INDICATORS: LITERATURE STUDY

1 INTRODUCTION

The literature was searched for existing initiatives that propose sets of indicators for

- sustainable production and consumption patterns;
- integrated product policy;
- integrated product policy, partim the environmental aspects.

Although many initiatives propose general indicators for sustainable development, the result for the above mentioned topics was very limited. There were no initiatives found that propose indicators for integrated product policy or for the environmental aspects of integrated product policy, and only 4 initiatives that propose indicators for sustainable consumption and production patterns. These initiatives are described below. The indicators they propose are summarised in the table in the excel document “overview indicators production and consumption”.

2 INDICATORS FOR SUSTAINABLE PRODUCTION AND CONSUMPTION PATTERNS

Four initiatives propose indicators for sustainable consumption and production patterns: (1) the United Nations Commission on Sustainable Development (CSD), (2) Finland, (3) the OECD Environment Directorate and (4) GAIA Environmental Information System.

2.1 CSD

The United Nations Commission on Sustainable Development (CSD) has established an international work program on indicators for sustainable development since 1995. An important element of this program is the identification of a core set of indicators for "changing consumption and production patterns" (Chapter 4 of Agenda 21). "Measuring Changes in Consumption and Production Patterns" (1998) is the outcome of consultations and a Workshop with policy makers and other experts working on changing consumption and production patterns and indicators of sustainable development. The objective was to identify a core set of indicators for changing consumption and production patterns.

This report distinguishes between two broad categories of indicators: "key resources" and "consumption clusters". It proposes various indicators for the "key resources", energy, materials, water, and land; and for the "consumption clusters", mobility, consumer goods and services, buildings and housekeeping, food, and recreation.

The distinction between key resources and consumption clusters is drawn, because it highlights the need for two different types of indicators:
I) indicators of resource use and environmental impacts, and
ii) indicators that reflect consumer and producer choices.

This report proposes a provisional **core set of 17 indicators** for changing consumption and production patterns, as a tool for policy makers in formulating policies and monitoring the effectiveness of policy implementation for changing consumption and production patterns. In addition to the core indicators, some other possible indicators are given.

The core set of 17 indicators is a starting point for the further development of the indicators for consumption and production patterns. More work is needed for the development of operational

definitions and methodological descriptions of the indicators. Furthermore, the policy relevance and data availability for the indicators will become clearer through testing of the indicators at the national level. The core set is therefore provisional, should evolve over time in a dynamic process, and should reflect changes in priorities related to policy making on sustainable consumption and production patterns.

The framework used to organize and present the indicators is the Driving Force-State-Response (DSR) framework of the WPISD.

2.2 FINLAND'S INDICATORS FOR SUSTAINABLE DEVELOPMENT

UN member states were asked to test an initial list of 134 CSD indicators. Finland took part in the testing of the UN indicators during 1996-99. Results showed that UN indicators were not all suitable as such for measuring sustainable development in Finland. For this reason it was deemed essential to develop indicators better adapted to Finnish conditions in addition to those chosen directly from the UN list.

In choosing the national indicators of sustainable development the goal was a relatively concise collection aimed primarily at decision-makers and citizens. Because of the large target group, the chosen indicators had to be descriptive and easy to understand. Choice of topics and indicators was also guided by the Government Programme for Sustainable Development, and by similar programmes and environmental protection targets of individual ministries and national institutions. The indicators were organised using frames of reference of the different dimensions of sustainable development: ecological, economic, and socio-cultural. In the first phase, the most important entities and key subject areas of each dimension were defined. The actual indicators were chosen in the work's second phase. The result was presented in 2000.

There are nine **core indicators** that describe production and consumption. To each of these core indicators, a set of linked indicators is added.

2.3 GAIA

The GAIA INCO-DC (Technological Cooperation with Developing Countries) Project is a collaboration of ESS-ACA with partner institutions in the UK, Italy, Argentina, China, Egypt, Mexico, Thailand, Venezuela, and Zimbabwe. GAIA is sponsored by the European Commission, DG XIII. Overall, GAIA aims to provide innovative tools and methods to promote the conservation and the sustainable use of natural resources, compatible with long-term equitable economic growth and enhancement of productive capacity which is environmentally acceptable. At the same time, and through the methodology used to address the first objective, it aims to integrate developing countries, in particular those which have attained a higher level of development, into the global information society; to combine research skills established in developing countries institutions with their EU counterparts and to facilitate the growth of an information and communications area allowing developing countries to participate in solving their regional problems with regard to development.

Wrote an article for GAIA on "Monitoring Progress on Sustainable Development: Sustainable Development Indicators", based on a Report of the Department for Policy Coordination and Sustainable Development (DPCSD), United Nations Division for Sustainable Development. Unfortunately, the original document could not be traced.

The core set of indicators described in this article are divided in DPSIR and other indicators.

2.4 OECD

The OECD Environment Directorate developed a set of **consumption indicators** to support policies and measures to move current consumption trends toward sustainability. This work is part of a wider programme on environmental indicators, ongoing since 1989/90. It also contributes to the OECD-wide project on sustainable development indicators.

The overall aim of OECD's indicator work is to relate available economic and environmental data to conceptual and policy work. Specifically, the indicator work wanst to contribute to a better understanding of how different driving forces and policy instruments interact and affect the environmental sustainability of consumption. It also wants to contribute to the further integration of environmental and sustainability concerns into decision making and to provide a basis for monitoring related policies.

The framework that was adopted to structure the work on sustainable consumption indicators resembles that of other OECD work on sectoral indicators. It is based on an adjusted pressure-state-response (PSR) model and distinguishes three themes:

- Environmentally significant consumption trends and patterns (i.e. major driving forces and indirect pressures), including basic economic and socio-demographic trends and key household consumption trends (transport and communication; consumption of durable and non-durable goods including food, recreation and tourism, housing-related energy and water use);
- Interactions between consumption patterns and the environment (i.e. direct pressures on the environment and on natural resources and related impacts) including consumption-induced resource abstractions and pollutant and waste discharges, and related effects on environmental conditions;
- Economic and policy aspects covering key policy and other societal responses (regulatory instruments, economic instruments, information/social instruments), as well as trade aspects.

All indicators are reviewed according to their policy relevance, analytical soundness and measurability. Those indicators for which data are currently available for a majority of OECD countries have been calculated; they will be published and will be used as a **short term** tool for current OECD work on sustainable consumption patterns. The other indicators are classified as '**long term'**.

3 INDICATORS FOR INTEGRATED PRODUCT POLICY (IPP)

'Integrated product policy' is an instrument for sustainable development.[1] 'Integrated product policy' attempts to create –in a life-cycle approach– production and consumption patterns in which not only the economic efficiency of products –in principle all goods and services– is considered, but where also their environmental friendliness, as well as product related social and institutional issues are taken into account. 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.

There were no ready made lists of indicators for IPP to be found. At European level, the Environmental Council (in its conclusions on the 7th of June 2001) called upon the Commission to develop clear objectives with timetables for the IPP, supplemented with methods and indicators for monitoring the

1 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.

achievements of the IPP. The monitoring mechanism should address the full life cycle of products: both the resource efficiency of products themselves and the total environmental impacts arising during their production and consumption. Some indicators for the implementation of IPP-instruments are mentioned in the *Strategy for the Integration of Environmental Protection and Sustainable Development into the Internal Market Strategy*. The Swedish *Statistika Centralbyrån* suggested some indicators for IPP as well. The *Global Reporting Initiative* (GRI) presents sustainability reporting guidelines for voluntary use by organisations reporting on the economic, environmental, and social dimensions of their activities, products and services, as indicators as well. These could be seen as indicators for IPP on the company level.

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