The Sustainable Development – Why reporting sustainability?[1]

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Sustainability or sustainable development is nowadays becoming a very actual theme both in developed countries and also in developing countries. The term sustainability started to emerge since the publication of the Brundtland Commission Report in 1987[2] and after the world summit conference in Rio de Janeiro took place in 1992, which was then followed by the passing of the Agenda 21[3]. But what is actually meant by the term sustainability? The Brundtland Report offered a now-famous definition of it: sustainable development is a form of development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Dunphy *et al.* in their book "Sustainability: The Corporate Challenge of the 21st Century (2000)" complete the above definition as follows, **sustainability** is about living and working in ways that meet and balance existing economic, environmental and social needs without compromising the well-being of future generations.

Based on the orientation to achieve sustainability, companies are required to make decisions and carry out programs and projects in a manner that maximises benefits to the natural environment and humans and their cultures and communities, while maintaining or enhancing financial viability *(MacDonald and Peters, 2001).* In reference to balancing economy and environment, handling environmental problems in a company is a priority, because better environmental management is being seen as a key source of competitive advantage for industrial companies and because environmental management strives to an efficient use of raw materials and pollution prevention and thus leading to cost savings. For this reason, companies have to run and establish a sound environmental management combining economic growth and environmental concern in one stage.

Researchers from many countries have been trying to bring a good harmony between economy and ecology, in particular economy which run in industry. Economy and ecology must be able to evolve, each of them for themselves and also with close contact with each

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[2] In 1987 the Brundtland Report, also known as Our Common Future, alerted the world to the urgency of making progress toward economic development that could be sustained without depleting natural resources or harming the environment. Published by an international group of politicians, civil servants and experts on the environment and development. The report provided a key statement on sustainable development *(Encyclopedia of the Atmospheric Environment Online).*

[3] Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organisations of the United Nations, Governments, and Major Groups in every area in which human impacts the environment. Agenda 21 and the Rio Declaration on Environment and Development (held in Rio de Janeiro, Brazil, 3 to 14 June 1992) were adopted by more than 178 Governments at the United Nations Conference on Environment and Development *(United Nations Division for Sustainable Development Online).*

other. But they can not achieve this by themselves, if the hunger of the economy threats them as non-reproducable stock *(Schmidt-Bleek, 2000)*. For this reason, engineers are often urged to design for environment (**Eco-Design**) which can be achieved by:

- Minimising the use of material and energy,
- The substitution of materials with better environmental performance,
- The recovery of materials.

We have to remember that:

> *"...the more material we set in motion, the greater the chance that some of the effects will be harmful..."*
>
> *(Schmidt-Bleek, 2000)*

Furthermore:

> *"...the more 'environment' required for the product, the worse it appears from an ecological perspective..."*
>
> *(Schmidt-Bleek, 1994)*

So, a more distant target is dematerialisation. **Dematerialisation** is a matter of slowing down and reducing wasteful movement and misuse – or rather, abuse – of materials and use of energy while maintaining the material living standard. It may involve: making product smaller and lighter by introducing functionally equivalent goods that have reduced material intensities or replacing a material product with an immaterial substitute (mail replaced by e-mail). Dematerialisation in economy doesn't mean going back; it means progress, as such a development would not be possible without concomitant technical improvements. Dematerialisation is simply the key to modernisation of the industry, says Prof. Dr. Franz Lehner, President of the Institute of Work and Technique, Nordrhein-Westfalen Germany. He predicts:

> *"They who have mastered this field, will also have the power over the world in his hands. Countries that pay little notice to this trend, will become or stay as the Third World Countries".*
>
> *(Schmidt-Bleek, 2000)*

The discussion about dematerialisation was followed with the discussion about **Factor 10**. It is simply like this: if we produce a chair with 12 kg of weight, at least it carries 12 kg of natural resources (often more). If we then produce the same type of chair with only the half of the weight than before (6 kg) with the same comfort and quality, it is said that we have already dematerialised the chair with the Factor 2. If we make a 1.2 kg chair with the same quality, it means that we have fulfilled the demand for dematerialisation by the Factor 10. So Factor 10 means production of goods or services with only one tenth of the present amount of resources (materials and energy).

Another term related to the above description is the **ecological rucksack**. Each finished goods and services carry the ecological rucksack. A product's (or service's) ecological rucksack

contains all the materials displaced or processed during the life-cycle of that product: i.e. its conception, production, use, recycling and/or disposal. For example, it has been estimated that the production of a tonne of coal requires the processing of six tonnes of material, a tonne of gold or platinum has an ecological rucksack weighing a staggering 350,000 tonnes. So, the ecological rucksack of platinum is 1:350,000. That means that to produce a ring weighing just ten grammes, three tonnes of material must be processed *(Lovins, 1998)*.

In practising environmental management, companies are demanded to improve their environmental performance. Thus, they need to measure and monitor their environmental performance. Many **controlling instruments** are nowadays used by companies to measure their environmental performance. Some of them are:

- Enviromental Impact Assessment (1969)
- Environmental Accounting (Müller-Wenk: 1978)
- Product Line Analysis (Öko-Institut: 1987)
- Environmental Accounting (Schaltegger: 1992)
- MIPS, Material Input Per Service Unit (Schmidt-Bleek: 1993)
- Life Cycle Assessment/Eco-Balance (1997)
- etc.

And since years ago, companies have been able to standardise or validate their Environmental Management System (EMS) according to two Standards which are **EMAS** (Environmental Management and Audit Scheme) in Europe or **ISO 14001** (in the international level). After companies have conducted a good EMS, companies are also required to report their environmental performance in the form of an **environmental report**. This kind of report unfortunately presents only the economical and ecological aspects as a result of their activities.

Environmental report or other reports such as Health and Safety (HS) Report, Environmental Health and Safety (EHS) Report, Environmental and Social (ES) Report, are not able anymore to fulfil the demands of the company's stakeholders. A **stakeholder** is anyone who has stake in or claim on a company. These interest groups, or stakeholders, which typically refer to stockholders, consumers, employees, investors, environmental groups, government, etc. require a report that presents a holistic picture of company activities and provides a balanced view of benefits and trade-offs among social, economic and environmental impacts. For a company to successfully achieve its business goals, its management must take its stakeholders into consideration - based on mutual trust and cooperation.- when making decision and/or reporting its performances.

Therefore, a kind of report is now being developed called the **sustainability report**. This type of report is considered to be the most suitable one in meeting the requirements of the stakeholders. Even today, this sustainability report is considered as an essential condition for success in an increasingly global and transparent market *(Bowden et al., 2001)*. John Elkington, an international pioneer of green business strategy and chairman of the world-renowned Think Tank „SustainAbility", has also said that:

> *"Companies that are effective in communicating their environmental and sustainability performance will have a competitive edge".*
>
> *(York Centre For Applied Sustainability Online)*

Small and middle-class companies, in fact, realise that sustainability report is a need as a medium to introduce and promote themselves and is a must for large companies. Large companies consider sustainability report as a special communication instrument to their stakeholders *(Raupach, 2001)*. Sustainability reporting thus highlights the mutual dependency between companies and its stakeholders.

The question now is, how can companies create a sustainability report? What steps should be taken? Conscious of the above problems, some research institutes in Germany have conducted researches to create **guidelines of sustainability report**, such as those sponsored by DBU (Deutsche Bundesstiftung für Umwelt). In the end of 2001, they have published their research result which titled „Der Nachhaltigkeitsbericht: Ein Leitfaden zur Praxis glaubwürdiger Kommunikation für zukunftsfähige Unternehmen" *(IÖW and imug, 2001)*. Research institutes in other countries have also done the same thing. In the United States, a Global Reporting Initiative (GRI) also created Guidelines Sustainability Report named „Sustainability Reporting Guidelines on Economic, Environmental and Social Performances" published in June 2000 *(GRI, 2000)*. Not to forget, the United Nations Environment Programme (UNEP) in cooperation with the International Labour Standards (ILO) and the Office of the High Commissioner for Human Right through the Global Compact Group also published their outline to assess what a sustainability report could look like *(Global Compact, 2001)*.

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