

## SUSTAINABLE CONSUMPTION INDICATORS

**M. D. Bentley**

*Consultant, UNEP, Australia.*

**B. de Leeuw**

*Co-ordinator, Sustainable Consumption Programme, Division of Technology, Industry and Economics, United Nations Environment Programme, France*

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### Summary

There is wide recognition that current patterns of consumption and production,

particularly those in the highly industrialized regions, are one of the main causes of global environmental degradation. In recent years, the spotlights on the environmental consequences of economic growth and the adoption of sustainable practices have grown in intensification.

Originating from the Earth Summit in Rio de Janeiro in 1992, chapter 4 of Agenda 21, “Changing Consumption and Production Patterns”, focuses attention on the need to influence consumption and production patterns towards greater sustainability.

In response to such a calling, the United Nations Environment Programme (UNEP) has extended its successful production process-orientated activities, such as Cleaner Production and Industrial Pollution Management, with a new Sustainable Consumption initiative [see Author’s Notes 1]. Production and consumption policies are two sides of the same sustainability “coin” and UNEP is addressing them in an integrated manner. This article focuses on sustainable consumption with a clear eye on the inter-linkages with production activities.

Measuring changes in consumption patterns, by establishing indicators, presents all stakeholders with tangible reflections of current and potential future trends and provides information necessary to help develop appropriate policy responses.

The comparable nature of the indicators also provide a powerful analytical tool for national and global governments/organizations intent on demonstrating inherent differences between cases (nations/regions), that may present the opportunity of practice and/or policy transplantation.

Formulating sustainable economic and social policies require an interaction with stakeholders and the public. Therefore, sustainable consumption indicators need to be scientifically grounded and also uncomplicated and attractive to all interested parties.

Sustainable consumption indicators are capable of assisting in the optimization of resource use, minimizing negative environmental and social impacts of consumption and production patterns, while stimulating and facilitating trends towards more sustainable patterns.

This article will in part provide a synthesis of existing knowledge—highlighting current understanding and interesting work completed in the area of sustainable consumption indicators. Specifically, summarizing and building upon the seventeen provisional core-set of indicators identified by a process facilitated by the United Nations Commission on Sustainable Development (UNCSD) in 1998.

## **1. The Building Blocks**

### **1.1. An Evolving Global Consumer Culture**

The ensuing augmentation of the global village and the integration of the global consumer market have brought rapid changes in consumption patterns. And as the spread of human existence approaches the extremities of the available living space and the revolution in information technology simplifies the flow of common messages and

practices, there exists an emergence of a sub-culture displaying convergent behavior.

This wave of globalization has undoubtedly intensified the linkages between consumption patterns in various regions of the globe, fostering the development of a global consumer class [2].

And although, the expanding global consumer class may seem to pose further obstacles to those intent on promoting more sustainable patterns of consumption, it may rather present an opportunity for national and international policy-makers to formulate global approaches and campaigns for a global concern.

This new global consumer culture can be partly characterized by a growing emphasis on the individual, a search for wider opportunities and experiences (professional and leisure), a desire for comfort and autonomy, and personal material accumulation [3]. The ultimate summation of such changes and convergence of behaviors is that the globe has witnessed an unprecedented explosion in the consumption of goods and services in the past twenty years (see Figure 1).

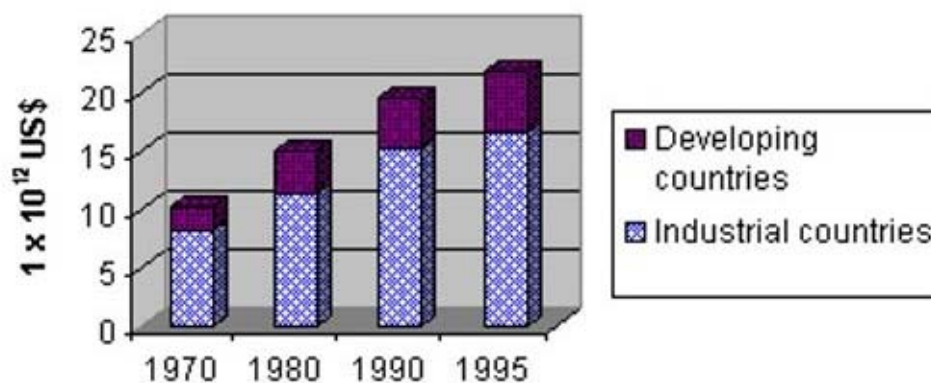


Figure1. Total consumption expenditure [4].

The ongoing evolution in consumption patterns will ultimately be fueled by a variety of forces. Hopefully while keeping in mind that, “a lifestyle that excludes one-third of the world's population, however dominant it may appear at the moment, should not be regarded as the supreme achievement of twentieth century civilization.” [5]

## 1.2. What is the Problem with Consumption?

World consumption expenditures, private and public, have expanded at an unprecedented pace, doubling in real terms in 25 years to reach \$24 trillion in 1998. This expansion has propelled considerable advances in human development [6]. The changes in global consumption patterns have resulted in substantial improvements in health care, communication, and education. Unfortunately, however, the negative impacts have been similarly resounding. The problems include:

- The expansion of consumption has left out about a fifth of the world's people;

- Consumption is environmentally damaging. Thus the consumption of some harms the well-being of others, in both present and future generations;
- Consumption growth and patterns have social impacts that deepen inequalities and social exclusion; and
- Consumer rights to information and product safety are difficult to defend in the context of the global consumer market [7].

A greater emphasis on the application of the practice of sustainability seems to be the most appropriate answer. In terms of ‘modern’ consumption, simple advocacy of consuming less is not necessarily the most effective approach. Instead what is required is a fundamental shift in consumption thinking and its associated behavior. All stakeholders must contribute to the process and support those mandated to achieve the ultimately desired outcome—implementing legitimately sustainable consumption patterns.

### 1.3. Getting to the Point...

The nature of today’s global consumer market is particularly complicated. The estimated figures below highlight the underlying challenges facing the global community. The enormity of the situation is illustrated in Figure 2.

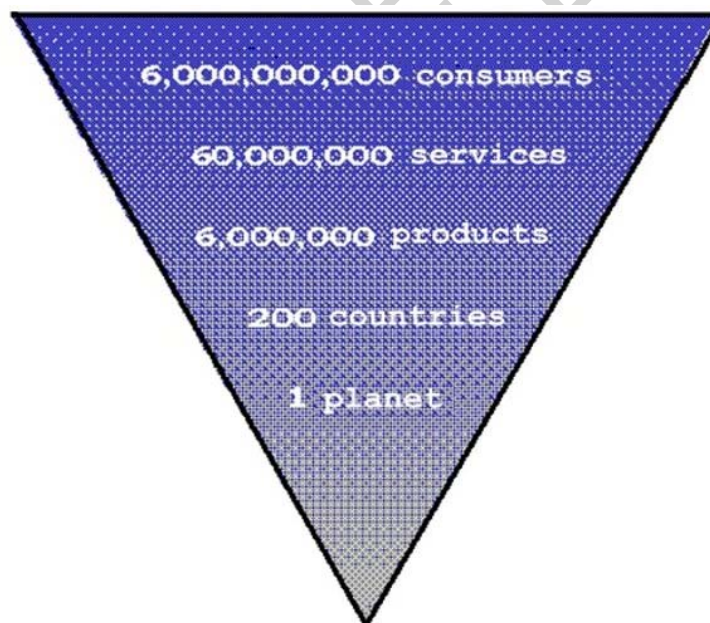


Figure 2. Global consumer

Source: *Global Consumer Class* report; M. Bentley (2000)

The point, in this context, is that there is certainly a need to develop approaches and tools that are both scientifically grounded and also uncomplicated and attractive to policy makers and the general public. Thus, any measure of consumption patterns should have strong communicative value—similar to the Gross Domestic Product (GDP) and the Human Development Index (HDI).

#### 1.4. What is Sustainable Consumption?

There have been many attempts to render precise notions of sustainable consumption since its adoption at the Rio Earth Summit in 1992. Possibly the most practical way to approach the concept is by being flexible and allowing for differences of method and opinion.

The 1994 Oslo Ministerial Roundtable produced the following working definition: ‘the use of services and related products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life-cycle so as not to jeopardize the needs of future generations.’ [8].

It is clear that meeting the needs of people and at the same time improving environmental outcomes requires more efficient consumption. Using fewer resources and causing less pollution will assist human development in all parts of the world. Furthermore, a fundamental shift in how to improve quality of life means that social and cultural elements should be taken into account as well [9].

UNEP Division of Technology, Industry and Economics (DTIE) Director, Ms. Jacqueline Aloisi de Larderel, suggests that “sustainable consumption is not about consuming less, it is about consuming differently, consuming efficiently, and having an improved quality of life. It also means sharing between the rich and the poor.” [10].

Although it is possibly by definition impossible to ever create a precise, operational definition, the direction in qualitative terms has been inspiring enough for various stakeholders—industry consumers and consumer groups, business and governments—to take action.

Consumers are being increasingly made aware of the fact that they have significant power to influence what happens in the market. When the consumer purchases a particular item he/she is indirectly approving the company’s image and behavior towards its consumers, employees and the environment.

In fact, sustainable consumption boils down to attempting to find a balance between the rights as free consumers and the responsibility towards others and the earth [11].

“Consumers are increasingly interested in the world that lies behind the product they buy. Apart from price and quality, they want to know how, where and who has produced the product. This increasing awareness about environmental and social issues is a sign of hope. Governments and industry must build on that.” [12]

It is essential to distinguish sustainable consumption from broader issues of sustainable development [13]. Sustainable consumption, considered as the demand-side of the consumption/production sustainability coin, should be flexible enough to allow for potential changes in consumer behavior, including greater efficiency of consumption of goods and services and the enhanced re-use and recycling of products.

Sustainable consumption must not be confined within the realm of formal technical terminology. It should be molded and adapted, under appropriate circumstances, to best fit the challenge at hand. It resonates practicality and should thus be understood in terms of finding out what drives people, thinking in concepts, and locating new forms of communication.

### **1.5. Why Develop Indicators?**

Measuring changes in consumption and production patterns, by establishing indicators, presents all stakeholders with tangible reflections of current and potentially future trends, such as the volume and intensity of resource use, and provides information necessary to help evaluate current and develop future policy initiatives.

In order to guarantee the development and implementation of sound environmental policies, these instruments should be based on appropriate factual information. Moreover, the general public has a right to be informed about the impacts of their habits and the results of the policies employed to initiate change.

In a general nature, sustainable consumption indicators are capable of:

- Highlighting the interface between consumption patterns and environmental issues, and in particular help to better understand how different driving forces and policy instruments interact and affect the environmental sustainability of consumption;
- Contributing to the further integration of environmental and sustainability concerns into decision-making and to provide a basis for monitoring related policies; and
- Stimulating discussions and initiatives concerning sustainable consumption [14].

Indicators are not necessarily designed to provide a full picture of relationships between phenomena—in this case consumption patterns and sustainability issues—but rather to help reveal trends and draw attention to occurrences that require further analysis and possible action. They certainly need to be supplemented with additional information and interpreted in context to acquire their full meaning [15]. Moreover, evidence of successful modifications in practices can be easily recognized and potentially transported to other geographical locations. When indicators are used for policy analysis or evaluation, one should keep in mind the other available assessment tools, and balance the sources appropriately.

### **1.6. Integrating the Two Themes**

The UN General Assembly Special Session on Sustainable Development (New York, June 1997) adopted a Programme for the Further Implementation of Agenda 21, identifying sustainable consumption and production as a cross-sectoral, over-riding issue that required greater attention. The UN's Commission on Sustainable Development (UNCSD) International Work Programme on Changing Consumption and Production Patterns has since concentrated some efforts on the development of indicators to measure changes in consumption and production patterns.

A workshop—supported by UNEP's Sustainable Consumption Programme—discussing a first set of indicators was organized by the UNCSD in March 1998 in New York. It

resulted in the selection of a provisional core-set of 17 indicators covering key resources and major consumption clusters and published in a report for the 7<sup>th</sup> session of the UNCED in 1999, which reviews chapter 4 of Agenda 21 “Changing Consumption and Production Patterns”. The report acts as a primary source for this chapter. This core-set will be further integrated into the Core-Set of Indicators of Sustainable Development, which is being facilitated in part by the UN Commission on Sustainable Development [16].

The Organisation for Economic Co-operation and Development (OECD), the World Business Council for Sustainable Development (WBCSD), and the United Nations Environment Programme (UNEP) are other international organizations participating in the initiative. The overview of current and future participant contributions will be covered in greater detail in Section 4, ‘On the Horizon.’

## **2. In the Beginning, There Were Seventeen**

The provisional core-set of seventeen indicators for changing consumption and production patterns, formalized by the United Nation’s Department of Economic and Social Affairs in 1998, covers all key resources and consumption clusters. The set relating to key resources focuses on the resources that should be used more sustainably, while those relating to consumption clusters consider the consumer ‘needs’ or functions that should be satisfied through the use of these resources [17]. Understandably, because of the nature of close interaction between consumption and production, it is often necessary to research and display trends in a combined fashion. Consumption patterns directly impact the resources sector. Therefore, key resources should be evaluated for links to the consumption equation. Today, expanding global consumption is responsible for depletion of the stock of non-renewable resources such as metals and fossil fuels, and is also inflicting increased pressure on renewable resources such as water, fisheries, and agricultural land. In addition, waste generation and disposal related to consumption affects land and water resources.

The consumption cluster indicators relate explicitly to the theme of sustainable consumption indicators.

The two categories of consumption and production indicators, those monitoring trends in resource use and associated consumption patterns and environmental impacts, and those reflecting consumer behavior, are both valuable tools for policy makers concerned with policy development, implementation, and evaluation. Furthermore, the knowledge gained from indicator exploration and comparisons may provide international organizations, NGOs and researchers with substantial insights into patterns of unsustainable levels of consumption and production. Undoubtedly, any advancement in statistical evaluation should provide greater exposure and thus be considered as a positive tool for change.

The CSD provisional core-set of indicators (numbered ‘1; 2; etc’ in the Tables at the end of each sub-section of 2.1 and 2.2) have been supplemented by other indicators (numbered ‘A; B; etc’) that are potentially demonstrating sustainable consumption patterns. The later indicators, many of which were discussed within the CSD indicator

framework, may help stimulate discussion and further scientific research and testing.

The core indicators were selected by focusing on those key resources and consumption clusters that have significant environmental impacts and seem particularly susceptible to public policy intervention.

Industrialized countries could benefit from the indicators as they may help their policy makers choose appropriate policy measures aimed at eco-efficiency improvements and the achievement of more sustainable consumption practices and lifestyles world-wide. Developing countries and economies in transition, supported by the industrialized world, could use the indicators to monitor the development of consumption and production patterns, while promoting the development process. Depending on the desired objectives, the suggested indicators can in most cases be applied at a global, regional, national, and local level [18].

Finally, the indicators selected are not by any means an exclusive or concluding set and should develop over time, reflecting changes in priorities related to sustainable consumption and production.

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United Nations Commission on Sustainable Development; Consumption and Production patterns: <http://www.un.org/esa/sustdev/cpp1224.htm>

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### **Biographical Sketches**

**Matthew Bentley BCom, CIBP, MA (Hons)** is a consultant whose most recent assignment included three years at the United Nations Environment Programme (UNEP), Division of Technology, Industry and Economics, Production and Consumption Branch, based in Paris, France. Previously, Mr. Bentley worked for American Express in both their New York (1997-1998) and Sydney (1998-1999) offices as a Legal Manager within the Legal Compliance Department. Earlier work assignments included positions at PricewaterhouseCoopers (PWC) and Household Financial Services.

He received his Masters of Arts in International Relations and Diplomacy in 2000 from the American Graduate School of International Relations and Diplomacy (AGSIRD), Paris, France. Mr. Bentley is a Ph.D. candidate (International Relations and Diplomacy) at AGSIRD. The research component of this degree intends to follow up his Masters thesis, which highlighted the interaction between the global consumer class and sustainable consumption.

### **Professional Experience**

- 1999-2002 United Nations Environment Programme, Paris  
Consultant: Division of Technology, Industry & Economics.
- 1998-1999 American Express Company, TRS Legal Compliance, Sydney

- Legal Manager – Regional Compliance Office – Japan Asia Pacific Australia.
- 1997-1998 American Express Company, TRS Legal Compliance, New York  
Legal Analyst - Money Laundering Prevention/International Compliance.
- 1996-1997 Price Waterhouse Coopers, Corporate Actions, Sydney
- 1990-1996 Thompson Bentley & Partners, Legal Firm, Sydney

### **Education**

2000-current American Graduate School of International Relations & Diplomacy, Paris, France. Ph.D. Candidate: International Relations & Diplomacy

1999-2000 American Graduate School of International Relations & Diplomacy, Paris, France. MA: International Relations & Diplomacy (Honours)

1997-1998 University of Oxford (U.K.), Mountbatten Internship Programme, Certificate of International Business Practice (CIBP)

1995-1996 State University of New York, New York, U.S.A. 1-Year International Exchange Program. Completion of BCom.

1992-1994 University Of Western Sydney, Sydney, Australia. Bachelor of Commerce (BCom), Majors in Economics & Finance

**Mr. Bas de Leeuw** is Co-ordinator of the Sustainable Consumption Programme at UNEP's Division of Technology, Industry and Economics (UNEP DTIE), based in Paris, France. In 1998 he was seconded to UNEP by the Dutch Government, followed by a secondment to OECD (Organisation for Economic Co-operation and Development, Environment Directorate) in 2001. In October, 2001 he returned to UNEP to take up duty as programme officer.

Before joining UNEP Mr. de Leeuw worked in several areas, including six years (1985-1991) for the Dutch Ministry of Economic Affairs (on business, technology, energy and environmental issues), followed by another six years (1991-1997) for the Dutch Ministry of Housing, Spatial Planning and the Environment. In this function he was Dept. Head of the Consumer and Product Policy Department, responsible for the Dutch consumption and product policies. He has a Masters Degree in Economic Policy from the Rotterdam Erasmus University.

### **2001-Current. United Nations Environment Programme, Paris**

Co-ordinator, Sustainable Consumption Programme, Production and Consumption Branch, Division of Technology, Industry & Economics

### **2001. Organisation for Economic Co-Operation and Development, Paris**

National expert, Environment Directorate, National Policies Division

### **1998-2000. United Nations Environment Programme, Paris**

Senior Advisor: Production and Consumption Branch, Division of Technology, Industry & Economics. Initiated and responsible for the Sustainable Consumption Programme. Seconded to UNEP by the Dutch Government

### **Dutch Ministry of Housing, Spatial Planning and The Environment**

Dept. Head of the Consumer and Product Policy Department, responsible for Dutch consumption and product policies

### **1985-1991. Dutch Ministry of Economic Affairs**

Worked on business, technology, energy and environmental issues

### **Education**

Rotterdam Erasmus University. Masters Degree in Economic Policy.