

Introduction

The papers which make up the first issue of the 2002 Statistical Journal were all presented and discussed at a joint ECE/Eurostat expert meeting hosted by Statistics Canada in Ottawa, 1–4 October 2001. They are but a sub-selection of the 32 papers discussed during the 6 sessions of the meeting.¹

The topic of the meeting was “Environment indicators and development of indicators of sustainable development”. The main reason to focus on this topic was to take stock of the important preparations which are going on in countries and international organisations for the Rio+10 assessment meeting on Sustainable Development in Johannesburg later this year. The other reason for choosing this topic is the growing awareness that adequate statistical information is essential for formulating and monitoring sustainability policies. The ‘measurement side’ of sustainability has resulted in a strong demand from governments for policy relevant statistics which is difficult for statistical agencies to meet. In fact, Agenda 21 (Chapter 40: Information For Decision-Making) already previewed this and specifically mentions the need for improving information availability, for developing indicators for decision-makers and for promoting the use of indicators of sustainable development.

In many countries the sustainability strategy will be monitored on the basis of a set of headline indicators which are currently being worked out, as for instance, is the case in Canada, Australia, Sweden, Switzerland and the UK (to mention but a few). At the same time, the UN Commission on Sustainable Development, together with countries, has developed a set of global indicators on sustainable development. Following testing in more than 20 countries, and by Eurostat for the EU as a whole, the initial set of 134 indicators, covering environmental, social and economic issues, was revised and rationalised to a set of 59 core indicators. This reduced set formed the basis of a recent Eurostat publication which looks at how far it is possible to compile the indicators from the data available. The result is presented in one of their publications published in 2001.²

The selection of papers in this issue covers indicator work undertaken at all levels, global, regional, national and the local level, all of which are important components for the global transition towards sustainable development. The paper by Bosch gives a good account of the relationship between policy and indicators, emphasising that sustainable development indicators should provide answers to real policy-related questions and therefore play an important role in policy preparation, formulation, execution and evaluation stages. The role of the European Environment Agency is to give support to policy and to regularly assess progress and to ensure accountability for action towards the sustainability goal. For that they have developed a number of tools, frameworks and typologies to provide an integrated assessment of progress.

At the national level, the Canadian and the Australian papers illustrate two different approaches to developing headline indicators which will provide a benchmark against which future trends towards or away from the objectives of the National Strategy for Sustainable Development can be measured.

¹The totality of the papers are available at the UNECE website at: <http://www.unece.org/stats/documents/2001.10.env.htm>.

²Eurostat (2001), Measuring progress towards a more sustainable Europe, Proposed indicators for sustainable development, data 1980–1999, Luxembourg.

The paper by Montgomery and Sanches argues that eco-efficiency indicators are needed to be able to bring together the three pillars of sustainable development. They discuss the different measurement criteria such as the “capital stock criterion”, the “eco-efficiency criterion” and the “equity criterion” which all can be used for measuring sustainability issues. Of the different approaches, they argue that the eco-efficiency concept is the most advantageous one as it allows combining economic, social and ecological performance.

Another term for eco-efficiency is productivity. The paper by Schoer and Seibel argues that looking at the quantities of natural factor inputs gives only half the picture and explores the use of the Environmental Economic Accounting to complete the picture by showing how much is produced by one unit of input. Environmental Accounts treat capital, labour and nature as production factors, thus covering all three aspects of sustainability in a common framework.

Sustainable development has important implications for resource use and therefore for minimising and handling waste. Sheshinski’s paper proposes some indirect methods for measuring waste for countries that have no organised waste reporting system. Data obtained from these methods are not perfect but are cheap and give government some idea of the waste situation in their country. However, to ensure that the modelled parameters are correct and to check the basic assumptions, sample surveys will need to be undertaken.

The paper by Vahvelainen highlights how difficult it is to produce useful waste indicators even when a fairly exhaustive data collection on waste exists. In his view, part of the problem relates to the fact that waste has been separated from its social nature, i.e. measurement of environmental load has been made ‘scientifically’ although waste results from economic and social activities. The paper demonstrates how socio-economic changes influence waste production and contents and lead to interpretive errors concerning waste volumes.

While there is no agreed definition of sustainable development, it is generally recognised that sustainable development is about “overall well-being”. The policy packages adopted by different governments differ but all usually include the three dimensions of sustainability: environmental, economic and social. What differs is the importance given to each of these. Environmental health indicators are an important subset of the social dimension of sustainability.

The paper by Mikkelsen gives an overview of some of the main environmental threats to human health and discusses the need to improve information for decision-making in this field. Although the paper proposes no indicators, it draws attention to the important role indicators have in monitoring progress towards goals and evaluating and rectifying policies. It is also argued that in the process of developing indicators statisticians have a crucial role to play.

Efforts to monitor environmental hazards are increasing across Europe and North America. To do this consistently, however, demands that appropriate indicators are developed which will allow evaluation of trends and support action. The European office of the WHO has taken up the challenge of developing a set of environmental health indicators which can be used across Europe. Dalbokova’s paper gives an account of the methodology WHO developed to identify the relevant issues and indicators for the region. Although promoting the establishment and use of a core set of indicators, WHO recognises that different policy processes and health concerns in countries will still require additional indicators at national level.

The last paper by Samson is a good example of a country-based approach to obtain better environmental health information. In Canada at the public policy level there is a strong desire to improve understanding of the various relationship between human health and the environment. The paper outlines the cooperation between Health Canada, Environment Canada and the Canadian Institute for Health Information which together are developing a framework and a set of environmental health indicators, some of which will become part of their headline indicators for sustainable development.

The discussions during the meeting as well as the many excellent papers, which could not be included in this issue, clearly showed that, despite its lack of clear definition, “sustainable development” is on the agenda of all governments and is rapidly becoming a household word. Although the papers illustrated that different approaches were used for developing indicators, it was heartening to see that everyone essentially tries not to start from scratch but to build on the experiences of other research. It was clear that we are at the beginning of the process of developing indicators of sustainable development, and that this area will evolve together with our understanding of the inter-linkages between economic and social development and the environment. The expert meeting could only touch on some elements of this potentially vast area. The knowledge that statistics are the basic material from which analysis and indicators will have to be built and that sustainable development can only be achieved by concerted endeavours between all players is also becoming increasingly clear at all levels. Eurostat’s Director General also expressed this in a recent editorial where he said that “Globalisation is being talked about everywhere. Nothing is more global than our concern about a future worth living because we all know that neither environmental, economic, nor even social problems are restricted by national borders. It is therefore a pleasing thought that we are not alone on our path towards ‘sustainable development’ ”.³

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³Eurostat (2001), ‘SIGMA The bulletin of European statistics’, 3, 2001, p. 3.