Normative frame

This conceptual framework was prepared to clarify the concepts of 'sustainable production and consumption patterns', 'integrated product policy' and 'integrated product policy partim the environmental aspects', and to assist the working groups in the development of indicators for 'sustainable production and consumption patterns' and 'integrated product policy' at national level.

1 NORMATIVE FRAME FOR SUSTAINABLE PRODUCTION AND CONSUMPTION PATTERNS

Sustainable production and consumption patterns are an essential part of sustainable development. In *Agenda 21*, unsustainable consumption and production patterns, especially those in developed countries, were identified as the major cause of continued deterioration of the global environment.[1] Furthermore a majority of problems descend from developed countries, while the most severe impacts are being felt in the poorest regions of the world: it enhances social inequality.[2] The issue of consumption and production patterns has become, to some extent, an umbrella for general strategic issues and innovative approaches in the area of sustainable development policy-making.

1.1 SUSTAINABLE DEVELOPMENT

There is no objective, unique universal interpretation of sustainable development.[3] The most frequently quoted and commonly accepted definition is *'Development that meets the needs of the present without compromising the ability of future generations to meet their own needs'*. [4] To achieve this better quality of life for everyone, now and for generations to come, the necessity for harmony between the environment, society and economy is recognized. Sustainable development means meeting three objectives at the same time: social progress recognising the needs of everyone; effective protection of the environment and prudent use of natural resources; maintenance of high and stable levels of economic growth and employment, and this in Belgium and the world as a whole.

In other words, sustainable development focuses on improving the quality of life for all of the Earth's citizens without going beyond the capacity of the environment. The basic ingredients of sustainable development are therefore the carrying capacity of the earth, social justice, and the needs of humanity. In the UNCED-conference an emphasis on participation was added.

The **Rio Declaration** offers 27 principles for sustainable development.

---

[1] "The major cause of the continued degradation of the global environment is the unsustainable pattern of production and consumption, particularly in industrialized countries" and "This results in excessive demands and unsustainable life-styles among the richer segments, which place immense stress on the environment. The poorer segments, meanwhile, are unable to meet food, health care, shelter, and educational needs"

[2] In the present global markets much of the social and environmental impacts of primary production will be increasingly felt in developing countries.

[3] In the definition and operationalisation of 'sustainable development' several normative choices have to be made. There is no objective definition of what people's needs are, of what is just and fair, etc. A lot of concepts can be interpreted differently dependent on time, place, etc.

[4] taken from the report Our Common Future -also known as the Brundtland Report- is only one of over sixty other the definitions of the same principle

RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT

The United Nations Conference on Environment and Development,

Having met at Rio de Janeiro from 3 to 14 June 1992,

Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, a/ and seeking to build upon it,

With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people,

Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system,

Recognizing the integral and interdependent nature of the Earth, our home,

Proclaims that:

Principle 1

Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 3

The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

Principle 4

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5

All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6

The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Principle 8

To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9

States should cooperate to strengthen endogenous capacity building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10

Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11

States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.

Principle 13

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14

States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

Principle 15

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.

Principle 16

National authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Principle 17

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18

States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

Principle 19

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

Principle 20

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Principle 21

The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

Principle 22

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23

The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24

Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25

Peace, development and environmental protection are interdependent and indivisible.

Principle 26

States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

Principle 27

States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

In particular, principle 8 addresses production and consumption patterns, stating that *'states should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies'*.

The **Federal Plan for Sustainable Development** also highlighted five principles as basic for sustainable development action, which make it possible to equally take into account the three aspects of sustainable development: the economic, social and ecological component. These are: shared, but differentiated responsibility; intragenerational and intergenerational fairness; integration; precautionary principle; principle of participation and good government.

Principle 7: shared, but differentiated responsibility

The principle of 'shared, but differentiated responsibility' expresses the global dimension of sustainable development and recognises the importance of cooperation and the interdependence of the role of different countries. This globalisation of responsibilities is grounded in shared notions of

fairness. Few demands are made on the much less capable and usually much less responsible (mostly developing countries), and the disproportionately responsible for historical damages, which have the greatest capacity to act (most often industrialised/developed countries) should set the example and take the lead in addressing the problems. The richest countries should make the first steps towards a sustainable development, and should reduce the particularly large pressure of their societies on the collective environment, through sustainable production and consumption patterns, on their national territories as well as in their activities abroad. The developing countries will also take the necessary[5] measures in due time and should be encouraged through cooperation mechanisms, technology transfers and financial means, from the rich countries.

Principle 3: intragenerational and intergenerational fairness

The principle of intragenerational fairness –between citizens and people of the same generation everywhere– and intergenerational fairness –between present and future generations– is applicable to solidarity between as well as within nations. The right to development should include the condition that the fulfilling of the needs of present and future generations everywhere ought to be fair to everyone. Intra- and intergenerational fairness amplify each other. The unfair distribution of wealth between citizens (for example North and South) now, also jeopardises the realisation of global sustainable development in the future. The required efforts to correct the burdens of the past cannot be passed completely onto one generation (for example the present one) either. The long-term sustainable development policy should not paralyse short-term policy, although it should advise its basics, and improve its coherence and its quality.

Principle 4: integration

The principle of integration entails that social, economic and ecological issues should be systematically linked to each other and be incorporated in consistent strategies.[6] In sustainable development it is out of the question that an existing problem would be transferred into another problem, moved to another place or handed over to the following generations. Internal and external integration are essential conditions for an integral approach of sustainable development. External integration means that all (for example environmental) aspects are –from the start in an early stage– taken into consideration in deliberations and decisions in other policy areas (such as urban planning, economy, education, etc.). Internal integration stands for harmonisation and coordination between the different policy levels and between different themes and measures within the environmental policy.

Principle 15: precautionary action

The essence of the 'principle of precautionary action' is captured in common-sense aphorisms such as 'an ounce of prevention is worth a pound of cure', 'better safe than sorry', and 'look before you leap'. It basically means that people have a duty to take anticipatory action to prevent harm. Lack of full scientific certainty[7] should not be used as a reason for postponing prevention measures[8] in case of potential risks, not in the economic, nor in the social, nor in the ecological sphere. If a reasonable suspicion of threats of serious or irreversible damage exists, there is an obligation to try to stop it. Naturally the precautionary principle does not imply systematic abstinence; it should apply to activities with a potential risk of irreversible damage.

[5] which they acknowledged in Rio

[6] for example to control impacts to avoid cross-media transfers of problems pollution

[7] or lack of 100% scientific consensus.

[8] Preventive measures taken, should be based on a scientific risk analysis be in proportion to the seriousness of the potential risks and the chosen protection level en are evolutive in nature (read: They are always revisable in function of the evolutions of the scientific knowledge about the risk).

The principle also implies that measures should be taken to gradually reduce scientific uncertainty. Furthermore, it means that the burden of proof of harmlessness of a new technology, process, activity, or chemical lies with the proponents, not with the general public, as well as that before using a new technology, process, or chemical, or starting a new activity, a full range of alternatives must be examined, including the alternative of doing nothing. This principle is essential to a preventive policy.
The decisions concerning the application of the precautionary principle must be 'open, informed, and democratic' and 'must include affected parties'. Leaving the risk management of serious and irreversible damage to the decision makers and experts only, is inconsistent with the participation principle.

Principle 10: participation and good government

The principle of participation and good government is founded on the reality that without democracy, without respect for all human rights and all fundamental freedoms (also the right to development), without transparent and responsible government of all sectors of society, and without the effective participation of the stakeholders in society, one can not reach a sustainable development that takes into account social issues and is aimed at respect for human beings. Sustainability has to do with the creation of a 'maatschappelijk draagvlak'. Sustainability issues are best handled with participation of all concerned citizens, at the relevant level. For policy decisions, the authorities should identify the stakeholders and proactively consult them on the decision. Permanent involvement and active participation of the population supposes opportunities for access to information[9], participation in decision-making, and access to justice should be available to all.

Naturally, the other principles of the Rio Declaration are equally relevant, treating with certain components of sustainable development, with important themes, with specific approaches, with certain normative, or even legal, principles, or with other philosophical aspects of sustainable development.

1.2 PRODUCTION AND CONSUMPTION PATTERNS

Sustainable development requires a way of production and consumption, which matches our environmental space –read: 'which is adjusted to the carrying capacity of the ecosystems'– and is socially and ethically acceptable –read: 'which contributes to increased human well-being'. '*Meeting the needs of the present generation, without compromising the needs of future generations*' can straightforwardly be put into practice through sustainable production and consumption patterns.

Future development cannot simply follow the patterns of the past. The need for change has been demonstrated time and again, not only because problems are vast as it is, but just as much because this development model of the industrial countries cannot be expanded all over the world. The production and consumption patterns in the past tended to mean more pollution and wasteful use of resources, and in addition spendings to clean up the mess. A damaged environment impairs quality of life and may threaten long-term economic growth. Also too many people have been left behind, excluded from the benefits of development but often suffering from the side effects. This applies to the world as a whole, and to every community in this country. *'Changing consumption and production patterns for the benefit of all people and all countries is increasingly urgent to secure prosperity, improve quality of life, provide equal access to education and health services, and ensure a high quality environment for all.'*

[9] also efforts in education and sensibilisation

The Soria Moria Conference (February 1994) proposed a working definition of sustainable consumption as "the use of goods and services that respond to basic needs and bring a better quality of life whilst minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations."

The issue of sustainable production and consumption has been the subject of considerable interest since the conclusion of the Earth Summit in June 1992. Particular impetus to these discussions has been the two sessions hosted by the Norwegian Ministry of the Environment in 1994 and 1995.

Patterns

A 'production/consumption pattern' could be understood as a way, a system of producing/consuming. In these systems, one can consider all aspects of sustainability during the whole life cycle[10] of products and services. Production and consumption patterns cover a multistage process, with each stage associated with certain types of environmental degradation and social issues. Each stage should be regarded as an integral part of a whole interrelated process, with changes at one stage yielding effects at other stages.

This framework provides the indispensable structure for taking a closer look at the associated environmental, social and economic effects. In a sustainable pattern the production/consumption is moved away from unsustainable schemes and towards sustainable production/consumption. In other words, the pattern can change without the overall level of production/consumption changing: changing consumption patterns does not necessarily mean reducing production/consumption as such.

However, the total volume of material input, as well as the pollutants in the output, matter in a sustainable development. With increasing production, all product design and process technology measures might not bring about a cleaner and therefore more sustainable economy. In the frame of the wellbeing of human beings (being at the centre of concerns for sustainable development) it might be interesting to consider that, in the wealthy portion of the world, less materialistic consumption often brings about more satisfaction.

In the **efficiency approach** the evolution is confined to utilising product design and process technology to attain a more sustainable production and product. The aim is to get the same goods and services out of less material. The idea behind this restriction is that the need for classical economic growth is after all as great as ever[11]. Sacrificing growth could cause unemployment and social unrest, which is not sustainable, and would make both the north and the south worse off.

> *Aber ebenso wird bei allen Zukunftsszenarien deutlich, dass Zukunftsfähigkeit mit Effizienz-Gewinnen allein nicht erreichbar ist, erst recht nicht, wenn im globalen Maßstab die Bevölkerungszunahme und das Wachstum der Konsumansprüche einbezogen werden. Technologische Innovationen sind für Zukunftsfähigkeit zwar notwendige, aber eben nicht hinreichende Bedingungen. Soll das Zusammenleben in dieser eng gewordenen Welt ökologisch und sozial gelingen, sind auch vernünftige Anspruchsbegrenzungen notwendig – also Suffizienz. Wir wollen in dem begonnenen Projekt diesen noch unscharfen Begriff präzisieren. Und es mag sich dabei zeigen, dass Suffizienz ihren Platz als ungeliebte Schwester der Effizienz aufgeben und eine gleichrangige Bedeutung gewinnen kann.*

[10] from the mining of raw materials through production, distribution and use to end-of-life disposal

[11] 'Global prosperity must increase, and be more widely shared. Economic growth remains vital for a better quality of life: for education, healthcare and housing, to tackle poverty and social exclusion, and to improve standards of living through better goods and services.'

The **sufficiency approach** finds that the efficiency approach can only gain time, looks at development in a broader frame than just economical growth and aims at getting the same welfare out of fewer goods and services.

> *The argument of the resource limits to growth has overshadowed another potentially transformative critique which emphasized the impacts of consumption and production patterns on human health. The latter gave a powerful impetus to citizens' actions against toxics and in favour of cleaning up industrial production, particularly in the US, and a decade later in the former socialist countries. For instance the emergence of Social Ecological Union in Russia and CIS countries or Ecoglasnost in Bulgaria have been related to the enormous health impacts of environmental degradation and growth pursued at all costs in the CEE countries. Rebound, demand volume and expansion economy growth. Less resource use on the micro level does not automatically result in less on the macrolevel*

Since reaching an agreement on what the truely sustainable production and consumption patterns are, seems impossible, the *Johannesburg plan of implementation* recommends changing **un**sustainable production and consumption patterns. Pointing out the unsustainability of actions is easier.

1.2.1 Production patterns

The debate on production patterns is about the degree to which all aspects of sustainability are considered and aimed for in the different steps of the life cycle of products and services. In sustainable production patterns the approach is moved away from unsustainable production methods and towards more sustainable alternatives. Producers should take a pro-active approach to sustainable development and integrate environmental and social considerations into their activities. Sustainable production measures cover a wide array of subjects. They aim to decouple wealth creation from the need to use more and more natural resources and energy and form its resulting pollution effects. Many preventative terms — such as eco-efficiency, pollution prevention, waste minimization, and source reduction — are in use today. They also address the employment and social consequences of economic and market developments. The measures fit in a more systemic and holistic approach: handle crosscutting and cross-boundary environmental problems, surpass conventional end-of-pipe approaches –deal with the source of the problem, rather than the symptoms– and explore new opportunities through preventative strategies.

A move towards more corporate responsibility for sustainable production may be incited for several reasons. The media and modern information and communication technologies have brought about transparency of business activities. Citizens, consumers, public authorities and investors have new concerns and expectations in the context of globalisation and large-scale industrial change. The damage to the environment caused by economic activity and social criteria are increasingly considered of concern and influence the decisions of individuals and institutions both as consumers and as investors. As such concerns increase, some producers are using sustainable production information as a marketing tool. To enhance global equity, eco-efficient practises as well as product policy should offer developing countries possibilities for 'leap frogging'.

1.2.2 Consumption patterns

Consumption patterns are about the composition of demand. The consumption is made up of demand volumes for certain products. In sustainable consumption patterns the demand is moved away from unsustainable products and towards more sustainable alternatives. Consumers can for example be

guided away from resource intensive products to less resource intensive products. Sustainable consumption depends on the options available to consumers, which in turn depend on public infrastructure and services as well as on private sector production. In essence, a marketable mix of products and services should be developed that are jointly capable of fulfilling a client's need - with less adverse environmental and social impacts.

The need to change consumption patterns applies to public as well as private consumption. A move towards more sustainable consumption patterns may be incited for several reasons. Health concerns, chosing wellbeing over material prosperity, concern about the future, quality associations, financial considerations could all incite the sustainable consumption. It can also have a deep personal motive. *Consumption patterns are embedded in the web of economic, social and cultural pressures whose effects on actors and institutions need to be understood to inform the design of policies and the mobilization of public support. The impacts of consumption patterns on environment are interlinked with the impacts on health, jobs, distribution of wealth, and on well-being.*

Although the vast expansion of world consumption during the 20th century has had significant positive effects on human welfare for a large number of people, there are however huge disparities in consumption levels.
There is a widening gap between developed and developing countries as well as between the wealthy and the poor. Therefore the impact of choices made in the West on the developing world has to be carefully considered.

1.2.2.1 Sustainable patterns

For sustainable production and consumption patterns all three pillars of sustainable development need to be considered: the economic conditions, environmental consequences of the production process, the product and its consumption, as well as social and institutional issues are taken into account.

Increasing production and economic growth should be de-coupled from environmental degradation and should support and endorse social justice. This de-coupling requires integration of economic, social and environmental aspects of sustainability.

Social and environmental requirements are often seen as restrictive to economic development and therefore jeopardising living standards. Changing consumption and production patterns to ensure sustainability, does however not automatically imply a decrease in quality of life or living standards or even a threat to jobs. It is rather the other way around: if the world sticks with existing consumption and production patterns, further development will be held back and the quality of life will diminish. Adjustments to transformations in economic growth as well as in existing consumption patterns and life-styles of developed countries are naturally inevitable. When the changing of consumption and production patterns is managed well however, new business opportunities will be created, the growth of economy will be promoted, processes for delivering improved quality of life will be developed and new preconditions will be formed to promote human well-being both in industrialised and developing countries and consumption covering basic needs for all and for a more fair access to resources.

Policies and activities to promote sustainable production and consumption in developed countries may affect economic development in developing countries by limiting exports from developing to developed countries. Particularly standards for products and production processes and labelling[12], but also

[12] Eco-labelling that requires certification with respect to international standards can pose major technical, administrative and financial difficulties for small and medium-sized enterprises (SMEs) in developing countries.

environmental and social management standards, life cycle analysis, extended producer responsibility and eco-efficiency efforts, and a possible reduced demand for some products from developing countries (for example fossil fuels, minerals and other industrial raw materials) are causing concern. Support, for example through technology transfer, is indispensable to reach a global sustainable development.

1.2.3 Instruments for changing production and consumption patterns:

Since sustainable production and consumption patterns encompass a broad range of concepts, resource and policy sectors, and related issues, it is difficult to find an overall and broadly accepted interpretation of all the elements covered by the topic. Diverse approaches and instruments[13] – addressing both supply and demand– are developed to cut back the unsustainable impacts related to production and consumption patterns. Policies for sustainable production and consumption patterns aim at influencing producer and product performance and consumer demand, with responsabilisation, 'the polluter pays', and sensibilisation as a starting point.

The role of any policy has to be to drive a wedge between on the one hand production and consumption and on the other hand environmental and social burdens. One should aim for "win-win" situations - good for business and good for the social and natural environment. Instruments are often useful and efficient for changing both production and consumption patterns. When sustainable consumption is promoted, companies are encouraged to provide more sustainably produced products. And when more sustainably produced products are available, sustainable consumption can be more easily enhanced.

In many cases, these instruments are most effective when combined with more conventional regulatory environmental and social incentives. The diversity of products and actors requires a balanced mixture of different measures. The choice and combination of measures will vary according to the product sector and sustainable development issues involved. Depending on the desired behaviour and impact, different instruments with their corresponding incentives should be used to get the most effective mix favouring economic, environmental and social gain.

For certain sectors the action will have to be undertaken mainly starting from production. This can then be supported, for example by labels, so that the consumer can easily go along with it. In other areas pioneering work should start in consumption. Here changes in mentality should be realised. This can be supported by information and sensibilisation campaigns, but also by legal instruments.

Economic instruments

Economic instruments are increasingly being used in both developed and developing countries to promote sustainable production and consumption.

An important policy instrument to promote sustainable production and consumption through the market, is the application of the violator pays principle in the fixing of product prices: all prices ought to reflect the true environmental and social costs of the products. For prices to be right, the negative environmental impacts or social exploitation need to be paid for. Where the market fails to integrate all costs into the price, this can be corrected through differentiated taxation or subsidies according to the environmental and social performance of products and by removing perverse subsidies.

[13] The Division for Sustainable Development, in cooperation with the International Institute for Sustainable Development, established in 1997 a database on new and innovative policy instruments for changing production and consumption patterns. The database, now in its initial stage, lists more than 100 instruments. The database is accessible at http://iisd.ca/susprod/, and Governments, international organizations and major groups are encouraged to contribute additional examples.

Subsidies for environmentally harmful or socially undesirable practices, providing economic incentives for unsustainable practices, are one of the major obstacles to sustainable production and consumption, and should therefore be eliminated. The measures for removing unsustainable subsidies should of course avoid creating economic, social or political problems.

Other economic instruments are tradable permits, deposit-refund systems and other market-based mechanisms.

Raising awareness and social values through information, education,

Efforts to strengthen social values supporting sustainable production and consumption and raise awareness, have focused on education and consumer information.

Broad education of consumers and companies is necessary. *Sustainable consumption can be promoted through educational approaches such as critical thinking, self-reflection, skills in media analysis, personal and group decision-making and problem solving.* As a foundation to mainstream sustainable production and consumption and to ensure that it influences all the stakeholders, inclusion of sustainable production and consumption concepts is necessary in all forms of training and education. Sustainable production and consumption needs to be built into school and university curricula, particularly business schools. The concept of sustainable consumption and production can also be a useful introduction to education on sustainable development.

Co-operation for national capacity building and technology development is essential. Information networking is needed for example to produce and publish life- cycle information about products. Collaboration between the public and private sectors and partnerships between enterprises in developed and developing countries can also increase international transfer and adaptation of technologies to promote cleaner, more resource-efficient and socially responsible production, particularly in developing countries (besides the necessary financing mechanisms and sustainable development policies, including economic incentives and environmental regulations, that encourage enterprises in developing countries to increase eco-efficiency and reduce pollution).

Marketing, advertising and media are important elements in the shaping of consumption patterns. Since they have a direct influence on consumer lifestyles and impact the behaviour of people, policy makers can be more effective if social and environmental marketing is included in the policy package, and advertising and media are considered as factors in the policy development process.

Sustainable consumption can be encouraged through better informing consumers about the products they buy. Consumer information measures are for example consumer awareness strategies or the use of labelling of products with information on their environmental impacts and production processes with information relating to product sourcing, manufacturing and environmental impact at all stages along the production-consumption chain, etc. This can even boost the demand for more sustainably produced products.

Name-fame and shame strategy

The government grades companies based on their performance in meeting certain standards and makes that information publicly available. This name-fame and shame strategy induces many companies to improve their performance, but others do not respond to such pressures.

Voluntary initiatives and agreements

Voluntary approaches to promoting sustainable production and consumption among businesses and other public and private organizations can identify and implement improved production processes and

products by obtaining a commitment but without imposing excessive burdens on enterprises. Voluntary codes of conduct can contribute to promote sustainable production and consumption patterns (for example international labour standards), their effectiveness however depends on proper implementation and verification. Covenants –legally binding, public-private, negotiated agreements– seem most effective and cost-efficient. They allow a more flexible implementation and encourage businesses to take responsibility for environmental protection and social concerns. The promotion of sustainability management, social and environmental audit schemes, performance reporting and accounting systems to be adopted by business and industry, and extended producer responsibility is another possibility.

Public procurement

The integration of product related sustainability considerations into public procurement are another instrument to influence the sustainability of production and consumption. These kind of green policies include recycling and procurement of recycled and recyclable products, energy conservation, construction of energy-efficient buildings, and low emission vehicles for public transport fleets. If public procurement contracts focus on the purchase of environmentally friendly and socially responsible products, they directly increase the demand for sustainably produced products and may as such promote the production of such products. Moreover, encouraging large, public-sector organisations to adopt green procurement strategies can work as example to others, indirectly increasing the demand for sustainably produced products. Public policy also has a key role in encouraging a greater sense of corporate social responsibility and in establishing a framework to ensure that businesses.

Retailer procurement

Retailer procurement policies are a third and essential instrument to improve the environmental and social performance of products. Retailers are able to specify standards of performance with a greater degree of expertise and market power than individual consumers. Therefore the purchasing role of major retailers is potentially one of the most powerful drivers in influencing the market for more sustainable goods.

Integrated product policy

IPP is founded on the consideration of products' impacts throughout their life cycle, and involves business and other stakeholders in dialogue to find the most cost-effective approach. It can therefore be seen as a strong framework for promotion of sustainable production and consumption patterns.

Eco-efficiency

The concept of eco-efficiency holds the progressively reducing of ecological impacts and the resource intensity throughout the life cycle, to a level at least in line with the earth's estimated carrying capacity, the reduction of the toxic dispersion and the material and energy intensity of goods and services, the maximisation of the sustainable use of renewable resources, the improvement of product durability and enhancement of its recyclability, and the increasing of the service intensity of goods and services.[14] In eco-efficiency it is required to search for methods that result in increased productivity on one hand, and reduced resource inputs and waste output and reduced risk to the environment on the other hand.

Eco-efficiency is a widely accepted instrument because industry pioneers have shown that substantial financial benefits can be achieved through better management of energy and materials. Eco-efficiency is seen as a strategy to make businesses both more competitive and more innovative, as well as more

[14] WBCSD, December 1998.

environmentally responsible through less resource consumption and less pollution. Eco-design, waste recycling, cogeneration of heat and power, and zero waste are increasingly being implemented, with both economic and environmental benefits.

Environmental regulations, economic incentives, collaboration between the public and private sectors, support for the development of substitutes for environmentally harmful materials and processes, and encouragement of life cycle analyses of the environmental impact of products are used to promote eco-efficiency and cleaner production.

From products to services to consumers

New concepts for doing business are being pioneered, through re-evaluating processes and products and focusing on services to consumers, for example by providing energy services instead of selling oil, or floor covering services instead of selling carpets. With such approaches, enterprises have an incentive to reduce rather than increase consumption of energy and resources.

Standard setting

Benchmarking and monitoring, standard setting, and integrating environmental and social considerations into all product standards to ensure they gradually tighten across the edges to progressively eliminate the worst performing products.

2 NORMATIVE FRAME FOR INTEGRATED PRODUCT POLICY

2.1 WHAT IS INTEGRATED PRODUCT POLICY?

'Integrated product policy' is an instrument for sustainable development, and in particular for the section of production and consumption patterns.[15] Integrated product policy attempts to create –in a product's life-cycle approach– production and consumption patterns in which besides the economic efficiency of products[16], the environmental consequences of the production process and the product, as well as product related social and institutional issues are considered. The impacts related to all aspects of sustainability of a product's life-cycle –from the mining of raw materials through production, distribution and use to end-of-life disposal– are assessed. To achieve the development of more sustainable products and their uptake by consumers in an efficient manner, tools are developed and framed in an holistic approach.

IPP-thinking so far has focused on the environmental impacts of products, while policy approaches for reducing the social[17] impacts of consumer products are often less well defined. However, integrated product policy should also take into account the other dimensions (social, ethical, economic, institutional) of sustainable development. It is also important to pay attention to the fact that choices made in the West have an impact in the developing world. The broad experience with life cycle analysis of environmental impacts and other available environmental tools could prove useful for developing the other dimensions of integrated product policy.

2.1.1 Focus on products

Traditional policies start from identified environmental or social problems and are primarily process-oriented. The features of a process-oriented approach are that it 1) stops at the company gates (or at most takes account of suppliers and stakeholders in the immediate surroundings), 2) works with the traditional care systems (environment, safety, etc.) and 3) fits in with the ordinary socio-economical way of thinking. It is clear that in this case, issues like effects for third parties are neglected. Although through these policies major improvements have been achieved, unsustainable production and consumption patterns have not been eliminated.

Integrated product policy addresses these sustainability objectives as well, but from a different reference point: the objective is to minimise the social and environmental burdens of goods and services with product-oriented (and thus chain oriented) policies. This approach 1) does not stop at the company gates and takes account of the full chain, 2) works with 'management systems' and 3) comprehends that this will not immediately fit in with the ordinary socio-economic way of thinking[18]. The focus on products seems necessary as a complementary strategy to the traditional policies.

---

15 Therefore 'Integrated product policy' should be seen wider than the European Union interpretation, which might be better termed 'environmental product policy'. Ideas are being sought on a possible new name for the EU IPP. The European Commission held a 'competition' in 2001 to generate suggestions, and is currently analysing the entries.

16 in principle all goods and services

17 For example looking at companies' observance of the core ILO labour standards (freedom of association, abolition of forced labour, non discrimination and elimination of child labour) and their sense of social responsibility regarding best practices on lifelong learning, work organisation, equal opportunities, social inclusion and restructuring in a socially responsible manner

18 This must however be treated in terms of specific cases.

There are various arguments in favour of a focus on products for the achievement of sustainable development objectives.

- A product is an easily recognisable reference unit for all stakeholders, and the consultation or active engagement of stakeholders is an important component of sustainable policy.

- Companies and sector organisations also focus on products. They are increasingly using environmental and social issues as an additional marketing element to promote their products or services. Traditionally companies have been approached mainly by means of legislation and enforcement measures. However, the trend of outsourcing work to contractors and suppliers makes companies more dependent on the performance of their contractors, so environmental and social issues should be brought in as a criterion in procuring products and services from other companies.

- Products become more important as a source of environmental impacts through for example the use phase of products or the large volumes which magnify the impact. The achievement of many environmental policy goals therefore requires specific product-oriented actions. Moreover, the sources of pollution are often diffuse, even more so due to structural changes in industry. This creates a need for a more flexible and responsive approach which is further detached from traditional point-source controls. Where past policy has dealt with many of the major point sources[19] of pollution, more product-oriented actions can deal with these complexities and will probably bring about substantial environmental benefits.

- The focus on products is also useful in the frame of improving resource productivity. An orientation towards the goal of providing goods and services at lowest resource intensity, will probably make measures to achieve overall improvements in resource productivity[20] more effective. Major changes are more likely when the total life cycle resource commitments associated with goods and services are progressively reduced.[21] Without this focus, action to improve productivity is likely to be diffuse and incoherent.

- Products are the link between producers and consumers. *Products provide the vehicle through which consumers secure their own welfare, while they also embody the social and environmental burdens of that consumption.'* The final consumer has become a proportionately much larger contributor to the overall impact of human activity.[22] So there might be a potentially larger benefit of focusing –rather than on process-related– on consumption-related initiatives.[23] The combination of strong consumer concerns and buying influence can change the whole idea of production. Furthermore, since all economic actors are consumers[24] the concern with consumption also broadens the scope of integrated product policy. *'Products are tied to behaviours and social and organisational values. They play a*

[19] such as industrial installations, sustainable development in Third World countries, and reduced industrial emissions / waste in industrial plants

[20] An inter-linked set of technological, infrastructural and market changes is needed.

[21] For instance, while incremental technical change may lead to yield improvements in the production of steel for use in cars, major improvements in the eco-efficiency of an automobile will come about only when the vehicle is considered as a whole (then for example including the use of alternative materials like aluminium).

[22] There has been decline in the relative importance of industry in economic activity, and a large growth in final consumption in highly developed economies.

[23] For example where, while industrial production has been getting 'cleaner', the total amount of resources being consumed by economic activity has been growing.

[24] Producers consume raw materials.

crucial role in providing the entitlement of different households or social groups to given lifestyles or livelihoods. Inequalities of entitlement to environmental resources underlie many of the social and political inequalities that persist in societies, nationally and internationally.'

- In products the different aspects of the sustainable development triad can be connected more easily. The products approach reveals that more holistic approaches, acting in integrated way along the product chain are required. Certainly when product-focused measures and existing policy instruments and fields of action are put side by side, the need for co-ordination and integration becomes very clear.

2.1.2 Promotion of integration

One of the key principles underpinning 'integrated product policy' is obviously integration. Integrated product policy seeks to promote quality and coherence of durability practices. After all, even product-oriented policies can be less effective, when they lack integration with each other. Through its situation within the sustainable development context, its life-cycle orientation, and the involvement of diverse stakeholders, integrated product policy assures this a greater integration at and between different (policy) levels.

sustainable development context

Integrated product policy seeks to modify the societal burdens of goods and services in a holistic way, taking into consideration social, ecological and economic aspects. Environmental, social and other sustainability considerations are integrated into other policy areas and the strategies and policy instruments of different policy levels are geared to one another. [25]

life-cycle orientation

In life cycle thinking, rather than focusing on individual components of the product system, such as the production process, one concentrates on the entire product system.[26] Environmental impacts and social aspects are managed integratively all along the product chain. This is bound to bring about potential benefits, if only because of the opportunity to reduce environmental impacts beyond traditional intervention areas of the life cycle, production and disposal.

The life-cycle of a product is often long and complicated. It covers 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. At the same time it also involves many different actors such as designers, industry, marketing people, distributors, retailers and consumers. Integrated product policy attempts to stimulate improvement of environmental and social performance by each part of the different phases.

Integrated product policy also encourages policy makers to consider where in the product system the key environmental impacts arise and the most important social problems lay, and therefore which type of measure will yield the most significant gain on all aspects.[27]

---

25 It also tries to bring together the often disparate initiatives and legislation that affect products into a coherent framework, so that areas for possible future action can be identified.

26 For example: All products cause environmental degradation in some way, whether from their manufacturing, use or disposal. Integrated Product Policy (IPP) seeks to minimise these by looking at all phases of a products' life-cycle and taking action where it is most effective.

27 For example, integrated product policy explicitly considers different environmental burdens side-by-side in this broader life cycle perspective, and then tries to act where the impacts are greatest. In some cases the control of chemicals in products for instance, needs to be balanced against the energy or other resource-saving benefits associated with their use.

involvement of diverse stakeholders

In integrated product policy, involvement is required of all the parties concerned –at all levels of action in the policy development and throughout the life cycle of the products[28]–and of diverse –social and non-social, environment and non-environment– ministries. This way it is less complicated to define the most appropriate actions and levels to implement them[29] in order to best support the development of ecological and social responsibility.

2.1.3 Emphasising best practice

Integrated product policy aims at promoting quality through supporting best practice and innovative ideas. Encouraging product innovation and best practice can be a more influential method of achieving environmental and social performance improvement, than the changes typical of process-based regulation. IPP pays attention to improving poorly performing products (and eliminating the worst performers from the market) as well, but the main stress is on providing incentives for pacesetting good performers, and on the dissemination of best practice. The focus on products and their life-cycle in integrated product policy also provides opportunities for going beyond the optimisation of existing product systems. In many cases, radically alternative means of providing given goods and services[30] are the most sustainable choice. Leasing and pooling products, for example, may offer more sustainable methods of providing the functions required by consumers.

By emphasising high standards and continuous improvement in the provision of goods and services, integrated product policy is more proactive in contrary to the reactive nature of a lot of traditional policy approaches.[31] Challenging targets for social respect, eco-efficiency and better goods and services in the market are set, thus promoting respect, innovation and excellence. Minimum rules to eliminate what is unsafe or unacceptable plus an incentive for the top performers should result in a positive market transformation process leading to better and more sustainable goods and services.

In the traditional policies uncertainty and controversy over –certainly environmental– problems, caused debates on the setting of environmental standards to end up in conflicts and useless trade-offs. The emphasis of integrated product policy on high standards and continuous improvement in the provision of goods and services –instead of a focus on the worst performers– can solve this. Integrated product policy does not seem to try to satisfy possibly ambiguous goals, but attempts to promote what is possible, given developments in technology and market demand. Many of these strategies will be adopted in competitive markets anyway, but there may be other applications that require support and promotion.

2.1.4 Policy mix

The diversity of products and actors requires a balanced mixture of different measures. The choice and combination of measures will vary according to the product sector and sustainable development

28 The NGOs could play a role in identifying problems and solutions with a view to creating products that are more environmentally friendly. Eco-design must be promoted by the manufacturers so as to ensure that the products on the market are more environmentally friendly. Distributors should put green products on the shelves and should inform consumers of their existence and benefits. Consumers should preferably choose green products and use them in such a way as to prolong their shelf life and reduce their impact on the environment.

29 The firm, local, regional, sectoral, national, European and international

30 including the substitution of goods by services.

31 IPP can not provide a means of avoiding a reactive approach altogether, but that it can change the balance in policy between being reactive and proactive.

issues involved. Depending on the desired behaviour and impact, different instruments with their corresponding incentives should be used to get the most effective mix favouring environmental and social gain. Any instruments considered should be evaluated on their efficiency, their perverse effects, their effects on innovation, and their political acceptability

Product policy is not new. A variety of regulations, standards, prohibitions, and voluntary actions are already in place in different European countries.[32] The adoption of more holistic approaches in the IPP-frame should increase the efficiency of existing measures. Therefore Integrated product policy might be seen as a long-term and evolutionary process.

The measures are often divided into three main categories:

2.1.4.1 All-in product prices

An important policy instrument to optimise the sustainable performance of products through the market, is the application of the 'violator pays'-principle in the fixing of product prices: all prices ought to reflect the true environmental and social costs of the products. For prices to be right, the negative environmental impacts or social exploitation need to be paid for. Sustainable products will then be cheaper than non-sustainable products. Where the market fails to integrate all costs into the price, this can be corrected through differentiated taxation or state subsidies according to the environmental and social performance of products[33] and by removing perverse subsidies.

2.1.4.2 Stimulating demand for sustainable products

When sustainable consumption is expanded, companies are potentially encouraged to, in answer to the rising demand, provide more sustainable products. The demand for more sustainable products can be boosted through better informing consumers about the products they buy. Consumer information measures choice should therefore be another focus of integrated product policy. Consumer information measures are for example broad education of consumers and companies and consumer awareness strategies, use of labelling of products and production processes, etc.

The integration of product related sustainability considerations into public procurement are a second instrument to provoke a rise in demand. If public procurement contracts focus on the purchase of environmentally friendly and socially responsible products, they could directly increase the demand and production of such products. Moreover, encouraging large, public-sector organisations to adopt

32 Actions taken to implement IPP goals –to strengthen the production and sale of cleaner products and services with reduced impacts– in European countries include for example the provision of subsidies; energy and waste taxes; labels and other information instruments; the production of a warning list of undesirable chemicals; consumer awareness measures the introduction of 'Green Accounts' showing resource consumption and emissions from businesses; focus on the production of products with improved environmental properties especially relating to hazardous substances, fossil fuels, biological and mineral resource depletion; packaging agreements with industry, promoting collection and recycling; measures to increase industry responsibility to improve overall environmental efficiency across the life cycle of their products; involvement of stakeholders; creation of an overview of initiatives and their co-ordination across the product chain, across all life cycle stages. They are often linked to existing national environmental and social priorities, namely climate change, air pollution, human health, hazardous chemicals, bio-diversity. Existing IPP-policies are framed in for example cleaner technology promotion; existing national environmental priorities such as climate change, air pollution, human health, and bio-diversity; better consumer information; stakeholder engagement; greening public procurement; promotion of product-oriented environmental management systems.

33 For example the application of lower VAT rates to products carrying the eco-label or the introduction of other environmental taxes and charges.

green procurement strategies can work as example to others, indirectly increasing the demand and production. [34]

Retailer procurement policies are a third and essential instrument to improve the environmental and social performance of products. Retailers are able to specify standards of performance with a greater degree of expertise and market power than individual consumers. Therefore the purchasing role of major retailers is potentially one of the most powerful drivers in influencing the market for more sustainable goods.

2.1.4.3 Promoting production of sustainable products

Measures to stimulate the demand for sustainable goods must be supplemented by action on the supply side. The production of more sustainable products can be stimulated for example by encouraging eco-design in a broader range of products, producing and publishing life-cycle information about products, bans on hazardous substances, benchmarking and monitoring, accounting, auditing and reporting, voluntary agreements, the promotion of sustainability management and environmental and social audit schemes, standard setting, and integrating environmental and social considerations into all product standards to ensure they gradually tighten across the edges to progressively eliminate the worst-performing products.

2.2 WHAT IS INTEGRATED PRODUCT POLICY, PARTIM ENVIRONMENTAL ASPECTS?

Integrated product policy partim environmental aspects, which could also be termed 'environmental product policy', seeks to minimise environmental degradation caused by products. It seeks to do this through looking at all phases of a products' life-cycle[35] and taking action where it is most effective. Environmental product policy wants to create conditions which promote environment-friendly products, or those with a reduced impact on the environment.

[34] the tendency of companies and organisations to include occupational safety and health criteria into their procurement schemes has supported the development of generic procurement schemes based on uniform requirements for contractor occupational safety and health training or management systems, which allow for a third party to carry out the "certification" or initial approval of the contractors as well as overseeing the continuous improvement of the scheme.

[35] All products cause environmental degradation in some way, whether from their manufacturing, use or disposal.