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**Brazilian Roundtable on Sustainable Consumption and  
Production**

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# **Brazilian Roundtable on Sustainable Consumption and Production**

**Background Paper**

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It was compiled and edited by UNEP with contributions from the Ministry of Environment of Brazil and the European Commission.

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### **The idea of the Roundtables**

UNEP has organized roundtables on Sustainable Consumption and Production in China and in India in co-operation with the respective governments. The meetings were the first of a series of national roundtables that UNEP and the EC are organizing in key emerging economies with the aim of raising awareness of the different stakeholders and improving their commitment towards sustainable consumption and production, giving them the opportunity of benefiting and contributing at the same time to the international initiatives that are in place.

These roundtables have been organized in the framework of the Marrakech process, a global framework of initiatives which started in 2002, as a follow up of the UN World Summit on Sustainable Development (WSSD) held in Johannesburg, with the aim of accelerating the shift towards sustainable consumption and production patterns.

Regional consultations have so far been useful for identifying regional SCP priorities and needs. The process has been increasingly focusing on the implementation of concrete projects developed by expert groups on different SCP issues, on the development of SCP strategies and action plans at international, regional and national levels with the involvement of development agencies into SCP activities.

More concrete action is still needed at country level to find and implement specific solutions that will improve the quality of the life of all the citizens while improving the sustainability of the countries' production and consumption patterns.

### **What were the Roundtables objectives?**

*What are SCP priorities in your countries? What are the suggested policies and means to implement SCP? How to move to effective implementation?*

...were the main questions that the Government, Industry, NGO's and civil society representatives as well as international experts attending the roundtables answered in lively debates. Overall objectives of the meetings were:

- Strengthen Brazil active involvement in the Marrakech process on SCP, improving relevant stakeholders' awareness and understanding of the process.
- Identify Brazil specific needs, priority areas and gaps as well as means for the implementation of the Marrakech process, recognizing the crucial roles of the different stakeholders and encouraging their commitment to SCP.
- Exchange expertise on SCP and share information about on-going activities with other regions, particularly Europe.

The roundtable is seen by the participants and governments as an initial step for long term commitment to promote SCP in the country, where possible acting as 'kick-off' to the development and implementation of focused activities and further strategic work.

## I. INTRODUCTION

In this century, it can be expected that nine billion people will live on the planet and that the world output will quadruple. Global environment trends continue to pose grave challenges and threats, as underlined by figures in UNEP's third Global Environmental Outlook Report (UNEP 2002). The use of natural resources and levels of pollution and waste continue to grow despite the gains on cleaner production and eco-efficiency. Fossil fuels and global use of coal, oil, and natural gas was 4.7 times higher in 2002 than in 1950. Carbon atmosphere dioxide levels in 2002 were 18 percent higher than in 1960, and estimated to be 31 percent higher since the onset of the Industrial Revolution in 1750. About half of the world's original forest cover is also gone, while another 30 percent of it is degraded or fragmented. In 1999, global use of wood for fuel, lumber, paper, and other wood products was more than double that in 1950.<sup>1</sup> Unless humankind cuts the link between economic growth and the degradation of the environment, modern societies will simply not be able to sustain quality of life.<sup>2</sup>

During the last ten years the need for sustainable consumption policies has been increasingly expressed on the international policy level:

- The 1992 - Rio Declaration on Environment and Development – which calls upon States to reduce and eliminate unsustainable patterns of production and consumption in order to achieve sustainable development and a higher quality of life for all people.
- Agenda 21 with its chapter 4 on sustainable consumption and production.
- The 1999 – UN Guidelines for Consumer Protection which gives governments a comprehensive framework for policy setting for more sustainable consumption and production.
- Finally in 2002 sustainable consumption was a top priority on the agenda for the World Summit on Sustainable Development in Johannesburg again. The third chapter of the Summit's Plan of Implementation (UN 2002) calls for the development of a 10-year framework of programmes to accelerate the shift towards sustainable consumption and production patterns.

The main lessons learnt in developing policies for sustainable consumption have been that:

- One single instrument will not fix the problem; it is necessary to design a package of mixed instruments (regulatory framework, voluntary measures and economic instruments).
- Likewise it is important to involve actively all stakeholders: government, industries, business, advertising, academia, consumers associations, and environmental NGOs, among others. There is also a need for a sectoral approach. This is linked to the integration of environmental considerations into sectoral policies.

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<sup>1</sup> Worldwatch Institute, State of the World. Washington, 2004.

<sup>2</sup> "Promoting Sustainable Consumption and Production and the International Level", De Leeuw, G. Sonnemann and A. Zacarias in Governance of Integrated Product Policy. Edited by t D. Scheer and F. Rubik, Greenleaf, Uk, 2006.

A key aspect of sustainable consumption and production is the social-economic dimension. This is especially relevant for developing countries. The poor of the world deserve the same quality of life enjoyed by the majority of people in the developed countries. The key question of sustainable development is how to decouple economic growth from environmental degradation, and how to provide poor countries/communities with what they need and what they want without damaging the Earth's life support systems.

This issue is a priority for all countries worldwide. It is necessary to look at innovative manners to meet (basic) needs, developing new innovative product-service systems. This is especially important when we consider the new emerging "global consumer class", with large groups of middle-class consumers showing increasingly similar consumption patterns, for instance in rapidly developing countries (e.g. Brazil, China and India). For example, Asia Pacific accounts for two thirds of current global population growth. Already there are more middle-income earners – earning over US \$7,000 – in Asia and the Pacific than in Europe and North America combined. Yet, this relative prosperity – and consumer power – is enjoyed by only 26 per cent of the region's population.<sup>3</sup>

As a result, de-coupling environmental pressures from economic growth, while satisfying human needs, is a key challenge for all countries over the next few decades. This will require integrated efforts that address production and consumption patterns for key consumer goods and government policy that provides consistent messages across sectors.

### **What is Sustainable Consumption and Production?**

Sustainable consumption and production can be seen as the two faces of a same coin related to the "the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations."<sup>4</sup> Sustainable consumption is generally understood to mean re-orienting consumption towards environmentally friendly consumption behaviour and reducing household environmental impacts (not the consumption of goods and services as such). Where ecological limits can be established, sustainable consumption can be linked to specific targets (e.g. for CO<sub>2</sub> emissions, water consumption).

If sustainable production concerns the supply side, focusing on the economic, social and environmental impacts of production processes, sustainable consumption addresses the demand side, focusing on consumers' choices of goods and services, such as food, shelter, clothing, mobility and leisure, to fulfil basic needs and improve the quality of life.

Both in developed and developing countries the way goods and services are consumed and produced have become unsustainable, under different aspects. Developed and rapidly developing countries are characterized by a rate of use of

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<sup>3</sup> Bentley Matthew, *Global Consumers and Sustainable Consumption: an international study*. PhD. Dissertation, AGSIRD, Paris, 2003.

<sup>4</sup> Symposium: Sustainable Consumption. Oslo, Norway; 19-20 January 1994.

natural resources that in many cases has gone far beyond the carrying capacities of ecosystems, causing a continued deterioration of the global environment that poses concrete and severe hazards to our planet and to humanity as a whole. Poor countries or poor communities not only face the environmental consequences of global impacts caused by industrial development occurred more often outside their borders, but also face the domestic pollution generated by obsolete technologies, and also suffer profound social disparities and inequalities that have prevented them from real development.

De-materialization of consumption (better products and services, doing more with less) is often quoted as a strategy to achieve sustainable consumption patterns without sacrificing - perceived - quality of life. Business has a key role in this area, to be achieved by eco-design, marketing of product service systems and using mainstream advertising techniques. Governments have a role to play as well, in particular (apart from implementing legal and economic instruments targeted at business) to contribute to awareness raising and involvement campaigns on SCP which engage, seduce and empower consumers, in particular youth. Among this "global consumer class", communication, awareness raising and information can in fact contribute to strengthen consumer demand for sustainable products and services, which then, through the market, will create stronger incentives for industry to design and market sustainable options.

There is a need for an integrated approach of consumption and production, since the environmental gains obtained through improvements in the productions side (via eco-efficiency and technological developments) are offset by the increasing trends on the demand side driven by various factors such as economic growth, population growth and increasing standards of living or unsustainable lifestyles. For example our societies could be more efficient in waste recycling, but the volume of waste generation is increasing more rapidly than the recycling rate.

## **II. THE 10 YEAR FRAMEWORK OF PROGRAMMES ON SUSTAINABLE CONSUMPTION AND PRODUCTION (MARRAKECH PROCESS)**

Changing the unsustainable patterns of consumption and production has been one of the major commitments of the World Summit on Sustainable Development held in Johannesburg in 2002 that dedicated to SCP Chapter 3 of the Johannesburg Plan of Implementation (JPOI). Stating that 'Fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development'<sup>5</sup>, the JPOI has called for the development of a 10-Year Framework of Programmes (10YFP) on SCP in support of regional and national initiatives.

UNEP, together with UN DESA, has been very active in promoting and supporting the development of regional and national strategies on SCP and coordinating the international cooperation to develop a Global 10Year Framework of Programmes on SCP. This global framework will be presented at the Commission on Sustainable Development (CSD) during its 2010/11 two-year cycle.

The development of the 10YFP consists of the following phases:

- a) Organizing regional consultations to promote awareness and identify priorities and needs for SCP;
- b) Building regional strategies and implementation mechanisms with regional and national ownership;
- c) Implementing concrete projects and programmes on the regional, national and local levels; in order to develop tools and best practices that will contribute to the development of the 10YFP.
- d) International coordination, to sharing and evaluating progress.

### **1. Regional Consultation under the Marrakech Process:**

In the years 2003-2005 nine regional consultations in Latin America and the Caribbean, Asia-Pacific Region, Africa and Europe were held, where each region identified its needs and priorities in terms of SCP.

In Europe, two regional expert meetings have been held. The European Stakeholder Meeting on SCP held in Ostend, Belgium, in November 2004 was the first of these meetings and was jointly organised by UNEP and the European Commission. The meeting discussed priorities for further work on SCP for all key actors in Europe, and considered as well how Europe could cooperate with other regions to promote SCP. EU is committed to the Marrakech process; the forthcoming EU Action Plan on SCP will also contribute to this process. As a follow up of the regional meeting, the EU is supporting countries from other regions to promote SCP, by supporting the organization of National Roundtable on SCP in China, India, Brazil and South Africa.

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<sup>5</sup> United Nations, 2002, Johannesburg Plan of Implementation

### **Regional Activities under the Marrakech Process:**

In Latin America and the Caribbean region, three regional expert meetings on the 10YFP have been held, one in Buenos Aires in April 2003 and the other two in Managua, Nicaragua in October 2003 and August 2005.

The regional expert meetings have identified the regional priorities in the thematic areas on SCP. The need for capacity building, as well as technical and financial assistance for implementing SCP policies and activities was pointed out. One of the most important outcomes of the regional consultations was the development of the Regional Strategy on SCP and the establishment of the Latin American Regional Council of Government Experts on SCP that were endorsed at the 14<sup>th</sup> Forum of Environment Ministers in November 2003, with UNEP Regional Office in the Latin America and the Caribbean (ROLAC) presiding as secretariat. The main objective of this Council is to identify and propose efficient mechanisms in order to integrate policies, and support the implementation of the regional strategy. Meeting reports of the regional consultations as well as the regional strategy are available at: <http://www.unep.fr/pc/sustain/10year/regional.htm>

At the third meeting, the Regional Council recommended as strategic components the following points:

- Development of policies, national strategies and action plans for SCP in every country of the region
- Inclusion of SCP in the national and regional policies for sustainable development and poverty reduction
- Creation of multi-stakeholder National Consultative Councils on SCP that consist of representatives from the private sector, the government, universities, consumer associations and other civil society organisations for participatory development of policies, strategies and action plans

To support the region, UNEP launched a two-year project "Implementation of a Regional Programme on Sustainable Production and Consumption in Latin America and the Caribbean" in May 2006. This project aims at supporting the governments in the region with the goal of developing and implementing concrete SCP policies and projects. This project consists of eleven independent activities that target the following areas:

- Development and adoption of national SCP strategies
- Support for the design and implementation of integrated waste management systems
- Improvement in the knowledge base and capacities of micro, small and medium-sized enterprises (MSMEs) on environmentally friendly technologies
- Support by governments for the implementation of sustainable public procurement programmes
- Increase in environmental awareness pertaining to SCP
- Strengthening of the Regional Council

## 2 Marrakech International Expert Meetings:

Within the Marrakech Process, two international meetings<sup>6</sup> have been organized by UNEP and UNDESA to report back and further develop the process. The first meeting was held in Marrakech, Morocco (June 2003) and the second one in San José, Costa Rica (September 2005). In the Costa Rica meeting the consultation phase was closed, and it was agreed to move towards the implementation of the regional strategies or concrete projects on SCP. The third international review meeting will be organized in Stockholm, Sweden, 27-29 June 2007.<sup>7</sup>

## 3 Marrakech Task Forces:

In order to support the implementation of concrete projects, and to focus on a specific themes of SCP, Task Forces have been created with participation of experts from developing and developed countries. The Marrakech Task Forces are voluntary initiatives lead by countries that - in co-operation with other partners - commit themselves to carrying out a set of activities that support the implementation of specific projects of the Marrakech Process. So far, 7 Task Forces have been formed<sup>8</sup>:

- Cooperation with Africa (led by Germany),
- Sustainable Products (led by United Kingdom),
- Sustainable Lifestyles (led by Sweden),
- Sustainable Procurement (led by Switzerland),
- Sustainable Tourism (led by France),
- Sustainable Building and Construction (led by Finland),
- Education for sustainable consumption (led by Italy).

**4 Cooperation Dialogue with Development Agencies:** Recognizing the important role of development agencies and regional banks, a **Marrakech Cooperation Dialogue** has been initiated between development agencies and SCP experts. Its main objective is to build better cooperation in implementing development projects that simultaneously contribute to reduce poverty reduction and promote SCP. The Cooperation Dialogue was launched through a special session at the "Marrakech +2" meeting held in Costa Rica, September 2005 when it was recognized that the aspects of sustainable development and/or environmental sustainability are often included in national development plans, but there are generally no specific references to SCP. It is usually referred to in other terms and generally included in sectoral approaches (energy efficiency, waste management, etc).<sup>9</sup>

A survey with development agencies conducted by UNEP with the main objectives to identify their SCP-related projects, find mechanisms for cooperation and better integrate SCP in their programmes provided encouraging results: 76% of the agencies responded to the survey. It reveals that development agencies carry out

<sup>6</sup> Reports on International meetings are available at:

<http://www.unep.fr/pc/sustain/10year/international.htm>

<sup>7</sup> For more information please see: <http://www.unep.fr/pc/sustain/10year/international.htm>

<sup>8</sup> For further information please refer to <http://www.unep.fr/pc/sustain/10year/taskforce.htm>

<sup>9</sup> For further information please refer to

<http://www.unep.fr/pc/sustain/10year/Cooperation%20Dialogue.htm>

activities linked to SCP, even if they are not always labelled as such. Most of the agencies are supporting projects on energy and resource efficiency, waste management and water and sanitation. One third of the agencies support activities related to organic agriculture and fair trade (review available at: [www.unep.fr/sustain/10year/Cooperation%20Dialogue.htm](http://www.unep.fr/sustain/10year/Cooperation%20Dialogue.htm)).

## **5 National Action Plans and Indicators:**

One of the key recommendations coming out of the international meetings of the Marrakech Process is develop non-prescriptive guidelines to support the implementation national SCP programmes and action plans. A Manual drafted by UNEP will provide practical steps for the monitoring of national SCP action plans and indicators progress toward SCP. The manual will also explore including SCP in the existing national policy frameworks Sustainable Development and Poverty Reduction strategies.<sup>10</sup>

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<sup>10</sup> For further information please refer to: [www.unep.fr/sustain/initiatives/action.htm](http://www.unep.fr/sustain/initiatives/action.htm)

### III. EUROPEAN SCP POLICIES

#### 1. European SCP Trends

The European model of wealth, like that of all industrialized countries, has been based on a high level of resource consumption, including energy and materials. Current total material consumption in industrialized countries is between 31 and 74 tonnes/person/year, and environmentally most significant is the consumption of materials for housing, food and mobility.

Important progress has been made in promoting cleaner production, not only in the EU, but also - often at a slower pace - in the wider European region. Progress has also been made in improving eco-efficiency and reducing the environmental impacts of consumption. However, progress towards changing consumers' behaviour has been rather limited. In Western Europe, absolute de-coupling of the environmental effects from growing material use and waste generation remains an important challenge.

Direct Material Consumption (DMC) has increased slightly in 2000 compared with early 1980 levels. It remained more or less constant during the second half of the 1990s. Non-renewable materials dominate DMC, with construction materials accounting for the largest share, more than 40%.

There has been an increase in generation of municipal waste per capita in western European whilst in Central and Eastern Europe, the volume of municipal waste has remained stable. There has been a 7% increase of total packaging waste in the EU15 between 1997 and 2001. However, the EU target to recycle 25 % of packaging waste in 2001 has been significantly exceeded. In 2002 the recycling rate in the EU-15 was 54 %.<sup>11</sup>

The EU15 has made considerable progress regarding sulphur dioxide emissions - reducing them by over 60% since 1990 - and nitrogen oxides - by 25%. However, CO<sub>2</sub> emissions continue to rise and NO<sub>x</sub> levels continue to pose major environmental problems. In 2000, the energy sector continued to be the largest contributor to total EU greenhouse gas emissions, accounting for 27% of total EU15 emissions.<sup>12</sup> Total energy consumption in the EU has been rising since the mid-1990s - although more slowly than GDP.

Many fish stocks in European waters are over fished or fully exploited, due to over fishing, but also because of coastal and marine pollution, and changes in ecosystems. Forest on the other hand is an example of a relatively well managed natural resource. The area covered by forests in Europe is around 36 %, and on average, has been increasing by half a million hectares a year in recent years.

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<sup>11</sup> The European Environment, State and Outlook:  
[http://reports.eea.europa.eu/state\\_of\\_environment\\_report\\_2005\\_1/en/SOER2005\\_all.pdf](http://reports.eea.europa.eu/state_of_environment_report_2005_1/en/SOER2005_all.pdf)

<sup>12</sup> Source: The "World Energy, Technology and Climate Policy Outlook (WETO)", published by the European Commission on 12 May 2003

## 2. Overview of the European Union on SCP tools and strategies

EU enlargement is a driving force for political and economic changes in Europe. Currently there are 27 Member States in the European Union. Through this process, the EU is extending its environmental standards and policies across the wider European region. Moreover, Europe is the world's largest trader, with the EU accounting for about a fifth of the world exports and imports. Trade policy has an important impact on global sustainable development. Europe is also a major player in the development process, with the EU providing approximately half of all public aid to the developing countries. These global interactions have a multiplier effect on approaches promoted by Europe.

The EU is fully committed to the SCP goals of the Johannesburg Plan of Implementation (JPOI). EU action in this field inscribes itself in the broader strategic framework of the Lisbon Strategy<sup>13</sup> on Growth and Jobs, and the EU Sustainable Development Strategy (SDS).

The **Lisbon Strategy** aims at making the EU, by 2010, "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion". This strategy sets out the ambitious goal of achieving an economic growth rate of 3% per annum, which would roughly double GDP in 25 years<sup>14</sup>, and it also aims to boost research and innovation. Accelerating progress in achieving the goals of the Lisbon strategy is now at the top of the EU agenda.

SCP is a priority area in the renewed **EU Sustainable Development Strategy (SDS)**<sup>15</sup> alongside climate change, clean energy, sustainable transport, natural resources and public health. The Strategy called for the Commission to develop an Action Plan by 2007 to *identify and overcome barriers for SCP, ensure better coherence between the different related policy areas, and raise awareness among citizens and change unsustainable consumption habits*. Furthermore, some of the EU Member States have already developed national SCP strategies or action plans, such as the United Kingdom, Finland, and Germany. The Czech Republic is currently developing its SCP strategy.

The **Sixth Community Environment Action Programme**<sup>16</sup> (6EAP) identified the EU's environmental goals between 2002 and 2012 to ensure a high level of environmental protection and de-coupling environmental pressures and economic growth. Key areas to be tackled are climate change; nature and biodiversity; environmental and health and quality of life; and natural resources and waste. The programme states as one of its aims better resource efficiency and resources and waste management to bring about more sustainable consumption and production patterns.

The 6EAP is complemented by **seven thematic strategies** with concrete targets in the areas of air quality, soil protection, sustainable use of pesticides, protection and conservation of the marine environment, waste prevention and

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<sup>13</sup> Lisbon European Council, 23 and 24 March 2000

<sup>14</sup> See the Communication "2003 Environmental Policy Review. Consolidating the environmental pillar of sustainable development". Brussels, 3.12.2003, COM (2003) 745 final.

<sup>15</sup> <http://register.consilium.europa.eu/pdf/en/06/st10/st10117.en06.pdf>

<sup>16</sup> Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July laying down the Sixth Environment Action Programme.

recycling, sustainable use and management of natural resources and urban environment<sup>17</sup>. Especially the waste and resource strategies are key ingredients of the EU's efforts to move towards sustainable consumption and production patterns.

**The Thematic Strategy on the Sustainable Use of Natural Resources**<sup>18</sup> (December 2005) aims to reduce the environmental impacts associated with resource use and to do so in a growing economy. The strategy is focusing on improving knowledge, developing monitoring tools and fostering strategic approaches in specific economic sectors in the EU and internationally.

One key initiative under the Thematic Strategy on the Sustainable Use of Natural Resources is the proposal to set up an **International Panel on Natural Resources** to examine and provide information on the global aspects of natural resource use and its environmental impacts. This kind of information is crucial for improving EU policies, but it can also give useful input to international processes such as the Marrakech process. The Panel is being set up jointly by the European Commission and UNEP.

**The Thematic Strategy on the prevention and recycling of waste (December 2005)** seeks to make Europe a recycling society that seeks to prevent waste and, where waste cannot be prevented, uses it as a resource. It aims at reducing the environmental impacts of waste by focusing waste policy on the key environmental impacts, taking account of the life-cycle of resources and products; promoting the prevention of waste policies must reach out to the individuals and businesses whose decisions influence the generation of waste, strengthening recycling activities by setting standards, modernizing and simplifying the EU waste legislation, and improving implementation

To achieve the environment policy objectives, the EU uses a blend of policies and instruments, including market based and economic instruments as well as information and communication tools. It also active seeks to involve all government levels and relevant actors (business, citizens, NGOs and consumer organizations and other social partners).

The EU's **Integrated Product Policy (IPP)**, seeks to minimise the environmental impacts of products by looking at all phases of a products' life-cycle and taking action where it is most effective. The life-cycle of a product is often long and complicated, covering all the areas from the extraction of natural resources, through their design, manufacture, assembly, marketing, distribution, sale and use to their eventual disposal as waste. IPP attempts to stimulate each part of these individual phases to improve their environmental performance.

Research has been conducted on environmental impacts of products in order to identify and stimulate action on those products with the greatest environmental impact and room for environmental improvement.. The fields with most potential are food, transport and housing.

Information tools are crucial to enable consumers make informed choices. The **EU eco-label** launched in 1992, is a voluntary scheme providing EU consumers

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<sup>17</sup> Commission Communication "Towards a thematic strategy on the urban environment". COM(2004) 60

<sup>18</sup> Commission Communication "Thematic Strategy on the sustainable use of natural resources" COM(2005) 670 final, Brussels, 21.12.2005

with a life-cycle based environmental certification for products, that they can really trust. At the same time, it gives businesses the opportunity to use one label for all their pan-European or global marketing and also sets the EU benchmark for good environmental performance of products. Criteria are established for individual product groups, such as paper products, textiles, detergents, paints and appliances such as refrigerators or dishwashers, but also service sectors such as tourism. The scheme is currently under revision in order to significantly expand the number products on the shelves for consumers to choose from; increase stakeholder involvement in the decision making processes; harmonise the label with other labels, globally and nationally; and create a labelling system that meet the needs of Green Public Procurement.

The EU's **Environmental Technology Action Plan (ETAP, 2004)** aims to stimulate the development and uptake of environmental technologies in order to protect the environment and boost competitiveness. It focuses on getting environmental technologies from research to markets; improving market conditions; and global action. More priority and funding have been given to environmental technologies and eco-innovation in the new research and development programme. Technology platforms have been established for areas relevant such as water supply and sanitation and hydrogen and fuel cells.

The EU is also actively promoting green public procurement. The volume of public procurement in the EU is c. 16 % of EU wide GDP – making it important vehicle to create markets for sustainable products and services in order to help achieve environmental goals. In some product and service groups the impact could be greater still, as public purchasers are particularly significant in the market (computers, energy efficient buildings, public transport...). A **Handbook on Green Public Procurement** was published in all EU languages in 2005, to give public authorities at all levels concrete information on how they can integrate environmental considerations into their purchasing policies. The Sustainable Development Strategy sets the aim of by 2010 having the average figure for green public purchasing in the EU as high as it is now in the best performing member states.

One example of **regulatory tools** linked to SCP is the EU's '**Eco-design directive to energy-using products**' adopted in June 2005. The Directive deals with products such as electrical and electronic devices or heating equipment. It provides coherent EU-wide rules for eco-design and ensures that disparities among national regulations do not become obstacles to intra-EU trade. It does not introduce directly binding requirements for specific products, but does define conditions and criteria for setting requirements regarding environmentally relevant product characteristics such as energy consumption and allows them to be improved quickly and efficiently.

Some initiatives have also been taken by the business sector that contribute to SCP through **Corporate Social Responsibility (CSR)**, the **Environmental Management and Audit Scheme (EMAS)**, green supply chain, among other voluntary agreements. The European Commission focuses on promoting CSR practices by Europe's 25 million SMEs which are recognized as the most important drivers of economic growth and employment, and represent over 95% of European businesses. The programme aims at ensuring that SMEs have a good

understanding of the drivers, success factors and pitfalls related to CSR. The programme has offered SMEs a tailored, user-friendly CSR toolkit.

**The EU's Environmental Management and Auditing Scheme (EMAS)** is the highest standard of all environmental management systems, guaranteeing improvements in environmental performance. It also offers the possibility to use participation to demonstrate compliance with environmental legislation. The EMAS Regulation aims to ensure continual improvement in the environmental performance (energy, water, waste, emission to air, etc) of participating organisations, taking them well beyond compliance with environmental legislation. There are currently more than 5000 EMAS registered sites in Europe. 60% of them are SMEs. The main sectors are chemicals, food and beverages, while the fastest growing sectors are tourism and public authorities. The scheme is currently under review in order to strengthen its image as 'the very best' in the market; raise its attractiveness for participating organisations; and make it more user-friendly and affordable for participating organisations.

## **EU Main challenges**

While legislation and technological progress has enabled major environmental gains, the increasing demand means that pressures on the environment from consumption and production remain high. The key challenge is to address the economic, social and environmental dimensions of consumption and production in an integrated way, taking into account impacts on countries outside the EU.

The European Regional Stakeholder meeting on SCP (November 2004) identified the following key SCP challenges for further work:

- De-coupling economic growth from environmental degradation by addressing both supply and demand, with a focus on the most serious environmental challenges (promoting eco-efficiency in sectoral policies);
- Taking a holistic approach that considers whole life-cycles of products and services, intervening to tackle problems as early as practicable in the resource/waste flow;
- Developing coherent and integrated national and regional strategies on SCP, with a sectoral and cross-sectoral approach and including all the relevant stakeholders;
- Enhancing framework conditions for sustainable markets;
- Major innovation to enable the shift to cleaner and more resource-efficient systems and processes for delivering improved quality of life for all;
- Capacity building and integration of sustainable development considerations into all policy sectors;
- Developing a set of indicators for measuring progress, and adopting targets and timelines where appropriate;
- Addressing the international environmental impacts of EU consumption patterns, ensuring that basic needs are covered for all.

For more information please refer to the comprehensive overview provided in the *Inventory on Sustainable Consumption and production in the EU*<sup>19</sup> developed by the European Commission and EU Member States' experts, and to the European Commission website: <http://ec.europa.eu/environment/>.

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<sup>19</sup> EC, Sustainable consumption and production in the European Union, November 2004.

### III. PRODUCTION PATTERNS AND TRENDS IN BRAZIL

Attitudes of Brazilian companies are mostly reactive, brought about by policies in the 60s and 70s that promoted the (i) *end-of-pipe* model: treatment plants for accumulated waste discharge in landfills or incineration; and (ii) *command-and-control legislation* establishing emissions standards, caps or thresholds. Time proved that these models did not result in significant resource savings, elimination or minimization of the toxic and hazardous wastes that endanger quality of life and of the ecological services provided by natural ecosystems.

The mid-eighties began to see some improvements – although limited to a small number of differentiated companies –, which were localized and did not contribute to reducing resource loss or industrial waste. Industrial landfills in Brazil face both management problems and large stocks of hazardous wastes.

In the nineties, Brazilian industry began – albeit timidly – to incorporate procedures for recycling, pollution prevention and other environmental concerns, but all within the *end-of-pipe* and *command-and-control* models. There were, however, signs that some companies were beginning to replace reactive practices and behaviour by proactive and aggressive attitudes. As a result, management models began to incorporate environmental and supply aspects.

By the end of the nineties, *more-differentiated* companies began to heed market pressures and legislation passed as a result of environmentalists' demands. They began to introduce HSE (health, safety and environment) issues into differentiated management models. Nevertheless, there was no concrete and objective evidence that HSE was embedded into companies' strategic and tactical planning. Very few of the major companies actually made HSE part of their corporate structure: despite the acknowledged importance of HSE, it did not feature prominently in the higher management's business decision making.

New examples of organizational innovations and production processes incorporating social and environmental elements appeared in a tentative and limited manner. Nowadays, in the daily operation of organizations, the *strategic management* model is based on the final economic-financial result – the so-called *Bottom Line* – guided by monetary indicators such as liquidity, profit margins, turnover, rates of return on economic capital, net present value, earnings before interest, taxes, depreciation, and amortization, among others. Total price accounting, incorporating social and environmental externalities and directed towards the *Triple Bottom Line* are not part of the operational agenda of companies.

The best signs of change in corporate culture and paradigm are seen in companies that introduced environmental management systems, particularly those with ISO14001 certification. In 2007, there were 2,300 certified companies. Furthermore, 400 companies received OHSAS 18001 certification and 150 met SA 8000 requirements, making Brazil one of the Latin American countries with the highest number of socio-environmental management certifications (according to Tocalino Neto, editor of *Revista Ambiental Industrial*).

Brazil has made significant contributions to developing the future international social responsibility guidelines – ISO 26000. For many specialists, the working group chaired by Brazil and Sweden responsible for developing the future guidelines became the main global forum for multisectoral discussions on corporate responsibility. The thematic panel will cover the already approved topics of the

future ISO 26000 and will debate the challenges and opportunities of this initiative, projecting trends before the publication of the guidelines in 2008.

Although this is considered advanced, it must be said that in Brazil, in 2003, there were some 5.5 million formal companies. In addition, there were another 5 million agricultural properties, usually family owned and low income, and an inconceivable number of *informal businesses*, run by one or two people with no access to the job market, stimulated by the high fiscal and tax costs for formally established companies and, according to some analysts, derived from *the highly developed creativity of Brazilians*.

According to the spokesperson of the Environment Office of the Federation of Industries of the State of São Paulo (FIESP), companies, as a rule, encourage and favour good environmental practices, and share the view that health, occupational safety and socio-environmental responsibility are considered investments by industries.

*Social* issues are addressed in two different ways by companies that affirm they are concerned with socio-environmental aspects. They provide health and safety programs for in-house staff or collaborators and the more advanced companies undertake social responsibility actions for the external public.

There are companies that have adopted voluntary codes of conduct and have agreed to report their (mainly environmental) performance based on indicators proposed by NGOs that represent corporate interests, namely:

- Ethos Institute, with 1,145 members, encompassing small, medium and large companies in various sectors of business and activities.
- CEBDS, Brazilian Business Council for Sustainable Development, has a membership of 50 major corporate groups, representing more than 30% of the GDP and operating in a wide range of activities – financial capital, energy, transports, steel, metals, building construction, consumption goods in general, and service providers.

These two organizations work with companies that are committed to social and environmental issues and that, in some form, report their activities in a Socio-Environmental Performance Report (Ethos Institute) or a Sustainability Report (CEBDS).

In addition, there are a group of Brazilian companies that trade their shares in the São Paulo Stock Exchange (BOVESPA) and are rated in its Corporate Sustainability Index (ISE). 150 of the largest companies were invited to answer the questionnaire and a maximum of forty were to be chosen. 28 companies were admitted. After its first year in operation, the yield of ISE listed companies was 21.6% (until October 2006) in comparison to 17.3% of the BOVESPA Index.

It is suggested, in both cases, that the reporting model used by companies should include the indicators promoted by the Global Reporting Initiative (GRI). But, a more detailed analysis does not show marked compliance or implementation of these recommendations.

At least from the statements made by their officers and the nature of the raw data and published information, there is evidence to show that to generate the information required by the GRI, companies would have to adopt criteria and

principles for industrial ecology, cleaner production, eco-design, eco-efficiency and life-cycle assessment. This, in itself, represents an interesting trend.

More evidence can be perceived or inferred. To produce GRI based reports, companies must redirect their management model; produce environmentally responsible goods and services, which would indicate sustainable consumption and production.

In spite of all the signs, there is no objective evidence of trends towards *regional and national sustainable consumption and production* that would indicate the adoption of corporate practices such as:

- Insertion of the environmental dimension in total quality practices to achieve *Total Quality Environmental Management (TQEM)*.
- Deepen and broaden incorporation of cleaner production and eco-efficiency in production lines.
- Adoption of effective life-cycle assessments or life-cycle thinking in the development of environmentally sound products (*Eco-design*).
- Implementation of production practices and compliance with social demand indicators, such as the Millennium Development Goals proposed by the UN.
- Evaluation and report of the *Triple Bottom Line* as a sustainable development paradigm.
- Organization of the production chain (according to the Porter concept) and its transformation into a *sustainable value chain* with socio-environmental responsibility. In this case, the economic, environmental and social impacts are expressly included in the actions of all participants – from the extraction of materials, through the use of inputs, manufacture, distribution, consumption (intermediate and final) up to post-consumption and returning of materials to the environment.
- Integrated actions for raising awareness of consumers to demand sustainable products.

#### **IV. POLICY FRAMEWORK AND SUCCESSFUL INITIATIVES THAT CONTRIBUTE TO CONSUMPTION AND PRODUCTION IN BRAZIL**

The Brazilian Government recognizes the importance of the *Marrakech Process*, for reasons that are implicit in the initiatives of its bodies, with special reference to those of the Ministry of the Environment, the Ministry of Science and Technology and the Ministry of Development, Industry and Commerce. It also recognizes the relevance of the proposal for orienting consumption and production actions in companies that produce goods and services, as part of global initiatives for the following reasons.

- This proposal is an international proposal stemming from Chapter III of the Johannesburg Plan of Implementation, *Changing of unsustainable patterns of consumption and production*, developed at the UN, in the Division for Sustainable Development of its Department for Economic and Social Affairs and the United Nations Environment Programme.

- The overall objective is to implement the 10 Year Framework of Programmes (2002-2012) in order to accelerate the shift towards regional and national sustainable consumption and production.
- The 10 Year Program includes the following important aspects: promotion of social and economic development within the limits of the carrying capacity of ecosystems and, when appropriate, decoupling economic growth from environmental degradation by improving efficiency and sustainability of resource use and production processes as well as reducing resource degradation, pollution and wastes.

Several federal and state government bodies took important steps which may contribute to redirecting sustainable consumption and production by companies in Brazil. Documents and information are available at the aforementioned bodies and may also be found on their websites. Brazilian legislation states that environmental information deposited in public environmental bodies must be made freely available to all interested parties<sup>20</sup>. The list below is not exhaustive.

- Ministry of the Environment
  - ✓ Establishment of the National Chemical Safety Council, an inter-agency body to implement the recommendations of the Intergovernmental Chemical Safety Forum.
  - ✓ Establishment of the Cleaner Production Management Committee, a multistakeholder body to develop and implement the National Cleaner Production Policy.
  - ✓ Production of background papers for the National Cleaner Production Policy and a National Cleaner Production Plan, within the Ministry of the Environment.
  - ✓ Awareness raising and creation of state-level cleaner production forums, in line with the proposal for the National Cleaner Production Policy.
  - ✓ Alignment of the proposal for the National Cleaner Production Policy with studies being carried out under Mercosul, to formulate a Mercosul Cleaner Production Policy. Agreement signed between the Ministry of the Environment and the German Government's GTZ.
  - ✓ Public policies for natural resources and ecological services in various departments of the Ministry of the Environment.
  - ✓ Regulatory instructions for establishing municipal environment or sustainable development committees, in line with sustainable consumption and production.
  - ✓ Implementation of multilateral environment agreements, resulting from Brazil's ratification of UN conventions and protocols.
  - ✓ Development of "**Sustainable Consumption: Education Manual**". The manual started being used in 2004, in the *Let's Take Care of Brazil* Program, developed by the Ministry of Education, which reached 32 thousand schoolteachers in 4400 municipalities.
- Ministry of Science and Technology

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<sup>20</sup> Federal Law No. 10.650/03. Provides for access by consultation and for the production and direct dissemination by the depositary body. Although the environmental information concept established in law is consistent with the provision of the Aarhus Convention, it doesn't include relevant "non environmental" bodies and does not establish deadlines for compliance.

- ✓ Programs and projects involving ecosystem resources, social insertion, new renewable energy sources.
- ✓ Organization and institutionalization of local production arrangements.
- Ministry of Development, Industry and Commerce
  - ✓ Competitiveness forums.
  - ✓ Industrial policy.
  - ✓ Local production arrangements.
  - ✓ Micro and small enterprises.
- Ministry of Tourism
  - ✓ National Sustainable Tourism Certification Program
  - ✓ Member of the International Task Force on Sustainable Tourism

State governments have been extremely active in implementing social and environmental actions that can benefit corporate initiatives for re-orienting sustainable consumption and production.

These actions include regulatory measures that have impacts on licensing and operation authorizations, public policies for improving environmental procedures and conduct, creation of intermunicipal consortia for sustainable development, river basin management, and development of strategic public-private partnerships, among others.

Also worthy of mention are the initiatives for green public procurement, like the one of the São Paulo State Government, through its Electronic Purchasing System, whose criteria specifically mention meeting the requirements of the *Marrakech Process*.

## **V. FUTURE SUSTAINABLE CONSUMPTION AND PRODUCTION CHALLENGES FOR BRAZIL**

Higher management decisions in industry are the most important factors in overcoming the challenges posed by re-orienting sustainable consumption and production, regardless of whatever initiatives and efforts governmental and non governmental organizations undertake to implement the *Marrakech Process* in Brazil.

Below are some of the main issues associated to current and future challenges.

- Barriers to change are related to organization and technology and private companies alone will not overcome these challenges. Corporate initiatives will have little or no effect if political-strategic, institutional and operational instruments are not in place that are capable of increasing business competitiveness, through effective market instruments for reducing production/commercialization costs and for encouraging product differentiation in the market.
- Industry will have to organize their *sustainable value chains* and all participants will have to practice socio-environmental responsibility principles: government bodies at all political-administrative levels; participants of the production process itself, encompassing production

companies, service providers, suppliers, distributors, financial and other strategic agents; clients, consumers and beneficiaries.

It is in this context that the following challenges were considered. The list order may represent some degree of hierarchy.

**Conceptual challenge.** Entrepreneurs, authorities and members of society as a whole must develop an understanding and a vision of sustainable development or sustainability, to promote growth with quality that is compatible with the ecosystem carrying capacity – as stated in the *Marrakech Process*. Other conceptual elements to be introduced into corporate culture refer to production and managerial technologies.

**Institutional challenge.** Higher and middle management should create mechanisms and procedures to insert the dimension of sustainability into real projects for production processes and products.

**Technical (skills) and technological (knowing how to do it and doing it well) challenges.** Develop and implement organizational learning and knowledge management programs, through education (building responsible knowledge), capacity building (acquiring skills) and training (command of methods).

**Contextual challenge.** The scope and extension of the object or target of initiatives for re-orienting sustainable consumption and production relate to different contexts, starting by understanding and delimiting the expression *consumption and production* or, written the other way, *production and consumption*.

The expression *consumption and production* can be used in the context of production systems, from the source of materials and other inputs (upstream) up to the exit of products to market (downstream). In the case of *production and consumption*, the flow may be identical to the aforementioned or it may also include practices and patterns of final consumers and post-consumption actions. Therefore, understanding of the expression goes beyond mere semantics, as it involves different political-institutional implications, tools and procedures.

This **background paper** is limited to *consumption and production* in the context of the company and the production elements of the respective production chain. Thus, it encompasses the consumption of intermediate products, of reuse or reutilization of materials for production of new goods or services.

The fact that it does not address final consumption and post-consumption issues doesn't diminish the importance of these stages. Nevertheless, they must be examined when the consumption and production analysis is carried out under the *sustainable value chain*. In this case, the complex scenarios of habits and patterns adopted by communities must be taken into account.<sup>21</sup>

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<sup>21</sup> The essence of the construction of the vision of the future of sustainable systems is in the building of proto-scenarios, holding creativity workshops, development of scenarios based on eco-design, environmental and economic assessment, acceptance by the consumer, implementation of workshops for validation and final presentation of scenarios with recommendations for appropriate policies. This

Another **contextual challenge** refers to the understanding of the *product system*, based on the assumption that the "product" – be it goods or services – must be seen in a *systemic way*, made up of interactive and interdependent parts, phases or stages.

***Cradle to grave*** and ***cradle to cradle product systems***. The first is usually related to *eco-efficiency* (economic and ecological), from the extraction of the raw material from nature, through manufacture (upstream), exit from the plant (downstream), right up to the final post-use or post-consumption destination. The second is referred to as *eco-effectiveness*, which implies in incorporating – in the design of the raw materials, the process and the product – the opportunity and reutilization of materials in at least 3-4 consumption or remanufacturing cycles.

Command of innovation and technologies for *eco-effectiveness*, is among the most important challenges for re-orienting consumption and production of sustainable goods and services, in all economic sectors.

Thus, the *cradle to grave* and *cradle to cradle* product systems can be achieved by the intersection of two paths or routes.

- (i) Application of the broader view of cleaner production, to incorporate tools or instruments, such as the aforementioned ones.
- (ii) Decision of the leading or anchor company to transform its production chain into a *sustainable value chain*.

Incorporation of elements and convergence of the aforementioned paths can and – for objective and realistic reasons – will be a gradual process, due to the characteristics, the local conditions and the availability of various kinds of resources.

Cleaner production is admittedly a good idea to be applied to most human activities, both for profit and non-profit, including personal and household habits. Its application, at least in the companies working in Brazil, essentially involves the stated changes for unit operations or in the stages of the process flowchart, involving water and energy savings, modifying raw materials to remove toxicity and other localized aspects.

Since the original proposal, in the early nineties, new criteria and principles have been added, the result of pressures from NGOs<sup>22</sup>, market competition, consumers and new public policy instruments<sup>23</sup>. The following list, therefore, contains the expanded elements or criteria for understanding cleaner production,

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type of initiative – like the SusHouse Model, in Germany – has been used in several European countries, based on global sustainability targets with eco-efficiency factors of 4, 5, 10, 20 and even 50, for the year 2050.

<sup>22</sup> The NGO Greenpeace advocates, since 1989, the concept of Clean Production, which includes, in addition to the criteria of prevention, eco-efficiency and holistic vision (life cycle assessment), the precautionary principle, public right to access to information and the democratic control of technology. In 2001, it also added the principle of accountability.

<sup>23</sup> The 1998 Aarhus Protocol, signed by the European Union, is a reference framework for many of the new principles and criteria applied to conventions, agreements, programs and also the actual cleaner production practices in the EU.

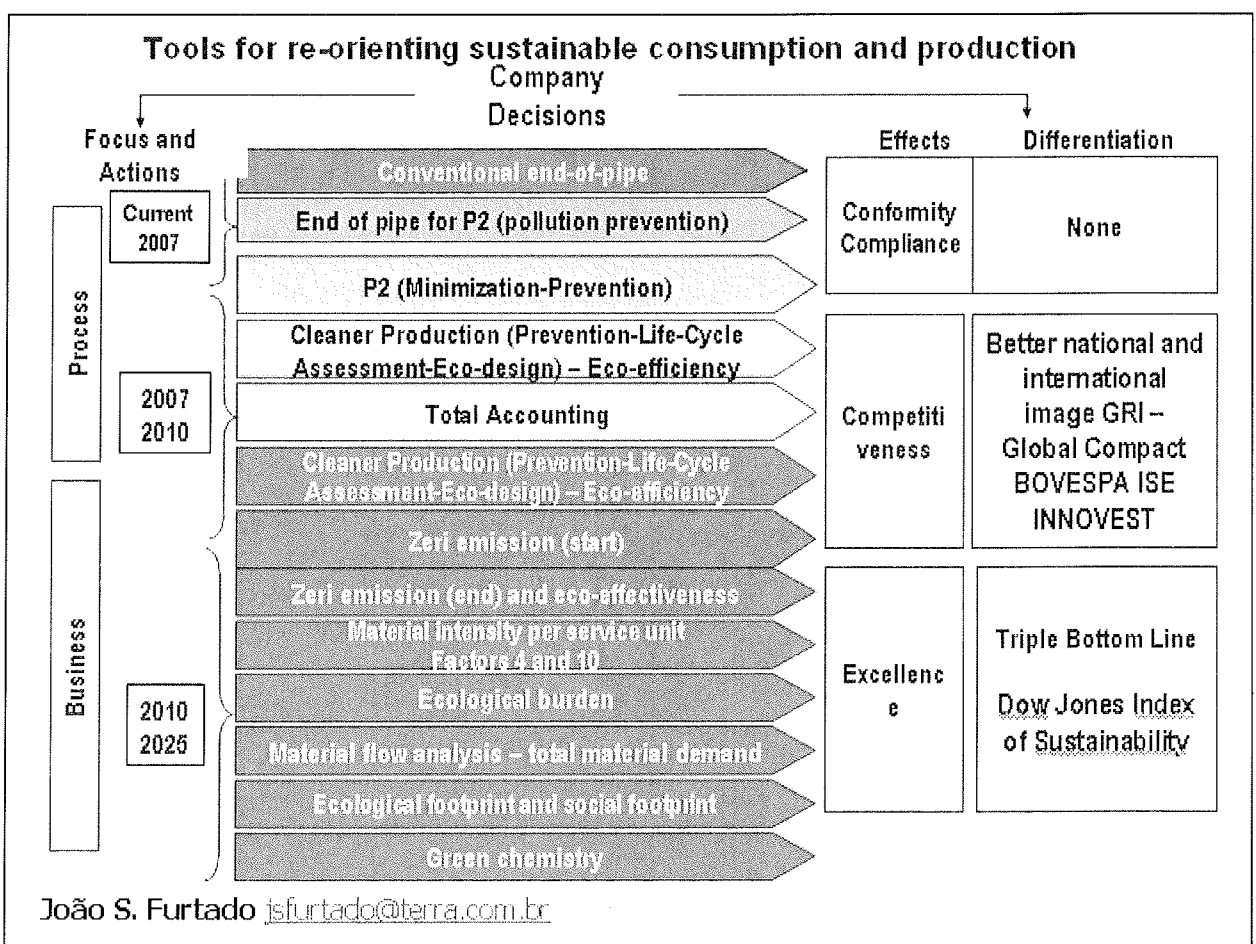
which are being promoted by the Ministry of the Environment, to create the National Cleaner Production Forum Network. The Brazilian Ministry of the Environment's proposals inspired representatives of environmental agencies of the Mercosul partners to discuss the formulation of the Mercosul Cleaner Production and Eco-efficiency Policy.

Acknowledgement of the relevance and the real application of the listed principles are important steps to redirect sustainable consumption and production of goods and services by Brazilian companies.

- **Prevention** – determining factor for the actions that prevent endangerment of the environment and imposes the obligation on the entrepreneur or causal agent to adopt strategies to prevent or eliminate the generation of the agent and, consequently, the ensuing impact.
- **Precaution** – preventive action to avoid the use of substances, products and processes that are capable, or potentially capable, of posing a threat or causing serious, lasting or irreversible damage, given the uncertainty or the absence of formal scientific certainty. According to the Precautionary Principle, assessment of the probability of future risks demands the participation of all stakeholders, incorporates political and institutional aspects that go beyond science and technology, and places the burden of proof on the proponent or potential polluter and not on the potential victims.
- **Eco-efficiency**– expresses the progressive reduction of consumption of natural resources, and water and energy savings by calculating the ratio between volume and amount of value created (numerator), divided by the value that represents the environmental effects or influences (denominator) derived from the creation of value.
- **Product system** – represented by the *cradle to grave* model and in an ideal future, *cradle to cradle*.
- **Public right of access to information** expressed by the free public access to information on issues regarding the safety and use of processes and products, by all interested parties, including pollutant emissions and records, plans for reducing the use of toxic products and data on the hazardous components of products.
- **Accountability** – duty or obligation of all agents to answer – before all stakeholders – for their acts, attitudes, production processes, goods and services once they are introduced in the public environment, with transparency, capacity for and quality of response (respondency), compliance and verification (independent evaluation).
- **Polluter pays principle** – assigns the polluter, regardless of fault, the responsibility for compensation for the repairs of damage caused to the environment and to third parties.
- **Continued responsibility of producer** – represented by the extension of the civil responsibility of the entrepreneur for the impacts and damage caused by the process, product and packaging, throughout the life-cycle of the product.
- **Integration or holistic vision** – use of life-cycle assessment in the production system for goods and services, in which the entrepreneur comes to be responsible for the damage and impacts caused by materials or activities, including energy and water flow, by analyzing the consequences for humans and the environment, in all stages of the life-cycle, according to the adopted product system.

- **Democratic control** – organized effort to increase the right of control or leadership by groups or movements of people excluded by these controls, involving the resources and the regulatory institutions in a social situation.
- **Independent outside evaluation** – complete and documented survey of information, by means of independent reports, to verify and certify or receive formal acknowledgement of the organization's operations, with respect to the effectiveness of risk management and the use of cleaner production principles and criteria.
- **Cooperation** – cooperation required between government and society to formulate plans, programs and executive actions to attain desired social and environmental patterns.

Insertion of these tools and concepts will allow companies to overcome the challenges for redirecting sustainable consumption and production, reaping benefits such as those shown below.



# Strategic recommendations for sustainable consumption and production in production systems

Diagram showing implementation of Marrakech Process in Brazil

