field of sustainability. The importance of creating partnerships with private consultants and non-profit organizations cannot be over emphasised. It will expand a company’s breadth of understanding. Dialogue with local NGOs, UN agencies and foundations helps focus on places where traditional business models do not work.

The Global Compact principles require tough choices:

- How far ahead should one operate of local competition and Government practice?
- How much should one monitor and influence the practices of suppliers and customers?
- How frank should one be about failures in a culture where only success counts?
- How much time should one set aside for the Global Compact versus other job priorities?

GETTING THERE

**Codes and Standards**

- Translate the three principles into practical language of the company (with examples).
- Draw on the results of the GC Learning Forums

**Management Tools**

- Apply the Business Case Matrix to show how sustainability factors enhance business successes: [www.sustainability.com](http://www.sustainability.com)
- Apply the Corporate Responsibility Assessment Tool to help the company manage, measure, improve and report on CSR practices. [www.crtool.com](http://www.crtool.com)
- Implement an Environmental Management System, Module 4, Session 2
Communication and Partnership

- Form a board/top management committee to guide implementation and identify a sustainability champion
- Hold listening and dialogue sessions – make use of Communication Tools (Module 4, Session 2)

Case studies
- Natura, Brazil – developing a business case (www.sustainability.com)
- Washright Campaign (case study no. 3-9) – demonstrating role of leadership competence in meeting sustainability targets (www.unilever.com/environmentsociety)
- Interface (case study no. 4-1)

Empowerment

This is about realising the full potential of people in line with the vision. Best practice performance includes:
- Ensuring overall alignment of all people management activities with the vision.
- Care in recruitment, training and career progression.
- Setting individual and team performance targets.
- Appropriate delegation of decision making and resource deployment.
- Sufficient freedom for the initiative and the allowance for mistakes.
- Implementing an appropriate reward system for performance and breakthroughs.

In relation to the Global Compact this means relating principles to tangible choices with adequate information and supporting clear stands on sensitive issues. A direct partnership with the company workforce is fundamental in ensuring the successful application of the principle and the continuous improvement and innovation capacity of the organization.

Education on a company-wide scale allows employees from various sectors to understand their role in the company’s sustainability practices. The creation of interdepartmental teams generates employee participation and ideas to reduce waste and save money.

GETTING THERE

Management Tools

- Undertake in-house learning sessions, draw on Learning Forums and other executive education, MBA programs and worker/employee training.
- Experiential learning.
- Engagement in community work to build on life experience and develop societal understanding of employees.
- Develop Environmental Performance Indicators (Module 4, Session 2).
Communication and Partnership

- Internal environmental training and communication (could form part of an Environmental Management System, Module 4, Session 2).
- Employees should work through the self-guided Chronos e-learning tutorial at www.sdchronos.org
- Trainers and company managers should utilise the EMS training resource kit (UNEP/ICC/FIDIC) at www.unep.ie.org
- Use the Environmental Management Navigator package of the Wuppertal Institute/UNEP for SMEs at www.em-navigator.net to select the most suitable environmental management tool for your company.

Case studies
- Du Pont (no. 4-4)
- Bovince Ltd (no. 4-5)

Slide 8 Enablers (3)

Policies and strategies

Leadership and empowerment is best consolidated and structured by:
- A formal set of objectives.
- Policies that determine in advance the desired and prohibited practices and activities.
- Plans that articulate for every part of the organization the activities, the objectives and resources with deadlines and responsibilities.
- Effective communication with employees, business partners, shareholders and stakeholders.

A statement articulating a company's sustainability goals is necessary to provide a foundation on which to build a program of initiatives. Most companies’ visions or policy statements are characterised by a formal set of objectives that articulate the company's culture or specific ambitions. The three environmental principles will need to be translated into the practical language of the company with examples, each of which will enrich the company vision.

Using tools such as life cycle assessments, resource flow audits and environmental reviews, the key areas for change should be identified. Priorities based on level of impact and environmental threat should be identified, and the business advantage of each possible change should be considered. All staff and external stakeholders (including suppliers and other interested parties) should be involved as far as possible in this process.

The policy should include a clear description of objectives, targets and actions to reach them with the people and departments involved. A budget should be allocated to each action, with times and deadlines identified. Capacity and training needs should be identified and a system by which to review and assess the plan's application outlined.

Targets should be set with the aim of measuring progress toward sustainability – these might
include specific goals for reductions in emissions, waste and energy use, or benchmarks for gauging company impact on disadvantaged regions or social groups and/or sensitive ecological areas. These targets and objectives should be “SMART”

- Specific – in terms of the aspect of work to which they relate
- Measurable – in terms of quantity and quality
- Achievable – within work constraints
- Relevant – to the aims and objectives of the company
- Time constrained

**GETTING THERE**

**Codes and Standards**

- Use the International Declaration on Cleaner Production for guidance on how to implement CP in the company at [www.uneptie.org/cp/declaration](http://www.uneptie.org/cp/declaration)

**Management Tools**

- Use Environmental Assessment and Auditing Tools to assess needs and priorities (Module 4, Session 2)
- Select an Environmental Management Strategy (Module 4, Session 2)
- Life Cycle Management
- Resource flow audits
- Environmental reviews

**Communication and Partnership**

- Forge partnerships with scientific/research groups, environmental groups, suppliers
- Make use of Communication Tools (Module 4, Session 2)

**Case studies**

- Du Pont (no. 4-4)
- Bovince Ltd (no. 4-5)

**Slide 9** Enablers (4)

*The allocation of resources (time, knowledge, technology, money)*

This is about the management of the means to implement the strategy and equip the employees with what they need to achieve their targets. Here we consider:

- The efficient allocation of financial resources
- The management of material assets
The management of technologies
The management of information and knowledge

Some would argue that the Global Compact principles tend to relate mainly to the category of resources that are “intangible” like brand reputation, community relations, potential liabilities. They have nevertheless a large impact on total shareholder value. It is therefore important to understand how the appropriate strategy and allocation of resources create value from the integration of the Global Compact principles. Once one goes into the practical implementation of the principles their direct material or tangible value becomes evident.

GETTING THERE

**Codes and Standards**

**Management Tools**
- Test budgets against policies/action plans
- Assign responsibilities to executive management (Part of Environmental Management System, Module 4-Session 2)
- Make use of Environmental Assessment Tools such as Environmental Risk Assessment and Environmental Technology Assessment (Module 4, Session 2)

**Communication and Partnership**
- Use the SIGMA projects accounting tool ([www.projectsigma.com](http://www.projectsigma.com))
- Use the CARE tool to help reduce costs and improve environmental performance ([www.wupperinst.org](http://www.wupperinst.org))
- Undertake risk and opportunity assessment

**Case studies**
- Wessex Water Services Ltd. – used the Sigma Project Accounting Tool to develop its sustainability accounts ([www.wessexwater.co.uk](http://www.wessexwater.co.uk))
- Muckenhaust and Nusselt – participated in the CARE project in order to develop an EMS ([www.munu-kabel.de](http://www.munu-kabel.de))

**Innovation and processes**
Continuous improvement is about:
Understanding the key processes that create improvements
The process of target setting and communication throughout the organization and particularly
The process of innovation

Innovation thrives in organizations that foster system thinking and contacts and dialogue beyond the usual boundaries of business. The Global Compact principles create dilemmas for business and are therefore a source of innovative solutions that open new markets and strengthen competitive advantage.

Look at how you can link sustainability to the company’s core values - such as quality, innovation, or time to market. Reducing the amount of material used in a product while maintaining or improving overall product quality provides greater value to customers while preserving resources. Another method is to sell services in addition to products. Establish eco-efficiency as a prominent target and evaluation screen in your innovation process.

Analyzing and understanding a product’s life cycle (from design, production, distribution, end-use and ultimate disposal or recyclability) is the only way to identify the opportunities to reduce material and resource costs. As the life cycle of a product is considered, companies can begin to understand the environmental, economic and social impacts of their products and move toward a more sustainable practice. Pay attention to places where you may be vulnerable because of impacts on ecosystems.

The use of the following tools and processes should be formalised through an environmental management system (EMS) approach such as ISO 14001. It is here that the company could begin to conduct regular and transparent environmental audits and impact assessments, to refocus research and development towards environmentally sound technologies (ESTs), use life cycle assessment (LCA) in the development of new technologies and products, co-operate with industry partners to disseminate “best available technologies” and explore opportunities for more environmentally benign inputs and outputs in product development.

GETTING THERE

Management Tools
- ISO 14000 Environmental Management System www.iso.org (Module 4, Session 2)
- Environmental Assessment Tools (Module 4, Session 2):
  - Cleaner Production assessment
  - Product stewardship activities
  - Environmental Impact Assessment and Risk Assessment
  - Life-Cycle Assessment
  - Design for Environment and Eco-design
  - Environmental Auditing
– Sustainable Production and Consumption
– Product-services systems

### Case studies

- Toyota-Global (no. 3-11)
- Re-Define (no. 3-15)
- Nokia (no. 3-14) — product life-cycle analysis
- Moroccan dyeing industry – eco-efficiency analysis for each product’s life cycle (www.unido.org)

### Slide 11 Results (1)

**Influencing or satisfying commercial partners — Impact on Value Chain**

Cooperation and transactions with customers and suppliers provide a company with its financial added value. This is where it also confronts its competition.

At some stage the implementation of the Global Compact principles will involve suppliers and customers. Companies with high credentials and performance in their own operations have been accused of tolerating their suppliers’ or distributors’ poorer standards. There are potential conflicts between the traditional results of customer satisfaction and an interference regarding their environmental, labour and human rights practices. There are also many opportunities for alliances because there are precisely very few things a company can move alone. A fine balance between satisfying the needs of commercial partners and influencing their practices as an advocate for the Global Compact will be a critical test of real commitment in the eyes of most employees and many observers.

Many leadership companies work with their suppliers on design for environment projects and other initiatives to reduce environmental impacts. Some companies try to involve customers, analyzing their needs to eliminate waste or develop systems to take back and recycle used products. It is useful to test key technologies and markets against changing trends in societal acceptance. Start a campaign that brings eco-efficiency ideas and tangible savings to customers and suppliers. Form a stakeholder advisory panel in the communities around your primary operations to focus on your main products or markets. Understand how suppliers are performing on an eco-efficiency basis and create programs to improve performance and share rewards.

**GETTING THERE**

### Codes and Standards

- Sector wide codes of practices
- See examples on UNEPTIE website, especially Catalysing Change: How industry associations can promote sustainable development.
Management Tools

- Environmental Monitoring and Auditing Tools (Module 4, Session 2). E.g. Supplier and customer audits
- Environmental Management Tools (Module 4, Session 2) E.g. Product life cycle stewardship and Supply chain management standards

Communication and Partnership

- Environmental Communication Tools (Module 4, Session 2) (e.g. Product labelling – e.g. Eco-labels)
- Form a stakeholder advisory panel

Case studies

- British Telecom (case study no. 3-2) – CSR and customer satisfaction
  www.bt.com/betterworld

Slide 12 Results (2)

People satisfaction

This measures impact on employee satisfaction and morale. Many companies have noted that their commitment to principles beyond profit has a positive impact on recruitment and retention of talented employees.

Some of the tough choices made by the leadership about high environmental standards and zero tolerance of unfair and unethical practices will affect employees in the regions where governments and competitors ignore compliance with the Global Compact principles. This will require special attention and support.

Employees are one of the most important assets of a company, and the two enjoy a mutually beneficial relationship. Employees have many rights that, when respected, lay the foundation for job satisfaction and high performance. The rights related to health and safety are closely related to the environmental performance of a company. Improving the environmental performance of a company can improve the working conditions and also the workers morale. Another aspect that contributes to higher employee satisfaction and performance levels is employee participation. One of the key success factors of an environmental management system is the participation of employees in identifying risks and opportunities as well as in implementing changes and especially in reward systems for meeting performance targets.

GETTING THERE

Communication and Partnership

- Dialogue and listening sessions (Internal Training and Communication – could form part of EMS, Module 4, Session 2)
Employee surveys and reward schemes for meeting environmental performance targets

**Results (3)**

**Impact on society**

This measures the perception of the company’s performance by relevant external stakeholders, including, for example:

- Investors
- Regulatory agencies
- Employees
- Local communities where the company operates
- Human rights, labour, and environmental organizations
- Business networks
- Rating agencies; financial analysts
- Suppliers and customers

**GETTING THERE**

**Communication and Partnership**

- Site community opinion surveys
- Local and corporate advisory panels
- ETHOS Indicators on Corporate Social Responsibility [www.ethos.org.br](http://www.ethos.org.br)

**Management Tools**

- Environmental Management Tools (e.g. Product Stewardship, Extended Producer Responsibility, Module 4, Session 2)
- UNEP APELL (Module 4, Session 2) [http://www.uneptie.org/pc/apell/](http://www.uneptie.org/pc/apell/)

**Case studies**

- Petrobras, Brazil – implementation of APELL

**Reporting**

The continuous improvement cycle does not work without a set of specific measurements that reflect actual performance. The measurements also need to be relevant to all actors concerned by the performance.

The performance needs:

- To be compared to the targets set for the period
To be compared to those of competitors and, amongst them, the best-in-class
To include parameters that measure the improvements of processes, not only outputs

Progress against objectives derived from the Global Compact principles adds a social and environmental ledger to the financial results. This provides an augmented perspective of how the company makes a positive contribution to the society in which it operates. Yet the core contribution will remain consistent, improving creation of wealth for all its employees, owners, associates and the economy at large. Social and environmental excellence enhances shareholder value only as long as the company generates an economic profit.

Publicise the results of your sustainability efforts. Consider publishing an annual sustainability report. In doing this, introduce your company to the GRI guidelines for sustainability reporting, where you will find a suggested framework, reporting principles, sustainability indicators and so on. Make clear to senior management that reporting is a key communication tool and an essential part of the quality management cycle. Communicating progress is also a key annual requirement in the Global Compact. Be sure to highlight environmental and social gains achieved by the business to all stakeholders, particularly those in the local communities. Share best practices with the broader business community. Promote a wider awareness of sustainability issues and the practices that can help businesses move toward sustainability.

GETTING THERE

**Codes and Standards**
- AccountAbility 1000 (AA1000) Framework [www.accountability.org.uk](http://www.accountability.org.uk)
- Efficient Entrepreneur Calendar [www.uneptie.org/outreach/business/calendar.htm](http://www.uneptie.org/outreach/business/calendar.htm)

**Communication and Partnership**
- Environmental Reporting and Communication Tools (Module 4, Session 2) including, for example, the Global Reporting Initiative [www.globalreporting.org](http://www.globalreporting.org)

**Case studies**
- Vancity – use of AccountAbility 1000 (AA1000) Framework ([www.vancity.com](http://www.vancity.com))

**Slide 15** The Global Compact’s engagement opportunities

The Global Compact offers many engagement opportunities, namely:
- Policy dialogue
- Learning
- Local Networks
- Partnership Projects
The Global Compact Learning Forums seek to contribute to a better understanding of global responsible corporate citizenship by bringing stakeholders together to share good practices and to identify and fill knowledge gaps. They aim to contribute to knowledge and tool development, as well as training and dissemination on priority issues related to the Global Compact. The Forums support efforts to increase transparency of corporate actions through the publication of relevant public corporate reports on the Global Compact Learning website. They offer a range of engagement mechanisms to assist different stakeholders in the implementation of these goals and objectives.

**Slides 16-17 The UNGC Learning Forums**

The following mechanisms exist:

- **Examples of corporate experiences in implementing the ten principles**: This includes descriptions of company experiences, with links to respective websites for further documentation, reports (annual reports, sustainability reports) and a personal contact to facilitate networking between interested parties.

- **Case studies of corporate experiences**: This includes independent and in-depth analyses and descriptions of specific company activities related to the integration of one or more of the ten principles. The case studies follow the Global Compact Research guidelines that facilitate comparative analysis and eventually aggregation of knowledge and implications.

- **Description of partnership projects**: Specific partnership projects implemented by a company and related to the ten principles and/or the United Nations Millennium goals will be described. These three mechanisms are open to comments of both Global Compact stakeholders and the general public, aiming to contribute to a better understanding of “good practice” through social vetting.

- **Research matching database**: The Global Compact invites all companies to describe their research interests in a web-based database. This will help to connect companies with participating universities and business schools that have expressed strong interest to contribute to the development of case studies and other action research related to the integration of the ten principles.

- **Learning Forums publications**: The Global Compact invites academics and researchers to present research papers on specific Global Compact issues and research questions that are published in Global Compact Learning Forums publications.

- **Tools development**: The Learning Forums invites all tool providers to join efforts and contribute to the development of tools that enable companies to integrate the ten principles into their core business. The Learning Forums will focus on the development of tools related to the Global Compact Performance Model. Then you will need to draw on the Global Compact Learning Forums and case studies collection.

**Exercise 4.1 – Understanding stakeholder interests**

Divide the delegates into groups of about 10 (if possible from the same company, or similar industries). Provide the delegates with a specific company and a potential scenario relating to a specific environmental decision that they will have to take. Ideally the company and scenario should have a close bearing on the nature of the activities and decisions that the delegates are currently involved in.
Ask each group to compile a list of stakeholders that they consider have an interest in the development of the company’s environmental performance. These groups should then divide into even smaller groups representing these different stakeholders, with one group/individ-ual playing the role of the company.

Each group should then:

- Brainstorm the general interests and values of their stakeholder group
- Brainstorm the changes that their particular stakeholder group would like to see to the company’s policy and activities
- Develop a possible negotiating strategy aimed at achieving these changes

Groups should bear in mind the likely strategy of other groups, and should consider whether it would be advantageous to seek alliance with one or more of the other groups. Each group will make a final presentation of their viewpoint, after which general discussion will be held.

Once the groups have been set up, encourage delegates to consider the following questions:

- Identify the most key interests of each particular stakeholder group – and be prepared to strongly defend and maintain that interest.
- To what extent is stakeholder consultation likely to allow interested parties to make meaningful contribution to corporate environmental policy making?
- Are some interested parties more likely to be effective than others? If so, why?
MODULE 4: FROM PRINCIPLE TO PRACTICE

Session 2: The Global Compact Toolkit – Environmental Principles

TIME: Variable, depending on level of group

OBJECTIVES:

The objectives of this session are:

I To unpack the ‘GC toolkit’ for the Environmental Principles and consider some of the more prominent tools and management approaches.
I To indicate when to use the tool being described.
I To provide examples through case studies.
I Provide the delegates with useful references.

SUGGESTED PROCEDURE:

The day before this session is scheduled, encourage delegates to read several of the following:

I Case Study 4-1: Interface
I Case Study 4-2: Deloitte Touche Tohmatsu (Global)
I Case Study 4-3: Sonae (Thailand)
I Case Study 4-4: DuPont
I Case Study 4-5: Bovince Ltd
I Case Study 4-6: Kalundborg, Denmark
I Case study 4-7: Hitega – Chile
I Case study 4-8: IBM’s recycled-resin personal computer
I Case Study 4-9: Elk Falls pulp mill, Columbia
I Case study 4-10: BHP Biliton
I Case study 4-11: RMC
I Case-study 4-12: Cardboard Packages, Thailand

NOTE: all case studies are included separately in the accompanying Delegates’ Manual. When reading these case studies, delegates should identify and keep a note of:

I The key lessons / messages from the case study.
I Their thoughts on the relevance of the case study for their company.

Speaker’s Notes

Slide 1 Title slide

Slide 2 The GC Toolkit – Environmental principles

The GC Toolkit is a range of concrete instruments aiding implementation of the GC Performance Model outlined in Session 1. The range of tools and codes of practice have been developed over the last ten years by business, government and civil society.
In essence, the GC toolkit has the following essential functions:

- Provides a methodology for collecting and organising information
- Improves knowledge and understanding of the dynamics of the system, the drivers of behaviour and the reasons for failure
- Provides a description of accepted levels of performance and/or prompts the setting of performance targets
- Identifies proven means for modifying behaviour to reach these performance targets
- Provides the means for monitoring and reporting on progress in improving performance

Some managers intuitively ‘see’ the challenge and the correct solution without the conscious help of tools, which they may reject as being too cumbersome. However, when it comes to sharing knowledge and learning new skills, particularly at a distance and through published material, tools work best.

Tools are presented not only to be used but also to be adapted and combined with others to reach new levels of performance. The toolbox associated with the Global Compact performance model will continue to grow as companies share and standardise their approaches to implementation.

**Slide 3  Different types of GC Tools for the Environmental Principles**

For the purposes of this course, the ‘GC toolkit’ for the Environmental Principles has been divided into four key compartments, namely:

- Management Tools
- Assessment Tools
- Monitoring and Auditing Tools
- Reporting and Communication Tools

This is consistent with the organisation of the tools for Environmental Responsibility in Module 3: Session 2. However, it must be noted that the tools are applicable to implementing all three of the Environmental Principles into core business practice. In Module 3 Principle 7, it was shown that the Precautionary Principle can be integrated into business by using one or more of the tools (i.e. CP, LCA, EIA etc.) and, similarly, in the session on Principle 9 it was shown that incorporating Environmentally Sound Technologies can be supported by using various assessment tools such as CP, EnTAs, EIAs, etc.

**NOTE TO TRAINERS**

In the following section, you will describe each of the tools in each of these four compartments. Make the point that this is by no means a comprehensive overview of all the available tools. Where possible, you will illustrate each tool’s use by means of a case study, or provide the delegates with references or websites for further reading.

In this session you will provide an overview of each of the main types of policy tools in the four broad categories listed above, before examining each of these tools in more detail later in the presentation.

This session is an introduction to the tools only, the application of each tool requires further work by the participants themselves, and additional guidance for this is provided in Module 4, Session 3 and Module 5.
In addition you should also make use of the detailed Framework for Action that is provided in Appendix 1 (of both Manuals). This is intended to provide a valuable guide for selecting and applying the various tools.

Slide 4 The response of a hypothetical company: What tools and when?

It may be useful to consider how a hypothetical company would look at the different kinds of tools it should adopt, and the timing thereof. Point out that the various case studies in the delegates’ manual indicate the benefits to many companies of using these tools to identify opportunities for improved environmental responsibility.

The company could first decide to manage its environmental risks and opportunities by implementing an Environmental Management System. It could then decide on the strategy of Cleaner Production and undertake a Cleaner Production Opportunity Assessment (CPOA).

This will encompass or lead to one or more of the following:
- Environmental auditing
- Pollution and waste audits
- Supply chain audits and assessments
- Ecological footprinting

It would also provide the company with environmental performance indicators. The result of this will be the identification of options for improved environmental responsibility. These options may require more detailed assessments to assist decision makers on determining their feasibility and long-term sustainability, examples being:
- Design for Environment (DfE)
- Life Cycle Assessment (LCA)
- Eco Efficiency
- Industrial Ecology
- Total Cost Assessments (TCA)
- Environmental Impact Assessment (EIA)
- Environmental Technology Assessment (EnTA).

The results could then be communicated by reporting on the existing ecological footprint/environmental performance indicators together with a report on the identified options for improved environmental responsibility as a result of the decisions made from the information identified by these tools.

The benefits to the company will be to reduce environmentally-related risks and identify opportunities for creative new ideas that save the company money, that open up new markets, that reduce liability, etc.

Similarly, a new business idea can be developed using tools such as DfE, and can be assessed using EIAs, LCAs, EnTAs, TCAs. The new business can be operated according to the strategies of CP/eco-efficiency/industrial ecology.
Once the business is up and running under an Environmental Management System, regular audits can be undertaken to ensure the business remains environmentally responsible and to identify further opportunities for continuous improvement (this may be voluntary or required by law/agreement). The EMS will help tie all the different aspects together by providing a structured approach. The *Framework for Action* in Appendix 1 provides a useful overview of when to use each of the various tools.

**Slide 5** Environmental Sustainability Tools – Overview

Introduce the following general types of environmental management tool:

- Environmental Management Systems (ISO 14001, EMAS, etc.) – Note that a more detailed review of the key steps in designing and implementing a structured Environmental Management System is provided in slides 13-18 of this module.

- Environmental Management Strategies:
  - Cleaner Production, Eco-efficiency and Sustainable Consumption
  - Life-cycle management
  - Design for the Environment/ Eco-design
  - Cradle-to-Cradle Design
  - Product stewardship activities
  - Product-services systems
  - Industrial ecology
  - UNEP APPEL

**Slide 6** Relating Environmental Management Tools to the GC Performance Model

This slide indicates how the Environmental Management Tools may be used to support the implementation of the GC Performance Model.

**Slide 7** Environmental Assessment Tools

Introduce the following five general types of environmental assessment tool

- Environmental Impact Assessment
- Environmental Risk Assessment
- Cleaner Production Opportunity Assessments
- Environmental Technology Assessment
- Life-Cycle Assessment
- Total Cost Assessment

**Slide 8** Relating Environmental Assessment Tools to the GC Performance Model

This slide indicates how the Environmental Management Tools may be used to support the implementation of the GC Performance Model.
Environmental Monitoring and Auditing Tools

Introduce the following general types of environmental monitoring tools:
- Environmental Performance Indicators
- Environmental Auditing
- Pollution and Waste Audits
- Supply Chain Audits and Assessments
- Ecological Footprint

Relating Environmental Monitoring and Auditing Tools to the GC Performance Model

This slide indicates how the Environmental Management Tools may be used to support the implementation of the GC Performance Model.

Environmental Reporting and Communication Tools

Introduce the following general types of environmental reporting and communication tools:
- Corporate Environmental / Sustainability Reports
- Stakeholder Engagement Activities
- Developing Partnerships for Progress
- Environmental Labelling/Product Declaration Programmes

Relating Reporting and Communication Tools to the GC Performance Model

This slide indicates how the Environmental Management Tools may be used to support the implementation of the GC Performance Model.

Management tool: Environmental Management Systems (EMS)

An Environmental Management System (EMS) is the part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining an environmental policy. An EMS is seen as an effective tool to reduce and control the negative effects of human activity on the environment.

An EMS may be used to:
- Help companies to identify and prioritise their key environmental impacts in a structured and systematic manner.
- Provide a framework for setting clear objectives and targets for managing these impacts.
- Ensure that structured processes and procedures are in place for measuring and monitoring performance.

The type of EMS depends largely on the nature, size and complexity of the company’s activities, products and services. The following basic elements apply:
An environmental policy is usually published as a written statement expressing the commitment of the company to a set of objectives.

An environmental programme or action plan details the measure the company will take.

Organisational structures are defined.

Environmental management is integrated into the business operations.

Monitoring, measurement and record keeping procedures are set up.

Corrective and preventative action is defined.

EMS audits are carried out.

Management reviews are carried out.

Internal training and external communication components are adopted.

Many companies and their interested parties have encountered the need for more clarity on the details of EMS and auditing/assessment concepts, and at the same time the need emerged for a level playing field in relation to these aspects. Activities on standardisation and certification have therefore started at both national and international level. Standards for EMS have been developed by the International Organisation for Standardisation (e.g. ISO14000), and standard developments at national and European level are affecting industry worldwide, the main developments being the recognition of the British Standard for EMS (BS 7750) in many countries and the implementation of the Eco Management and Audit Scheme (EMAS) in the European Union. These generally follow a similar process for the EMS as outlined in the following slides on ISO14000.

Slides 14-18 The basic elements on an EMS

These slides run through the various sets of activities in each of the plan, do, check, act phases that make up a structured Environmental Management System.

An EMS follows the well-known quality management approach of “Plan, Do, Check, Improve.” It is a problem identification and problem solving tool which can be implemented in an organisation in many different ways, depending on the precise sector of activity and the needs perceived by management. The specific system implemented depends entirely on the needs and objectives of the organisation.

Plan
- Identify aspects and impacts, hazards and risks
- Document legislation and other requirements
- Set objectives and measurable targets
- Policy and management programme

Do
- Structure and responsibility
- Training, awareness and competence
- Communication
- EMS documentation
- Document control
- Operational control
- Emergency preparedness and response
Check
- Monitoring, measuring and auditing performance
- Maintaining records
- Schedule, plan and conduct system audits
- Non-conformance and corrective action

Act
- Implement corrective actions
- Track improvement
- Management review

Slide 19  EMS: Importance of training and internal communication

Internal communication is an important element of an EMS but can also be undertaken independently of an EMS. Ongoing employee and management training and internal communication at all levels is critical for ensuring that there is sufficient commitment and understanding to integrating principles of environmental responsibility into the business, and to ensuring that there is a required change in attitudes and business behaviour.

Training and communication should be undertaken on issues such as:
- Awareness of the company’s environmental impacts and aspects.
- Technical understanding on how to manage these impacts and aspects.
- Knowledge of current and potential environmental liabilities.
- Skills to effectively implement management systems and programmes.
- Building and maintain motivation to address environmental concerns.

For further information:

Slide 20  Environmental Management Strategy: Cleaner Production

Cleaner Production (CP) is a general term that describes a preventive environmental approach, aimed at increasing resource efficiency and reducing the generation of pollution and waste at source, rather than addressing and mitigating the symptoms. CP has been defined as “the continuous application of an integrated preventive environmental strategy to processes, products and services so as to increase efficiency and reduce risks to humans and the environment.”

- Cleaner Production is essentially similar in approach to related concepts such as waste minimisation, pollution prevention and eco-efficiency.

Slide 21  A Cleaner Production (CP) Strategy

- For production processes, CP includes
  - More efficient use of raw materials, water and energy
  - Elimination of toxic or dangerous process input materials
- Minimising the volume and toxicity of all emissions and waste
- For products, CP focuses on
  - Reducing impacts through the products’ life cycle
  - Adapting design, raw material input, manufacturing, use, and disposal
- For services, CP implies
  - Preventive environmental strategy in the design and delivery of services

CP can be achieved in many different ways, but the most important of these are:
- Changing attitudes and finding a new approach to the relationship between industry and the environment.
- Applying expertise and know-how by improving efficiency, adopting better management techniques, changing housekeeping practices, and revising policies, procedures and institutions as necessary.
- Improving technology or simply rethinking an industrial process or product in terms of CP may produce the required results without importing new technology.

For further information (see also list at the back of the Manual):
- [www.cleanerproduction.com/](http://www.cleanerproduction.com/)
- [www.uneptie.org/pc/cp/](http://www.uneptie.org/pc/cp/)
- [http://es.epa.gov/cooperative/international/](http://es.epa.gov/cooperative/international/)
- [http://www.uneptie.org/pc/pc/tools/cleanerproduction.htm](http://www.uneptie.org/pc/pc/tools/cleanerproduction.htm)

**Slide 22 Promoting CP through good management practices**

This slide outlines some of the key management activities that can be undertaken with the aim of embedding CP practices throughout the company.

- Establish senior management commitment for CP:
  - Define, communicate and monitor progress against performance targets
- Appoint waste minimisation ‘champion’ to:
  - Review the true cost of waste
  - Motivate the workforce to reduce waste – appropriate incentives
- Implement visible monitoring and reporting for example on:
  - Volumes of waste generated / materials used
  - The cost of waste collection and disposal, and resource use
  - The total cost of waste and resource use
- Inform the company’s suppliers of the company’s commitment to CP, and (where appropriate) provide them with technical and other assistance to help them in implementing CP
- Look into the possibility of sharing CP expertise and best practices with company peers, for example by participating in a waste minimisation club

**Slides 23-24 Implementing a CP Management Programme**

Cleaner Production is about collecting and processing information and making decisions about minimising emissions and waste. It is essentially the application of familiar analytical, problem solv-
ing and project management techniques for the reduction of waste and the promotion of resource efficiency in process operations.

A structured CP process can be broadly divided into the following steps (these are presented in a diagram in Slide 8, along with a more detailed overview of the various activities associated with each of the following steps):

- Step 1: Planning and Organisation
- Step 2: Preliminary Assessment
- Step 3: Detailed Assessment
- Step 4: Feasibility Analysis
- Step 5: Implementation
- Step 6: Monitoring Progress

A company may implement these steps entirely on its own, or it may hire experts to assist. Depending on the nature of the business, an understanding of fundamental process chemistry and technology may be needed to clarify causes of waste. Obtaining such knowledge may require extensive information gathering and/or consultation with technology experts. In addition, the assessment may also be organised to focus on selected processes rather than the entire operating facility.

When developing a cleaner production programme that is cost-effective, it is useful to remember the following broad principles:

- Keep it simple and appropriate to the circumstances of the company.
- Include provision for simple management issues as well as for process/product changes.
- Only target materials for recycling and re-use when there sufficient local demand.
- Include provision for methods for storing and collecting recycled materials.

**Eco-efficiency**

Eco-efficiency is a management approach which aims to achieve “more with less” by making efficiency improvements within existing processes. It is also about finding innovative approaches to producing more value with less input of energy and material, and with reduced emissions.

Eco-efficiency involves:

- Reducing the material and energy intensity of goods and services
- Increasing the service intensity of goods and services
- Reducing toxic dispersion
- Enhancing material recyclability
- Maximising sustainable use of renewable resources
- Increasing material/product durability
- Increasing service intensity

The four key opportunity areas for business to implement eco-efficiency are as follows:

- **Re-engineering processes**: improving monitoring and management practices, changing
existing technology, amending operating procedures and making changes to raw material inputs.

- **Redesigning products**: facilitating product disassembly, reducing material intensity, and promoting product recyclability and reuse.
- **Re-valorising by-products**: turning waste into a commercially valuable resource for other processes; at its extreme this may form part of a closed-loop process known as “industrial ecology”.
- **Rethinking markets**: meeting customer needs in a less material and energy-intensive manner, for example by providing an equivalent service to replace the product.

Although eco-efficiency is an important component of sustainable development efforts, it is not enough on its own. Not only is the social aspect of sustainability beyond its scope (other than employee health and safety), but for eco-efficiency to lead to absolute reductions in resource use it needs to be accompanied by more efficient consumption.

**Slide 26 Implementing CP and Eco-efficiency – A structured approach**

This slide provides an overview of a possible structured approach for embedding CP and eco-efficiency practices within a company. The key steps include: (see also some of the slides in Module 3, Session 2)

- Assigning formal responsibility for CP/eco-efficiency
- Identifying CP opportunities by undertaking a CP opportunity assessment
- Analysing the information
- Considering all of the various options that are available
- Producing an action plan
- Implementing the action plan
- Reviewing progress and making changes as required

**Slide 27 Sustainable Consumption and Production**

The growing attention to issues of Sustainable Consumption and Production is a natural outcome of decades of work on Cleaner Production and eco-efficient industrial systems. It represents the final step in a progressive widening of the horizons of pollution prevention; a widening which has gone from a focus on production processes (Cleaner Production), to products, (eco-design), then to product-systems (incorporating transport logistics, end-of-life collection and component reuse or materials recycling) and to eco-innovation (new products and product-systems and enterprises designed as win-win solutions for business and the environment). Action focused on consumption has highlighted the need to address the creation of new systems of production and consumption, systems that might be truly sustainable, both environmentally and economically.

Preventative approaches to improving production and the performance of products (Cleaner Production, product eco-design, environmental technology, eco-innovation and environmental management) have demonstrated significant environmental gains. Increasing eco-efficiency remains the most optimistic strategy for sustainable production, with strong support from industry. However, there is evidence that GDP is growing at a faster rate than improvements in resource or
energy efficiency – consumption is outpacing the gains from improvements in production and products. There is also increasing evidence of rebound effects, in which improvements in efficiency actually become a stimulus for increased consumption.

Sustainable Consumption is concerned about the evidence that many advances made on the supply side are overtaken by increasing consumer demand and unsustainable consumption patterns. The challenge is to persuade consumers not so much to consume less, but to consume differently. The responsibility of the producer to provide product information that enables consumers to make informed choices is only a part of the answer – necessary, but not yet sufficient to cause an effective shift towards sustainability.

**What is Sustainable Consumption?**

“... the use of services and products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as to not jeopardise the needs of future generations.” (UN CSD, 1995)

It includes interventions that influence consumption patterns (e.g. product stewardship, product labelling and information and product design)

“Consumers are increasingly interested in the world that lies behind the products. They want to know how and where and by whom the products have been produced.”

*Klaus Toepfer, UNEP Executive Director*

For further information:
- For UNEP’s recent resource kit on Sustainable Production and Consumption visit [www.uneptie.org/pc/sustain/advertising/events specifics/SCP_Resource](http://www.uneptie.org/pc/sustain/advertising/events specifics/SCP_Resource)

**European Stakeholder Meeting on Sustainable Consumption and Production. Nairobi / Paris / Brussels: UNEP DTIE.**

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**Slide 28 Business Response to Sustainable Consumption**

Business (e.g. through the World Business Council for Sustainable Development (WBCSD) has approached Sustainable Consumption as an extension of eco-efficiency approaches to include:
- Technological and social innovations to improve quality of life (ESTs, Product-services systems, Green Procurement Strategies, etc.)
- Provide and inform consumer choice (Eco-labelling, Green Advertising, etc.)
- Improved market conditions through appropriate legislation and regulation (Extended Producer Responsibility, etc.)
- Attention to the need to reduce resource consumption in production and products (Eco-design and Design for Environment, Eco-efficiency, CP, ESTs, Product-services systems)
- To improve the effectiveness and quality of product use (Eco-design, Product Stewardship, etc.)
Some of the examples (in parenthesis) are elaborated on as additional tools in this Module.

The 22 Industry Sector Reports that were submitted to the World Summit on Sustainable Development in a process facilitated by UNEP demonstrate awareness and attention to the need to reduce resource consumption in production and products and to provide information to consumers in order to improve the effectiveness and quality of product use. These Sector Reports may be obtained at: http://www.uneptie.org/outr each/wssd/contributions/sector_reports/reports.htm

Reducing end-of-life waste (usually through recycling) is also a common feature of product stewardship programmes across most industry sectors.

**Slides 29-30 Examples of strategies to improve Resource Productivity in Production and Consumption**

These two slides show a production chain schematic with examples of business strategies to improve resource productivity in both production and consumption. The move to Product-Services systems is one of the most effective strategies to improve resource productivity in production and consumption. This is explained in more detail later on in this module. Other options include designing products to minimise the environmental impact in both production and consumption. This is an important element of a Product Stewardship strategy.

**Slide 31 Life Cycle management**

*Life Cycle Management* has been developed as an integrated concept for managing the total life cycle of products and services towards more sustainable consumption and production patterns. This implies that everyone in the whole chain of a product’s life cycle, from cradle to grave, has a responsibility and a role to play, taking into account all the relevant external environmental effects.

The concept of *life cycle thinking* integrates existing consumption and production strategies, preventing a piece-meal approach. Life cycle approaches avoid problem shifting from one life cycle stage to another, from one geographic area to another and from one environmental medium to another. Human needs should be met by providing functions of products and services, such as food, shelter and mobility, through optimised consumption and production systems that are contained within the capacity of the ecosystem.

By integrating the life cycle perspective in overall management and bringing product and process development in a more sustainable direction, an organisation can harvest the benefits of environmental, occupational health and safety, risk and quality management, as well as developing and applying cleaner process and product options. Incorporating life cycle and sustainability management will improve image and brand value for both world market players as well as smaller suppliers and producers.

For further information:

Management tool: Design for the Environment

Design for the environment (DFE) is an umbrella term used to describe the techniques for incorporating environmental considerations into products and services before they enter the production phase. DFE involves examining a product’s entire projected lifecycle and identifying measures that can be taken to minimise the environmental impact of the product throughout that lifecycle.

DFE strategies may identify design measures that can be taken to reduce the environmental impact in each of the following key phases of a product lifecycle:

- **Raw materials**: designing in opportunities for resource conservation and low impact raw material usage.
- **Manufacturing**: providing for measures relating to cleaner production and eco-efficiency during the production phase.
- **Product use**: ensuring provision in the product-use phase for considerations relating, for example, to improved energy and water efficiency, reduced material use, and increased durability.
- **End-of-life**: key design considerations include design for disassembly, product re-use, and design for recycling. Building on engineering concepts like “design for manufacturability” and “design for disassembly,”

Design for Environment takes environmental factors into account at the earliest possible stages of product development and design. Paralleling the trend toward Pollution Prevention, DFE recognises that it is far more economical to design quality into a product than to try to tack it on later.


Eco-Design

Eco-design addresses the relation between a product and the environment.

Some common propositions about eco-design include:

- Environmental impacts from products have continued to rise relative to production processes.
- A life-cycle perspective on the environmental impacts of a product captures the whole production-consumption chain.
- Of the (life-cycle) impacts from products, 60% to 80% are determined at the design stage.
- When product-related impacts are made explicit in the design process, there are well-tried design strategies for reducing them.
- A focus on products is a better way to engage business interest and action because it focuses on the products’ market vulnerability.

For further information see: [http://www.uneptie.org/pc/pc/tools/ecodesign.htm](http://www.uneptie.org/pc/pc/tools/ecodesign.htm)
Instead of designing cradle-to-grave products, sent to landfills at the end of their ‘life’, industry can be transformed by creating products for cradle-to-cradle cycles, whose materials are perpetually circulated in closed loops. Maintaining materials in closed loops maximises material value without damaging ecosystems.

“Models human industry on natural processes, creating safe and healthy prosperity.”

In response to widespread environmental degradation, many industries have adopted a strategy known as “eco-efficiency” – minimizing waste, pollution and natural resource depletion. But eco-efficiency is not a strategy for long-term success. It seeks to make the current, destructive system sustainable. Minimizing toxic pollution and the waste of natural resources are not strategies for real change. Designing industrial processes so they do not generate toxic pollution and “waste” in the first place is true change. Long-term prosperity depends not on the efficiency of a fundamentally destructive system, but on the effectiveness of processes designed to be healthy and renewable in the first place.

The industrial framework that dominates our lives now is fairly primitive. It is conceived around a one-way manufacturing flow—what is known as a “cradle to grave” lifecycle. This cradle-to-grave flow relies on brute force (including fossil fuels and large amounts of powerful chemicals). It seeks universal design solutions (“one size fits all”), overwhelming and ignoring natural and cultural diversity. And it produces massive amounts of waste —something that in nature does not exist.

Cradle-to-Cradle Design – “Environmentally Intelligent”

Cradle to Cradle Design is a new strategy for business growth and prosperity that generates ecological, social and economic value. It represents a fundamental conceptual shift away from the current industrial system, not just a damage management strategy. At a fundamental level, the new paradigm proposes that human design can learn from nature to view materials as nutrients circulating in healthy, safe metabolisms.

Industry must protect and enrich ecosystems—nature’s biological metabolism—while also maintaining safe, productive technical metabolism for the high-quality use and circulation of mineral, synthetic, and other materials.

Eco-effectiveness seeks to design industrial systems that emulate the healthy abundance of nature. The central design principle of eco-effectiveness is waste equals food.

In addition to its provocative content, Cradle to Cradle, is printed on a polymer film instead of paper. While current materials and systems are incomplete, this book’s materials suggest ways ‘technical nutrients’ might be used in the future, cycling safely and prosperously in the ‘technical metabolism’ of plastics recycling.

Benefits of Cradle-to-Cradle Design

There are a number of important potential benefits associated with cradle-to-cradle design.
Design for life-time customers: Cradle to Cradle Design nurtures a company’s relationship with its customers by helping clients design products that can be perpetually recycled and “reincarnated,” leased again and again to a customer base. For example, computer companies have begun to institute “trade-in” programs, taking obsolete computers from buyers of new machines. This is currently marketed as a waste management service, alleviating the customer’s responsibility for handling potentially dangerous, toxic hardware. Companies design products from the beginning to be safely and completely recycled, deriving the best value from materials over many product life cycles and lease terms. Trade-in or leasing programs then support the company’s material needs while creating an opportunity for lifetime relationships with customers.

Risk Management: The Cradle to Cradle Design Protocol implements material and process criteria that avoid many of the risks created by current industrial practices, moving far beyond simple regulatory compliance. Risks to environmental and human health are reduced by eliminating the concept of waste—toxic or otherwise—and selecting materials that are safe to both human and natural systems. As public scrutiny and class action lawsuits increase, designing such risks out of products has large payback potential for more and more industries and companies. For example, by designing Climatex Lifecycle fabrics to be completely free of toxins or other harmful substances, Rohner Textil has greatly reduced their risk of accidents and lawsuits. More importantly, they have improved relations with their employees, consumers and the public as a whole.

Cost Reduction: Cradle to Cradle Design aims to eliminate the need for regulations or dangerous materials management. By implementing intelligent design strategies and criteria, companies can dramatically reduce legal and other costs, strengthening their bottom line. Designing for cradle-to-cradle product life cycles also reduces reliance on virgin material inputs, lessening overall material costs.

Product Differentiation: Cradle to Cradle Design is fundamentally different from other approaches to sustainability. Instead of pushing a guilt-driven agenda of minimizing damage to the environment, companies celebrate abundance. Companies design high quality products and services that are safe, healthy, and ecologically sound. As a result, companies offer their customers excellence by all measurements.

For further information: http://www.mbd.com/index.htm

Slide 37 Product Services Systems

PS systems describes developing a marketable mix of products and services that are jointly capable of fulfilling a client’s need – with less environmental impact. The increasing number of service industries, illustrated by expanding information technologies, for example, is one very visible indicator of changes underway.

Product Service Systems (PSS) is a new concept for business to improve its sustainability performance. The approach analyses the needs of consumers that are fulfilled by certain products and services, and uses this as a basis for innovation. As a natural next step after efforts such as cleaning up production processes and re-designing products, the new approach invites business to shift its focus from selling products to selling the utility. A mix of products and services can thereby fulfill the same client demands with less environmental and social impacts.
Product stewardship is where all parties involved in the production, selling or use of a product take responsibility for the full environmental and economic impacts that result from the production, use and disposal of that product. There are several related terms such as shared responsibility, extended producer responsibility and manufacturer responsibility.

Most companies that have adopted a product stewardship approach have found that it makes good business sense. It offers green marketing opportunities, avoids regulation and can achieve environmental goals. More often than not, companies find that they are able to save money on raw materials.

The ‘tools’ of product stewardship include:

- **Take-back programs.** A growing trend is the development of take-back programs in which a manufacturer accepts their product back at the end of the product’s life. Xerox, among others, have made take-back an essential part of their business operations.

- **Leasing.** Another tool of product stewardship is leasing or selling a service rather than a product. Under a leasing system, actual ownership of the product remains with the manufacturer. Customers pay for the use and maintenance of a product. At the end of the product’s useful life, the manufacturer is responsible for disposal. Several companies are recognizing the benefits of leasing, including Interface, a manufacturer of carpet tiles, and several computer manufacturers like Dell and Gateway.

- **Life-cycle management.** Life-cycle management is a comprehensive examination of the environmental impacts of a product. IBM’s new personal computer, which contains recycled content plastic, is an example of a life-cycle management decision resulting in an environmentally preferable product.

The stakeholders typically include manufacturers, retailers, consumers and government officials. The product stewardship approach provides incentives to manufacturers to consider the entire life-cycle impacts of a product and its packaging - energy and materials consumption, air and water emissions, the amount of toxics in the product, worker safety and waste disposal - in product design, and to take increasing responsibility for the end-of-life management of the products they produce.

The objective of product stewardship is to encourage manufacturers to redesign products with fewer toxics, and to make them more durable, reusable, and recyclable, and with recycled materials. Since waste disposal impacts and associated costs have been the basis for engaging manufacturers, attention has initially focused on waste management problems and solutions. However,
the challenge of product stewardship is to move beyond disposal to facilitate a paradigm shift toward “zero waste” and “sustainable production.”

The economic prosperity of the last 10 years has increased average per capita income, but it has also dramatically increased the amount of waste sent to landfills, incinerators and wastewater treatment plants. It has also increased the amount of waste recycled. Increased waste means increased recycling and disposal costs. Costs are further escalated by the need to keep a growing number of toxic products out of solid waste disposal facilities. The costs of managing the recyclables and toxic waste have become a financial burden for local communities, and local agencies have turned back to national governments for assistance. State agencies are now turning to product manufacturers, retailers and other potential industry partners to become part of the solution and to alleviate the burden created by what many local governments are calling an “unfunded industry mandate.”

For further information:
- The Product Stewardship Institute – www.productstewardshipinstitute.org/

Industrial ecology

Industrial ecology aims to mimic natural ecosystems in industry. It looks at promoting the symbiotic co-location of industries so that waste from one industry can serve as a raw material input into another. It involves tracking energy and material flows through a particular industrial system and identifying opportunities for symbiotic relationships with the aim of minimising the generation of waste.

Industrial ecology is an interdisciplinary framework for designing and operating industrial systems as living systems interdependent with natural systems. It seeks to balance environmental and economic performance within emerging understanding of local and global ecological constraints. Some of its developers have called it “the science of sustainability”.

IE supports coordination of design over the life cycle of products and processes. It enables creation of short-term innovations with awareness of their long-term impacts. It helps design local solutions that contribute to global solutions.

Industrial ecology helps companies become more competitive by improving their environmental performance and strategic planning. IE helps communities develop and maintain a sound industrial base and infrastructure without sacrificing the quality of their environments. And it helps government agencies design policies and regulations that improve environmental protection while building business competitiveness.

While much of the initial work in IE has focused on manufacturing, a full definition of industrial systems includes service, agricultural, manufacturing, military and other public operations, as well as infrastructure such as landfills, water and sewage systems, and transportation systems.
Industrial ecology encompasses a variety of related areas of research and practice, including:

- Material and energy flow studies ("industrial metabolism")
- Dematerialization and decarbonization
- Technological change and the environment
- Life-cycle planning, design and assessment
- Design for the environment ("eco-design")
- Extended producer responsibility ("product stewardship")
- Eco-industrial parks ("industrial symbiosis")
- Product-oriented environmental policy
- Eco-efficiency

Further information:

- International Society for Industrial Ecology [www.is4ie.org/](http://www.is4ie.org/)
- Journal of Industrial Ecology [www.yale.edu/jie/](http://www.yale.edu/jie/)

**Slide 43 UNEP APELL**

The Awareness and Preparedness for Emergencies at Local Level (APELL) process is a managerial tool to build a multi-stakeholder group that subsequently develops a contingency plan ahead of any foreseeable industry-related disaster. This plan means that damage from a potential disaster is reduced. Indirectly, such a plan also results in risk-reduction measures being taken. If an accident does occur, the response actions are already defined in the contingency plan.

The APELL Programme was developed by UNEP and partner organisations in 1988 as a way of raising awareness of local communities surrounded by industrial zones to potential risks to which they are exposed. The initiative came as a response to major accidents in the early 1980s, specifically in Mexico City and Bhopal.

APELL is:

- A modular, flexible methodological tool for preventing accidents
- Failing this, to minimise their impacts
This is achieved by assisting decision-makers and technical personnel to:
- Increase community awareness
- Prepare co-ordinated response plans involving industry, government, and the local community in the event that unexpected events should endanger life, property or the environment.

APELL was originally developed to cover risks arising from fixed installations, but it has also been adapted for specific applications:

- **APELL For Port Areas** was released in 1996
- **APELL for Mining** was released in 2001
The APELL Programme is directly supported by the International Council of Chemical Associations (ICCA), also representing numerous national associations. Special agreements have also been signed and joint projects undertaken with: the International Atomic Energy Agency (IAEA), the International Programme on Chemical Safety (IPCS), the World Health Organization (WHO), the UN Centre for Human Settlements (HABITAT), the United Nations Industrial Development Organization (UNIDO), the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the International Labour Organization (ILO), and the International Maritime Organization (IMO).

The APELL Handbook (available at http://www.uneptie.org/pc/apell/home), launched in 1988, sets out a ten-step process for the development of an integrated and functional emergency response plan involving local communities, governments, emergency responders and others. This process creates awareness of hazards in communities close to industrial facilities, encourages risk reduction and mitigation, and develops preparedness for emergency response.

Communication is often between the three main groups of stakeholders - company, community and local authorities. Discussion on hazards usually leads to the identification of risk reduction measures, thus making the area safer than before. Structured communication between emergency response bodies (public and company) results in a better-organised overall emergency response effort.

None of the elements of APELL is radical or new. The programme simply provides a common-sense approach to accident prevention and response. APELL can apply to any risk situation, whether industrial or natural. It can be initiated by any party, although companies are expected to take the lead. It can be facilitated by governments, or by industry associations. APELL can be applied in developed and developing countries and in remote or urban areas.

**Benefits of APELL**

APELL can be useful in any situation that requires joint planning by several parties to develop integrated and well understood response plans ready to be implemented should an accident occur.

The APELL process should bring benefits in at least three ways:

- In reducing the likelihood of accidents and reducing their impacts. Even if risks are believed to be low, the consequences to a company of a major accident can be severe in physical, financial and reputational terms. APELL can help protect the company as well as the community.
- In helping to build relationships between a company and the community which will be of benefit over the long term. Companies are becoming more transparent, proactive and responsive in their relationships with stakeholders. Emergency preparedness planning requires effective communication between all parties, which helps to build relationships based on common interest.
- In assisting community awareness and understanding of the operation and its management which should generate the confidence, trust and support which companies need whether or not they experience an accident. These will be severely tested if there is a major accident, but if trust exists, the company will be better placed to communicate effectively in the case of an emergency as well as to recover more quickly from one.
Further information
- http://www.unep.org/pc/apell/home.html

**Slides 45-46  Environmental Assessment Tools: Environmental Impact Assessment**

As a planning tool, an Environmental Impact Assessment (EIA) is regarded as an integral component of sound decision making. It has both information gathering and decision making components which provides the decision maker with an objective basis to either grant or deny approval for a proposed development.

**Key elements of an EIA are:**
- Scoping: identify key issues and concerns of interested parties
- Screening: decide whether an in-depth EIA is required based on initial information collected
- Identifying and evaluating alternatives: list alternative sites and techniques and the impacts of each
- Mitigating measures dealing with uncertainty: review proposed action to prevent or minimise the potential adverse effects of the project
- Issuing environmental statements: report the findings of the EIA

The initiator is usually the applicant for regulatory approval. For further information: www.unep.ch/etu/publications/EIAMan_2editiontoc.htm

Environmental Impact Assessment (EIA) is used to identify the environmental and social impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers. By using EIA both environmental and economic benefits can be achieved, such as reduced cost and time of project implementation and design, avoided treatment/clean-up costs and impacts of laws and regulations.

UNEP promotes the appropriate application of the EIA process to major projects, and supports practitioners, clients and review agencies through the publication of guidance documents. A recent review of the EIA process recommended that it should consider, and be used during, the entire project cycle from planning through operation to eventual closure. EIA should also be closely integrated with the environmental management systems now used by major companies.

**Slides 47-48  Assessment tool: Environmental Risk Assessment (ERA)**

ERA typically consists of Human Health Risk Assessment and Ecological Risk Assessment. As a tool, Environmental Risk Assessment:
- Describes a hazard (whether a chemical pollutant detrimental to human health or habitat loss which will impact on biodiversity)
- Describes the potential for exposure to the hazard, which may be estimated using modelling approaches or by direct measurement of an existing situation
Estimates the risk, or likelihood of a negative effect, based on the hazard and exposures
Considers uncertainties which may be inherent in arriving at the risk estimate.

ERA is a process which helps answer the following:
- What can go wrong? (risk perception)
- What is the likelihood and severity of any adverse occurrence? (risk assessment)
- What can be done to manage any significant adverse occurrence and who should be involved? (risk management and risk communication)

ERA is really a systematic process that can be employed at various tiers of decision-making (from policy, programme, project or activity).

The project proponent is usually the initiator, but the investors or stakeholders who may be impacted could also initiate the process.

For further information: www.oilandgasforum.net/oefonline/module4_enra.htm

**Slide 49** Assessment tool: Environmental Technology Assessment (EnTA)

Environmental Technology Assessment (EnTA) helps decision-makers assess the potential impact of using a new or existing technology. The assessment considers the costs of the technology, the monetary benefits, and its environmental, social and political impacts.

The tool provides:
- A description of the technology, its goal, the likely stakeholders, etc.
- An assessment of the environmental pressure and impacts of using the technology
- An evaluation of the environmental risks and their significance
- A comparative assessment of alternative technologies
- Recommendations on technology choices.

The proponent of the technology usually makes use of EnTA, but investors and stakeholders who may be impacted may also use it.

For further information:
- www.uneptie.org/pc/pc/tools/enta.htm
- www.uneptie.org/pc/cp/library/training/cdgpckt/enta.htm

**Slide 50** EnTA for Identification and Selection of ESTs

Environmental Technology Assessment (EnTA) is a systematic procedure to assess technology options at the pre-investment stage, with a focus on their relative environmental performances, the implications for sustainable development and the likely cultural and socio-economic consequences.
EnTA helps planners, decision makers in government, the private sector, communities and other stakeholders to reach a consensus on the technology intervention that is expected to be the most environmentally sound, socially acceptable and economically viable for a specified location and application.

EnTA is being promoted by the United Nations Environment Programme’s (UNEP) Division of Technology, Industry and Economics, and specifically by its International Environmental Technology Centre (IETC) and its Production and Consumption (P&C) Branch, as well as by other international governmental and private sector organisations. Now that a comprehensive suite of EnTA methodologies, tools and materials is in place, there is a need to optimise application of these resources, consistent with the view that EnTA is an integral part of a dynamic, evolving process of assessment, transfer, uptake and verification of ESTs.

EnTA is not intended to replace other assessment tools already in use, including Environmental Impact Assessment (EIA), Environmental Risk Assessment (ERA) and Life Cycle Assessment (LCA). EnTA has a different focus since it is totally oriented to identifying and evaluating both specific and broader environmental impacts, is predominantly qualitative and comparative, and examines the wider technological process over its entire life cycle.

EnTA provides a particularly valuable tool for determining whether a technology will meet specific performance criteria. It highlights steps in the process where Cleaner Production techniques (such as Pollution Prevention and Toxic Use Reduction) and tools such as Cost-Benefit Analysis and Social Impact Assessment may be applied with advantage.

**Key characteristics of EnTAs**

The key and differentiating characteristics of EnTA are:
- Technology focused
- Focused at enterprise level rather than national policy level
- Designed to ensure consideration of alternative technology interventions
- Simplifying, flexible, largely qualitative yet often subjective
- Designed to involve, and reflect the interests of, multiple stakeholders
- Scoping tool - to be used at the “idea stage”, rather than after development of a formal/full proposal when it is more appropriate to undertake an environmental impact assessment
- A proactive environmental management tool
- Multidisciplinary in approach
- Comprehensive and integrated – with respect to the full life cycle and broad implications of the technology system
- Identifies if more sophisticated assessment tools should be used; and
- Voluntary – it is not considered to be a regulatory tool

It is important to draw attention to the following aspects of an EnTA:
- Intended to be used to prevent environmental problems, rather than solving them after they have become apparent;
- Technical, economic and environmental conditions and processes can often be complex;
therefore many different skills are required in assembling, combining, interpreting, and communicating information;
- Involves simplifying both the relationships between the technology and its environment, and the consequences of those interactions;
- Examines the environmental effects of the entire technological system including the resources used and the wastes produced, over the full life cycle of the technology;
- Considers the wider technological system, rather than the technology itself, in isolation;
- Identifies and assesses alternative technology options rather that just the one advocated by the technology investor; and
- Recognises that the “environment” is wider than ecosystems and living resources, for it includes economic, social, aesthetic and cultural conditions and amenity values.

**Slide 52** Overview of an EnTA

Technologies do not exist in isolation, but are affected by the environment within which they function. And in turn they affect their surroundings. The approach taken in an EnTA is to identify, in a systematic and transparent manner, both the resource demands and environmental pressures generated by a technology, and then determine the likely implications for the environment. The sequence is described by the acronym “DICE”:

- Describe the proposed technology intervention, any alternatives, their requirements, and the operating environment;
- Identify the pressures the technology places on the environment;
- Characterise the environmental impacts these pressures may cause; and
- Evaluate the overall consequences of the impacts, in light of local conditions.

Each demand a technology generates has an impact upon aspects of the wider environment. Some of these impacts will be beneficial and some will not. In an EnTA several impact ‘end-points’ (or environmental outcome categories) are considered. These are Human Health, Local Natural Environment, Global Environment, Social and Cultural Disruptions and Resource Consumption. The use of such end-points assists in assessing the potential impacts of a technology on the wider environment.

**Slide 53** The EnTA Process

This diagram provides an overview of the EnTA process.

**Slide 54** EnTA Identification of Environmental Pressures

This is an example of a checklist used in EnTAs for identifying Environmental Pressures.

**Slide 55** EnTA Preliminary Judgement of Impacts

This is an example of a worksheet used in EnTAs for the preliminary judgement of environmental impacts of a technology.
EnTA Performance Data

Performance data on various technologies that have undergone EnTAs may be obtainable from the following sources:

- **MaESTRO** – a website linked to the UNEP DTIE which provides a searchable database of Environmentally Sound Technologies [http://www.unep.or.jp/maestro2/](http://www.unep.or.jp/maestro2/)
- Technical publications
- Academic Journals
- Expert information

Assessment tool: CP Opportunity Assessment

A CP Opportunity Assessment is a systematic approach to identifying opportunities for implementing cleaner production/eco-efficiency measures in a company. The assessment should look at identifying practical opportunities relating for example to each of the following steps:

- Changing raw material and energy inputs
- Organisation and management practices
- Changing equipment and process technologies
- Re-using and recycling wastes (internally and externally)
- Introducing changes to the product and packaging

Examples of CP worksheets

The next two slides present some examples of practical worksheets that can be used to assist in identifying opportunities within the company for implementing CP measures. These worksheets come from the *Efficient Entrepreneur Calendar: Assistant* of the UNEP/Wuppertal Institute. More information on this initiative is available from [www.efficient-entrepreneur.net](http://www.efficient-entrepreneur.net)

Assessment tool: Life-cycle Assessment

Life cycle assessment (LCA) provides a systematic approach to measuring resource consumption and environmental releases throughout the entire life cycle of a product or service – from resource extraction, raw material transport, manufacture, distribution and use, to final disposal. This is achieved through the compilation of an “inventory” of energy and resource usage, waste generation, emissions and discharges in each stage of the product life cycle.

An LCA can be a powerful tool for effective decision-making when comparing the relative environmental merits of two or more product or service categories. LCA activities often form an important component of product eco-labels and design for environment activities, as well as in identifying effective cleaner production possibilities.

An LCA is carried is carried out in three stages:

- Identifying and quantifying the environmental loads (the energy and raw materials consumed and waste generated)
- Assessing and evaluating the potential environmental impacts of these loads and;
- Assessing the options available for reducing these environmental impacts.
LCA can be used by industry and other types of commercial enterprise, NGOs and consumers. They are, however, expensive and complex to implement. The environmental (and social) impacts of raw material extraction may vary from country to country, and subjective assessments are often required in assessing the relative weightings that emissions should be given.

Life Cycle Assessment attempts to systematically account for that entire web of resources and impacts, and offers a powerful, though still developing tool to rigorously comparing the environmental consequences of product and process choices.

LCA is the focus of one aspect of the emerging ISO 14000 environmental standards – ISO14040. Over the last ten years there has been a rapid expansion in the demand for and use of LCAs, fuelled by both industry and governments. For industry, a major use is in characterising current operating practices with a view towards how industry stands in relation to current and proposed legislative measures. A series of LCAs performed by any company over consecutive years will fully determine that company’s operating practices as well as establishing manufacturing trends. It also helps a company in setting requirements for suppliers in supply chain management (see below Slide 60). For government, awareness of the implications of proposed legislation, especially when the effects may counter those originally intended, can help in usefully amending legislation before it is adopted. A suitable example of this is the setting of realistic recycling targets.

For enterprises in rapidly emerging economies, a ready access to up-to-date technologies and know-how is vital. Joint ventures with companies in the West for such an access is now an established approach. For the interested companies, particularly in large and populous countries such as India and China, an ideal selling point would be the demonstration of their full awareness of the environmental aspects of their operations and adherence to regulations. This is where LCA, as an internationally accepted methodology for establishing full environmental credentials, would be invaluable. Equally, the application of LCA as a management tool could identify optimum strategies for companies interested in becoming resource and energy efficient to international standards.

The interpretation of LCA is still being developed with the result that this step is often omitted from LCA studies: in such cases, what is really being presented is a life cycle inventory (LCI).

Slide 57 provides an example of the life cycle associated with a pair of jeans. Ask delegates to consider what the life cycle of their particular products may look like, and where the most significant environmental impacts are likely to occur. Consider also where in the life cycle most of the environmental management efforts are currently focused.

For further information:
- www.uneptie.org/pc/pc/tools/lca.htm
- http://www.howproductsimpact.net/box/
Monitoring and Auditing Tool: Total Cost Assessment (TCA)

The concept of Total Cost Assessment (TCA), developed in 1991 by the Tellus Institute in Boston, is a useful tool for integrating business and environmental objectives. TCA captures costs and savings that are generally ignored by traditional approaches, with the aim of allowing environmental investments to compete more successfully for limited capital funds. TCA helps to ‘level the playing field’ for investments in environmental improvements and pollution prevention.

TCA goes beyond traditional accounting by examining changes in direct, indirect, contingent and less-quantifiable costs and savings over the longer term. TCA is generally viewed as one tool within the broader field of environmental accounting which seeks to ensure that past, present and future environmental activities are suitably provided for in corporate decision-making.

The Five Major Full Cost Accounting Principles

FCA embodies several key concepts that distinguish it from cash accounting techniques. The following list highlights the five basic tenets of FCA:

- **Accounting for costs rather than outlays.** An outlay is an expenditure of cash to acquire or use a resource. A cost is the value of the resource as it is used. For example, an outlay is made when a truck is purchased, but the cost of the truck is incurred over its active life (e.g. 10 years). The cost of the truck needs to be allocated over the period of its use because every year of use contributes to the deterioration of the truck’s value.

- **Accounting for hidden costs.** With FCA, the value of goods and services is reflected as a cost even if no cash outlay is involved. An organization might receive a grant, for example, to purchase equipment. This equipment has value, even though the organization did not pay for it in cash. The equipment, therefore, should be valued in an FCA analysis.

- **Accounting for overhead and indirect costs to individual services.** FCA accounts for all overhead and indirect costs, including those that are shared with other departments. Overhead and indirect costs might include administrative support, billing, data processing, legal services, and purchasing.

- **Accounting for past and future costs.** FCA includes past and future costs that often do not appear on annual budgets under cash accounting systems. Past (or upfront) costs are initial investments such as the acquisition of vehicles, equipment, or facilities. Future (or back-end) costs are costs that will be incurred to complete operations such as post-employment health and retirement benefits.

- **Accounting for costs according to activities or paths.** For example in solid waste management, activities include waste collection, operation of transfer stations, transport, waste processing and/or disposal, and sale of by-products. Paths include recycling, composting, waste-to-energy, and land disposal. Both the path and the activity ways of looking at costs can be useful. Understanding the costs of each activity often will be necessary for compiling the costs of the entire system and helps evaluate whether to provide a service yourself or contract out for it. However, in considering changes that affect how much waste ends up being recycled, composted, converted to energy, or landfilled, you should focus on the costs of the different paths. Understanding the full costs of each path is an essential first step in discussing whether to shift the flows of solid waste management one way or another.


Environmental auditing

An environmental audit is a “systematic, documented verification process for objectively obtaining and evaluating audit evidence to determine whether specified environmental activities, events, conditions, management systems or information about these matters confirm with audit criteria, and communicating the results of this process.”
Environmental audits may be used in companies to assess compliance with:

- Environmental laws and standards
- A company’s environmental management system (e.g., ISO 14001)
- A company’s environmental/sustainability report

**Slide 64  Supply chain audits and assessments**

There are two overriding reasons why a company that has committed to sustainable development will look to its supply chain.

- First, because most of the innovations it may wish to implement within its own operations will depend heavily on the quality (and sustainability) of what is coming in through its supply chain. As has been demonstrated in the global movement to quality management systems, one’s own best efforts can easily be undermined if one’s suppliers are working to lower standards.
- Secondly, management for sustainability implies a focus on long-term risk reduction, and in achieving this one’s dependence on other companies’ values and performance is critical.

An important supply chain management tool is the supply chain audit, whereby corporate purchasers undertake an assessment of the social and/or environmental performance of their suppliers. Effective supply chain audits can be a valuable means for larger more visible companies to transmit pressure for change, as well as necessary knowledge, down the supply chain.

While there has been some progress in promoting responsibility through corporate supply chains, it is recognised this remains an area where current practice remains relatively weak. Benchmarks such as the UK’s Business in the Community Corporate Responsibility Index indicate that supply chain management is one of the least developed areas, a finding that has been confirmed in a recent international study by the World Bank and Business for Social Responsibility.

*For further information:*

- [www.projectsigma.com/RnDStreams/5_chain.asp](http://www.projectsigma.com/RnDStreams/5_chain.asp)
- [www.napm.org/](http://www.napm.org/)
- [www.chemicalstrategies.org/](http://www.chemicalstrategies.org/)
- [www.bsr.org/](http://www.bsr.org/)

**Slide 65  Environmental Performance Indicators**

A key aspect of an EMS is to set targets and monitor progress against these targets. Environmental Performance Indicators are the most common means of measuring performance against targets. *Indicators* are a form of quantified information that is presented as broad-brush aggregated data that provides decision-makers and interested parties with an indication of performance trends. A key objective of indicators is to provide a summary set of statistics to assist in effective policy decision-making, and to allow the public to readily assess how performance is progressing towards stated targets.

*Sustainability Indicators* are specific indicators that provide reliable information on the current state
of each of the social, economic and environmental elements of sustainable development. These may include input, output and outcome indicators. These indicators may be aggregated into a smaller set of composite indicators. These are useful in simplifying a long list of indicators into a smaller subset of indicators that provide a visible indication of key trends. Most environmental performance indicators should be presented both as absolute and as relative/normalised measures (e.g. energy use per unit of output), as both measures reflect significant yet distinct elements of sustainable development. Absolute figures provide an indication of the organisation’s direct impact on the environment, while relative figures highlight the organisation’s efficiency, which may be useful for comparative purposes.

**Slide 66  Ecological Footprints**

An ecological footprint is a graphic approach for conceptualising the environmental impact of a particular individual, organisation, product, service or political region, and for understanding how this relates to the overall carrying capacity of the planet.

Ecological footprint analysis provides an informative area-based indicator of sustainability.

Despite our technological, economic, and cultural achievements, achieving sustainability requires that we understand human beings as ecological entities. Indeed, from a functional perspective, the relationship of humankind to the rest of the ecosphere is similar to those of millions of other species with which we share the planet. We depend for both basic needs and the production of artefacts on energy and material resources extracted from nature and all this energy/matter is eventually returned in degraded form to the ecosphere as waste. The major material difference between humans and other species is that in addition to our biological metabolism, the human enterprise is characterised by an industrial metabolism.

Economic assessments of the human condition should be based on, or at least informed by, ecological and biophysical analyses.

This approach shows that humankind, through the industrial economy, has become the dominant consumer in most of the Earth’s major ecosystems.

**Slide 67  Corporate Environmental / Sustainability Reporting**

Corporate reporting on environmental and social issues has grown dramatically over the last ten years. A recent international survey found that 45% of the Global Fortune Top 250 companies regularly publish a separate social, environmental and/or sustainability report. The most active sectors are utilities, chemicals, forestry, pulp and paper, mining, and oil and gas. Initially focusing mainly on environmental, health and safety or social issues, corporate reporting on non-financial matters is beginning to shift towards integrated “sustainability reporting” on the triple-bottom-line of environmental, social and economic performance. An important driver for this shift to sustainability reporting has been the development of the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI). GRI is explained in further detail in Module 5.
The following general issues pertain to environmental and sustainability reporting:

- There is increasing community, regulatory and financial pressure on companies to report on their environmental performance.
- Such reporting should respond to the interests of key stakeholders and should report on issues that are material to the company’s core business.
- The process of reporting should feed into development of company strategy, and should provide a stimulus for continuous commitment and improvement.
- The report should provide evidence that the company understands its key environmental impacts and should demonstrate its commitment to addressing these in an effective manner.
- Provision should be included for external verification / assurance.

**Slide 68** Sustainability Reporting – Key questions

An effective process of environmental reporting should consider the following issues:

- Motivation – Why report
- Market – To whom to report
- Message – What to report
- Medium – How to report
- Method – What process to report (including stakeholder engagement and assurance processes)

**Slide 69** GRI guidelines: Environmental performance criteria

The GRI Sustainability Reporting Guidelines includes a detailed set of criteria relating to a company’s economic, social and environmental performance. The core environmental performance criteria relate to:

- Energy – total use / move to renewables
- Materials – total material use / specific issues
- Water – total water use
- Emissions, effluents and waste
- Transport – distance and method
- Suppliers – supply chain management
- Product and services – impact with use
- Land-use / biodiversity
- Compliance

**Slide 70** Report in accordance with GRI

A company that wishes to report “in accordance with” the GRI needs to:

- Report on the numbered elements of Sections 1-3 in Part C
- Include GRI Content Index
- Respond to core indicators in Section 5 of Part C
- Ensure consistency with the reporting principles
- Include statement signed by Board or CEO
The UNGC Principles and the GRI criteria

When considering areas in their corporate reporting to highlight support of the Global Compact principles (i.e. to communicate on progress) companies can use the table in Appendix 3 of the Delegates’ Manual as an assistant guide. The table lists selected core performance indicators from the 2002 GRI Sustainability Reporting Guidelines against the three Global Compact environmental principles.

For further information:
- www.globalreporting.org/
- www.enviroreporting.com/
- www.acc.co.uk/sustainability/
- www.corporateregister.com/

Stakeholder Engagement

A stakeholder is any individual or group who is affected by, or can influence, the activities of another group. For a company, this typically extends to employees and trade unions, shareholders, customers, suppliers, business peers, communities, regulators, NGOs and the media – individuals who have a legitimate interest in the activities of the company and to whom the company owes an account of its conduct.

Stakeholder engagement refers to the process of interaction between an organisation and its stakeholders, beyond the one-way communication of data. Such engagement may be undertaken in order to gather information and ideas, build and strengthen relationships and trust, improve decision-making and enhance the company’s reputation. There are a variety of techniques that can be employed as part of a stakeholder strategy. These include one-to-one interactions such as interviews, as well as one-to-many and many-to-many approaches such as focus groups, workshops, postal and electronic surveys, community panels, telephone hotlines and stakeholder advisory boards.

Effective stakeholder engagement forms an important component of a company’s efforts at promoting sustainable development. It is valuable in fostering trust and developing social capital, and is most important in developing an effective and appropriate sustainability strategy that is based on a common understanding and agreement as to what sustainability means for the company. For this to be realised, companies need to be committed to implementing a process of engagement as a means of shared learning with stakeholders, with the aim of including and empowering them in the development of their strategy. Stakeholder engagement is at the core of AccountAbility 1000 (AA1000), a management framework that seeks to improve the quality of social and ethical accounting, auditing and reporting. It is also explicitly referred in the GRI Sustainability Reporting Guidelines as an important basis for identifying the key performance parameters.

A well planned stakeholder dialogue:
- Helps to scope and prioritise issues
- Allows for greater understanding between stakeholders and their respective needs and constraints
- Ensures direct engagement of different groups and helps forge alliances, collaborative partnerships and shared principles
Enables people to both recognise and take responsibility
Encourages synergy and new ideas
Manages disagreement and conflict

The following are important vehicles for stakeholder engagement and dialogue:

- Sustainability reports
- Company websites (inter/intranet)
- Company newsletters
- Product information (e.g., product declarations and eco-labels)
- Consumer surveys and panels
- Annual consultative stakeholder dialogue and meetings


Slides 74-76 Environmental Labelling and Product Declarations

An eco-label is a market-driven environmental policy instrument used by policy-makers with the aim of promoting environmentally preferable goods and services. The label is applied to a product or service, warranting that the product or service complies with certain pre-determined environmental – and sometimes also social – criteria. The eco-label makes a positive statement about the environmental aspects of a product, and is a reward for the environmental leadership embodied in such a product.

Eco-labels are a guide for consumers to choose products and services that are deemed to be less harmful to the environment than other products within the same category. A principal objective of eco-labels is to encourage the production of more environmentally appropriate products through consumers’ purchasing power. Although the distribution of eco-labels is largely concentrated in the industrialised countries, there have been a number of recent labelling initiatives within developing countries. Furthermore, the use of labels in developed countries may have increasingly significant trade consequences for developing countries.

Eco-labels are potentially attractive instruments for informing consumers (including institutions and governments that consume input materials and products) about the environmental impact of their purchasing decisions, while simultaneously providing producers with a tool for extracting market place preference, and thus market share. Eco-labels provide an opportunity to inform consumers about product characteristics that may not be readily apparent. Eco-labels are not directly quality labels; however, for a product to obtain an eco-label, it would have to be manufactured under strictly controlled conditions for it to pass the criteria laid down by the relevant eco-label.
Using a broad definition of eco-labelling, it is possible to classify eco-labelling programmes on the basis of various key characteristics, including in particular:

- Whether the programme relies on first-party or third-party verification.
  - First-party verification is undertaken by the producers/marketers themselves, with the aim of promoting the positive attributes of the product.
  - Third party verification is undertaken by an independent source that awards labels on the basis of defined environmental criteria.

- Whether the product labelling is positive, negative or neutral.
  - Positive labelling certifies that the product possesses one or more environmentally preferable attributes (e.g. no ozone depleting substances).
  - Negative labelling warns consumers of possible harmful effects substances contained in the labelled product.
  - Neutral labelling simply summarises environmental information regarding the product that may be used by consumers in making their product choices.

- Whether the third-party labelling programme is mandatory or voluntary.
  - Mandatory programmes typically include hazard/warning labels and information disclosure labels (e.g. Material Safety Data Sheets).
  - Voluntary programmes are generally positive or neutral initiatives, and include report-cards, seal-of-approval or single-attribute certification programmes.

- Whether the (voluntary) labels are report-cards, or seal-of-approval or single-attribute certification programmes.
  - Seal of Approval programmes (ISO Type I labels) typically involve issuing a licence to use a particular logo to products on the basis that they are deemed to be less environmentally harmful than comparable products, as determined by specific award criteria that usually include some form of life-cycle consideration.
  - Single Attribute Programmes certify that claims made for a single attribute of a product meet a specified definition (e.g. “recycled” or “biodegradable”). This includes labelling schemes such as that administered by the private Forest Stewardship Council as well as organic food labelling.
  - Report Cards (ISO Type III labels) use a standardised format to categorise and quantify various impacts/burdens that a product has on the environment, thus allowing consumers to make judgements based on their particular environmental concerns.

Type III labelling has received increased prominence recently in the form of the Environmental Product Declaration scheme, which includes third-party verification. An environmental product declaration provides quantified environmental data for a product with pre-set categories of parameters (such as carbon dioxide emissions or global warming potential) based on the results of a life cycle assessment study that has been undertaken in accordance with the ISO 14040 standard series.
Exercise 4.2 – Identifying environmental tools

With reference to the experiences in your own company identify which of the various environmental tools discussed in this session you have used in the recent past. Identify some of the key learning points associated with the implementation of each tool (you may wish to focus only on or two of tools), and share these with the colleagues in your small groups.

- What was the underlying motivation for introducing the tool in your company? Was there a particular champion who may have driven the introduction of this tool?
- What was the anticipated outcome of the tool? Has this objective been met? If not, why not?
- What do you think should be done differently for the tool to be more effective?

If delegates do not have clear examples from their own experience encourage them to use the case studies and to evaluate how useful these tools would be if applied to their own companies.

Exercise 4.3 – Reviewing the case studies

Each delegate should choose one of the case studies contained in their manuals, read through it, and then present a summary of this case study to the other delegates. After presenting the case study, delegates should consider some of the key learning points that have arisen from this study, focusing in particular on the implications of the case study for their respective companies.

As the trainer you should encourage and facilitate an active discussion around each case study, making sure that the principal learning points are drawn out during the discussion and ensuring as far as possible that

Exercise 4.4 – Benefits and barriers of environmental tools

The following table lists some of the principal types of environmental/sustainability tools that have been reviewed in this module. Using this table – and with reference to the experiences in their own company – workshop participants should identify which of the various environmental tools they have used in the recent past. For each of these tools, they should highlight some of the benefits that have been achieved in their company, and identify some of the key barriers that may have been encountered. For those tools that have not yet been used in their company and/or which they have not had direct experience with, they should identify what they see as potential benefits and barriers that may typically be associated with each tool. (Some broad suggested benefits and barriers are included in the table below for discussion purposes. These suggestions have not been included in the Delegates’ Manual).
### Environmental management tools

<table>
<thead>
<tr>
<th>TOOL</th>
<th>SUMMARY</th>
<th>CASE STUDY</th>
<th>BENEFITS REALISED FOR THE COMPANY (General examples)</th>
<th>BARRIERS ENCOUNTERED (General examples)</th>
</tr>
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<tbody>
<tr>
<td><strong>Environmental Management Systems</strong></td>
<td>The part of the overall management system that includes organiza-</td>
<td></td>
<td>■ Help companies to identify and prioritise their key environmental impacts in a structured and systematic manner</td>
<td>■ Time consuming</td>
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<td></td>
<td>tional structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining an environmental policy</td>
<td></td>
<td>■ Provides a framework for setting clear objectives and targets for managing these impacts</td>
<td>■ Requires a significant amount of paperwork and documentation</td>
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<tr>
<td><strong>Internal training and communication</strong></td>
<td>The provision of structured training programmes aimed at building capacity and awareness on the benefits and techniques of environmental management.</td>
<td>Case study 3-3</td>
<td>■ Ensures that structured processes and procedures are in place for measuring and monitoring performance</td>
<td>■ Can be expensive</td>
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<td></td>
<td></td>
<td></td>
<td>■ May assist in identifying cost saving opportunities</td>
<td>■ There may be initial management reluctance</td>
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<td></td>
<td></td>
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<td>■ Can be an important basis for improving market access</td>
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<td></td>
<td></td>
<td></td>
<td>■ Ongoing employee and management training and communication is critical for ensuring sufficient commitment and understanding on benefits and techniques for integrating environmental principles into the business, and for changing attitudes and behaviour</td>
<td>■ Potentially time consuming</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ Can result in improved employee moral and assist in identifying cost saving opportunities associated for example with cleaner production</td>
<td>■ Seen as possible distraction from core business</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>■ Insufficiently clear business benefits</td>
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</tbody>
</table>
| Cleaner production strategy and management programme | The continuous application of an integrated preventive environmental strategy to processes, products and services so as to increase efficiency and reduce risks to humans and the environment. | Case study 3-11 and 4-7 | ■ Prevention of environmental problems rather than “treat/cure”  
■ Saves money by addressing impacts at source  
■ Economic savings identified as well as environmental improvement | ■ Cleaner Production skills needed  
■ May need to employ external consultants  
■ Requires input from senior management to shop floor  
■ Time consuming  
■ Training required |
| Eco-Efficiency                           | Eco-efficiency is a management philosophy which aims to achieve “more with less” by making efficiency improvements within existing processes.                                                               | Case study 3-12     | ■ Helps to identify approaches to producing more value with less input of energy and material, and with reduced emissions.  
■ Related economic savings can be significant | ■ May need to employ external consultants  
■ Requires input from senior management to shop floor  
■ Training required  
■ There may be some initial management reluctance |
| Sustainable production and consumption   | It includes interventions that influence consumption patterns (e.g., product stewardship, product labelling and information and product design).                                                    |                     | ■ Inspires innovation  
■ Potential competitive advantage beyond compliance  
■ Keeps company ahead of the game | ■ Can be against core business model (i.e. to sell as much product as possible)  
■ Can be expensive to implement  
■ Requires R&D  
■ There may be some initial management reluctance |
| Life cycle management                    | An integrated concept for managing the total life cycle of products and services towards more sustainable consumption and production patterns.                                                               |                     | ■ Provides a good understanding of environmental performance of products and processes  
■ Assists in making effective decision making | ■ Expensive and time consuming  
■ Requires R&D  
■ There may be some initial management reluctance |
<table>
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<tr>
<td>Design for environment</td>
<td>An integrated concept for managing the total life cycle of products and services towards more sustainable consumption and production patterns. Design changes may apply to: ■ raw materials ■ manufacturing process ■ product use ■ end-of-life</td>
<td>Case study 3-14</td>
<td>■ Saves money and provides competitive advantage ■ Design out environmental problems ■ Improved risk management ■ Potential first mover advantage by being proactive to possible environmental legislation</td>
<td>■ Requires R&amp;D, may be expensive initially ■ Resistance to change ■ May require process changes and new training</td>
</tr>
<tr>
<td>Product services systems</td>
<td>Developing a marketable mix of products and services that are jointly capable of fulfilling a client's need - with less environmental impact</td>
<td></td>
<td>■ A mix of products and services can fulfil the same client demands with less environmental and social impacts ■ Competitive advantage ■ Long-term sustainability</td>
<td>■ Resistance to change ■ New skills and training required ■ May involve initial up-front expenditure</td>
</tr>
<tr>
<td>Product stewardship (also known as shared responsibility, and extended producer responsibility)</td>
<td>Product stewardship is where all parties involved in the production, selling or use of a product take responsibility for the full environmental and economic impacts that result from the production, use and disposal of that product.</td>
<td>Case study 4-8</td>
<td>■ Manufacturers redesign products with fewer toxics, and with the aim of making them more durable, reusable, and recyclable, and with recycled materials ■ Potential market advantages and longer-term cost savings</td>
<td>■ Time consuming ■ May be expensive initially ■ Often requires R&amp;D ■ May need new technical capacity and skills</td>
</tr>
<tr>
<td>Industrial ecology</td>
<td>Industrial ecology aims to mimic natural ecosystems in industry. It looks at promoting the symbiotic co-location of industries so that waste from one industry can serve as a raw material input into another.</td>
<td>Case study 4-6</td>
<td>■ May help companies to become more competitive by improving their environmental performance and strategic planning ■ Helps communities develop and maintain a sound industrial base and infrastructure without sacrificing the quality of their environments</td>
<td>■ Difficult to identify potential suitable neighbours in same area ■ Potentially expensive initially ■ Often requires R&amp;D ■ May need new technical capacity and skills</td>
</tr>
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</tbody>
</table>
| Environmental impact assessments   | Provides a description of accepted levels of performance and/or prompts the setting of performance targets. Identifies proven means for modifying behaviour to reach these performance targets. |            | ■ Helps companies to proactively identify and manage potential environmental risks  
■ Can be used to identify and implement cost savings | ■ Potentially expensive and very time consuming  
■ May require involvement of external consultants  
■ Can have significant impact on project cycle in terms of timing and final decisions |
| Environmental risk assessments      | A structured process for describing a hazard, identifying the potential for exposure to the hazard, estimating the risk or likelihood of a negative effect based on the hazard and exposures and considering uncertainties associated with the hazard. |            | ■ Helps companies to proactively identify and manage potential environmental risks  
■ Can be used to identify and implement cost savings | ■ Potentially expensive and time consuming  
■ May require involvement of external consultants  
■ Can have significant impact on project cycle in terms of timing and final decisions |
| Environmental technology assessments| Helps decision-makers assess the potential impact of using a new or existing technology. The assessment considers the costs of the technology, the monetary benefits, and its environmental, social and political impacts. | Case study 4-10 and 4-12 | ■ Helps companies to proactively identify and manage potential environmental risks  
■ Can be used to identify and implement cost savings | ■ Potentially expensive and time consuming  
■ May require specific technical skills |
| Cleaner production opportunity assessments | A systematic approach to identifying opportunities for implementing cleaner production/eco-efficiency measures in a company |            | ■ Helps companies to proactively identify and manage potential environmental risks  
■ Can be used to identify and implement cost savings | ■ Potentially expensive  
■ May require specific technical skills |
<table>
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</tr>
</thead>
</table>
| Life cycle assessments       | Provides a systematic approach to measuring resource consumption and environmental releases throughout the entire life cycle of a product or service – from resource extraction, raw material transport, manufacture, distribution and use, to final disposal. |                  | ■ Helps companies to proactively identify and manage potential environmental risks  
 ■ Useful for identifying and implement cost savings  
 ■ Valuable means for informing effective decision-making process | ■ Potentially expensive and very time consuming  
 ■ May require specific technical skills |
| Total cost assessments       | TCA captures costs and savings that are generally ignored by traditional approaches, with the aim of allowing environmental investments to compete more successfully for limited capital funds. TCA helps to ‘level the playing field’ for investments in environmental improvements and pollution prevention. | Case study 4-9   | ■ Helps companies to proactively identify and manage potential environmental risks  
 ■ Useful for identifying and implement cost savings  
 ■ Valuable means for informing effective decision-making process | ■ Requires specific technical skills  
 ■ Dependent on access to reliable information that often is not sufficiently available |
| Environmental monitoring and auditing tools | A systematic, documented verification process for objectively obtaining and evaluating audit evidence to determine whether specified environmental activities, events, conditions, management systems or information about these matters confirm with audit criteria, and communicating the results of this process. | Case study 3-7   | ■ Helps companies to proactively identify and manage potential environmental risks  
 ■ Useful for identifying and implement cost savings | ■ Requires specific technical skills  
 ■ May be time consuming |
| Supply chain audits          | Provides the means for monitoring progress in the performance of suppliers against the host company’s environmental and/or social criteria. | Case study 3-9   | ■ Helps companies to proactively identify and manage potential environmental risks  
 ■ Useful for identifying and implement cost savings | ■ Requires specific technical skills  
 ■ May be time consuming |
<table>
<thead>
<tr>
<th>TOOL</th>
<th>SUMMARY</th>
<th>CASE STUDY</th>
<th>BENEFITS REALISED FOR THE COMPANY (General examples)</th>
<th>BARRIERS ENCOUNTERED (General examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental performance indicators</td>
<td>Indicators are a form of quantified information that is presented as broad-brush aggregated data that provides decision-makers and interested parties with an indication of performance trends. These may include input, output and outcome indicators, and may be aggregated into a smaller set of composite indicators.</td>
<td></td>
<td>■ Essential for effectively monitoring and tracking performance on a meaningful basis</td>
<td>■ Requires specific technical skills</td>
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<td>■ Useful for external communication and accountability</td>
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<td>■ Helps companies to proactively identify and manage potential environmental risks</td>
<td>■ Needs effective internal monitoring and reporting structures</td>
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<td></td>
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<td>Case study 4-5</td>
<td>■ Can be used to identify and implement cost savings</td>
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<td></td>
<td></td>
<td></td>
<td>■ Useful mechanism for informing strategy and for building trust with external stakeholders</td>
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<tr>
<td>Corporate environmental / sustainability reporting</td>
<td>Disclosure by a company of its environmental (and often also its overall “sustainability”) performance. Many companies report against a set of core indicators (including those contained in the GRI guidelines) as well as against issues of concern identified by external stakeholders.</td>
<td>Case study 4-5</td>
<td>■ Helps companies to proactively identify and manage potential environmental risks</td>
<td>■ Potentially expensive and time consuming</td>
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<td></td>
<td></td>
<td></td>
<td>■ Can be used to identify and implement cost savings</td>
<td>■ May require involvement of external consultants</td>
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<td></td>
<td></td>
<td>■ Useful mechanism for informing strategy and for building trust with external stakeholders</td>
<td>■ Can have significant impact on project cycle in terms of timing and final decisions</td>
</tr>
<tr>
<td>Stakeholder engagement</td>
<td>The process of interaction between an organisation and its stakeholders, beyond the one-way communication of data. Such engagement may be undertaken in order to gather information and ideas, build and strengthen relationships and trust, improve decision-making and enhance the company’s reputation.</td>
<td>Case study 3-3</td>
<td>■ Helps companies to proactively identify and manage potential environmental risks</td>
<td>■ Potentially expensive and time consuming</td>
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</tr>
</tbody>
</table>
Session 3: Principles to Practice – Additional Reference Material

The list below offers a broad range of training programmes and kits in the environmental management arena. These should help you develop and enrich your course material, and to integrate ideas and information into existing teaching programmes. Also listed below are some other publications that can be readily converted into teaching material.

**General**

*The Efficient Entrepreneur Programme*
Led by UNEP/Wuppertal Institute. Includes calendar and guide book which help small companies (SMEs) to measure and improve business performance month by month. [www.entrepreneur.net](http://www.entrepreneur.net)

**Cleaner Production**

*Cleaner Production: A Training Resource Package*
This package focuses on CP. It assists individuals who wish to teach the techniques and ethos of cleaner production at educational institutions, but it is also applicable to training at government and company level. [http://www.uneptie.org/pc/cp/library/catalogue/cp_training.htm](http://www.uneptie.org/pc/cp/library/catalogue/cp_training.htm)

**Sectoral Workbooks**

- Pulp and Paper Mills
- Leather Tanning
- Breweries
- Textile Wet Processing
- Lead-Acid Battery Recycling

Available from UNEP DTIE website or on CD ROM. More information for PDFs can be found on: [http://www.uneptie.org/pc/cp/library/home.htm](http://www.uneptie.org/pc/cp/library/home.htm)

**Capacity Building in Training Centres**

Training Package 1 includes three components:

- Integration of Sustainable Production and Consumption
- The Application of Environmental Technology Assessment (EnTA)
- Using Cleaner Production to Facilitate the Implementation of Multilateral Environmental Agreements

Training Package 2 focuses on how to establish and operate a CP Centre including background on CP, training on the tools used by Centres, and information/advice concerning other key operational issues.

**Trainer’s guide**

Introduction to Cleaner Production concept and practice, Introduction to capital budgeting and funding of capital projects, Profiting from Cleaner Production, and Funding Cleaner Production projects.
Short executive presentations ‘Profiting from Cleaner Production’ for government, industry, and financiers (includes CD-ROM). More information can be found at http://www.financingcp.org/training/training.html

**Profiting from Cleaner Production: Checklists for Action**

This support document gives a set of checklists for businesses, government and banks to facilitate financing Cleaner Production investments. More information for PDFs and other materials at: http://www.financingcp.org/training/training.html

**Life Cycle Assessment**

**Life Cycle Assessment: What It Is and How to Do It**

An introduction to LCA, covering its main characteristics and applications, where and why it is used and other tools associated with it. This report provides a useful structure for anyone interested in this teaching approach. More information on: http://www.uneptie.org/pc/pc/tools/lca.htm

**UNEP, Life Cycle Management programme**

The UNEP DTIE Life Cycle Management programme is oriented to the application of life cycle approaches. The LCM programme creates awareness and improves skills of decision-makers by producing information materials, establishing forums for best practice, and carrying out training programmes in all parts of the world. http://www.uneptie.org/pc/sustain/lcinitiative/lcm_program.htm

**UNEP, Life Cycle Initiative training material**

The Life Cycle Inventory programme refers to the second phase of LCA and aims at increasing the access to and quality of LCI databases. The LCI programme improves global access to transparent, high quality life cycle data by hosting and facilitating expert groups whose work results in (web-based) information systems. http://www.uneptie.org/pc/sustain/lcinitiative/training.htm

The Life Cycle Impact Assessment programme refers to the third phase of LCA and deals with the evaluation of environmental impacts (e.g. climate change and toxicity) of products and services over their whole life cycle. The LCIA programme increases the quality and global reach of the life cycle indicators by promoting the exchange of views among experts whose work results in a set of widely accepted recommendations.

**Eco-design**

**Eco-design: A promising approach to sustainable production and consumption**

This manual provides basic information to support education programmes in eco-design. More information from: http://www.uneptie.org/pc/pc/tools/ecodesign.htm

**Sustainable Consumption**

- UNEP/UNESCO: YouthXchange, training kit on responsible consumption, 2002
  http://www.youthxchange.net
- UNEP, Production and Consumption tools
  http://www.uneptie.org/pc/pc/tools/ems.htm
  http://www.uneptie.org/pc/pc/tools/supplychain.htm
UNEP, Sustainable Procurement Activities
http://www.unep.org/pc/sustain/design/green-proc.htm

Talk the Walk — Advancing Sustainable Lifestyles through Marketing and Communication
This publication by UNEP, the Global Compact Office and Utopies (2005) provides critical analysis and a collection of examples of advertising to promote sustainable lifestyles. It builds on the Global Compact Policy Dialogue on 'Sustainable Consumption: Marketing and Communications', hosted by UNEP and the Global Compact in Paris, April 2004. Available at:

Reporting
High 5! — Introducing SMEs to sustainability reporting and the GRI
This handbook was developed using a multi-stakeholder consultative process convened by the Global Reporting Initiative (GRI) in response to many requests for a “beginner’s guide”. It offers a step-by-step guidance and practical how-to advice on using the GRI Sustainability Reporting Guidelines, so that SMEs can easily and effectively create sustainability reports that bring value to their businesses and communications practices. Available from:
http://www.globalreporting.org/workgroup/sme/intro.asp

Stakeholder engagement

Environmental Technology Assessment
An interactive, e-learning package designed to increase dissemination, aid promotion and facilitate the application of Environmental Technology Assessment (EnTA).
http://www.unep.org/-pc/pc/tools/enta.htm

APELL
A Training Resources Package: Management of Industrial Accident Prevention and Preparedness
This package provides material to give an introduction to the issues of industrial accidents and APELL. It includes background papers, references, overhead slides, case studies and work exercises. More information is available from:
http://www.unep.org/pc/apell/publications/related-pubs.html

Tourism
Sowing the Seeds of Change: An Environmental Teaching Pack for the Hospitality Industry
This is a comprehensive information pack for developing and expanding the environmental curriculum in hotel schools, produced with the International Hotel and Restaurant Association and EUHOFSA. More information on: http://www.unep.org/pc/tourism/library/training-hotel.htm

Thematic Publications, Brochures
The above training manuals are supported by a library of UNEP documents on various technolo-
gy and policy issues, as listed in the brochures below – available on:
http://www.uneptie.org/pct-pclibrary.htm

Hazardous Waste
Training Resource Pack for hazardous waste management in developing economies. More info
on: http://www.uneptie.org/pchazardouswaste/menu.htm

Hazardous Waste Policies and Strategies — a trainer’s manual
UNEP/ISWA (1991) Included in Training Resource Pack referenced above; also on:
http://www.uneptie.org/pchazardouswaste/ssmenuD2.htm

Landfill of Hazardous Industrial Wastes — A trainer’s manual
UNEP/ISWA included in Training Resource Pack referenced under APELL; also on
http://www.uneptie.org/pchazardouswaste/ssmenuD3.htm

Risk Management of Contaminated Industrial Land
Included in Training Resource Pack referenced under APELL; also on
http://www.uneptie.org/pchazardouswaste/ssmenuD5.htm

Environmental Management System (EMS) Training Resource Kit 2nd Edition (UNEP/FIDIC/ICC)
Allows trainers to conduct courses in environmental management systems and offers
guidance on adapting the kit to local conditions and culture. More information on:

UNEP/FIDIC / ICLEI Urban Environmental Management: Environmental Management
Training Resources Kit
This offers local authorities a systematic approach to integrate environmental considerations
into all aspects of their activities. More information on:
http://www.unep.or.jp/ietc/Announcements/EMSkit_launch.asp

Produced by DTIE Economics and Trade Unit. Also available on: http://www.unep.ch/etu/publica-
tions/EIAMan_2edition.htm
Environmental Technology Assessment (EnTA) – is a tool for improving the quality of
decision-making, building consensus among stakeholders and keeping assessments focused.
Teaching material can be developed from EnTA on-line, found on:
http://www.unep.or.jp/ietc/Publications/index.asp

Environmental Technology Assessment (EnTA) in Sub-Saharan Africa — a UNEP EnTA
Leadership
More information: http://www.unep.or.jp/ietc/Publications/index_Integrative.asp

The Environmental Management Navigator
The package includes materials for training of SMEs on selecting and applying appropriate
tools for improved environmental management and performance. For more information:
http://www.em-navigator.net/
Resources for Life Cycle Assessment and Life Cycle Management:
http://www.uneptie.org/pc/pc/tools/lca.htm

Environmental Management of Industrial Estates: Information and Training Resources
This manual shows the potential environmental impacts of industrial estates, introduces the strategies and tools that are available for managing these impacts, and provides case studies collected from real practices around the world. It also proposes some modules for training workshops and a collection of overhead presentations. A list of further reading and contacts is included. Also available on:
http://www.uneptie.org/pc/ind-estates/support-tools/Kit.htm

Final Report on Joint Conference on Engineering Education and Training for Sustainable Development
This report has been prepared for the sponsors and delegates of the conference. The collected papers are held by the UNEP DTIE Information Centre in Paris. Some of the material is also available on the Conference website available from here: http://www.enpc.fr

Training Publications/Sources from other DTIE Branches/UNEP Institutions
Additional useful training materials on energy issues can be found at http://www.uneptie.org/energy/act/re/RETS/index.htm http://www.areed.org/training/index.htm

OzonAction
Training resources awareness materials, guidelines, resource modules and reports can be found on: http://www.uneptie.org/ozonaction/

Energy
Information useful for training and education on environmentally sound technologies and services can be found on: http://www.unep.fr/en/branches/energy.htm

Chemicals
Information useful for training and education can be found on: http://www.chem.unep.ch/publications.htm

Economics and Trade
Information useful for workshops and seminars can be found on:
http://www.unep.ch/etu/etp/acts/manpols/index.htm

International Environmental Technology Centre (IETC)
Information on materials useful for teaching can be found on:
http://www.unep.or.jp/ietc/Publications/index.asp

Training on tools for SCP: http://www.uneptie.org/pc/cp/library/training/cdgpack/cpsc.htm
Module 5

ENVIRONMENTAL INITIATIVES AND INSTITUTIONS
MODULE 5: Environmental Initiatives and Institutions

TIME: 1 Hour

OBJECTIVES:
The objectives of this session are:
- To provide a brief overview of a broad suite of environmentally-related sustainability initiatives (including codes of practice, management standards and general principles).
- To improve understanding on the inter-relationship between these different initiatives.
- To provide an overview of a range of sustainability institutions (business, academic and research to NGOs).
- To provide relevant links and contacts for these.

Speaker’s Notes

Slide 1  Title slide

Slide 2  Key Initiatives – Understanding the relationship

Sustainability management standards, codes of conduct and sectoral business initiatives abound – and many of them have been developed over the last decade. Almost all have been developed with input from business, government, labour bodies and non-governmental organisations (NGOs). One of the best ways to distinguish between them all is in terms of their scope and objective. The next few slides will provide a brief overview of some of the main codes of practice, principles, management standards, specifications and reporting guidelines.

For the purposes of this presentation, the various different initiatives have been divided as follows:
- Global Principles / Codes of Practice
- Management System Specifications
- Guidelines on Reporting and Stakeholder Engagement
- Sectoral-specific initiatives

Slides 3-6  Key Initiatives – Understanding the Relationship (2)

This slides introduces some of the most significant international environmental initiatives (and those that are covered in more detail in this section of the manual), divided using the typology presented in the previous slide.
- Global Principles / Codes of Practice
  - The UN Global Compact
  - The OECD Guidelines for Multinational Enterprises

- Management System Specifications
  - ISO 14001
  - EMAS
  - SIGMA
Guidelines on reporting and stakeholder engagement

- The Global Reporting Initiative (GRI)
- The AccountAbility AA 1000s

Sectoral-specific initiatives

- Forest Stewardship Council
- Marine Stewardship Council
- London Principles
- Equator Principles
- UNEP/Industry sector initiatives
- UNIDO/UNEP National CP Centres

Slide 7 Global Principles and Codes

UN Global Compact: This is covered in detail throughout this course and in the Global Compact Resource Package (2004).

OECD Guidelines for Multinational Enterprises: The Organisation for Economic Cooperation and Development (OECD) is a group of 30 developed nations, in which the participating governments discuss, develop and perfect economic and social policy. The OECD Guidelines for Multinational Organisations:

- Are non-legally binding recommendations addressed by governments to multinational enterprises operating in or from adhering countries
- Are designed to ensure that multi-national organisations conduct their business in accordance with the policies of the countries within which they operate
- Provide voluntary principles for responsible business conduct on issues such as employment and industrial relations, the environment, bribery and corruption, human rights, consumer interests, information disclosure, competition and taxation
- Were published in 1976 and were revised in 2000, with more of a focus on sustainable development issues as well as including all the core labour conventions of the ILO

While these Guidelines differ from most of the others considered below – in that they are for governments, rather than companies, to commit to – they nevertheless make a significant contribution to CSR activities. If implemented effectively, they have the potential to demonstrate the efficacy of self-regulation and to contribute to shifting company-stakeholder relationships from an adversarial to a more solutions-focused.

ICC Business/Sustainable Development Declaration: was formally launched by the International Chamber of Commerce in April 1991 at the Second World Industry Conference on Environmental Management in Rotterdam, and continues to be widely applied and recognised around the world. The Charter was issued in response to the World Commission on Environment and Development report, and sets out 16 principles for environmental management by individual corporations and business organisations. The Charter covers environmentally relevant aspects of health, safety and product stewardship. Its objective is that the widest range of enterprises commit themselves to improving their environmental performance in accordance with the principles, to having in place management practices to
effect such improvement, to measuring their progress, and to reporting this progress as appropriate, internally and externally’. The Business Charter has been published in over 20 languages, including all the official languages of the United Nations.

**Slide 8 Management Systems Specifications: An Introduction**

Underlying any company initiative aimed at promoting sustainable development is the implementation of a structured management system. In the last decade a number of voluntary *management standards* have been developed. These provide a systematic means of addressing environmental, social, and health and safety concerns, while also enabling companies to obtain internationally recognised certification that may have valuable marketing benefits.

When management systems are designed and implemented effectively, they can:

- Help companies identify and prioritise their key environmental and/or social impacts in a structured and systematic manner
- Provide a framework for setting clear objectives and targets for managing these impacts
- Ensure that structured processes and procedures are in place for measuring and monitoring performance.

**Slide 9 Management Systems Specifications: Criticisms**

While noting the potential benefits of *environmental management system specifications* (as outlined above) it is important also to appreciate some of the criticisms and concerns that have been raised regarding their use.

Key criticisms include the fact that:

- They focus efforts on incremental improvements rather than on the redesign and rethinking – “doing what you do, right” rather than “doing the right thing”
- They are often quite rigid and bureaucratic
- They can be very complex, requiring detailed document control procedures
- There is often inadequate provision for the integration of stakeholder input
- Their efficacy can depend on the quality and thoroughness of the certification and accreditation bodies (in this regard it is useful to reflect for example on the fact that the experience in implementing EMS specifications may differ significantly from country to country, with some regions placing far greater emphasis on environmental performance aspects than others which tend to rely more predominantly on the implementation of management procedures)
- There is a difference between process and performance standards/indicators

**Slide 10 Management Systems Specifications: Examples**

This slide briefly introduces the two most significant environmental management system specifications, before going on to introduce SIGMA, a recent initiative aimed at developing a specification for sustainability management more broadly.

- *ISO 14001*: The cornerstone of the ISO series – and the benchmark standard for
environmental management systems – is the ISO 14001 EMS Specification. ISO 14001 focuses on broad organisational processes, and describes how a company should manage its organisational system so that it monitors, measures and continually improves on its environmental performance.

- **EMAS**: Similar to ISO 14001, the EMAS standard is a non-regulatory, voluntary standard for environmental management systems and auditing. The key difference to ISO 14001 is that EMAS requires the publication of an externally verified statement of environmental performance. EMAS is also only applicable within the European Union.

- **SIGMA**: The SIGMA Project was formed in June 1999, as a partnership between the British Standards Institute, Forum for the Future and AccountAbility, with sponsorship from the UK Department of Trade and Industry and the Department of the Environment, Transport and the Regions. The project has been working towards helping organisations improve their performance on social, economic and environmental issues. The objective is to create a strategic management framework for sustainability, to be applied across the board, for ultimate adoption at European and international level. The aim is to develop the ‘next generation’ tools and standards for the economic, environmental and social aspects of sustainability, drawing together existing initiatives and placing them within a holistic framework. Any eventual output could then be managed by ISO at the international level.

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**Environmental Standard: The ISO 14000 Series**

The ISO 14000 series has been developed by the ISO environmental management committee ISO/TC 207, which was set up in 1993 following preparatory consultations held under the umbrella of the Strategic Advisory Group on Environment (SAGE). Today the ISO 14000 involves a series of standards that help companies to establish and maintain a structured and systemic effort to improve their environmental performance. It does this with the goal of continual performance. ISO’s technical committee ISO/TC 207 works closely with the committee ISO/TC 176, responsible for quality management and assurance, to ensure compatibility between the ISO 14000 series and the ISO 9000 family of quality management standards.

The series with its organisation-oriented and product-oriented parts includes the following:

- Environmental Management Systems and Communication: ISO 14001, ISO 14004 and ISO 14063
- Environmental Auditing: ISO 14010 series and ISO 19011
- Environmental Performance: ISO 14030 series
- Environmental Labels and Environmental Declarations: ISO 14020 series
- Life Cycle Assessment: ISO 14040 series
- Environmental Aspects: ISO Guide 64 and ISO/TR 14062

These standards can be used independently or together.

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**Environmental Standard: The ISO 14000 Series**

This slide presents the above series in a graphical and more detailed manner (reproduced from the ISO website).
Key implications for a certified EMS (ISO 14001)

ISO 14001 includes core elements in five categories with requirements that range from environmental policy, environmental assessment, objectives and targets, training and communication, to review and auditing. It includes fifty-two “shall” (action) requirements. Under the core element “Check” (checking and corrective action), it includes for example “Monitoring and Measurement” with the requirement that the “organization shall establish and maintain documented procedures to monitor and measure, on a regular basis, the key characteristics of its operations and activities that can have significant impact on the environment”.

With respect to basic concepts used in ISO 14001, an important distinction is that made between environmental aspects and impacts. Environmental impact refers to any change to the environment that results wholly or partially from the organization’s activities, products or services. The environmental management system does not directly influence the environmental impacts. It is focused on the causes of the environmental impact, for which ISO 14001 uses the term “environmental aspect”. The latter is defined as an “element of an organization’s activities, products or services that can interact with the environment”. ISO 14001 does not require an organization to consider all their aspects, but only those that are considered significant. Adding some guidance, ISO 14004 states that significance is associated with environmental concerns such as the scale, severity, duration and probability of the impact, as well as by other business concerns such as potential regulatory or legal exposure. Some of the aspects may not be directly caused by the organization, but by suppliers, contractors or by clients when using the products. In this respect ISO 14001 requires that the management system of an organization considers not only the aspects of its own operations, but also those which it can influence.

In practice the ISO 14001 registration programme allows company facilities to (i) install a management system that over time generates significant advantages, including lowered emissions or waste and lessened risks, (ii) conform to new approaches or methods for environmental management and new environmental legislative requirements, (iii) send a signal to stakeholders that the operator of the facility is showing commitment to environmental responsibility, and (iv) help the company to retain or gain new consumers.

In principle the standard is applicable to any organization that, in addition to implementing and improving an environmental management system, wishes to:
- Assure itself of its conformance with its stated environmental policy
- Demonstrate such conformance to others
-Seek certification or registration of its management system by an external organization
- Make a self-determination and self-declaration of conformance with the international standard

The environmental management system is part of the broader system of management in the company, with other subsystems on, for example, quality, occupational health and safety, security and economy. This poses the company with the challenge of integration and coordination as it seeks to find appropriate connections between its physical system boundaries and organizational or functional system boundaries.

In countries that do not have a tradition of environmental legislation going back many years or that
have weak enforcement of legislation, the introduction of the standard with registration would probably require more physical process changes from companies. The cost of investing in the implementation of ISO 14001 – which may range from US$ 25,000 to US$ 128,000 - is rewarded by savings generated.

ISO has suggested a number of conditions as determining how quickly and how effectively the return for an organization’s investment in ISO 14001 occurs. They include:

- The status and level of sophistication of its existing management system
- The degree of environmental challenge it faces
- The amount and quality of resources it has access to
- Its state of preparedness
- The knowledge, skill and ability of its staff
- The expectations of its stakeholders,
- Its current status of compliance with legal requirements,
- The level of verification required by the organization to meet market requirements or the expectations of stakeholders

Explain that while ISO 14001 has been criticised for being mainly a process standard that is weak at addressing performance standards, its strength is in laying the basis for improvement, with the establishment of procedures, documentation and operational control, as well as embedding environmental care in the company through training and putting in place an integrated system. ISO 14001 has made its mark with a total of almost 23,000 registrations within the first four years following its launch in 1996.

**Guidelines on Reporting and Stakeholder Engagement**

An important development in the last ten years has been the rapid increase in corporate reporting on non-financial performance. This slide presents two of the most important initiatives relating to reporting and stakeholder engagement.

- **The Global Reporting Initiative (GRI):** The Global Reporting Initiative (GRI) was established in 1997 by the Coalition on Environmentally Responsible Economies (CERES) and UNEP. The aim was to elevate sustainability reporting to the same level as that of financial reporting, ensuring that it has the same levels of credibility, rigour, timeliness and verifiability. The GRI is now an independent organisation, based in the Netherlands, and recognised as a United Nations Environment Programme (UNEP) Collaborating Centre.

In 1999 the GRI published the first draft Sustainability Reporting Guidelines, which were revised in 2002. The 3rd revised Guidelines will be launched in October 2006. By end of 2005, there were over 700 GRI self-declared reporters, mainly based in Europe, North America and Asia. The GRI:

- Provides guidance on the format and content of reports
- Provides assistance on how to normalise and verify data
- Contains a comprehensive set of organisational, management system and performance parameters
- Encourages companies to set targets and commitments
- Strongly encourages the adoption of a stakeholder engagement process.
The GRI complements the Global Compact by providing delegates with an instrument to
demonstrate accountability with respect to the Global Compact’s ten principles in their annual
communications and reports. External stakeholders, especially investors and civil society, are
also able to use GRI reports to assess how companies are implementing the principles.
For further information on the GRI see www.globalreporting.org

- **The AA 1000 Series:** Launched in 1999, the AA1000S is a best practice standard for a
stakeholder-based approach to social and ethical accounting, auditing and reporting. It was
developed by the UK Institute of Social and Ethical Accountability (AccountAbility). The AA1000S:
  - Guides the establishment of an inclusive stakeholder engagement process aimed at identi-
fying key issues and priorities
  - Defines performance metrics and targets
  - Contributes to the development of accounting, auditing and reporting systems
  - Contains the principles of a quality standard as well as a set of process standards that
cover planning, accounting, auditing and reporting
  - Makes reference to and builds on previous management system initiatives such as ISO
    9001 and ISO 14001
  - Seeks to encourage social and ethical accounting, auditing and reporting practices that are
    inclusive, complete, material and regular

For further information on AccountAbility 1000 see www.accountability.org.uk

**Slide 15  Sectoral-specific initiatives (1)**

The next series of slides introduce a number of prominent environmental initiatives that have been
developed by different industry sectors. These are intended to provide a very general overview and
introduction only – and are presented by way of example.

- **The Forest Stewardship Council (FSC):** is an international, non-profit NGO that was
  founded in 1993 in response to growing international concerns regarding deforestation as well
  as increasing consumer demand for a credible wood-labelling scheme. The FSC:
  - Promotes responsible management of the world’s forests through forest certification and
    product labelling
  - Comprises national working groups in 28 countries, and is supported by a number of
    NGOs including WWF, Greenpeace, and Friends of the Earth
  - Covers all types of forest (tropical, temperate and boreal)
  - Evaluates, accredits and monitors independent certification organisations, which then certi-
    fy individual forest management practices
  - Has 10 Principles of Forest Stewardship by which forests are inspected

To acquire FSC certification, a forest must be managed in an environmentally appropriate,
socially beneficial and economically viable manner. Forests that meet these strict standards
are given FSC certification and the timber is allowed to carry the FSC label. The FSC label is
currently found on over 10,000 product lines including household and garden furniture,
kitchen, bathroom and general houseware, wall paper and flooring, and paper and pencils.
For further information on the FSC see www.fscoax.org/

The Marine Stewardship Council: is an independent, global, non-profit organisation that was set up to promote sustainable fisheries and responsible fishing practices. The MSC was established in 1997 as a joint initiative between WWF and Unilever. The MSC became fully independent from both organisations in 1999, and is currently funded by a range of organisations, including charitable foundations and private companies.

In terms of the scheme, fisheries that have adopted environmentally responsible management practices may use a distinctive blue label for their products. The certification, which is undertaken by independent, accredited certification bodies, is intended to be equally valid for all types of fisheries, irrespective of size and location. The principles and criteria cover marine fish and invertebrates, but exclude harvest of other marine species, aquaculture and freshwater fisheries. The criteria are intended to ensure that the fish products come from well-managed sources. The MSC is guided by three key principles for sustainable fishing: avoiding over-fishing or depletion of exploited populations; maintaining the structure, productivity, function and diversity of the relevant habitats; and respecting local, national and international laws and standards.

The standard was developed over a period of two years, following an international consultative process with scientists, fisheries experts, environmental organisations and other interested parties.

For further information on the Marine Stewardship Council see http://www.msc.org/

The international chemical industry’s Responsible Care programme was first developed in Canada in 1995 to address public concerns about the manufacture, distribution and use of chemicals. It is an internationally recognised framework for voluntary environmental, health and safety improvement that is currently implemented in 46 countries. The initiative attempts to foster the adoption of corporate values that emphasise a long-term commitment to community and occupational health and safety and to environmental protection.

Responsible Care incorporates eight fundamental features including a formal commitment on behalf of each signatory company to a set of Guiding Principles signed by the CEO. This commitment involves progressive development of indicators against which improvements in performance can be measured. A core feature of the initiative is the six Codes of Management Practices dealing with the following issues:
- Community Awareness and Emergency Response
- Pollution Prevention
- Process Safety
- Distribution
- Employee Health and Safety
- Product Stewardship

Companies that adopt Responsible Care are encouraged to implement effective measures for engaging with their neighbouring communities, including the establishment of community
awareness and emergency response (CAER) committees. At an international level, efforts are currently underway to promote the adoption of Responsible Care in new countries with significant chemicals production, as well as to improve the existing implementation assurance process. In 2002, Responsible Care was one of four global partnerships award winners in the WSSD Business Awards for Sustainable Development Partnerships presented by the ICC in association with UNEP (refer to http://www.iccwbo.org/index.asp).

Slide 16  Sectoral-specific initiatives (2)

- The **FTSE4Good Index Series**: was launched in July 2001 as an investment tool for investors interested in socially responsible investment. Since its launch, over 250 companies have entered the index, in many cases having to adapt their practices to do so.

The selection criteria and methodology for the FTSE4Good are based on common themes from ten sets of declared principles. Both the philosophy and the FTSE4Good inclusion criteria are regularly revised and updated through a widespread market consultation process, so as to ensure that the criteria reflect recent developments in CSR and SRI practice. To be eligible for inclusion, companies in the starting universe need to meet prescribed standards in three areas: environmental sustainability, universal human rights and developing positive relations with stakeholders. The index series excludes companies involved in tobacco, weapons and nuclear power industries.

*For further information on the FTSE4Good see [www2.ftse.com/ftse4good/](http://www2.ftse.com/ftse4good/)*

- The **London Principles of Sustainable Finance** is a voluntary code of seven principles that propose conditions under which financial market mechanisms can best promote the financing of sustainable development. The Principles are intended as a framework to allow financing institutions and policy-makers to identify where future innovation is needed in order to improve the way the financial system as a whole finances sustainable development. The Principles apply to all aspects of finances and not just value-based investment and specific financing and banking niches.

- The **Equator Principles** are a voluntary set of guidelines for managing the social and environmental issues related to the financing of development projects. The principles were first adopted on 4 June 2003 by ten leading international banks from seven countries. The banks will apply the principles globally to project financing in all industry sectors, including mining, oil and gas, and forestry. The banks that first adopted the Equator Principles underwrote approximately $14.5 billion of project loans in 2002, representing approximately 30% of the project loan syndication market globally. The initial banks were ABN AMRO Bank, N.V., Barclays PLC, Citigroup, Inc., Credit Lyonnais, Credit Suisse Group, HVB Group, Rabobank, Royal Bank of Scotland, WestLB AG, and Westpac Banking Corporation.

The Equator Principles are based on the policies and guidelines of the World Bank and International Finance Corporation (IFC), and will be applied by the Banks to all loans for projects with a capital cost of $50 million or more. In adopting the Principles, a bank undertakes to provide loans only to those projects whose sponsors can demonstrate their
ability and willingness to comply with comprehensive processes aimed at ensuring that projects are developed in a socially responsible manner and according to sound environmental management practices.

The Principles use a screening process for projects that is based on the IFC’s environmental and social screening process. Projects are categorised by the banks as A, B or C (high, medium or low environmental or social risk). For A and B projects (high and medium risk), the borrower is required to complete an Environmental Assessment addressing the environmental and social issues identified in the categorisation process. After appropriate consultation with affected local stakeholders, category A projects, and category B projects where appropriate, will prepare Environmental Management Plans which address mitigation and monitoring of environmental and social risks.

The Equator Principles were created in response to criticism coming from environmental and social pressure groups that bank loans have often contributed to the contamination and impoverishment of the developing world. While some activists have cautiously welcomed the initiative, others have remained sceptical regarding its implementation. A number of other banks have expressed interest in signing up to the Equator Principles and it is envisaged that the guidelines will become the industry standard.

For further information on the Equator Principles see www.equator-principles.com/

The Greenhouse Gas Protocol Initiative (GHG Protocol) was established in 1998 as a partnership between the World Business Council for Sustainable Development and the World Resources Institute to develop internationally-accepted accounting and reporting standards for greenhouse gas emissions from companies. The GHG Protocol brings together leading experts on greenhouse gas emissions to develop these standards. The GHG Protocol has split the development of the standards into two components:

- Corporate GHG Accounting and Reporting: Corporate Inventory Module – This component is developing a step-by-step guide for companies to account for and report their GHG emissions.
- Project GHG Accounting and Reporting – This component is developing a guide for accounting and reporting emissions from projects that are developed to offset GHG emissions.

For further information on the GHG Protocol see www.ghgprotocol.org/

WEF Greenhouse Register Initiative (2004). In cooperation with leading businesses and environmental organizations, the World Economic Forum has created the Global Greenhouse Gas (GHG) Register to promote corporate GHG emission transparency. Companies are invited to participate in the Global GHG Register, which is a tool for corporations to record their GHG emissions on a public website.

For further information on the WEF Greenhouse Register Initiative see http://www.weforum.org/site/homepublic.nsf/Content/Global+Greenhouse+Gas+Register
Sectoral-specific initiatives (3)

- **Joint UNEP / Industry Sector Initiatives:** The following initiatives have been created between UNEP and industry whereby companies agree to develop environmentally sound practices along the lines of the Rio principles. Some are well established while others are in the process of being developed:
  - Tour Operators Initiative for Sustainable Development [http://www.toinitiative.org](http://www.toinitiative.org)
  - Global e-Sustainability Initiative [www.gesi.org](http://www.gesi.org)
  - Advertising and Communication Initiative [www.unep.org/pc/sustain/advertising/advertising.htm](http://www.unep.org/pc/sustain/advertising/advertising.htm)
  - Building and Construction Forum [http://www.unep.or.jp/ietc/sbc/Forum_Activities/intro.asp](http://www.unep.or.jp/ietc/sbc/Forum_Activities/intro.asp)

Sectoral-specific initiatives (4)

- **UNIDO/UNEP National Cleaner Production Centres:** Cleaner Production can only be sustained in a country if capacity is in place to adopt it. True appreciation of Cleaner Production and its application can only come about if the concept is promoted by professionals in the beneficiary country itself and adjusted to the local conditions. The role of UNEP’s National Cleaner Production Centres (NCPCs) is to promote, coordinate and facilitate Cleaner Production activities within each country. Their purpose is to build local capacity to implement Cleaner Production in developing countries and economies in transition.

There are 24 UNIDO/UNEP NCPCs in the following countries: Brazil, China, Costa Rica, Czech Republic, El Salvador, Ethiopia, Guatemala, Hungary, India, Kenya, Korea, Lebanon, Mexico, Morocco, Mozambique, Nicaragua, Slovak Republic, South Africa, Sri Lanka, Tanzania, Tunisia, Uganda, Vietnam, and Zimbabwe.

NCPC’s target is primarily to transfer know-how and not to transfer only technology. The centres, and the Cleaner Production assessors trained by them, do not deliver ready-made solutions. They train and advise their clients on how to find the best solutions for their own specific problems. The basic services:

- Raise awareness of the benefits and advantages of Cleaner Production
- Demonstrate that Cleaner Production works through in-plant Cleaner Production assessments and demonstration projects
- Train local experts and build local capacity for Cleaner Production
- Help to obtain financing for Cleaner Production investments
- Disseminate technical information
- Provide policy advice to national and local governments

UNEP assists NCPCs to develop and expand their capacities and services through capacity building. It provides training packages on Cleaner Production and related topics: [http://uneptie.org/pc/cp/library/catalogue/cp_training.htm](http://uneptie.org/pc/cp/library/catalogue/cp_training.htm)
Slide 19 Business Organisations on the Environment (1)

The following two slides provide a brief overview of business institutions involved in environmental management and related activities:

- **The World Business Council for Sustainable Development (WBCSD):** is a coalition of over 130 international companies that provides a business perspective on sustainable development issues and whose primary goal is to encourage high standards of environmental management in business. It conducts research, promotes collaboration, and publishes information to help companies and industry sectors best manage sustainable development issues.

  The WBSCD produces many reports and guides on issues ranging from biodiversity to eco-efficiency/metrics that help inform the business and non-business community about the sustainable business approach to the issues and to promote elevated standards. It conducts research, promotes collaboration and publishes information to help companies and industry sectors develop significant improvements in environmental areas and to better understand social issues. WBCSD also produces the Trade and Environment Bulletin each quarter. The WBCSD’s website features all of its current work, including reports, stakeholder dialogue summaries, case studies, educational initiatives, an interactive discussion page, links to other websites and a list of available publications.

  For further information on the WBCSD see www.wbcsd.ch

- **The Management Institute for Environment and Business (MEB):** part of the World Resources Institute, it is dedicated to educating current and future business leaders by working with business schools to integrate environmental and sustainability issues into the core curriculum, and to provide direct industry outreach and training. It builds bridges between academia and companies by helping to integrate environmental topics into business school curricula, and helps companies develop management practices and skills that result in significant progress in the development of environmental technologies and practices. MEB educates business leaders through these programs:
  - **Educational Services:** Manages the BELL (Business Environment Leadership and Learning) program, which concentrates on educating business school students about environmental concerns. A related program, LA-BELL, focuses its efforts on Latin America.
  - **Outreach Services:** Manages the SPLASH (Strategic Partners Learning About Sustainability Horizons) program, which promotes business practices that assist companies in their efforts towards sustainability. Operates the Sustainable Forestry Project, which helps businesses understand and integrate sustainable forestry practices through corporate partnership and other methods.
  - **Information Services:** Publishes a quarterly newsletter and occasional reports covering a range of topics. Past reports include corporate environmental metrics and the “greening” of business school curricula. Produces case studies on environmental topics for use in business schools.
  - **Events:** Holds an annual BELL conference bringing together academics, companies and other experts. Hosts an annual Sustainable Enterprise Summit, focusing on leading-edge themes related to corporate sustainability.
The following three slides provide a brief overview of prominent academic and research bodies involved in environmental management and related activities:

- **Forum for the Future** is a sustainable development non-profit organisation which works in partnership with leaders in business, central, regional and local government, in higher education, the media and the voluntary sector. Its philosophy is based on finding economic, social, technological and environmental solutions to build a more sustainable society. These solutions can deliver not only a healthy environment, but a better quality of life, strong communities, and practical answers to poverty and disempowerment. The Forum forges strategic alliances between people and organisations across all the key sectors. Through its partnership approach, Forum for the Future can wield influence where it is needed most - with decision-makers and opinion-formers, pre-dominantly in the UK.

  Through its Business Programme, the Forum works closely with 17 Foundation Corporate Partners, representing a range of different sectors, to help them adopt sustainability strategies right across their business. In the broader Forum Business Network, the focus is on how companies can learn from each other, with the Forum’s help, sharing best practice. Projects include helping companies to inspire their staff, engage with stakeholders, and develop strategies on fast-emerging fields such as corporate social responsibility, carbon management and renewable energy.

  Forum for the Future publishes a number of reports and position papers on many aspects of sustainable development. Research, consultancy and building cross-sectoral partnerships enable our partners and other key-decision makers to work towards sustainability. The group also publishes a bi-monthly magazine - “Green Futures,” which provides a comprehensive overview of sustainable development issues in the UK.

  The Forum’s site offers a comprehensive overview of all Forum activities and contacts. The Forum is revising the site to add downloadable publications, links, and additional resources to the site.

  For further information on Forum for the Future see [www.forumforthefuture.org.uk](http://www.forumforthefuture.org.uk)

- **The Natural Step** is a non-profit international organization dedicated to building an ecologically and economically sustainable society. The Natural Step offers a scientifically based framework that serves as a compass for businesses, communities, academia, government entities and individuals working to redesign their activities to become more sustainable. At its core is a set of four “systems conditions” that describe the scientific underpinning of all environmental problems and their solutions.

  The Natural Step uses the system conditions as the basis for helping companies and other institutions align their operations with the principles of sustainability. In the United States, The Natural Step assists organizations and corporations that embrace sustainability by:
– **Events:** Holding seminars, executive briefings, annual conferences, workshops and presentations across the nation
– **Training:** Conducting training inside companies and for groups of corporate, governmental and non-profit leaders to promote the four systems conditions of sustainability and how they can be harnessed to create sustainable enterprises
– **Information Services:** Producing a variety of tools to help companies and organizations educate employees, suppliers, customers, and others about sustainability principles

The Natural Step website features the science, history and regional activities of the organization, as well as a list of available merchandise, recent news reports about the organization, and a calendar of upcoming events.

*For further information on the Natural Step see [www.naturalstep.org](http://www.naturalstep.org/)*

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**Slide 21  Academic/research institutions (2)**

- **The World Resources Institute (WRI)** is a Washington DC-based environmental research and policy organisation that creates solutions to protect the Earth and improve people’s lives. The work of the WRI focuses on four key goals: protecting the Earth’s living systems, increasing access to information, creating sustainable enterprise and opportunity, and reversing global warming. The organisation strives to catalyse change through the establishment of partnerships that implement innovative, incentive-based solutions founded upon objective data, harnessing the power of markets to ensure change. They provide – and help other institutions to provide – objective information and practical proposals for policy and institutional change aimed at fostering environmentally sound and socially equitable development.

*For further information on the WRI see [www.wri.org](http://www.wri.org/)*

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**Slide 21  Academic/research institutions (3)**

- **The Wuppertal Institute**, established in 1991 by the government of North Rhine-Westphalia in Germany, is an interdisciplinary and practice-orientated institute that seeks to mediate between politics, economy and the sciences in communicating the concept of sustainable development as defined at the 1992 Rio Earth Summit. The Institute’s underlying working guideline is “more wealth, less natural resource use.” It has been active in developing and promoting such concepts as Factor Four and eco-efficiency.

*For further information on the Institute see [www.wupperinst.org](http://www.wupperinst.org)*

- **Institut du Développement Durable et des Relations Internationales (IDDRI)** established in 2001, operates a network of representatives from the scientific community, companies, and government agencies to together identify and respond to key issues of concern. Its principal objectives are to contribute to informed decision making at an international level, to foster networking, communication and reflection on key sustainability issues, to undertake research work, and to inform private and public decision-makers and economic and social actors. Key
themes include climate change, biodiversity, agriculture, and forestry, as well as transversal issues such as international governance, financing of sustainable development, environmental and social responsibilities, uncertainty and precaution. Key outputs include the dissemination of information and analysis through publications, participation in seminars, training and through the internet.

For further information on the IDRICC, visit www.idri.org

Slide 22  Environmental NGOs

This slide briefly introduces a number of prominent environmental NGOs.

- **Greenpeace**: is an environmental NGO, with a presence in 40 countries across Europe, the Americas, Asia and the Pacific. Established in 1971, Greenpeace focuses on what are seen as the most crucial threats to the planet’s biodiversity and environment. Key campaigns include climate change, the protection of ancient forests, oceans, whaling, genetic engineering, nuclear power, toxic chemicals and sustainable trade. To maintain its independence, Greenpeace does not accept donations from governments or corporations but relies on contributions from individual supporters and foundation grants.

For further information on Greenpeace see www.greenpeace.org

- **WWF** is a global organisation founded in 1961 and currently comprising a network of 52 offices operating in more than 90 countries. WWF International, located in Gland, Switzerland, serves as the central “secretariat” that co-ordinates the activities of the individual national offices. Originally known as the World Wildlife Fund its name was changed in 1986 to the World Wide Fund For Nature to reflect the broader scope of its activities. In 1980 WWF launched the World Conservation Strategy urging greater efforts at conserving the world’s natural resources, and introducing the concept of sustainable development which was later given greater prominence in the Brundtland Report. WWF has identified a set of global priorities, covering six key issues: marine protection, freshwater species, climate change, toxics, ecoregions, and forests.

For further information on WWF International see www.panda.org

- **Friends of the Earth International (FoEI)** is a world-wide federation of autonomous national environmental organisations that campaign on various environmental and social issues with the aim of “catalysing a shift toward sustainable societies.” This federation strives to preserve the Earth’s ecological, cultural and ethnic diversity, increase public participation and democratic decision-making, promote social, economic and political justice at the local, national, regional and international levels, and promote sustainable development. FoEI was founded in 1971 by four organisations from France, Sweden, England and the USA. The current federation of 68 groups grew from annual meetings of environmentalists from different countries who agreed to campaign together on certain crucial issues, such as nuclear energy and whaling. In 2003, the combined number of members and supporters of Friends of the
Earth groups was more than one million, with the FoEI umbrella organisation uniting more than 5,000 local activist groups.

For further information on FoE International see www.foei.org

- **Conservation International** is a U.S.-based, non-profit, international organization. CI applies innovations in science, economics, policy and community participation to protect the Earth’s richest regions of plant and animal diversity in the hotspots, major tropical wilderness areas and key marine ecosystems. With headquarters in Washington, D.C., CI works in more than 30 countries on four continents.

For further information on CI see www.conervation.org/xp/CIWEB/about

- **IUCN – The World Conservation Union** (or the International Union for Conservation of Nature and Natural Resources) is a unique Union with members from some 140 countries include over 70 States, 100 government agencies, and 750-plus NGOs. More than 10,000 internationally-recognised scientists and experts from more than 180 countries volunteer their services to its six global commissions. Its 1000 staff members in offices around the world are working on some 500 projects. For more than 50 years this ‘Green Web’ of partnerships has generated environmental conventions, global standards, scientific knowledge and innovative leadership.

For further information on IUCN see http://www.iucn.org/

- **Rainforest Alliance** is a leading international conservation organization. Their mission is to protect ecosystems and the people and wildlife that live within them by implementing better business practices for biodiversity conservation and sustainability. Companies, cooperatives, and landowners that participate in their programmes meet rigorous standards for protecting the environment, wildlife, workers and local communities. The Rainforest Alliance is based in New York City, with offices throughout the United States and worldwide.

For further information on Rainforest Alliance see www.rainforest-alliance.org

- **CELB (Centre for Environmental Leadership in Business)** was established by Conservation International and Ford Motor Company. Companies with a global presence have an opportunity to shift the impact of their activities from environmental harm to ecological stewardship. As business acquires more influence worldwide and public support for conservation grows, companies are discovering new incentives to demonstrate environmental leadership. To catalyze this transformation, CELB was formed to engage the private sector worldwide in creating solutions to critical global environmental problems in which industry plays a defining role.

For further information on CELB see www.celb.org/xp/CELB/about/

- **CIEL (Centre for International Environmental Law)** is a public interest, not-for-profit environmental law firm founded in 1989 to strengthen international and comparative
environmental law and policy around the world. CIEL provides a full range of environmental legal services in both international and comparative national law, including: policy research and publication, advice and advocacy, education and training, and institution building.

For further information on CIEL see www.ciel.org
Environmental Principles
Training Package

APPENDICES
Appendix 1 – Implementing the UNGC Environmental Principles: A Framework for Action

The table in this Appendix is intended to provide a useful framework for understanding the interdependencies and linkage between the three UNGC environmental principles, the various environmental management tools and the different training modules. The interrelationship between each of these elements is presented using the UN Global Compact Performance Model as an underlying framework for action. The Performance Model was introduced in some detail in Module 4, Session 1.

<table>
<thead>
<tr>
<th>STEP</th>
<th>Module</th>
<th>Principle</th>
<th>Tool</th>
<th>People most affected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STEP 1: FORMING THE VISION</strong></td>
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<tr>
<td>Are environmental issues integrated into the company’s overall vision statement and strategy development?</td>
<td>Module 3: Sessions 1,2,3 Module 4: Session 2</td>
<td>7,8 and 9</td>
<td>Environmental Management Strategies Communication Tools</td>
<td>Senior management</td>
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<tr>
<td>Has the company actively assessed and understood the business case for effective environmental management?</td>
<td>Module 2 Module 4: Session 2</td>
<td>7, 8 and 9</td>
<td>Environmental Assessment Tools (e.g. Risk and Opportunity Assessments)</td>
<td>Senior management</td>
</tr>
<tr>
<td>Has the CEO and/or other senior business executives communicated the importance of environmental management to the business?</td>
<td>Module 3: Session 2 Module 4: Session 2</td>
<td>8</td>
<td>Communication Tools Environmental Management Systems</td>
<td>CEO and business executives</td>
</tr>
<tr>
<td>Does anyone at company board level have formal responsibility for environmental issues?</td>
<td>Module 4: Session 1 (Enablers)</td>
<td>8</td>
<td>Environmental Management System</td>
<td>Company board level</td>
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<td><strong>TOOLBOX:</strong></td>
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<tr>
<td>● Review the three UNGC principles</td>
<td>All of the above Module 4: Session 3 Module 5</td>
<td>All of the above</td>
<td>All of the above and use checklists in Module 3</td>
<td>All of the above</td>
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<tr>
<td>● Analyse major economic, social and environmental world trends (look to the Millennium Development Goals for 2015)</td>
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<td><a href="http://www.developmentgoals.org">www.developmentgoals.org</a></td>
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<tr>
<td>● Use the SIGMA Management Framework to structure thinking, vision, strategic direction</td>
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<td><a href="http://www.projectsigma.com">www.projectsigma.com</a></td>
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<td><strong>STEP 2: IDENTIFY LEADERSHIP</strong></td>
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<td>Has a coordinator/sustainability champion been identified? (s/he should have a senior management position and work closely with other managers)</td>
<td>Module 4: Session 1 (Leadership)</td>
<td>8</td>
<td>Environmental Management System</td>
<td>Senior management Sustainability champion</td>
</tr>
<tr>
<td>STEP</td>
<td>Module</td>
<td>Principle</td>
<td>Tool</td>
<td>People most affected</td>
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<tr>
<td>Have partnerships been formed (for example with NGOs, research bodies, and/or consulting companies) to gain knowledge/innovation on the way forward?</td>
<td>Module 4: Session 3 Module 5</td>
<td>8</td>
<td>Stakeholder Engagement</td>
<td>Middle management Public Relations</td>
</tr>
<tr>
<td>Are regular listening and dialogue sessions held?</td>
<td>Module 4: Session 2</td>
<td>8</td>
<td>Internal training and communication Stakeholder Engagement</td>
<td>Public Relations Middle management</td>
</tr>
<tr>
<td>Who in the company currently has authority to issue policies?</td>
<td>Module 4: Session 1</td>
<td>8</td>
<td>Environmental Management System</td>
<td>Senior and middle management</td>
</tr>
<tr>
<td>Who has responsibility for environmental issues?</td>
<td>Module 4: Session 1</td>
<td>8</td>
<td>Environmental Management System</td>
<td>SHE Management</td>
</tr>
</tbody>
</table>
| TOOLBOX:  
  - Apply the Business Case Matrix to show how sustainability factors enhance business success (www.sustainability.com)  
  - Apply the Corporate Responsibility Assessment Tool to help the company manage, measure, improve and report on CSR practices (www.crtool.com)  
  - Translate the three principles into practical language of the company  
  - Draw on the GC Learning Forum | All of the above | 8 | All of the above and use checklists in Module 3 | All of the above |
<p>| STEP 3: EMPOWERMENT | | | | |
| Is the focus of recruitment, training and career progression aligned to the vision and leadership priorities? | Module 4: Session 1 and 2 | 8 | Internal training and communication | Senior management and human resources |
| Have individual and team performance targets been set? | Module 4: Session 1 and 2 | 8 | Environmental Management System Eco-efficiency Cleaner Production Environmental Monitoring (Environmental Performance Indicators) | Senior and middle management Department heads and supervisors |
| Is there a rewards/incentives system for environmental performance throughout the company? | Module 4: Session 1 and 2 | 8 | Cleaner Production Eco-efficiency Environmental Performance Indicators Environmental Management System | Senior and middle management |</p>
<table>
<thead>
<tr>
<th>STEP</th>
<th>Module</th>
<th>Principle</th>
<th>Tool</th>
<th>People most affected</th>
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</thead>
<tbody>
<tr>
<td>Have participatory exercises been carried out aimed at developing the corporate environmental policy and mission statement?</td>
<td>Module 3 and Module 4</td>
<td>7, 8 and 9</td>
<td>Environmental opportunity and risk assessment Environmental management strategy Environmental management system</td>
<td>Senior and middle management</td>
</tr>
<tr>
<td>Are environmental management issues included in the company’s training programmes, at all levels from shop-floor tool-box talks, to executive development programmes?</td>
<td>Module 4: Session 1 and 2</td>
<td>7, 8 and 9</td>
<td>Cleaner Production Internal training and communication Environmental management system</td>
<td>All levels from senior management to shop-floor</td>
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<td>Training department</td>
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<tr>
<td><strong>TOOLBOX:</strong></td>
<td>All of the above</td>
<td>All of the above</td>
<td>All of the above</td>
<td>All of the above</td>
</tr>
<tr>
<td>● Ensure employees work through the self-guided Chronos e-learning tutorial <a href="http://www.sdchronos.org">www.sdchronos.org</a></td>
<td>Module 4: Session 3 Module 5</td>
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<tr>
<td>● Trainers and company managers should utilise the EMS training resource kit <a href="http://www.unepite.org">www.unepite.org</a></td>
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<td>● To help select the most suitable environmental management tool for the company, use the Environmental Management Navigator package for SMEs <a href="http://www.em-navigator.net">www.em-navigator.net</a></td>
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<td>● On the role unions and employee representatives can play, see UNEP / Ecologic report with case study examples under ‘Business / Labour’ at <a href="http://www.unep.fr/outreach/bi/index.htm">http://www.unep.fr/outreach/bi/index.htm</a></td>
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<td><strong>STEP 4: DEVELOP POLICIES AND STRATEGIES</strong></td>
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</tr>
<tr>
<td>Has a company environmental policy (that is distinctive to the company culture) been drawn up and been made available to all?</td>
<td>Module 4: Session 1 and 2</td>
<td>7, 8 and 9</td>
<td>Environmental management strategy Internal training and communication Environmental reporting</td>
<td>Senior management to shop-floor</td>
</tr>
<tr>
<td>Training department</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Have specific environmental objectives and targets been set to add clarity to the company environmental policy? (These may relate for example to the quantity of raw materials used, quantity of emissions, waste produced per ton of finished product, efficiency of material and energy use, number of environmental incidents, % waste recycled, % recycled material used in packaging, and so on)</td>
<td>Module 4: Session 1 and 2</td>
<td>7 and 8</td>
<td>Cleaner production opportunity assessment Environmental management system Environmental monitoring and auditing Environmental performance indicators</td>
<td>Senior and middle management</td>
</tr>
<tr>
<td><strong>STEP</strong></td>
<td><strong>Module</strong></td>
<td><strong>Principle</strong></td>
<td><strong>Tool</strong></td>
<td><strong>People most affected</strong></td>
</tr>
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</tr>
<tr>
<td>Are the objectives realistic and achievable from a business perspective?</td>
<td>Module 4: Session 1 and 2</td>
<td>7 and 8</td>
<td>Total Cost Assessments Cleaner Production Opportunity Assessments Eco-efficiency</td>
<td>Senior management Finance</td>
</tr>
<tr>
<td>Are they focused on risk reduction and liabilities?</td>
<td>Module 4: Session 2</td>
<td>7</td>
<td>Environmental Risk Assessment Environmental Impact Assessment Life Cycle Assessment</td>
<td>SHE Management Senior and Middle Management</td>
</tr>
<tr>
<td>Are they quantified and measurable over time?</td>
<td>Module 3 and Module 4</td>
<td>7 and 8</td>
<td>Environmental monitoring and auditing</td>
<td>Middle management</td>
</tr>
<tr>
<td>Do they meet the expectations of your stakeholders?</td>
<td>Module 4</td>
<td>8</td>
<td>Stakeholder engagement Environmental reporting</td>
<td>Board Public relations Senior management to shop floor</td>
</tr>
<tr>
<td>Have you considered all relevant laws and regulations?</td>
<td>Module 3 and Module 4</td>
<td>7 and 8</td>
<td>Environmental management system Environmental auditing and monitoring</td>
<td>SHE Management Legal Department</td>
</tr>
<tr>
<td>Have you considered the potential business advantage of each possible change?</td>
<td>Module 2 and Module 3</td>
<td>7 and 8</td>
<td>Cleaner Production Opportunity Assessment Total Cost Assessment</td>
<td>Senior and middle management</td>
</tr>
<tr>
<td>Have you considered potential technical or operational constraints?</td>
<td>Module 4</td>
<td>7, 8 and 9</td>
<td>Cleaner Production Opportunity Assessment Environmental Technology Assessment Supply Chain Assessments</td>
<td>Technical and operations management</td>
</tr>
<tr>
<td>Have you considered the views and expectations of interested parties outside the company (customers and suppliers)? Have partnerships with other groups been forged?</td>
<td>Module 4</td>
<td>7 and 8</td>
<td>Stakeholder engagement Sustainability reporting Supply chain audits and assessments Industrial ecology</td>
<td>Public relations Market research Senior and middle management Procurement and sales</td>
</tr>
<tr>
<td>Are all the staff involved? Is there an employee suggestion process with clear follow through?</td>
<td>Module 4</td>
<td>7 and 8</td>
<td>Internal communication and training Environmental Management System</td>
<td>Senior management to shop floor Training department</td>
</tr>
<tr>
<td>STEP</td>
<td>Module</td>
<td>Principle</td>
<td>Tool</td>
<td>People most affected</td>
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<tr>
<td><strong>TOOLBOX:</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>● Use tools such as life-cycle assessment, resource flow audits and environmental reviews to identify key areas for change</td>
<td>All of the above Module 4: Session 3 Module 5</td>
<td>All of the above</td>
<td>All of the above and use checklists in Module 3</td>
<td>All of the above</td>
</tr>
<tr>
<td>● Hold workshops to help forge partnerships with scientific groups, academia, environmental groups to strengthen knowledge base, increase access to information etc.</td>
<td></td>
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</tr>
<tr>
<td>● Forge partnerships with suppliers to develop sustainable solutions to problems</td>
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<tr>
<td>● Use the International Declaration on Cleaner Production for guidance on how to implement CP in the company</td>
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<tr>
<td><a href="http://www.uneptie.org/cp/declaration">www.uneptie.org/cp/declaration</a></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>STEP 5: ALLOCATE RESOURCES (time, knowledge, technology and finance)</strong></td>
<td></td>
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</tr>
<tr>
<td>Have the following issues been considered:</td>
<td>Module 2 and Module 4</td>
<td>7, 8 and 9</td>
<td>Cleaner Production Opportunity Assessment</td>
<td>Technical, operational and financial management</td>
</tr>
<tr>
<td>The affordability of solutions</td>
<td></td>
<td></td>
<td>Total Cost Assessment</td>
<td></td>
</tr>
<tr>
<td>What improvements will result and how they relate to the designated priority</td>
<td></td>
<td></td>
<td>Environmental Technology Assessments</td>
<td></td>
</tr>
<tr>
<td>Whether the options are practical and feasible taking into account staff capacity</td>
<td></td>
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<tr>
<td>Does the plan include the following:</td>
<td>Module 4</td>
<td>8</td>
<td>Environmental Management System</td>
<td>Senior management to shop floor</td>
</tr>
<tr>
<td>A clear description of objectives, targets and actions to reach them</td>
<td></td>
<td></td>
<td>Environmental Monitoring and Auditing</td>
<td>SHE management</td>
</tr>
<tr>
<td>Description of the people and departments involved</td>
<td></td>
<td></td>
<td>Internal Communication and Training</td>
<td>Training department</td>
</tr>
<tr>
<td>Budget allocation</td>
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<tr>
<td>Identified capacity and training needs</td>
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<tr>
<td>Time period and deadline</td>
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<tr>
<td>Description of monitoring system and corrective measures</td>
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<tr>
<td>STEP</td>
<td>Module</td>
<td>Principle</td>
<td>Tool</td>
<td>People most affected</td>
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<tr>
<td>TOOLBOX:</td>
<td></td>
<td>All of the above</td>
<td></td>
<td>All of the above</td>
</tr>
<tr>
<td>- Develop baseline information, document experiments and learning, record problems, results, knowledge gained.</td>
<td>Module 4: Session 3 Module 5</td>
<td>All of the above</td>
<td>All of the above and use checklists in Module 3</td>
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<tr>
<td>- Bulletins, websites, newsletters to post results.</td>
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<tr>
<td>- Publicise the results of your sustainability efforts: annual sustainability reports.</td>
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<tr>
<td>- Use the SIGMA project accounting tool <a href="http://www.projectsigma.com">www.projectsigma.com</a></td>
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<tr>
<td>- Use the Computer Aided Resource Efficiency (CARE) tool to help reduce costs and improve environmental performance <a href="http://www.wuperinst.org">www.wuperinst.org</a></td>
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<tr>
<td>STEP 5: PROCESSES AND INNOVATION</td>
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<tr>
<td>Is there a spirit of continuous improvement and innovation in the company?</td>
<td>Module 4</td>
<td>7, 8 and 9</td>
<td>Environmental Management Strategy Environmental Management System</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Senior management Design department, Research and Development Technical and operations management Training department</td>
<td></td>
</tr>
<tr>
<td>Are the key processes that create improvement understood by all employees?</td>
<td>Module 4</td>
<td>8 and 9</td>
<td>Cleaner Production Opportunity Assessment Internal Communication and Training Environmental Management System</td>
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<td></td>
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<td></td>
<td>Senior management to shop floor Training Department</td>
<td></td>
</tr>
<tr>
<td>Has the product's life-cycle been analysed in order to identify opportunities to reduce material and resource costs?</td>
<td>Module 4</td>
<td>7 and 8</td>
<td>Life Cycle Assessment, Supply Chain Audits Cradle-to-cradle design Total Cost Assessment</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td>Research and Development Design SHE management</td>
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</tr>
<tr>
<td>Have tools and processes been formalised through an EMS approach such as ISO 14001?</td>
<td>Module 4</td>
<td>8</td>
<td>Environmental Management System</td>
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<td>SHE management Training department</td>
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<tr>
<td>STEP</td>
<td>Module</td>
<td>Principle</td>
<td>Tool</td>
<td>People most affected</td>
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<tr>
<td><strong>TOOLBOX:</strong></td>
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<tr>
<td>• EMS (ISO14000, AA1000, SA8000)</td>
<td>All of the above Module 4: Session 3 Module 5</td>
<td>All of the above</td>
<td>All of the above and use checklists in Module 3</td>
<td></td>
</tr>
<tr>
<td>• Technology management</td>
<td></td>
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<tr>
<td>• Cleaner production</td>
<td></td>
<td></td>
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<tr>
<td>• Eco-efficiency and Eco-design <a href="http://www.cfd.rmit.edu.au">www.cfd.rmit.edu.au</a></td>
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<td></td>
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<tr>
<td>• Environmental Assessment tools:</td>
<td></td>
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<tr>
<td>• Design for the environment</td>
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<td>• Ecological footprint</td>
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<tr>
<td>• Life Cycle Assessment</td>
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<tr>
<td>• Resource flow audits</td>
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<tr>
<td>• Eco-labelling of products</td>
<td></td>
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<tr>
<td><strong>STEP 6: IMPACT ON VALUE CHAIN</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Are you working with suppliers and customers on environmental issues?</td>
<td>Module 4</td>
<td>7, 8 and 9</td>
<td>Supply chain audits and assessments Industrial ecology Eco-labelling Product stewardship Extended producer responsibility Product-services systems</td>
<td>Public relations Procurement and sales Research and Development Design</td>
</tr>
<tr>
<td>Has a stakeholder advisory panel been formed in the communities around your primary operations (where appropriate)?</td>
<td>Module 4</td>
<td>7 and 8</td>
<td>Stakeholder engagement</td>
<td>Public Relations Senior Management Legal department</td>
</tr>
<tr>
<td>Have you initiated programmes to improve supplier performance and share rewards?</td>
<td>Module 4</td>
<td>8</td>
<td>Supply chain audits and assessments Life cycle management Industrial ecology Product-service systems Product stewardship Eco-labelling Communication and reporting tools</td>
<td>Procurement Senior and middle management</td>
</tr>
<tr>
<td>STEP</td>
<td>Module</td>
<td>Principle</td>
<td>Tool</td>
<td>People most affected</td>
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</tr>
</tbody>
</table>
| TOOLBOX:  
- Sector-wide codes of practice  
- Supplier and customer audits  
- Product life-cycle stewardship  
- Supply chain management standards  
- Product labelling | All of the above and Module 4: Session 3 Module 5 | All of the above | All of the above and use Checklists in Module 3 | All of the above |
| STEP 7: IMPACT ON EMPLOYEES | Module 4: Session 1 | 8 | Internal communication and training Environmental auditing | Human resources SHE management |
| Have you looked at the impact of these changes on employee satisfaction and morale? | Module 4: Session 1 | 7 and 8 | Internal communication and training Environmental management system | SHE management Human resources and training |
| Do you continue to hold regular listening and dialogue sessions? | Module 4: Session 1 | 7 and 8 | Internal communication and training Environmental management system | SHE management Human resources and training |
| TOOLBOX:  
- Design and implement employee surveys  
- Stakeholder Engagement Manual [http://www.unep.fr/outreach/home.htm](http://www.unep.fr/outreach/home.htm) | All of the above and Module 4: Session 3 Module 5 | All of the above | All of the above and use checklists in Module 3 | All of the above |
| STEP 8: IMPACT ON SOCIETY | Module 4: Session 1 and 2 | 7 and 8 | Stakeholder engagement Environmental reporting UNEP APELL | Public relations Legal department SHE management |
| Have you considered needs/perceptions of: local community, human rights, labour and environmental organisations, business networks, rating consultancies? | Module 4: Session 1 and 2 | 7 and 8 | Stakeholder engagement Environmental reporting UNEP APELL | Public relations Legal department SHE management |
| TOOLBOX:  
- Ensure site opinion surveys  
- Form local and corporate advisory panels  
- Use the ETHOS indicators on CSR [www.ethos.org.br](http://www.ethos.org.br)  
- Introduce APELL to achieve prevention of and preparedness for accidents [www.unepie.org/apell](http://www.unepie.org/apell)  
- Stakeholder Engagement Manual [http://www.unep.fr/outreach/home.htm](http://www.unep.fr/outreach/home.htm) | All of the above and Module 4: Session 3 Module 5 | All of the above | All of the above and use checklists in Module 3 | All of the above |
<p>| STEP 9: REPORTING | Module 4: Session 1 and 2 | 8 | Environmental management strategy Sustainability reporting Stakeholder engagement | CEO Public Relations SHE management |</p>
<table>
<thead>
<tr>
<th>STEP</th>
<th>Module</th>
<th>Principle</th>
<th>Tool</th>
<th>People most affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does this include a description of how activities have integrated GC principles into company practice?</td>
<td>Module 3</td>
<td>7, 8 and 9</td>
<td>Environmental management system Sustainability reporting</td>
<td>CEO SHE management Public relations</td>
</tr>
<tr>
<td>Does the company have procedures in place for reporting on its environmental performance to relevant affected stakeholders?</td>
<td>Module 4</td>
<td>7 and 8</td>
<td>Environmental management system Stakeholder engagement Environmental reporting</td>
<td>Public relations SHE management</td>
</tr>
<tr>
<td>Is there clarity on the types of environmental performance data to be reported?</td>
<td>Module 4</td>
<td>7 and 8</td>
<td>Environmental monitoring and auditing Life cycle assessments Environmental management system Environmental performance indicators Environmental / sustainability reporting</td>
<td>SHE manager Training department Public relations</td>
</tr>
<tr>
<td>TOOLBOX:</td>
<td>All of the above Module 4: Session 3 Module 5</td>
<td>All of the above</td>
<td>All of the above and use checklists in Module 3</td>
<td>All of the above</td>
</tr>
</tbody>
</table>
The following table lists selected core performance indicators from the 2002 GRI Sustainability Reporting Guidelines against the three Global Compact environmental principles.

<table>
<thead>
<tr>
<th>Global Compact Principles</th>
<th>GRI Core Indicators: Report Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle 7</strong></td>
<td></td>
</tr>
<tr>
<td>A precautionary approach</td>
<td></td>
</tr>
<tr>
<td>Governance Structure and</td>
<td>EN1 Total materials use other than</td>
</tr>
<tr>
<td>Management Systems</td>
<td>water, by type.</td>
</tr>
<tr>
<td>Overarching Policies and</td>
<td>EN2 Percentage of materials used</td>
</tr>
<tr>
<td>Management Systems</td>
<td>that are wastes (processed or</td>
</tr>
<tr>
<td></td>
<td>unprocessed) from sources</td>
</tr>
<tr>
<td></td>
<td>external to the reporting organisation.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN3 Direct energy use segmented by</td>
</tr>
<tr>
<td>Materials</td>
<td>primary source.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN4 Indirect energy use.</td>
</tr>
<tr>
<td>Energy</td>
<td></td>
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<tr>
<td>Environmental Indicators:</td>
<td>EN5 Total water use.</td>
</tr>
<tr>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN6 Location and size of land</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>owned, leased, or managed in</td>
</tr>
<tr>
<td></td>
<td>biodiversity-rich habitats.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN7 Description of the major impacts</td>
</tr>
<tr>
<td>Emissions, Effluents</td>
<td>on biodiversity associated with</td>
</tr>
<tr>
<td>and Waste</td>
<td>activities and/or products and</td>
</tr>
<tr>
<td></td>
<td>services in terrestrial, fresh</td>
</tr>
<tr>
<td></td>
<td>water and marine environments.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN8 Greenhouse gas emissions.</td>
</tr>
<tr>
<td>Emissions, Effluents</td>
<td>EN9 Use and emissions of ozone-</td>
</tr>
<tr>
<td>and Waste</td>
<td>depleting substances.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN10 NOx, SOx, and other significant</td>
</tr>
<tr>
<td>Products and Services</td>
<td>air emissions by type.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN11 Total amount of waste by type</td>
</tr>
<tr>
<td>Compliance</td>
<td>and destination.</td>
</tr>
<tr>
<td>Vision and Strategy</td>
<td>EN12 Significant discharges to</td>
</tr>
<tr>
<td></td>
<td>water by type.</td>
</tr>
<tr>
<td>Principle 8</td>
<td>EN13 Significant spills of chemicals,</td>
</tr>
<tr>
<td>Environmental responsibility</td>
<td>oils, and fuels in terms of total</td>
</tr>
<tr>
<td></td>
<td>number and total volume.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN14 Significant environmental</td>
</tr>
<tr>
<td>Products and Services</td>
<td>impacts of principal products and</td>
</tr>
<tr>
<td></td>
<td>services.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN15 Percentage of the weight of</td>
</tr>
<tr>
<td>Compliance</td>
<td>products sold that is reclaimable</td>
</tr>
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<td></td>
<td>at the end of the products’ useful</td>
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<tr>
<td></td>
<td>life and percentage that is actually</td>
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<td></td>
<td>reclaimed.</td>
</tr>
<tr>
<td>Environmental Indicators:</td>
<td>EN16 Incidents of and fines for</td>
</tr>
<tr>
<td>Compliance</td>
<td>non-compliance with all applicable</td>
</tr>
<tr>
<td></td>
<td>international declarations/treaties,</td>
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<td></td>
<td>and national, sub-national, regional</td>
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<td></td>
<td>and local regulations associated</td>
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<td>with environmental issues.</td>
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<tr>
<td>Vision and Strategy</td>
<td>EN17 Initiatives to use renewable</td>
</tr>
<tr>
<td></td>
<td>energy sources and to increase</td>
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<tr>
<td></td>
<td>energy efficiency.</td>
</tr>
</tbody>
</table>

**Principle 9**

**Environmentally friendly technologies**

Environmental Indicators: Energy (additional indicator, by example) EN17 Initiatives to use renewable energy sources and to increase energy efficiency.
Appendix 3 – Communication on Progress

GLOBAL COMPACT GUIDANCE ON COMMUNICATION ON PROGRESS

Basic Facts about Communication on Progress (COP)

- A COP is an annual description of actions taken in support of the Global Compact, made available to stakeholders.
- It is expected of all companies participating in the Global Compact.
- All COPs will be prominently displayed, or linked to, on the Global Compact website.
- Companies failing to communicate progress will be regarded as inactive and will be identified as such on the Global Compact website.
- The new UN Global Compact 2005 Practical Guide to Communication on Progress, New York: UNGC (http://www.unglobalcompact.org/content/cops/pock_guide.pdf) is a valuable reference on this topic.

Global Compact participants are expected to communicate with their stakeholders on an annual basis about progress in implementing the Global Compact principles through their annual reports, sustainability reports or other corporate communications. Participants are also expected to submit a short description and a URL link to these communications on the Global Compact and/or Global Compact local network website.

To safeguard the integrity of the initiative as a whole, only those participants who communicate progress will be allowed to continue their participation in the Global Compact.

Communications on Progress (COPs) should include the following three elements:

- Statement of continued support for the Global Compact in the opening letter, statement or message from the Chief Executive Officer, Chairman or other senior executive.
- Description of practical actions that participants have taken to implement the Global Compact principles during the previous fiscal year.
- Measurement of outcomes or expected outcomes using, as much as possible, indicators or metrics such as those developed by the Global Reporting Initiative.

Note: COPs should be integrated in participants’ already existing communications with stakeholders, such as annual reports or sustainability reports. In the event that a participant does not publish an annual report or a sustainability report, a COP can be issued through other channels where employees, shareholders, customers and other stakeholders expect to read about the company’s major economic, social and environmental engagements.

Link to and Description of COPs

Participants are expected to submit a brief description and, where an online version exists, a URL link to their COP on the Global Compact website and/or Global Compact local network website. In the event that an online version of the COP does not exist, participants can submit an electronic version of their COP as an attachment with a description of how they are communicating the content to their stakeholders. More detailed information on how to enter the link to and description of COPs is available on the Global Compact website (http://www.unglobalcompact.org) under “About the Global Compact” “How to Participate” “Further Documents” (The login for submission is “ungc”, the passcode is “action”).
The Global Compact Office accepts COPs in all languages by allowing companies to post links to their respective reports on the Global Compact website and/or Global Compact local network website. The development of local Global Compact networks will offer opportunities to facilitate this process. COPs are important demonstrations of participants’ commitment to the Global Compact and its principles. It is also a tool to exercise leadership, facilitate learning, stimulate dialogue and promote action.

**SUGGESTED MODEL 1**

Global Compact Communication on Progress Integrated into Existing Reports

*Who should use this model?*

Participants who publish one or more of the following prominent public annual reports (including web-based reports):

- Sustainability reports, including GRI-based sustainability reports*
- Financial reports
- Integrated financial and sustainability reports

*How should participants communicate progress?*

Participants should integrate the three elements of Communication on Progress in their public annual reports, in the following way:

- The **statement of continued support for the Global Compact** should be integrated in the opening letter, statement or message from the Chief Executive Officer, Chairman or other senior executive. Ideally, the statement should also indicate that the report contains a Communication on Progress.

- The **description of practical actions taken and process of implementation used** should be formatted as a dedicated section in the annual report, providing a summary with reference to more details in the report or other sources of company information.
  - For example, this section can be formatted as a table listing the Global Compact principles and corresponding relevant sections of the report. This section can also be formatted as a summary of actions under each principle with reference to more details in the report, including performance indicators.

- **Measurement of outcomes or expected outcomes.** Performance indicators used in the report and relevant to the implementation of the Global Compact principles should be highlighted, either by cross-referencing the indicators with the principles or by referring to those indicators in the description of actions and process. This can also be done by adding to the description of actions a reference to relevant performance indicators.
  - If the information provided in the Communication on Progress has been assured, it is suggested that the company also provides details on how this was accomplished.

*Note for GRI Reporters: GRI reporters should consider cross-referencing GRI indicators with the Global Compact principles, either in the dedicated Global Compact section, or in other sections of the report. GRI reporters are also encouraged to describe the process of implementation of the principles when addressing GRI Reporting Elements 3.4, 3.6, 3.7, 3.11, 3.12, 3.16, and 3.19 and to provide a summary of that information, with reference to more detail in the report, in the dedicated Communication on Progress section of the report.*
**SUGGESTED MODEL 2**

Global Compact Communication on Progress as a Self-Contained, Comprehensive Document

*Who should use this model?*

This is the default model for all participants who DO NOT communicate publicly and annually through a sustainability or a financial report.

*How should participants communicate progress?*

This is a model for a self-contained, comprehensive document that contains the three required elements of a Communication on Progress:

- **A Statement of continued support for the Global Compact** from the Chief Executive Officer, Chairman or other senior executive should be made as an introduction to the self-contained, comprehensive Communication on Progress.

- **Description of practical actions** taken and process of implementation used.
  - Participants should provide, under each Global Compact principle or category of principles, a full description of actions taken and processes used to integrate the principles into the company’s operations.

- **Measurement of outcomes or expected outcomes.** Participants should include performance indicators in their Communication on Progress, to substantiate practical actions taken and process used to implement the Global Compact principles. Participants should also provide a cross-reference between Global Compact principles and these performance indicators.
  - If the information provided in the Communication on Progress has been assured, it is suggested that the company also provides details on how this was accomplished.

*Where should a “Communication on Progress” be published?*

- **Step 1.** If you maintain a company website, you should publish your Communication on Progress on your website. If not, go to Step 2.

- **Step 2.** If you do not maintain a company website, you should issue your Communication on Progress through other stakeholder communication channels. In addition, an electronic copy of the Communication on Progress should be posted on the Global Compact website, with a description of other means used to communicate progress.
## Template for Links to Communication on Progress on the UNGC Website

This template shows the information you will be asked to provide when submitting a link to your Communication on Progress to the Global Compact website:

<table>
<thead>
<tr>
<th><strong>Company name:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Title of the submission (70 characters limit)</strong></th>
</tr>
</thead>
</table>

Please insert the name of the document used to communicate progress and the period covered (e.g. Sustainability Report 2003).

<table>
<thead>
<tr>
<th><strong>1. What actions has your company taken to communicate with stakeholders on its progress in implementing the Global Compact inside its business? (2500 characters limit)</strong></th>
</tr>
</thead>
</table>

Please describe the format used to communicate progress (e.g. annual report, sustainability report; website; company bulletins etc); the nature of those communications; the main corporate citizenship issues tackled in the report and their relation with Global Compact principles (please provide the most relevant page numbers in the report). Please provide information on any indicators used in communicating with stakeholders on sustainability issues (e.g. GRI), as well as external verification process.

<table>
<thead>
<tr>
<th><strong>2. What was the outcome/result of efforts to communicate progress? What response have you received from your efforts to communicate progress? What are your plans for future communications on progress to stakeholders? (2500 characters limit)</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Country(ies) covered in the communication on progress (global is also an option):</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Five search words (keywords) describing the submission:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Contact information of company representative:</strong></th>
</tr>
</thead>
</table>

Name:  
Email:  

<table>
<thead>
<tr>
<th><strong>Direct URL links to the company communication on progress (e.g. annual report/CSR report, or other communication):</strong></th>
</tr>
</thead>
</table>
Appendix 4 – References and Further Reading


Reed, D.J. (2001) *Stalking the Elusive Business Case for Corporate Sustainability* Washington: Sustainable Enterprise Perspectives World Resources Institute


Websites

Useful UNEP sites (introduced by www.unep.fr from 2006 onwards)

On corporate environmental and social responsibility:
http://www.unep.fr/outreach/home.htm

On sustainable production and consumption:
www.uneptie.org/pc/cp/library/catalogue/cp_training.htm
www.uneptie.org/pc/sustain/icinitiative/training.htm
www.uneptie.org/pc/tools/ems.htm
www.uneptie.org/pc/tools/supplychain.htm

On state of the global / regional environment, climate and biodiversity data:
http://www.unep.org/dewa/index.asp
http://www.grida.no/
http://www.unep-wcmc.org/

On collaborating centres, convention secretariats, regional offices:
http://www.unep.org/

Various business and sustainability, other relevant sites
AccountAbility www.accountability.org.uk
Amnesty International www.amnesty.org
Business for Social Responsibility www.bsr.org
Business in the Community http://www.bitc.org.uk/environment/index.html
Canadian Centre for Philanthropy and the Conference Board of Canada www.imagine.ca
Chronos E-learning Tutorial www.sdchronos.org
Confederation of Norwegian Business and Industry www.nho.no/csr
Corporate Social Responsibility Europe www.csreurope.org
Danish Institute for Human Rights www.humanrights.dk / www.humanrightsbusiness.org
Ethical Trading Initiative www.ethicaltrade.org
Ethos Institute www.ethos.com.br
European Foundation of Quality Management www.efqm.org
Fair Labour Association www.fairlabor.org
Global Environmental Management Initiative http://www.gemi.org/index.htm
Global Reporting Initiative website: www.globalreporting.org
International Alert www.international-alert.org
International Chamber of Commerce www.iccwbo.org
International Federation of Consulting Engineers www.fidic.org
International Finance Corporation www.ifc.org
International Labour Office www.ilo.org
International Organization of Employers www.ioe-emp.org
International Standards Organization www.iso.org
Natural Step website: www.naturalstep.org/
Office of the High Commissioner for Human Rights www.unhchr.org
Organization for Economic Cooperation and Development www.oecd.org
Respect Europe www.respecttable.com
SIGMA www.sigmaproject.com / www.forumforthefuture.org.uk
Social Accountability International www.sa-intl.org
SustainAbility International www.sustainability.com
The Natural Step www.naturalstep.org
The Prince of Wales International Business Leaders Forum www.iblf.org
Transparency International www.transparency.org
United Nations Development Programme www.undp.org
United Nations Conference on Trade and Development www.unctad.org
United Nations Environment Programme www.uneptie.org
United Nations Department of Economic and Social Affairs, Division for Sustainable Development www.un.org/esa/sustdev/
United Nations Global Compact Office www.unglobalcompact.org
United Nations Industrial Development Organization www.unido.org
World Bank www.worldbank.org/privatesector/csr
World Business Council for Sustainable Development www.wbcsd.ch
World Resources Institute www.wri.org
Worldwide Fund for Nature www.wwf-uk.org
Wuppertal Institute for Climate, Environment and Energy www.wupperinst.org

Specific environmental tools and initiatives

Note: the following sites are in addition to the numerous websites provided throughout the Manual.

Contains a virtual library of pollution prevention information from Canada

Clean Technologies in US Industries – www.usaep.org/resources/reports/rep_cleantech_text.html
A brief overview of the US textile industry, with an emphasis on pollution prevention

Cleaner Textile Production Idea Catalogue – www.nu.ac.za/cleanerproduction
A number of options for Cleaner Production in textile wet processing (with illustrations) prepared by DANCED

A tailor-made programme for the environmental certification of small and medium sized enterprises and public administration, an innovative example from Norway.

Environmental Navigator for SMEs – www.em-navigator.net
Capacity building package on environmental tools aimed at small and medium sized enterprises

Enviro$en$e (Envirosense) Cooperatives – http://es.epa.gov/cooperative/
Provides access to Pollution Prevention and Cleaner Production resources found on the Internet

Enviroplating – www.enviroplating.co.za
Information on metal finishing opportunities, with an emphasis on the South African experience
European Environmental Agency – http://ew-news.eea.eu.int/Industry/Cleaner
Background information on CP and voluntary initiatives

A non-profit organization of North American companies dedicated to fostering environmental, health and safety excellence worldwide through the sharing of tools and information in order for business to help business achieve environmental excellence. Tools developed by GEMI include the Sustainable Development Planner, Business and Climate, Water Sustainability, Forging New Links Supply Chain and HSE Web Depot.

Greenprofit – www.greenprofit.net
GreenProfit features practical information on hundreds of pollution prevention measures and many examples of their application in industry and other sectors, as well as a comprehensive links page

International CP Co-operative – http://es.epa.gov/cooperative/topics/casestudies.html
The International CP Co-operative contains links to numerous case studies, with a predominant focus on business case studies based in the US


National Pollution Prevention Roundtable – www.p2.org/
The home-page of the National Pollution Prevention Roundtable in the US

Pollution Prevention Resource Exchange – www.p2rx.org
National network of regional cleaner production centres in the US, providing pollution prevention information and networking opportunities to States, local governments and technical assistance providers.

An introduction to CSR for small and medium sized enterprises, developed in the UK

The International Cleaner Production Information Clearing-house is a collection of CP databases with examples of technical and policy applications, abstracts of available publications, lists of expert contact institutions etc

Information on environmental risk assessment issues

Info on the WRRC, and particularly useful P2 information on all kinds of (industrial) sectors

World Bank Pollution Prevention and Abatement Handbook
Appendix 5 – Evaluation Forms

The following evaluation forms have been included in each Delegates’ Manual. The first form should be completed by the delegates at the end of each day, while the second form should be completed at the end of the entire course.

END OF DAY EVALUATION FORM

Name:

Date:

Company:

Module:

The most useful thing I learned today was:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

The least useful aspect of the day was:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
What I most want to learn more about is:

_________________________________________________________

_________________________________________________________

_________________________________________________________

Other comments:

_________________________________________________________

_________________________________________________________

_________________________________________________________
END OF COURSE EVALUATION FORM

This course evaluation will help us develop a more effective course for future delegates. In Part 1, please give us your overall views on the course. In Part 2, please comment on and rate the elements of the course on a scale of 1 to 4. Additional comment may be given on the reverse side of the page.

PART 1:

I think the most useful parts of the course were:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

I think the least useful parts of the course were:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

I will have difficulty applying:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

My overall feelings about the course are:

<table>
<thead>
<tr>
<th>Waste of time</th>
<th>Limited value</th>
<th>Mixed feelings</th>
<th>Helpful / Learnt a lot</th>
<th>Extremely valuable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>
## PART 2:

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Adequate</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Preparatory work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talks/lectures</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Exercises</td>
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<tr>
<td>Handouts</td>
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<tr>
<td>Trainer</td>
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<tr>
<td>Organisation</td>
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</tr>
<tr>
<td>Venue</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Overall benefit</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
*How can your company take on new risks and opportunities in a responsible manner? How do you apply precaution? How do you promote environmentally sound technologies? These questions are relevant to companies of different sizes in all regions. This package provides practical guidance and an overview of new trends in addressing these. Trainers and practitioners alike are invited to join us with fellow UN agencies such as UNDP, UNIDO and others in rolling out this training programme in a growing number of countries and languages."

Monique Barbut, Director, UNEP Division of Technology, Industry and Economics

*I welcome this Global Compact Environment Principles Training Package as an excellent contribution in responding to the ongoing demand for practical guidance and capacity building. I encourage training institutions, business organisations and fellow UN agencies to make full use of it.*

Georg Kell, Head, United Nations Global Compact Office

*The World Business Council for Sustainable Development (WBCSD) has been closely involved in the development of the Global Compact Performance Model during the past three years. I welcome the introduction to the model and the practical business case approach found in this training package. I am sure it will be of tremendous value to business communities everywhere, in particular new market leaders from Asia, Africa, Latin America and the Middle East."

Odd Gullberg, Chief Operating Officer, WBCSD