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Sustainability challenge: Global goods and values versus local priorities and practices. Environmental aspects of globalization

Kaia ORAS, Head of Environment and Sustainable Development Statistics Service, Statistics Estonia

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Which are the truly global environmental questions? We know now that climate change and ozone layer depletion are. But there are others also: extinction of species, hazardous chemicals, GMO-s, radioactive waste etc. Which are the pressures and driving forces behind these phenomena? What kind of information on global issues is important to make more widely known and publicly understandable? Is this just the general awareness on global problems and respective pressures? In a current paper also the statistical system ability to reflect the environmental aspects of trade and consumption patterns is described. How deep do we have to dig? The current paper tries to handle these issues.

What we can measure today could lead us to what we should start measuring for the future…

1. Broad scope

Globalization processes probably started already with the colonization of the world and the first devastating "environmental impacts" were the massive fatal infections of the native Indians by the smallpox virus carried overseas by the sailors. Nowadays globally spreading viruses threaten people all over the world. When the viruses need a host organism to carry them, several environmental pollutants that lead to global environmental problems get global by simple physical processes. The ozone hole and the green house effect are just two global phenomena stemming from local activities

Currently globalization is defined and seen in various ways, but mainly the growing economic and financial development is mentioned. One of the latest studies on globalization and environmental issues carried out by The International Institute for Sustainable Development summarizes: "The environment itself is inherently global, with life-sustaining ecosystems and watersheds frequently crossing national boundaries; air pollution moving across entire continents and oceans; and a single shared atmosphere providing climate protection and shielding us from harsh UV rays. Monitoring and responding to environmental issues frequently provokes a need for coordinated global or regional governance. Moreover, the environment is intrinsically linked to economic development,

providing natural resources that fuel growth and ecosystem services that underpin both life and livelihoods." (1)

The Millennium Ecosystem Assessment(2), the most comprehensive survey of the ecological state of the planet, concludes that human society has caused irreversible changes that are degrading the ecological processes that support life on Earth. Some findings are as follows: 60% of the world's ecosystem services have been degraded; out of 24 evaluated ecosystems, 15 are being damaged; about a quarter of the Earth's land surface is now cultivated; people now use around 50 percent of all available freshwater running off the land; water withdrawals have doubled over the past 40 years; over a quarter of all fish stocks are overharvested; since 1980, nutrient pollution has led to eutrophication of waters and coastal dead zones; species extinction rates are now 100-1,000 times above the background rate, etc.

What is the "share" of the EU countries in the pressure imposed on global ecosystems? Generally we know that EU countries are among the biggest consumers and polluters. If we look indicator by indicator we quite often do not have enough complete data for comparisons. Also the definitions vary in "time and space". The third and bigger problem is that environmental issues have multiple dimensions: pressures to waters, hazardous waste, nuclear waste, loss of biodiversity, emissions of ozone layer depleting substances and climate change gases etc. Building of a "global pressure index" on the bases of these wide range of indicators is of course difficult and needs assumptions inter alia on the weight of the issues.

The Ecological Footprint is one of the attempts to build an index which expresses whether a community lives in its physical and resource boundaries or not. It is a non-monetary measure of resource use which translates human demand on the environment into the area required for the production of food and other goods, together with the absorption of waste. The Ecological footprint amazes and attracts with its simplicity: "How many Earths do we need?" According to the latest report (3) humanity's Ecological Footprint exceeded global biocapacity by 25 per cent. This finding indicates that the human economy is in ecological overshoot: the planet's ecological stocks are being depleted faster than nature can regenerate them.

A more detailed report focused on European countries [4] says the following: being a home to 7 per cent of the world's population, Europe generates 17 per cent of humanity's footprint. Today, the footprint of the EU-25 is 2.2 times larger than its own biological capacity. This means that at its current rate of consumption just over twice its own land and sea space is required to support Europe's resource demands. We use up more of the world's resources and produce more waste per capita than a lot of other countries in a world do. In some cases we use our own environments,

sometimes others. Statisticians, surprised by the popularity of the footprint, have analysed its methodology and criticised the weakness of certain assumptions and calculation methods. For assisting complex European Union environment policies, it is neither detailed nor robust enough. And yet, for portraying and illustrating the message that the lifestyles of rich countries have global consequences, many of them affecting the poorest, the Ecological Footprint is a valuable tool.

The Environmental Sustainability Index is another purely environmental index, but it ranks the countries mainly on the basis of their domestic environmental issues/problems, giving a very low weight to global pressures such as CO2 emissions. Again, it is not very compatible with the internal EU environmental policies, and yet, through the steadiness and consistency of its successful production and dissemination process, the media use it increasingly to judge EU policies, in the absence of home-made alternatives.

In the European Statistical System there are no major statistical activities regarding measurements of global environmental issues. On the basis of the Communication from the Commission to the Council and the European Parliament on Directions for the EU on Environmental Indicators and Green National Accounts [5], the pressure indicators project [6] was launched in 1994 to construct an index on human pressures leading to both global and local environmental problems. This work has been stopped for today. Methodological studies have been carried out on environmental accounts (material flow accounts) in order to map the flows of the products and raw materials.The standard tables for material flow accounts are in place, the indicator construction methodology is still in the phase of development.

In the wider perspective the environmental dimension of the globalization refers to the ultimate goal : “sustainable development”. So also the work done in Eurostat under this heading of sustainable development could be seen as an input to global issues. On a global scale, launched at the 1992 UN Conference on Environment and Development, Sustainable Development is globally perceived as a four-pillar model with economic, social, environmental and governance elements. This model has been reconfirmed at the 2002 World Summit on Sustainable Development. A respective UN Commission on Sustainable Development set on sustainable development indicators was tested in twinning with developing countries and published in the 90-s.

On the European Union scale The European Union’s Sustainable Development Strategy was launched in 2001 and the respective sustainable development indicators [7] to monitor the implementation of the strategy were elaborated by the group known as the Sustainable Development Indicator Task Force. In addition to the themes of the EU SD strategy, two additional themes relevant to World Summit on Sustainable Development Plan of Implementation: “global

partnership" and "consumption and production patterns" were added. These two themes are also relevant for the description of the environmental dimension of globalization from the European perspective.

As EU accepted a global responsibility together with other nations and agreed on concerted actions for global sustainable development in the Millennium Summit, the theme "Global Partnership" was introduced into the EU sustainable development strategy indicator list. The idea behind it was to reflect the EU contribution towards the implementation of global sustainable development. So the theme outlines three relevant subthemes: globalization of trade, financing for sustainable development and resource management. The indicators are in large the following: official development assistance, carbon dioxide emissions per capita in EU and developing countries, import from developing countries, sales of fair-trade labeled products, agriculture support in EU.

EU sustainable development strategy considers the achieving of "Sustainable Production and Consumption Patterns" as a key challenge. Derived from World Summit on Sustainable Development Plan of Implementation there are four sub-themes listed in the indicator list: eco-efficiency, consumption patterns, corporate responsibility, material consumption. Indicators: air pollutants, material consumption, waste generation and treatment, electricity consumption, meat consumption, household size, agri-environmental support, nitrogen loads, livestock intensity, eco-label awards. The overall EU objective of this theme is to "Promote sustainable development worldwide and ensure that EU internal and external policies are consistent with global sustainable development and relevant international commitments".

The indicators were developed taking account the existing data flows. The need for future improvements in indicators was emphasized. How efficient are these indicators for reflecting the issues of global environmental importance? The strategies to reduce the pressure on global resources are already operational: rise in the material and energy efficiency, reuse of waste and materials, application of modern technologies etc. Are these indicators able to reflect the trends in these progress areas?

An encouraging aspect is that we as an international organization have attained a level where we have started to grasp how the communication from knowledge to politics works and how the understanding of economical, environmental and social interactions and informed decisions helps to build the way to a more sustainable future. Citizens, private sector, government, statistical data producers would all be partners in a communication circle. Environment statistics should contribute to the building of a public understanding on global environmental aspects of economical processes, trade, tourism and international relations. The future clients of environmental information will ask

for much more tough statistics (evidence) concerning the global level environmental problems and the results of the applied policies. The marketplace for environmentally friendly ideas would be every consumer. So the environmental information has to be adequate and understandable for all citizens.

2. Relevant issues to tackle

2.1 Consumption patterns

Environmentalism as a norm has become truly global, but so has mass consumerism[1]. One face of globalization is the dissemination of the American lifestyle all over the world. "The process by which the experience of everyday life ... is becoming standardized around the world." is the Encyclopedia Britannica definition of globalization. These norms and standards become globalised by more or less aggressive mass communication. Although western lifestyle has spread all over the world, a bigger share of humanity is excluded from this wealth and is still keen to reach higher "consumption standards".

Fortunately also the opposite happens: concerned, alarming, upset signals regarding the fate of the earth and future generations together with the unselfish, caring and loving attitudes towards nature are disseminating via massmedia. The central environmental challenge for the future would be the changing of the consumption patterns. UN Conference on Environment and Development, agreed Agenda 21 and World Summit on Sustainable Development all have highlighted the need to shape the consumption patterns.

A study carried out by the Tellus Institute on the future global environmental challenges brings up the need for a global level "Great Transition" for achieving sustainable development and also calls for a "new kind of globalization" as a prerequisite for this change: "It links people and groups in an expanding project to share information and influence development. The widening, deepening and accelerating interconnectedness that characterizes globalization is the precondition for a Great Transition. Globalization forges expanded categories of consciousness—seeing humanity as a whole, its place in the web of life and its links to the destiny of the planet. It distributes systems of production and participation, creates potential roles for corporate and civil society and makes greater equity possible. The principles and means for shaping a new kind of globalization are in place. A Great Transition would find rights assured, nature treasured, culture rich and the human spirit animate."[8]

What could be the role of the statistical systems in a "Great Transition"? Statistics provides an insight into a full range of topics and builds an understanding of the economical and ecological

supply chains in a “global village”. Today our statistical products are too far-off to suit this purpose. But there is still a hope that we advance. Several of the Statistical Offices have stated in their missions and visions that they want to become society’s main suppliers of information regarding the state and the development in main important spheres.

Information on environmental impacts of consumption patterns is difficult to assemble. For example the undesirable effect of products both in production and consumption is a methodological challenge. Further work is needed on developing necessary methods to produce statistical data, information and indicators on the environmental impacts of resources, products and waste taking a life cycle perspective.

Eurostat is supposed to build Data Centres for topic areas "Natural Resources", "Products" and "Waste” in the frame of Group of Four. These datacenters should eventually maintain and develop both quantitative and qualitative information on resources, products and waste and the associated environmental impacts. Strong emphasis should also be set on knowledge building.

2.2 Trade and environment

With the growing internationalisation of economics and trade whole factories and branches of industries are moved from one country to another depending on the cheap production costs. International corporations which have been grown under the protection of globalized economical and financial institutions have given rise to ecological dumping in various parts of the developing world.

Several developing countries are providing manufacturing to the whole world, industrialized as well as developing. But to the extent that China (and some other countries) has emerged as the new “workshop” of the world, the suppliers to this workshop are the still poor raw material-based economies in Asia, Africa and Latin America; and the customers of the products from this workshop are the populations in the North and within the affluent pockets in the South. To seriously consider the “workshop” metaphor one needs to place the “workshop” within a supply chain that is (a) truly global in nature, and (b) not just an economic supply chain, but an evironmental one. [1]

Civil societies from the consumption side and market actors from the production side are defining the rules and the roles of the game on a global level. Could it be assured that the economical supply chain is fitted into the ecological supply chain?

Report, “Ecological Footprint EUROPE 2005” [4] summarizes main mechanisms behind the Europe’s high ecological footprint: “Trade is the mechanism that makes it possible for Europe to

maintain its current way of life. It is only by importing resources and using the ecological services of other countries and the global commons that Europe can continue to increase its consumption while avoiding further liquidation of its own natural capital. If Europe accepts global limits, it also needs to understand the impact its economy has on the rest of the planet. Globalization and trade can help developing countries prosper but excessive demand on resources may cause degradation of ecosystems in countries providing them. To achieve global sustainable development, the world community would need to decide how big the planet's ecological budget is and how it will be shared. Or more simply put: how big is the ecological cake, and who gets which piece?"

Environmental labelling programs and environmental certification schemes are the tools that have been used to promote environmental responsibility. They are largely voluntary programs that provide consumers with environmental information. By enabling environmental criteria to be considered during purchasing decisions labelling and certification programs help consumers to "vote through the marketplace" for more environmentally responsible products. [9] There are various environmental labelling programs around that provide information on environmental impacts linked to the production of the products or their use.

The statistical classification system of the products does not yet take into consideration the environmental impact of goods. Separation between the trade of the eco-labelled and non-eco-labelled products is still not feasible. A good example is the struggle against illegally felled timber with forest certification. Still the export and import statistics is not capable of distinguishing between these categories. However, many governments are considering restructuring their environmental regulation regimes around these voluntary programs. What is the role of the statistical system in reflecting environmental aspects of trade? Is this the communication of best practices? Should we adjust our classification systems in order to start reflecting the over border movements of goods and services that correspond to environmental standards? Is environmental accounting a way forward?

A lot of bits and pieces are available already but there is still no common practice regarding what should be measured in respect to the environmental dimension of global trade. A possible framework that could help us to select and organize the issues to be measured should probably contain: imports and exports of various eco-labelled and certified commodities, indicators on consumption patterns, indicators on the volume of transport and its harmful environmental effects, environmental taxes, use of energy produced from non-renewable and renewable resources.

Areas of statistics that need to be expanded with "environmental adjustments" in the future could be the following: household budget surveys on consumption patterns, foreign trade, tourism, business and trade statistics.

Is there a need for developing these sets of indicators? Indicators should be linked to policy processes. There are no global environment and trade policy targets still in place; however, WTO has in its preamble sustainable development as an ultimate goal. As a first step perhaps the consumption of the world's resources should be analysed and the results should be published. Material flow accounts could be theoretical bases for doing it.

One key issue is without a doubt climate change, and our related dependence on oil imports. European Union member states have traditionally much higher fuel taxes than the U.S., Canada or Australia, and accordingly much lower fuel consumption in car traffic. Under the heading "Ecological Tax Reform", political debate goes on to what extent the experience of road fuel taxes can be extended to air transport, heating and other significant energy carriers. Sound figures on energy taxes and revenues, on their usage for general purposes as well as targeted subsidies e.g. for renewable energy, are still lacking but needed for calculating long-term price elasticities and forecasting the effects of a broad shift away from income taxation towards energy taxation. Questions that need more detailed analyses and also publishing are as follows: export flows which have environmental impacts, the effects of environmental regulations and standards on the flows and also on EU competitiveness, the analyses of the labelling and other measures, sustainability impact assessments of multilateral trade agreements etc.

3. Is EU Statistical System doing enough in sense of globalization – environmental dimension: suggestions

Commission Communication "Towards Global Partnership for sustainable development" [10] says explicitly that EU policies should ensure that globalization contributes to sustainable development. The issues to be addressed are the public participation, knowledge building and involvement of the scientific assessments. International regional organizations should in principal play an important role in providing the necessary insights what is feasible in the sense of shaping the politics and also while producing relevant statistical data.

As the political processes regarding global environmental issues are shaped on a world level, global environmental governance will require stronger international co-operation and better political leadership. EU as one of the leading economic and political organizations on the international scene

bears a responsibility within the ‘global governance’ process. EU could be a model international organization who could also, from the side of information, produce and develop sets of methodological guidelines, examples of harmonization and best practices regarding global environmental issues.

Development of the Data Centres could be a first step to concentrate on and develop the knowledge and communication in the areas of "Natural Resources", "Products" and "Waste", more precisely, to develop methodologies to form databases and indicators on the environmental impacts of resources, products and waste taking a life cycle perspective. Eurostat should start the descriptive work and the exchange of ideas on a broad range of issues related to measuring global ecosystem protection, to review what has been done over the past years, to contemplate what remains to be done … in the short to medium term.

International environmental politics have a wide spectrum of players from deep ecological movements like Greenpeace to government institutions. Despite the differences, these actors are focused on the same eventual goal “sustainable development”. All of these organisations are in shortage of the evidence: clear figures that could be used as evidence of the progress or regress regarding a wide range of environmental pressures, impacts and driving forces. Eurostat should start again the publication of thematic statistics combined with textual analyses on important environmental issues … more storytelling is needed.

The system of classification of commodities does not take into consideration the environmental impact of goods. A further development of the foreign trade statistics would be the way further.

Does the future look exactly the same as the present or past or should we need to be proactive and look for the new ways of producing the information for shaping new policies on the global issues or on environment and trade areas? What we can measure today could lead us to what we should start measuring for the future…

A good tool for communicating the states effectiveness on solving relevant environmental problems is the ranking of the countries in respect of important environmental problems leading to global environmental issues.

As the central question of this conference is “Is ESS doing enough in sense of globalization” and the specific context is environmental dimension, the answer should be “yes, we are doing enough” if there is no specific need for further development. But the concept of sustainable development has been now rather widely accepted by governments and people across the world – and, more

importantly, has begun to be implemented globally with increased cooperation. From that perspective we have to say “no, we are not doing enough”, much more is needed. Knowledge is one of the key issues. Indicators and indicator systems are important components in enhancing the political debate on global environmental and sustainability issues. If sustainable development ideas start to be implemented in practice, much more robust statistics is needed for the measuring of the effectiveness of the measures.

Also the 6 Environmental Action Program stipulates: “The pursuit of ambitious environmental policies at international level paying particular attention to the carrying capacity of global environment”.

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