



Session 3

Breakout session

Key needs and ways forward



Carlos Figueiredo

Environment Ministry, Portugal

Insights on New Measures of Progress

Good morning to everybody!

First of all, I would like to thank the organizers of this conference for inviting us to participate in this workshop.

My name is Carlos Figueiredo and I work at the Portuguese Ministry of Environment, Spatial Planning and Regional Development.

This presentation was prepared with the support of a technical team listed here.

I would like to focus on three main questions.

Firstly, what do we know about the different indicators that are linked to the well-being? Besides we should analyse some empirical results relating to GSI.

Secondly, what do we want ? We want a new generation of indicators that should include the environmental issues in complementing the GDP.

Thirdly, what should we do? We should mobilize the different statistical institutions and also their main stakeholders to provide a set of complementary indicators with GDP.

The **limitations** of GDP and other traditional economic measures as indicators of welfare are well-known. Moreover, such measures do not show whether the economic system is on a sustainable path or not. Indicators that go beyond GDP are needed to support better decision making.

There are **different categories of indicators** which can be roughly divided into monetary and non-monetary indicators. The former are generally based on corrected national accounts; while non-monetary indicators can be based on environmental data or on socio-demographic data.

Although there are many indicators available, in this presentation we would like to focus on the analysis

for the Portuguese case of a specific indicator, the **Adjusted Net Savings (ANS)**.

This indicator is based on national accounts and is consistent with the capital approach to sustainability, i.e. the notion that future well-being can only be maintained if the wealth-producing asset base is preserved.

This indicator is built upon the **National Net Saving (NNS)**, which considers only the depreciation of built capital and attempts to include the net changes in both human and natural capital, thus providing a measure of an economy's genuine savings.

In this way, The ANS indicator corresponds to the concept of weak sustainability (WS).

All values of those indicators are monetarized. Thus the aggregation is easily achieved by adding up the different values considered in the ANS algebraic expression.

This is a real advantage to interact with the policy makers and to communicate to the general public.

This concept of genuine saving was considered by the World Bank to organize a set of data for all countries that allow international comparisons.

Based on data computed by the **Environment Department of the World Bank**, these figures show the path of the listed indicators as a percentage of GNI – Gross National Income.

In this way, we can see the evolution of ANS for Portugal and the EMU countries between 1983 and 2004.

In both cases **the path of ANS roughly follows that of the conventional measures of GNS/ NNS**, but the **gap between ANS and NNS has**

been increasing in Portugal for over a decade, unlike that of EMU countries, which has remained relatively stable.

It is important to analyze the role of each component in the results. The influence of **education expenditures** (EDE) on the gap is high both in Portugal and in the EMU as a whole, but there was a significant increase in education expenditures in Portugal from 1990 to 2004 (*larger than one percentage point in terms of the ratio to Gross National Income*).

As for **natural capital depreciation**, the Portuguese values show a smaller decrease, which also contributes to a larger gap.

Summarising, the gap ANS/NNS just mentioned shows a positive correlation with EDE and a negative one with depletion of natural resources and environmental damages since 1990.

Now, we propose moving forward on several levels so that new insights can be gained in the medium and long term.

Firstly, to get a better picture of genuine savings, **additional natural resources and environmental damages** should be included. In what refers to human capital creation, **professional training expenditures** should be considered without disregarding education and training outcomes.

Secondly, to **improve the basic GNI measure**, non-salaried time activities such as housework, volunteer work and leisure time need to be valued and included.

Thirdly, to ensure that we are not following paths that are just weakly sustainable, **a set of environmental quality indicators, namely for critical environmental services**, should be established for international comparisons. Indicators that reflect ecosystem **resilience**, such as biodiversity, require particular precaution as the context is of huge uncertainty.

Finally, we propose that sustainability in the EU is assessed at a **regional level**, which will require spatially disaggregated data. This would be important for a consistent framework to support decision makers at national and European policy levels.

In the long term, we should end up in an established modular System of Economic and Social Accounting Matrices and Extensions (**SESAME**), with enough flexibility to answer the needs of different users but that is still **consistent with national accounts**.

This is my guess on that matter!

Thank you for your attention.

Feel free to put your questions and comments.

Insights on New Measures of Progress

What do we know?

What do we want?

What should we do?

Carlos Figueiredo (DPP)

Technical Collaboration

Catarina Roseta Palma (ISCTE), Daniel Santos (INE)
Fátima Azevedo (DPP), Jorge Catarino (DPP)

What do we know

- **National Accounting Matrix** including Environmental Accounts – Air Emissions (NAMEA - AIR), 1995-2004
- **Satellite accounts** to the ESA95 for the analysis between the environment and the economy
- **Sustainable Development Indicators (SDI)**
Reconciliation of economic development, social cohesion and protection of the environment

What do we want?

To answer this question it is important to highlight some remarks about portuguese figures as regard **Adjusted Net Savings (ANS)**

What do we know

Sharp increase of ANS in the 80's, reversing this tendency from 89 onwards

Stable pattern in a range of 10-13% of the GNI

The path of ANS follows the dynamics of GNS/NNS



Since late 90's portuguese gap is larger

What do we know

1990/2004			
	PRT_Gap ANS_INNS	EMU_Gap ANS_INNS	
Gap ANS_INNS	1	1	
EDE	0.99	0.97	
DEPLETION	-0.83	-0.62	
CO2_PM10	-0.82	-0.50	

Sources: World Bank; INE; DPP

The influence of **EDE** on this gap is high both in PRT and EMU.

Depletion of natural resources has a positive trend in PRT since 90, contributing to amplify PRT gap comparing with EMU

These data point out different structural profiles and to improve the assessment of the capital components we must use more detailed data

The Future

A modular system of accounting for **Well-being** and **Sustainable growth** could be effective:

- Setting up an integrated information system based on environmental accounts (**NAMEA**) and social accounts (**SAM**) linked to the National Accounts;
- This should end up in an extensive System of Economic and Social Accounting Matrices and Extensions (**SESAME**) with huge potential: harmonisation, flexibility to answer users needs and consistency with core National Accounts.

What should we do

Medium term

•Improving ANS

- Evaluation of additional natural resources and environmental damages (**NAMEA_ENERGY**, **NAMEA-WATER**, **NAMEA-WASTE**)
- Add professional training expenditures as human capital's investment
- Upgrade and application of monetary valuation methods

•Improving GNI

- Evaluation of activities such as house and volunteer work & leisure time;

•Improving Strong Sustainability

- Harmonisation of environmental quality indicators, namely critical environmental services
- Development of useful methodologies for decision making process in a context of huge uncertainty, taking into account the precautionary principle



Thais Corral

Executive Director, Rede de Desenvolvimento Humano (REDEH), Brazil

I will address the three discussion questions¹ by offering some examples, because conceptually a lot has been said. But when we see what happens in real life as a consequence of a certain perspective, it's also helpful to see how we can move forward. And, in terms of opportunities, some of the consequences that we are facing with this narrow view of GDP are very important in showing us what can be done, but also how these narrow views also reveal some kind of culture that is very difficult to change. And the opportunity now is climate, as with climate we have a limited time in which we take action.

And I want to give you the example of Brazil and what has happened over three decades in the Amazon. As in the seventies we had a policy of occupying that region. It was the policy of our military government, which was very nationalist, and as a consequence of that people were given subsidies to occupy the forests. So most of this was done just by chopping down the trees and putting cattle there, which was the easiest way to get hold of the subsidies. Over the years the consequence of that was major occupation of the Amazon, 30% of the forest was destroyed. And today it goes on because this trend still continues. So Brazil now occupies the 16th position in terms of a global production of greenhouse gases and 75% of this is produced by deforestation. The Amazon alone is responsible for 3% of the global greenhouse emissions and at the same time produces only 0.1% of our GDP. So now of course Brazil wants to change that perspective urgently and also doesn't want to be seen as the villain on the global scene. We are changing; we are starting to implement now a new law from 2006 on incentives. It takes an opposite approach by giving people a kind of salary to protect and to maintain the standing forests, to maintain the trees. The question is how long this shift in terms of policy is going to take in terms of our

mentality and culture, so that we can really be protective of the forest. Because the way that people see wealth is just using the trees in the opposite way for money or for cattle.

The second example I want to give is also related to consequences, and in this case the consequences of poverty that are not taken into account in GDP. And it's true for most Latin American cities, namely the question of safety.

Most of our cities have a high rate of crime today and if you go to people in terms of the service we're doing on perceptions, the most important thing for them is safety. Because of course if you don't have safety you don't have wealth, you don't have a lot of the things money can bring no matter at what level. And on the basis of that, several cities starting with Bogotá started a movement which was called *Bogotá 'como vamos'*, and then we had *'Rio How We Are'*, and Sao Paulo, *'Our Sao Paulo'*. And the idea is to match the perception with the statistics that are available and make them usable for people, so that they can not only act themselves but create a dialogue and a mobilisation that can be translated into action and can involve politicians and mayors. And there are goals for the mayors. In the case of Bogotá after ten years of this movement the situation in the city has totally changed. And I think this shows us how indicators can be used by people and produce change, because after all this is what we want.

In an attempt to do that, in 2003 together with Hazel Henderson and the corporate social responsibility movement of Brazil, statisticians, policymakers and a lot of grass roots organisations and social entrepreneurs, we organised this big conference with the participation of 700 organisations. And the most important

¹ What are the key opportunities for going beyond GDP? What is feasible in the short to medium term and how can implementation be improved? How to meet the needs of policymakers, key institutions, business, media and the broader public?

lesson of that conference was dialogue, because actually we have to understand each other. I think it's important, we need complex data, but how are we going to follow the path unless we can really understand each other and make this useful? Because all these very complicated methodologies, unless they are translated into something that can be put into action, are very limited. And this conference was an example of that, as an outcome of all these movements. There are all these examples of cities working on their own neighbourhoods, schools, no matter what level. But the important thing is that people can handle the complexity and are not afraid to use them.

And my final point is that ICTs (Information Communication Technologies) are very important assets on our side. And I think that there are several examples, like the Community Right-to-Know in the United States, that actually helped. This was a law, integrated with access to ICTs, on information and helped the United States to overcome toxic release into the environment. And this is an information and model that is 20 years old, but is an example of how information put in the hands of the people can really make a change. Thank you.



Peter van de Ven

Statistics Netherlands

I would like to put forward two arguments, two messages I want to convey. The first one is a plea for cooperation. I think that we as researchers, statisticians, policy analysts, and policymakers should look more for the common ground and should do a better job in looking for the areas where we agree instead of stressing the points of disagreements, and that for two reasons:

- The first one is that I see from the discussions on environmental accounting that people are very engaged and very personally involved. In my opinion, progress in measuring and analysing broader concepts of welfare and broader concepts of well-being society may sometimes even have been hampered by the discussion about rival indicator approaches by what in the documentation for this conference is called "beauty contests".
- The second reason is that we have totally different ideas and concepts of welfare and well-being. Every introduction showed a different approach. My question is, do we actually know what we want to measure? It seems that everybody has a different idea. Therefore, we should also look for the common ground of what we want to measure.

My second message is that we can learn from the worldwide success of the system of national accounts. There are some factors which we should learn from in making environmental accounting or, more broadly, the measurement of well-being a success.

To go back to the first point, as I have said, I have a long experience in national accounts and I can tell you that hardly any national accountant considers GDP or economic growth as the ultimate indicator of societal progress. There is no argument about that. Of course economic growth is considered to be an important indicator of economic activity, and an indicator for production and income with strong relationships for example with employment, and for that reason also with, for example, issues like social exclusion.

On the other hand it's clear that GDP has its limitations. We all agree about that, including 95% of national accountants. So that's not an issue and it's important to realise that. In my opinion, the discussion is much more on the way to arrive at a broader measurement, to a more inclusive measurement of welfare or wellbeing. Personally,

I think that welfare and wellbeing is a multidimensional phenomenon and as such I'm strongly in favour of a limited set of headline indicators in which, for each aspect of welfare, an indicator is defined that is directly observable and measurable. In addition, these indicators should preferably be embedded in an integrated system of accounts. By doing this, it is possible to analyse the interrelationships, the interlinkages, and the trade-offs between different indicators. That's very important when discussing and analysing policy choices.

On the other hand, I know that there are other approaches that try to capture these different aspects of welfare or sustainability in one indicator. Just to name a few examples: Sustainable National Income such as developed by Dr Hueting who is present here – he is a pioneer in this work – or Genuine Saving developed by the World Bank. There are other approaches as well.

Personally, I think that there are still a lot of theoretical as well as practical problems involved with these single indicator approaches, certainly when it comes to the inclusion of this kind of research in the programme of official statistics. But that's not a point I would like to make.

My main argument is that all these approaches are not mutually exclusive; that initiatives like Sustainable National Income or Genuine Savings complement or supplement information from multiple indicator systems. We should not compete with each other, instead we should try to

help each other and support each other. As a statistical office, by providing the relevant data, the relevant statistics, and researchers can help by telling us what kind of data are needed. "We can help you".

The second point, as stated before, was that we can learn from the success story of national accounts. Factors in that success are: one set of international standards; a conceptual framework with worldwide commitment to apply these guidelines. In addition, there is international agreement about a set of tables that a critical number of countries compile in practice, making international comparison possible. Furthermore, there is agreement, implicitly or explicitly, about headline indicators.

In my opinion, it is important to have such an international standard for environmental accounting as well, like the system that is already mentioned in the introduction, the SEEA, the System of Integrated Environmental and Economic Accounting. This system is now being developed to an international standard by the United Nations in close cooperation with other international organisations. However, I am quite sure that it will not be possible to agree on aggregate indicators. On the other hand, I think it will be possible to develop a system in which economic development can be related to environmental issues. It is very important to look into such international standards, agree on them, and agree on a set of tables which as many countries as possible compile.



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OPENING AND DISCUSSION OF WORKSHOP

- **Jeff Mason**

Reuters, Chairman of Workshop Session 3
Panel 1

My name is Jeff Mason and I'm a correspondent for Reuters based in Brussels. It is my privilege to be the chair of this working group. Thanks for joining us. I see my role as simply one of facilitator and getting the conversation rolling. I'm looking forward to having a good conversation. Also, to talk a little bit perhaps about the needs of the media in an issue like this, so feel free to throw questions my way about that later once we get to the discussion.

What I'd like to do first is just have all the panellists briefly introduce themselves and then we'll start with our presentations. Please go ahead.

- **Carlos Figueiredo**

Environment Ministry, Portugal

My name is Carlos Figueiredo. I work at the Ministry for Environment, Special Planning and Regional Development. I'm an economist and I worked with a small technical team to prepare this presentation. We have the full presentation available on the website of the conference.

- **Thais Corral**

REDEH, Brazil

My name is Thais Corral, I come from Brazil. I am the head of an NGO called Network for Human Development. I was involved in the Rio Conference in 1992, the UN Conference for Environment and Development, and since then we have been working on how to translate information into action, especially with local sustainable development, renewable energy, and empowerment of women in the community. I am also an old friend of Hazel Henderson and in 2003 we organized together a big conference on indicators on quality of life and sustainable development and that's the reason why I'm here.

- **Peter van de Ven**

Statistics Netherlands

My name is Peter van de Ven. I have more than 20 years experience in national accounts. I still like national accounts very much. My present position is director of national accounts at Statistics Netherlands. I have been and I still am heavily involved in international discussions on the con-

ceptual framework of national accounts. I am a member of the advisory expert group on national accounts which is responsible for the revision or the update of international guidelines on national accounting. I'm also, perhaps more importantly in this context, a member of the UN Committee of Experts on Environmental Accounting, a committee that started two years ago with the goal of arriving at international standards for environmental accounting and a better common approach to environmental accounting.

For the speech of Carlos Figueiredo, see page 166.

For the speech of Thais Corral, see page 169.

For the speech of Peter van de Ven, see page 170.

- **Jeff Mason**

Chairman

A couple of thoughts came to my mind listening to the speakers that I think it might be interesting to explore; the idea of complexity and making sure that whatever the direction that we go doesn't get too complex. It's appealing at least to a journalist whose job is to boil it down to that lead sentence in a story or in a TV report in a 1½ minute package, so I think that's an interesting issue that maybe we can touch on.

Also both of you gentlemen talked about having an international standard. I would be curious to hear more from the panel about what that standard should be, and I'd also be curious to hear what some of our audience members think about that.

The three issues that we are supposed to be following during this session are as follows:

- What are the key opportunities for going beyond GDP? Some of those have just been discussed.
- What is feasible in the short to medium term and how can implementation be improved?
- And then thirdly: How do we meet the needs of policymakers, key institutions, business, media and the broader public?

So I suggest we start maybe with the first question: "What are the key opportunities for going beyond GDP?" Does anyone have a question along those lines?

- **André Vanoli**

The French Institute for the Environment

I am André Vanoli, an old national accountant, probably an older national accountant than Peter van de Ven, nearly from the 19th century... but national accounting did not exist in the 19th century. In France I am retired, but I chair the Scientific Board of the French Institute for the Environment which is actually a statistical office. I will elaborate on what Peter van de Ven said, on how to try to take advantage of the success of the system of national accounts. I will not answer the question, but I will raise a question which perhaps can be usefully studied in the context of national accounting.

In France in recent months there has been what has been called the "Grenelle Environmental Conference." In the context of this conference, which was both a political, economical and environmental conference, the interesting question was raised on, how to show people, consumers, what are the unpaid costs. And the suggestion was made and the minister in charge actually proposed to shop-owners – the big chain of shop-owners – to add a second price to the price to be paid, and this second price was called the environmental price. Unfortunately the expression was not perfect but this is not my point.

In my view this was a very, very interesting and fundamental proposal because the issue, which is increasingly clear in my view not only to policy-makers but to the public at large, is that we are consuming part of nature. And of course this is not reflected in the costs that are paid except for a small part of the natural assets which are involved in market transactions. So when you go to a shop and look at the price, what you see is only a reflection of the cost paid, i.e. the remuneration of labour and the remuneration of produced capital, to simplify the picture a bit.

So the question is: are we able to come up with an estimate of the unpaid cost, not only at the aggregated level but also product by product, because when you go to the shop you look at certain products.

I think that it is a difficult question to answer, perhaps we can see what would be the approach to such an issue. In my view going back to 1993 and the SEEA, system of economic and environmental integrated accounting, a very

important point was stressed at the time: it was the estimate of the maintenance cost. That is what would be or what would have been the cost of not degrading the environment, to give a visual symbol. Unfortunately for various reasons too many objectives in my view have been pursued instead of concentrating on this main objective. And nowadays the question is raised in France, I don't know what the situation is in your countries, but we are not really able to answer this question. But it seems to me that it would be necessary to concentrate on certain main issues. One is to try to have global estimates of unpaid costs and to see how they could be allocated to the various parts of final demand. And in my view this is a basic issue. I am afraid that perhaps the objective of this conference – I don't mean only the workshop but the conference as a whole – is perhaps a bit too wide. If you want to do too much there is a risk of not achieving anything reaching something substantial. And my advice would be to focus on environmental issues. I suppose Jacqueline will agree with me but it's not an issue of institution, it's what is most important...

- **Catarina Roseta-Palma**

Lisbon University, Portugal

I am an environmental economist and I think the issue that the previous speaker brought up is relevant.

Basically we have two approaches to choose between, or we can decide to go for both of them at the same time. One of them is to decide that we want things to be in prices.

If you have the monetary price and if you have taxes for the environmental costs or whatever, then the monetary price already has those costs in it. So maybe one approach, and that is the one the environmental economists are working on obviously, is to say: what you need is the correct price, you don't need a multitude of prices, you need a correct price.

Then the second approach, which apparently the previous speaker was defending, and which might be more direct, is maybe less polemical because you don't have to monetise things. The second approach would be to have a multitude of prices for products to help the consumers make the right decision.

Now I think we should be clear about what we're proposing. We don't want to do both at the same time because that would be wrong. For example, imagine you have a carbon tax and the carbon content of the product is already being considered in the price, then you don't need to have a specific indicator for carbon content in the product. This relates to a question that I had before the previous speaker took the floor, and this question is directed to the statisticians in the room: how advanced are statistical systems in terms of price valuations for environmental or social indicators? Especially environmental indicators where I know that a lot of work has been done, but it is analytical work. There's a lot of methodological discussion on what's the best way to analyse monetary values for environmental goods. And so, how has this been incorporated into statistical systems? These are not observable data, these are data that are constructed by people working in the field and I was wondering whether these data are useful; are they considered; are you thinking of including them in the statistical systems?

- **Enrico Giovannini**
OECD

I am not sure, Peter, that past experience with national accounts could be taken as a good model to go forward. The community of national accountants at the beginning, and even now, is relatively small, and the number of those who have the capacity to produce data according to national accounts, which is big machinery, is very limited. Today a lot of people are trying to put forward indicators of wellbeing or other environmental measures and we cannot close the door to those who are trying to do it. The real problem is how can we try to build a taxonomy that brings together the existing taxonomies? This is one of the most important issues and we are working on this with some people in San Francisco, who are trying to develop algorithms able to transform the natural language into taxonomies in order to understand what these hundreds of initiatives around the world are developing in terms of taxonomies. So this is something that we need to do, otherwise we will give the impression of tremendous confusion, while my guess is that in the end the key words are not so different around the world.

My second very quick point is about what can we do in actual terms, also in the short run. I think that communication is so important that we need to invest. But to do that, the fundamental question, especially for statistical offices, is: to what extent is

communication their job? A lot of statisticians feel that when they put figures out their job is finished, while of course it is not, at least in my view. And so it's difficult to convince not only statisticians but other institutions that the communication of information is part of the role of knowledge builders. This is a big shift in the culture of statisticians and again this requires investment.

- **Jeff Mason**
Chairman

I'm going to come back to you in just a second. We've got three comments. I'm going to start by saying as journalist on the panel "good communication is very important to us." If you have a message that you want to get across to a journalist, just throwing a bunch of numbers at us without a little bit of interpretation will be less successful. So I am pleased that you brought that up.

- **Peter van de Ven**
Statistics Netherlands

Well the first issue is about valuation and how to show people the unpaid costs and how advanced are our statistics to do that? Let me first stress that, in my opinion, it is important to have this kind of research and this kind of experimenting on the valuation of these costs. On the other hand however, I think at the moment that we are not so far that we can integrate these kind of valuations into official statistics. When you look, for example, at the interrelationship between environmental pollution, the effects on ecosystems and backwards, and the effects of ecosystems on the services that the economy derives from the ecosystems, we hardly know how this relationship works. And to value this, to put it into money, is too complicated. A first step could be to value and subtract depletion of natural resources. We are well advanced in that field, but when it comes to ecosystems it's too difficult.

Another point I want to make, is that we are not only dealing with a statistical problem; it's also a societal or a political problem. We know what happens to the environment, we don't need summary indicators to show that we are using up our environmental resources. Still we do not act upon it. And then I come to what Enrico Giovannini said about the importance of communication. In my opinion, as statisticians, we should do a better job in communicating. Sometimes, we put too much emphasis on economic growth. Instead,

we should put other indicators on environmental or social progress on a par with economic growth, and show that there are other important things as well. That's something we can do. In the Netherlands, for example, we now have concrete plans to develop and publish a monitor on sustainability. This is a co-operation venture between Statistics Netherlands and our planning agencies, the Bureau for Economic Forecasting, the Environmental Planning Agency, and the Social Cultural Planning Agency. With this monitor, we want to provide information on broader picture.

- **Carlos Figueiredo**

Environment Ministry, Portugal

Yes, I agree to some extent with Peter, but I think that at this moment we need to think outside the box. Because we already have some initiatives, and some indicators that make a real attempt to improve some calculations about natural capital, like depletion of natural capital, and energy. We have NAMEA, national accounts for energy. We have made some steps but we need to gather them together. And I think we can't answer at the same time. That is the reason we have chosen lots of different questions genuine net saving because it has three important components: build capital, fixed formation capital and depreciation, and human capital with expenditures, education expenditure. It's probably missing the outcomes for education; I think that's very important to make expenses compatible with outcomes.

We have a lot of problems in Portugal with that because we have high levels of expenditure, but we have some problems with the outcomes of education and we need to balance that. We probably need to do a methodology improvement to an indicator like the genuine saving indicator. We also have the depletion of mineral resources. We have environmental damage. This is a starting point probably, and I feel that we need to go ahead step by step.

There is another problem in terms of communication and how to sensitize the policy-makers. The first is that we need to have indicators reflected in monetary values. The second one is credibility. We need an institution that could publish some data like GDP Worldwide. I think the next indicator set must be a complement to GDP. It's very difficult to create an alternative to GDP because economic growth is very important.

We need to adjust economic growth and make some improvements in GDP, like Green GDP or something like that. But we need to go ahead with these kinds of indicators and explore ways of refining these calculations.

The third one is that we need more advances in order to introduce things like fisheries and other wealth stocks, because these kinds of indicators are not included, for instance fisheries and forestry. And I think we need to go step by step; it's very important to heighten the policy-makers' awareness.

Another thing: it's very difficult to have a composite indicator, but the evolution of these kinds of indicators is reflected in monetary values, it's very easy to aggregate the components.

And finally, these kinds of indicators must be included in the national accounts because it's a very important reference system. A lot of improvements have also taken place during the last decade in national accounts and we can't forget that.

- **Thais Corral**

REDEH, Brazil

I just want to make a brief comment about the question of communication, which is critical for the era in which we are in. Because if you are to get into more co-operation among sectors, among disciplines and among levels, we need people to understand what we are talking about. I think that we are in an era where we are flooded with information but with very little understanding. It took me a lot of time to understand why these multi-disciplinary approaches didn't work. Because we finish doing a job as a statistician or as a social entrepreneur or whatever, and then we pretend that somebody goes there and understands in five minutes all that complex work that maybe took us ten years. And that doesn't work. And I think that, building on what you said, to think the box doesn't work alone, you know. You have to really challenge yourself and your way of thinking in the process in which you're elaborating that thinking, and for that reason, I feel is that we need more and more to integrate people that deal with communication but also all the people who are going to use the information, from the beginning, and really challenge ourselves in that respect.

OPENING AND DISCUSSION OF WORKSHOP

Of course maybe we will go less quickly but we will go further. And I think that's what we need now, and I like that sentence of Al Gore, *"if you want to go quick you go alone, if you want to go together and far you have to see that it will take more time"*. And I think that time now is very helpful.

And the second point I want to make is about including the price in the products. I also think that we have to take into account the effort that was done over the years by all the people that built the certification process, which is not so clear in this environment but very helpful in terms of responsible consumption.

- **Jeff Mason**

Chairman

Just a reminder that the second two questions on our list were:

- What is feasible in the short term, short to medium term, and how can implementation be improved?

and

- How to meet the needs of policymakers, key institutions, business, media, etc?

- **Nick Marks**

New Economics Foundation

I want to address the last question about how to make it useful for policymakers. Policymakers are interested in adding value and it's a question of what we value. And it goes back to your first point, Peter, what are we trying to measure here?

I think what we're trying to measure here is people's lived experience; it's their experience of actually what services provide and what national governments provide. And we have to get into the realm of the subjective if we're going to do that. So in the UK local governments are very, very interested in wellbeing, because they know that they have certain economic situations which they can't control. But what service provision can do is affect people's experience of their life. So if you're going to create a system of national accounts, you're going to build them up from the bottom. I don't think there's any way that they're going to be useful if they're not built from the household upwards, through the local authorities, through super output areas where you can see where deprivation is felt and experienced, where crime is experienced, where fear of crime is experienced, and that's how we have to do it.

So we have to create a system which builds from the bottom. If we just have a top-down system, it remains an academic exercise. People won't relate to it, so if you're going to have national accounts of wellbeing, it's got to be a bottom-up process, and that's my plea. Thank you. Nick Marks, New Economics Foundation.

- **N.N.**

I would like to say more or less the same thing. Today we have a kind of disequilibrium. We are in a good position to produce indicators as Peter van de Ven said. We have good indicators, we have good institutions. All this is functioning, but the problem as he said is what do we want to measure? And the next question is who is the 'we'? Who decides what we want to measure? That is the problem.

First of all it is a problem of democracy, which is to choose the right indicators we want for society. The indicators, for instance, the government can choose what kind of indicators they want. We do it in the Council of Europe for instance. We have some benchmarks we define together between governments. And also at local level. When we say we speak about well-being, what is well-being? We want to measure well-being, but who is able to say what is well-being? So we have to get the citizens themselves to tell us What they consider their own criteria for indicators of well-being. We always say we need to make things understandable and useful and communicate well. We are always in the same framework, which is that we are producing indicators and we want the people to use them. We have to change that. We have to start from the democratic process and help them to build it. The technical services are a good place because they can help. We have done it in some cases and showed that it is possible.

- **N.N.**

This trade of information for decision-making has been going on for quite a while.

What has developed quite well over the past 10-15 years is our ability to look ahead, to make forecasts. Scenario driven, model based outlooks.

One of the short-term possibilities is to take the sometimes crude indicators that you have. A set like Peter van de Ven said to show trade-offs and apply them in a forward-looking manner like GDP has always been forecast traditionally. As a very

short-term opportunity that we can capitalize on, it is by sheer coincidence this autumn and next spring that there will be no less than four worldwide environmental outlooks that include this sort of primitive but still feasible forecasts. Decision makers and the audience have more or less become accustomed to that over the past 10-15 years. That's the difference. So it will be feasible to cobble together a complement to the structural indicators, as the indicators reporting to Spring Council based on worldwide outlooks including projections. It's something that's part of the discourse now and we can work on that.

- **Roefie Hueting**

Foundation for Research on Sustainable National Income, The Netherlands

I've been working on beyond GDP for more than 40 years. I've also published together with Jan Tinbergen, whose name was cited in a previous session.

I would like to make two comments: one is that it is not a good idea to build composite indicators because they entail conflicting goals and the rates of each aspect of these indicators cannot be given because of preferences. That is the key to the problem. We cannot measure welfare and welfare is simply satisfaction of wants, and these indicate the preferences that we cannot measure. What we can do, is make assumptions. It can be shown that GDP is also based on assumptions. I will not do that, because it takes too much time.

There is one indicator that assumes that there are preferences for environmental sustainability. That is only one aspect, but it might be an important one, because it is an indicator for the maximal attainable production level, which ensures that environmental functions remain available for future generations, and environmental functions are defined as the possible uses of the non human-made physical environment, on which human life is dependent. By definition, these environmental functions, which are the most fundamental economic goods humanity disposes of, remain outside the national accounts. Also, their losses remain outside the national accounts, which is logical because they are not produced by man, whereas national accounts and national income measure production, value added, and the definition of producing is "to add value."

Based on the assumption that we want to behave in such a way that future generations have at least the same living conditions as we have, and maybe a little bit better, is the sustainable national income, the environmentally sustainable national income. This is defined as the production level that leaves intact those fundamental environmental functions.

This indicator – sustainable national income – has four features that no other indicator has:

- First, sustainable national income is the only indicator which is directly comparable with standard national income, because it is estimated in accordance with the conventions of the system of national accounts.
- Second, sustainable national income relates to the measurable, physical environment. Ecology relates to subjective preferences that the economy has shown in a figure which I cannot show you at the moment.
- Third, sustainable national income provides the distance between the actual production level as measured in national income. It thus provides this distance, so it shows whether a country is drifting away from sustainability or towards it.
- In the fourth place, sustainable national income shows the development of this distance in the course of time and thus shows whether or not, as I said already, a country is drifting further away from environmental sustainability, defined as keeping vital environmental functions available for future generations.

The first rough estimate of sustainable world income was made by Jan Tinbergen and myself for the Rio Conference in 1992 and we arrived at about 50%. That means that 50% of production and consumption is unsustainable. A more advanced estimate was made for the Netherlands, and that estimate too arrived at about 50% of the current production level. So there is a big gap. We are talking about a very serious problem. The sad thing is that although the Dutch government promised the Parliament to subsidize further elaboration of national income, those subsidies were cancelled. So we are in a sad situation that maybe the most important and scientifically best underpinned indicator has no chance of being developed; maybe the European Union could do something about that.

- **Victoria Thoresen**

Consumer Citizenship Network, Norway

I have a comment and a question related to the reasons that we are here. We asked what are we measuring. We have heard much discussion this morning about indicators but very little about the human development index, which I have understood UNDP based very much on theories of needs. Yet as was mentioned, needs change. This is a problem, but one of the basic definitions of human development was participation in decision-making. If this is one of the key indicators of human development, then it is interesting to see that in the ISO - International Standards Organisation – process on developing standards for social responsibility for all organisations in the world, which is going on at present, they also focus on stakeholder involvement as one of the criteria for measuring social responsibility, because this also changes constantly.

So my question is: if we are talking about bottom-up, if we are talking about democracy, perhaps one of the most important criteria that can be developed in whatever indicators we now work on, or choose to focus on, is participation at grass-roots level, which again will connect with the question of dealing with communication; because if people there to help make the indicators, then they will understand them better when they are made. So I think we have to consider that very carefully in our work today.

- **Ruut Veenhoven**

Erasmus University, Netherlands

I would like to pick up on the question Peter Van der Ven raised: what do we want to know? Well, one of the things we want to know is how we can save the world, while leading a decent life? I think an answer to that question is in the Happy Planet Index by the New Economic Foundation, which on the one hand takes happy life years in nations, and on the other hand, sees how large the ecological footprint is, and allows us a picture of how efficient countries are in realising good quality of life while at the same time preserving the environment.

This is a very simple index which everybody understands. It is not yet perfect. We have data problems but these can be solved pretty easily.

- **Carlos Figueiredo**

Environment Ministry, Portugal

I think that these are very good questions, but we are still at the beginning of this debate. On the one hand we need to have indicators that need mobilisation of statistical institutions, governments and society in general in order to simplify the methods and to clarify the contents of these kinds of indicators. It is my feeling that some indicators need universal application and need to have some credibility in order to be useful for policy-makers.

There are a lot of indicators all over the world, like ecological footprint, happy planet, and so on. There are a lot of indicators like this, but we need to create an environment in order to put some people together to discuss that. It is very important to make a linkage with national accounts and the recent improvements in national accounts, because we have some physical indicators, and monetary indicators. So we need to correctly adjust the concept of sustainable development in order to put different indicators to use. I think that we need to go step by step.

- **Thais Corral**

REDEH, Brazil

From what I have heard here and from what I sense and feel after all these years working with the information, one of the challenges that we have is to maintain the integrity of the information and the methods we know about, in order to guarantee the diversity of the needs, the need for participation and the actual use of the information. I think that is still a challenge, because we do not know exactly how to do that. Even in what I see as multi-stakeholders processes, it is still at the very beginning, because it is more or less the same people that continue to go to the same meetings, because these are the people who actually know about it, and can understand the level at which we communicate those things. How can we really make information useful for the different levels, so that people can really make something out of that information? That is still a challenge. We do not know the answer yet.

The other point I want to comment on is this whole new trend of happiness and how we measure happiness. We also have to consider the diversity in that, because they are situations in which happiness is very different. In the city where I live, I think that for most people nowadays happiness is just to feel safer, and just to be able to go out on the street. So it is probably very different from

the way we are going to look at happiness in Norway or Denmark. I think we also have to embrace that diversity, which also reflects the challenges we have in the world today.

- **Peter van de Ven**

Statistics Netherlands

About subjective well-being or the measurement of happiness, indeed we should know more about that. It is very valid, very good information. On the other hand, you still need to know the factors driving this happiness. Otherwise you cannot make a policy to act upon. You need to know what drives happiness. As you said, it may be safety in Rio de Janeiro, and other things in other countries. So, what to measure? This democratic process is a very valid point. As statisticians, we should be more open to feedback from society, from politics: what are important factors, when it comes to societal progress? We as statisticians have a responsibility to respond to that need, and to give politicians, to give society the information they need to make this policy happen.

On Sustainable National Income, I fully agree with Dr. Hueting on the validity of his question: What would national income be, if we had been on a sustainable path? We have differences of opinion, however, when it comes to the measurement issues. I am much more hesitant on that point. But that is where science starts, asking the right questions. I will leave it at that, because of lack of time.

- **Jeff Mason**

Chairman

Does our Rapporteur want to make any final comment?

- **Fulai Sheng**

United Nations Environment Programme,
Rapporteur

Just a very quick one. I am very pleased to be here and to hear the various presentations. The key messages I got from the session included things like:

- the need to have a bottom-up approach,
- a democratic process to define what needs to be measured, and

- issues including also the need for diversity, for different kinds of indicators.

We have heard several propositions, some of the systems that are dear to people's minds, sustainable national income which I am very familiar with for the last two decades, and also other kinds of indicators. But as we have heard several times, this is not a beauty contest and we should be open-minded to different possibilities. Hopefully, as a result of this discussion, even though we may not be able to answer all the questions that have been raised, we will hopefully be getting closer perhaps to determining the kind of direction, in which we would like to take this work forward.

- **Jeff Mason**

Chairman

Thank you to the speakers. Thank you to all of you. Apologies to the people I had to cut off or encourage to hurry, and apologies also to those of you who I was not able to call on. Please keep the dialogue going, and enjoy the rest of your day.



Isabelle Cassiers

Professor of Economics,
University of Louvain and National Fund for
Scientific Research, Belgium

As a panellist invited to the expert workshop, I shall comment on the key points to which the speakers were asked to react. I shall tackle four issues:

1. Beyond or beside GDP?

We should be coherent about the status of GDP. One of the key points raised for speakers (*The merits and limitations of GDP*) states that:

"GDP is not an indicator of well-being or welfare; it is an indicator of economic market activity; it does not pretend to be an indicator of well-being or welfare, but some use it as such; GDP growth is not necessarily a progress indicator, though the news often portrays it as such".

We now have a consensus on this statement. Nevertheless, another key point (*New tools need to be applied to measure progress, wealth, and well-being*) suggests that :

"More adequate indices of progress, of wealth and well-being must include environmental and social indicators, in addition to the traditional economic ones."

The expression "in addition" is questionable. If we agree that GDP *is not* an indicator of well-being, if we recognize the existence of negative correlations between GDP growth and the quality of life, then why should we keep it as a ground for a new indicator? Of course there might be a strategic issue here. Leaving GDP aside might appear unfeasible in the short run and nevertheless be kept as a long run target. In any way the status of GDP should be explicitly stated, otherwise the risk is that huge efforts eventually lead to very minor changes.

2. Economic interests against challenging GDP

We should put more emphasis on the fact that there are strong economic interests involved in pursuing economic growth without restriction and in keeping GDP as proxy to well-being.

We should recognize that we live in a kind of schizophrenic society:

- On the one hand we know that the path we are on is not sustainable and brings forth questions on life satisfaction: this conference, many NGO's activities, and some academic work on the subject bear witness to this trend.
- But on the other hand we are flooded by advertisement and by all kinds of encouragement to consume, and produce, and drive and fly as much as possible.

Going beyond GDP requires addressing this contradiction.

In the same line, the move beyond GDP is an implicit recognition that the market cannot respond to our aspirations and that there is today a strong need for public intervention, from local to global. This might also encounter some political resistance.

3. Consider the distributional concerns

The distributional concerns are not included in the *Core messages*. Inequalities (not only income inequalities, but also unequal access to education, to healthcare, to culture) have risen during the last thirty years and will probably still rise in the future, despite the millennium goals. On this point we are moving backward as compared to the model that was set up after the WWII, at the time when GDP was implemented. Besides the fact that inequalities are often felt as a limit to social wellbeing, inequalities give in fact more power to the wealthy citizens and hamper the democratic process of redefining the progress of societies. On the move towards a more even share of income and wealth, we might as well encounter political resistance.

4. A normative issue that requires a democratic process

Being a normative issue, the move beyond GDP cannot be a technocratic process but must be rooted in a democratic ground, because it is. A question such as "Where do we want to be in ten year time" has to do with values and ends. If we seriously want to address the question of what is

well-being and how to enhance it, people should be allowed to express themselves as much as possible and at every stage of the process. That major institutions have launched a critical debate on GDP and the definition of progress is

pivotal, but it is now crucial to widespread the questioning as far as possible and in a democratic way. This is the only chance for a broad and sustainable consensus.





Jean Gadrey

Professor of Economics, University of Lille

I largely agree with Isabelle on her four points. In less than five minutes I will only insist on two complementary questions and a few key opportunities that I've personally experienced.

First question: If we want to enlarge the circle of stakeholders for new indicators, what is the main political change? Do we need sets of multiple indicators or synthetic indicators?

Answer: we need all types depending on what they are intended for, but considering the aim of this session, I defend a limited number of synthetic indicators as key opportunities for three reasons:

1. If we want to challenge the excessive attraction of GDP in public debates, sets of multiple indicators are simply in a position of unfair competition. For citizens, for policy-makers, and the media, synthetic indicators are more appealing. Oliver Zwirner's presentation this morning was based on them, this is an indication.
2. It is true that they have serious shortcomings, but they are young and they will increase in reliability.
3. They lead people who discuss them to go beyond them, and to enter the complex field of the sub-indicators on which they are built. They may open up some very rich debates.

Second question: How to take care of social considerations in new synthetic indicators? This is another challenge and an opportunity to grasp, if

we want to go beyond GDP in a way that is coherent with the three pillars of sustainable development policies, which is a condition of success in my view.

For environmental factors or for well-being contributions such as leisure time, domestic labour, unemployment costs, and so on, progress has been made towards economic valuations even though other good methods exist. But it is much more risky to give economic valuation to contributions such as equality between men and women, social security, decent work, and so on. This is why most existing indicators in these fields, beginning with the UNDP's one, are based on a weighted average of selected variables and this is why they are often accused of being arbitrary. In my view, this is unfair. As far as we recognize that any indicator, even GDP, is based on value systems and on judgement of what is worth measuring and what is not, we should also admit that it is possible to organize democratic debates on what should be included in a synthetic social indicator and on the weightings. That could even be a remarkable contribution to policy design and to democracy. It is an opportunity.

And the last opportunity: There is a rapidly growing interest in local indicators, whether synthetic or not. I am convinced that the popularity of European policy for a proper use of new indicators will largely expand on a local and territorial basis in the future. This is a key opportunity that I have also experienced.



Paul Hofheinz

Lisbon Council

I'm from the Lisbon Council. We're a think tank. We have as our mission the Lisbon Agenda and we do a great deal of work in all areas trying to make that process happen. We can talk more about it later if there is interest.

I'm going to take issue slightly with some of my fellow panellists here and with some of what we heard this morning. I do think there are some points of consensus, here and I will end on the points of consensus, but I want to start out talking about differences before we move into the less controversial areas where I do think we can agree.

Let me stress that the areas where we agree are probably the most important. We agree on what needs to be done. There may be a bit of a difference in the diagnosis.

I think GDP is really important and that it is a social indicator and let me tell you why. If you go back to the world 200 years ago – Ms Cassiers, I think you are a professor of economic history, are you not? – I'm going to talk about the historical development and I suspect you have a different interpretation or you couldn't have said the things that you did.

In the year 1820, the standard of living here in Europe, where we are today, according to the very good economic historian in the Netherlands, Angus Maddison, was roughly 90% of the standard of living in Africa today. The world was a very poor place 200 years ago. Most people lived until their mid forties; that was the life expectancy. Most women had seven or eight children, the majority of whom would not reach adulthood. Obviously an enormous number of things have changed in the last 200 years, in particular here in Europe. What you find today is a very different standard of living. You find a very high standard of living in the industrial part of the world. You continue essentially to have a standard of living in Africa that is roughly the same as it was here 200 years ago. They have not made progress in the same way that we

have here. The main difference is growth, and GDP in particular. Let me just say that when I say that I'm not standing up for any economic interest, quite the opposite. It's GDP, it's the strength of our economy that has allowed us to invest heavily in public health, that has given us this thing that we call the European social model that we find so precious, that pays for an enormous number of social advances. I think you ignore GDP as a social indicator at your peril. It is one thing to sit here in Europe or perhaps in a country like Sweden and say GDP no longer matters. But go and say that in Botswana and you will hear a very different explanation of why this process is important.

We can talk about inequality in the world in a moment, which is related, but I'm going to set that aside for now. I do think there is a very big problem with GDP, and not simply with GDP but with the entire range of indicators that we use to think about the economy today. The problem is that those indicators are stuck quite firmly in the industrial era. It is still essentially based on the assumptions that the world had in the 1930s when these indices were created.

So what's different between that era and ours? I would argue that there are three things that are very important:

- The first one is that in the 1930s we didn't think of the earth's resources as limited. Now, anyone who is honest and reads the newspapers and follows the public debate understands and accepts that we have a very serious problem with the way we are using the world's resources and are going to have to make important, vital changes in precisely that area in the next 20 years. By the way, they are going to be hard but that doesn't mean that we don't have to make them.
- The second big difference is most of us are no longer working in manufacturing. Manufacturing is still about 20-25% of our economy, but it no longer drives jobs. That's

been the case for three decades now. If you look at the statistics, you'll see I'm correct. Long before any of us heard of the word 'globalisation,' we were losing jobs in manufacturing. We've been taking on jobs in the service sector and that is why our economy continues to expand. We've also been losing them in agriculture. The three principal sectors of the economy: agriculture, industry, and services are moving in different directions. Losing jobs in agriculture and manufacturing, gaining them in services.

- The third area that I think is profoundly different now, and we can discuss this if you like, is that we no longer have a very clear division between labour and capital. I think that 60 years ago we absolutely did. There was much less access to education, there was very real poverty here in Europe. We still have it but not like we did 60 years ago.

A couple of things have changed. One of them is home ownership. You have much broader home ownership throughout Europe and indeed the industrial world right now. Those home owners – are they labour or are they capital? And also pensions. Because whether we like to admit it or not, a lot of our pensions are tied up in the global capitalist system. They are invested out there in various ways. The point I'm trying to make is that the distinctions that used to be fairly clear to us 60 years ago are no longer so clear. Where we have unclear distinctions, it leads in my view to shabby thinking.

Let me give the six areas where I think that we do need to work on statistics. I hope and believe that there will be some consensus around this area even if there is not on the diagnosis.

The **first** one is green growth. I think that to say that we will solve any of our problems, in particular the social ones, without growth is simply incorrect. There is a wealth of evidence to support that. But that doesn't mean that we can afford the same type of growth that we have had. We need to find a way of looking at our statistics and forcing it – as a bare minimum – to give us the cost of carbon. We cannot continue growing by treating our atmosphere, as Al Gore put it quite memorably, as a giant sewer. It is in many ways up to the statisticians to help us understand that. To help us understand the cost of carbon and the cost of excessive use of environmental resources so that we can track it and improve.

The **second** is inter-generational accounting. There is an awful lot of very interesting work going on in that area right now. I would argue that if 60 years ago we did have a very clear division in our economy between labour and capital, the principal division we have today is between generations. We have a generation alive right now that is frankly consuming the resources of the generation right behind it. That's true in the environment where we have a generally clear understanding but it's also true in our social system too. There has been a real delay in reforming social systems in ways that are putting genuine strain on their ability to deliver equity in the 21st century. We need to pay much more attention to the way that generations manage the earth's resources, one for the other.

The **third** would be the nature of our workforce. I mentioned the three sectors, and people often throw out the statistic that 70% of our population is working in the service sector. I don't think we know or understand the service sector nearly well enough. It lumps together far too many things ranging from architects and engineers to janitors and what we sometimes call McDonalds jobs. There are very good jobs in the service sector and we need to try a lot harder to understand better what the service sector means, because as I mentioned a moment ago, the service sector is the only sector of our economy where we have been adding jobs for 30 years. If – we want to attack our employment problem, it means we need to add jobs there not in McDonalds jobs, but in good jobs in the service sector.

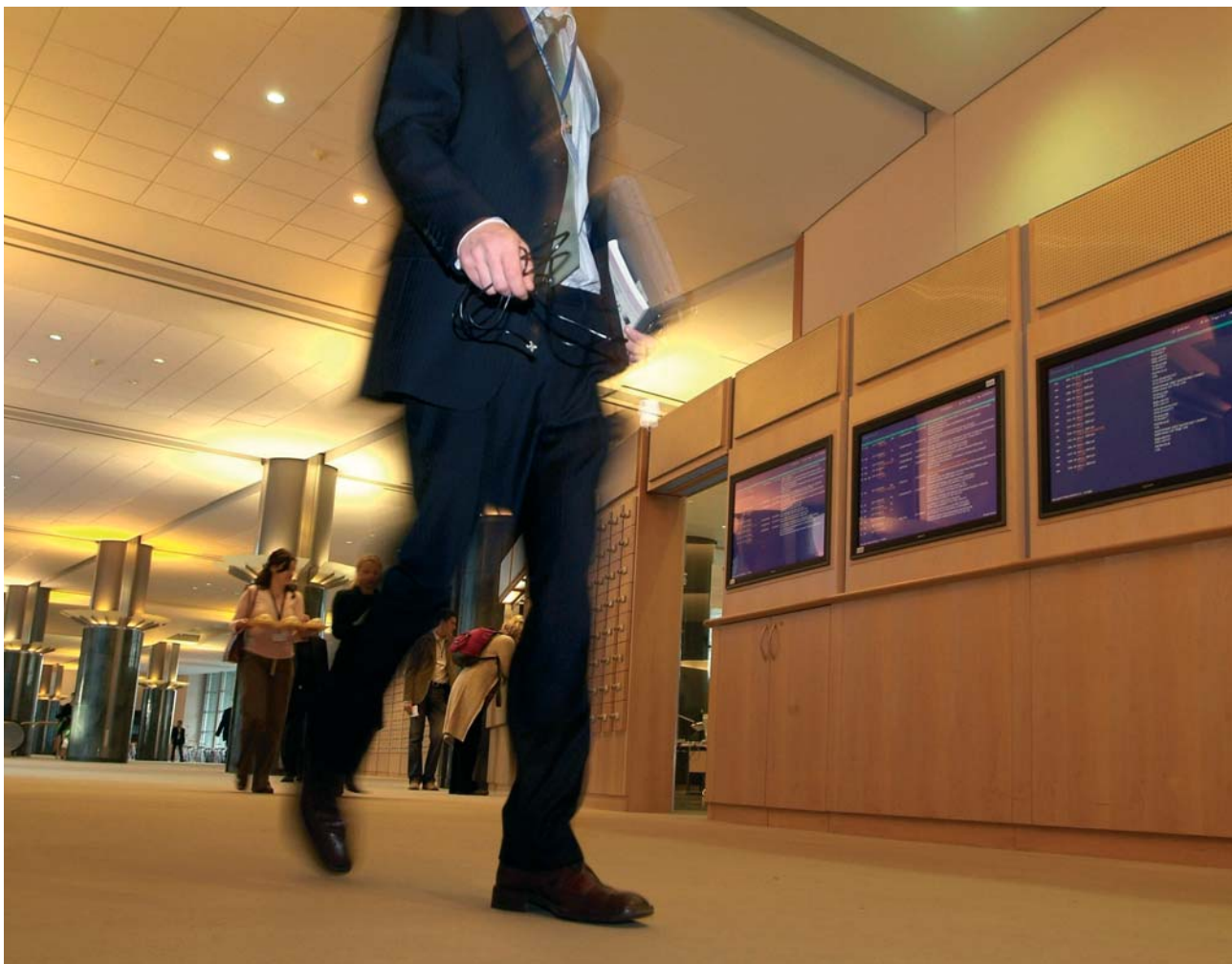
The **fourth**, an area in which the Lisbon Council has been quite active, is human capital accounting. In an era of globalisation, if we are going to go to our population and say that this transition is important, you are going to have the highest wages in the world, you are going to have the most generous social welfare system in the world, and you're going to do it by high value-added work, we need to do much more to develop people's minds to give them the capacity to develop themselves. Not just as children but through life-long learning throughout their lives and anything that statistics can do to help us understand that is useful. We have a project at the Lisbon Council called the European human capital index where we have been trying to measure this as a way of shedding light on it in the public policy domain.

The **fifth** area is benchmarking. We can do an awful lot more there, including some fairly simple things. In particular, benchmarking where we stand versus the values that we profess. A perfect example is

Kyoto. We talk about Kyoto all the time and it's a source of pride that we have signed it and embraced it, but very few European countries will meet their Kyoto targets by the year 2010. In fact, there are only two, according to two studies that have come out from the IPPR and the European Commission. The two are Sweden and the UK. The reason is particularly interesting is that Sweden and the UK are also two of the four countries that will likely reach their Lisbon targets on employment. There is a fair amount of evidence out there that if the policy mix is right, there needs not be a trade-off between jobs and environmental standards. That may sound obvious to you, but read the newspapers. Quite often environmental standards are being attacked as job destroying. They are not. We can use statistics to settle that argument.

I was going to say something about Pisa and what's happening in education. We have a tendency to talk a lot about social inclusion whereas our statistics tell us that we are doing very badly on that, in particular in immigrant communities. Pisa tells us that when immigrants come here, first generation immigrants do better on their Pisa than second generation immigrants.

Last but not least, is something that my colleagues mentioned and with which I totally agree. Gini coefficients. It's a very important area of analysis. The problem with Gini coefficients – this sounds strange – is that the analysis behind it is important and we need to find a way to get better measurements of inequality into the public domain.



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- **Aldo Ravazzi**

Ministry of Environment, Italy,
Chairman of Workshop Session 3 Panel 2

My name is Aldo Ravazzi. I happen to be an economist lost in the jungle of the Italian ministry of environment. I also happen to be chairing the OECD committees for national environmental policies and for taxation and environment.

The reason I have been asked to facilitate our discussion here, I imagine, is because Italy has recently moved forward an important 'delegated law' as we call it, on environmental accounting and budgeting. This means that the Italian public administration at all levels – state, region and city – must include environmental accounting and greening of the budget in national accounts. We have about 24 months to establish a national system. A very advanced draft has been passed through government and parliament, and requires only one last passage through parliament, which is planned during the next few weeks. Then we will have 24 months to establish this system.

The problems and challenges are quite clear – but not the answers. We have a number of good statisticians, economists, and environmentalists and we hope to bring good news in the near future. This is a rare attempt to have a specific law on environmental accounting and budgeting go forward.

Our organizers have asked us to discuss together and to come up with some ideas, some convictions that we can try to share together here, and then in the general conference this afternoon and tomorrow morning. We have a number of specific questions:

- What are the key opportunities for going beyond GDP?
- What is feasible in the short and in the medium term?
- How can implementation be improved?
- How to engage policy makers, key institutions, business, media, the broader public, and stakeholders in general?

There is a general consensus that a lot of work has been done by a few people, who deserve our admiration for their efforts and capacity. Now, we have to try to transform all the efforts of research and institutional capacity-building which have been attempted in recent years into policy and decision-making which is effective and recognized.

To help our discussions we have speakers who have been invited to share their views with all of us. We

will open the floor at the end for comments, and, if we have time, the speakers will come back with comments on the comments.

This is a session, like the two other parallel groups, trying to find ideas to see where we are and how we can go forward. It will be an open discussion. Professor Anil Markandya has been asked to be our rapporteur in the plenary. I have also asked him to give us his opinions since we cannot lose this opportunity to have him with us and hear what he thinks.

With your permission, if the rules of the game are clear, I would like to give the floor to Isabelle Cassiers who is teaching at the Catholic University de Louvain.

For the speech of Professor Isabelle Cassiers, see page 180.

- **Aldo Ravazzi**

Chairman

Thank you very much Professor Cassiers. Quite interesting points, reminding us that GDP never pretended to be a measure of welfare although it has very often been interpreted as such. And the balance between technocratic and democratic processes is another very key issue. How do we prepare the world for the future? We probably need technocracy to have data available, but then we have to be able to make the decision-making process effective in order to have useful indicators and measures of welfare and production.

For the speech of Professor Jean Gadrey, see page 182.

- **Aldo Ravazzi**

Chairman

Thank you very much Professor Gadrey. It is not easy to synthesize years and years of work.

It is interesting to see the problem of social and environmental aspects integrated into economics. That is one of the major challenges we are working on at European level. The Lisbon and Gothenburg strategies are trying to push forward in this area. The use of indicators for Lisbon and Gothenburg at the Spring European Council may be also a point for reflection.

I would like to give the floor to Mr Hofheinz of the Lisbon Council.

For the speech of Paul Hofheinz, please see page 183.

- **Aldo Ravazzi**

Chairman

Professor Markandya, would you like to share your key views with us?

- **Anil Markandya**

University of Bath, UK, Rapporteur

Just a few points on what has been said.

There are differences of opinion which are emerging, but the first thing is that if we are talking about 'beyond GDP', we are going to look at something which will be an indicator at a national level. A number of the points made by the first two speakers are relevant and important, but perhaps they will apply at the level of a region or a project, or to identify something which is more appropriate to show the change in welfare of a particular group. That is very valuable, but it is not a replacement for the kind of national level indicators that we are trying to focus on when we talk about 'beyond GDP'.

In that context, what can we do to have something that will be a headline indicator which people will take as seriously as they take GDP? One of the things that has been suggested and pointed out is to play the same game and to give values to the other impacts, which GDP doesn't do very well. The previous speaker suggested some of these. My own work has been concerned with trying to determine the value of the externalities, of the damages to the environment that are taking place relative to GDP. That doesn't mean we have to add it to GDP, but it gives some idea of their importance so that policy-makers can see that yes, we are doing damage here and yes, these are things of importance. Like it or not, monetary values do come up and are useful for decision-making.

The other element that is useful here in going beyond GDP is wealth accounting. Wealth accounting is accounting not for the flow of goods and services, but for the stock of our assets. The stock of our assets is not just physical capital but, as has been pointed out, also human capital, natural capital, and social capital. We have made some attempts to try to measure these different forms of capital in some work in

which I was engaged with the World Bank but we are still not very well advanced. Our measures are very imperfect, but this is an important line to develop. It will tell us things about where we are losing certain forms of capital, which are a useful indicator of some of the things which will be going on in the future.

Yes, we do need to understand our growth rates more carefully. We need to understand them in the light of the environmental costs that we impose. The idea of green growth would be very useful. Our early work on that didn't have as much impact on policy-makers as we thought it would. In Indonesia, when we showed that the growth rate fell from 7% to 6% when you allowed for these kinds of factors, the Indonesians said 'so what?' The fact is that we may need to have a bigger impact. We need to show that they are actually losing capital. They are losing some important sources of their capital and maybe that form of accounting would be useful.

We can't do everything with the GDP indicator. It isn't perfect. As the first speaker said, it isn't a measure of well-being. Of course it's not a really good measure, it is not a measure of my well-being or your well-being and it will never be that. But in some comparisons, if made judiciously and over time, it is perhaps not a bad indicator of the relative well-being of different societies. As the previous speaker said, compare 200 years ago with now and GDP may not be a bad measure. It won't be a good measure to tell you if GDP has gone up 3%, that welfare has gone up 3%, no, but it will be useful in some contexts and for some purposes. So, let's try and improve that quality and use it judiciously and supplement it with all the other things that we have talked about: measures of inequality and measures of wealth, and some of the other social indicators that have been mentioned.

- **Aldo Ravazzi**

Chairman

Please give short reactions to the questions put to us:

- What are the key opportunities for going beyond GDP?
- What is feasible in the short to medium term?
- How can implementation be improved?
- How to meet the needs of policy-makers and other stakeholders?

- **Viveka Palm**

Statistics Sweden

I'm working at Statistics Sweden with environmental accounts, so obviously I'm going to talk about what I think we could do with environmental accounts.

We're using the system for national accounts as a basis and we're adding in environmental data and giving it to policy-makers. All the questions you've been addressing are things we also discuss.

However, what has not been said here, but what I think is one of the main things that our policy-makers use, is that we are tracking what type of economic instruments or institutional instruments that are being used to actually change what is going on.

Swedish society knows that we have a problem and we don't really need a measure to tell us that we have a problem. We rather need to know how we can get out of it and move towards development that is better.

What we are doing is looking at where we have environmental taxes, how they are working, where they are not working and what type of carbon emissions, for example, are not taxed at all.

We are also looking for the regular investments that are being made in the economy to understand what type of environmental damage you get from them so that you can change your perspective on what you should invest in, preferably using technology that will take you further on.

That is something I would like to add to this debate, to actually look at what we're doing right now and see how we can invest differently.

- **Maria-Paola Dosi**

Emilia-Romagna Region, Italy

I am Maria-Paola Dosi from Italy. I am the coordinator of an INTERREG IIIC project that involves the issue of this conference, i.e. the implementation of the Lisbon and Gothenburg agendas by means of international projects and sub-projects that transfer actions on the ground by local authorities and local organizations, universities, etc.

In particular, one of these sub-projects deals with the implementation of the NAMEA matrix at the regional level. Using Eurostat guidelines on air emissions, in particular greenhouse gases,

at the regional level, we have created a tool, a prototype.

There are many problems with implementation, but the main problem is to find the key words to disseminate the results to our policy-makers. Our work is very hard but also very fruitful, because there has been a lot of interest in the work, in the four corners of Europe from southeast England to North Brabant in the Netherlands, Emilia-Romagna, and Maloposkie in Poland.

The team did good work, but the problem was to transfer the results and the process we implemented to the policy-makers. Those involved in disseminating the results also question how to interest the media.

Another issue is to achieve more of a mixture between institutional statistical offices at the national level and this kind of 'experiment.' Because our statistical office debates with the person concerned but does not want to be directly involved. There seems to be some concrete dividing wall at local level.

One last thing, a colleague of Mr Markandya, University of Bath, Allister Hunt, was involved in one of our conferences in Bologna.

- **Aldo Ravazzi**

Chairman

It is very interesting that the challenge is at the same time local, regional, national, European, and probably beyond.

- **N.N.**

I'm involved with sustainable development indicators.

I was interested to hear the number of panellists mention the different types of capital that are behind the generation of well-being. I'd be interested to have your individual views on the last type that Anil Markandya mentioned, social capital, and whether you think that has anything more than metaphorical value compared to the other types of capital, and whether you could really measure it in a meaningful sense, in an accounting sense.

You also mentioned as an avenue, giving value to the different types of capital. Do you think it would also be possible to give a monetary value

to social capital? And given the limitations on monetarizing all four types of capital, would it make any sense to really focus too much on one aggregating measure, monetary value or otherwise, given that substitution possibilities between the different types of capitals are limited and so even with one measure you would have to measure this aggregating measure in any case. Is there not a risk in focusing too much on one aggregating value and forgetting that you do need to measure the different types separately in any case?

- **Raynald Létourneau**

Human Resources and Social Development, Canada

I'm heading a group which works on the development of social indicators related to human resources and social development.

I have a question that is more about the conceptual framework behind the social accounts. What should we measure? We need more analysis there just to understand better what well-being really is and what matters. If you use the analogy with GDP, the yardstick is currency and there are no weighting issues. As we saw this morning weighting issues create problems in terms of value. Should health have greater weight than human capital, for example? You have all these discussions about those terms.

Coming back to the point raised by the first speaker, Professor Cassiers, the notion of technocratic versus democratic processes. We need both, but we need to have a very good grasp of what should be measured.

- **Janos Zlinszky**

Regional Environmental Centre for Central and Eastern Europe

I certainly agree that the indicator has to be linked to the vision and the process. We have certain anchors as far as vision is concerned, at the UN, EU, and national levels. We can talk about the constitutionality of indicators that are frequently used in national discourse or at any level of political discourse. As far as the most important goals and values are established in documents that can be summarized as of constitutional value to a society or community, it would be important to take them into consideration when revisiting indicators.

My second point is that for the comprehension of any indicator, be it a simple one, a comprehensive one, a synthetic one or a set of indicators, a minimum threshold of literacy – you could call it scientific literacy – is necessary. And by scientific we mean humanities, arts, social sciences, natural sciences, and technical sciences. This is a point we cannot avoid raising again and again. If we divide society into experts and politicians, and forgive me for being very rough and rude and undiplomatic, but I just want to make a point here, that secondary education has tremendous importance in this sense and a tremendous responsibility, and we talked about human capital in this respect.

If we have such scientific literacy, then we would only have half the problem of GDP because GDP itself would be understood. I venture to say that the electorate does not understand GDP. What it is for really. I think that a new initiative to bring in other indicators to have a fuller set of information about achieving or not achieving our constitutional goals should have, beside the new indicators, a parallel effort in getting a better understanding about the GDP.

Finally, I have a very brief question. It struck me that Mr Hofheinz said that the GDP is a social indicator, and I would love to have a bit elaboration on that.

- **Laszlo Pinter**

International Institute for Sustainable Development, Canada

We've been looking at indicators for about 15 years. It's interesting to see that the whole field has really mushroomed into a very diverse community where initiatives are taking place on multiple levels from communities up to national. We have to realize that there is a movement out there that is very decentralized. When we try to discuss here what we are going to do, this will have only a partial effect, because there are a lot of autonomous processes out there: communities, sectors, companies and so on, are doing their own thing. Managing that level of energy, which is real energy and will continue injecting good and practical ideas, is going to be important.

We do have a big problem, by the way. The problem is in some degree with the way GDP is constructed, but even more with the way it is used. Several speakers referred to that. I agree

also with the previous speaker that we have to do work on that front. I do agree on incremental change, but at the same time we also have to be clear that any adjustments to the GDP system along the lines of Markandya's comments counting the uncounted adjustments will take significant amounts of time. Despite the progress we have made in keeping track of physical accounts, our monitoring systems are still not strong enough, particularly if we want to base a solid economic valuation on them.

And that is my last point. For a while we will have to live with both working with physical accounts and making better use of new types of physical accounts in decision-making, and at the same time build up economic valuations and learn how to use them better.

- **Aldo Ravazzi**

Chairman

Thank you very much for reminding us how much GDP has evolved through time (since it was introduced after the '29 crisis) as well as the debate on 'beyond GDP' in the last 10-20 years. We all know the debate among experts on how to define the GDP, finding international agreements: the national accounts experts have been fighting for a very long time and are still fighting on a large number of issues, like the rate of unemployment, how many definitions we have in different countries and how delicate the debate is.

- **Pasquale De Muro**

University of Rome

I work at the University of Rome. Currently I am working on a European research project that deals with these issues.

I want to make a point about the approach that we are following. We cannot limit our discussion to a mere statistical, ecological, or even political problem because there are a lot of theoretical problems that are in the background and that we cannot avoid. A relevant entry point from this point of view was made by Amartya Sen: we cannot avoid distinguishing between means and ends. Of course we cannot consider GDP not useful. It is a very important tool, but it is just a tool. That is its job. We cannot consider growth per se as negative or positive. It is just a means to an end. But to which end? It is the way we use resources for well-being, which is the central problem of

societies. Some societies with the same GDP have different outcomes.

The problem is how society uses GDP to produce well-being. This is the central issue. The problem of what is well-being, what are the ends, is a democratic and political problem. We should not put indicators of outcome and means on the same level. They do not have the same importance. We cannot mix means and ends of development in a composed indicator. We should be very careful how we decide which indicator to use.

From this point of view I agree that a very long list of indicators where we mix together means, ends, resources and the end results of the functioning of society is not a good approach. We should prioritise. We should have a democratic discussion about the prioritisation of outcomes that we want to pursue to create a good life for people. We should not mix together the means to get a good life and the outcomes of a good life.

My last point is about subjective indicators. I am very worried about the mix of means and ends. Subjective indicators are another category of indicators. They are very attractive and fashionable now, but there is no real theoretical discussion about the real meaning of subjective indicators. The subjective perception of our lives is important, but sometimes, for the poor especially, the perception and the reality are very different.

We need objective conditions and subjective perception as well. But we should consider the fact that the private sector especially is very good at mental adaptation and will not reflect real conditions in their survey because they adapt very strongly to hardship and tough circumstances. It is very dangerous to take for granted that subjective indicators are very good.

- **Jörg Mayer-Ries**

Federal Ministry for the Environment,
Germany

I work with the federal ministry of environment in Germany. I'm also an economist lost in this bureaucracy, but only for a few weeks. This is a new position.

We are working on the general aspects and strategic questions around sustainable development and the role of accounting in this context. Let me make a more general comment.

I thank the panel for making clear that there is a lot of linkage between accounting and statistics in society, and the particular perspective or interest from which you look at society and make a social indicator.

The last two speakers made it very clear that we need to talk about GDP on a national level. This is a very important aspect and should not be mixed with other levels.

My experience as an economist was that when I studied economy, there was no history of national accounting available. I think before we look beyond GDP, we should look before GDP and what was decided in making GDP as it has been conceptualised since the 1930s. It was wartime, and the specific macro-economic theories as well as the level and interest in society, and what was going on, opened up different possibilities. The whole discussion about beyond GDP is one about looking from new perspectives. We should look at making a benchmark and a comparison between the different ways and then we can learn by that.

It makes no sense to create a new GDP and try to convince society to use it. On different levels, from different perspectives, it will not be interesting. This will persist as a problem. Now is a good time for politicians and scientists to work on alternative perspectives on how society is interlinked with ecology and not only pure economy but also with societal questions.

For example, we should create new curricula for economists, journalists, and politicians to show that GDP is not a neutral natural scientific result but a social indicator – as you said – but a special social indicator.

All the questions and tasks you listed are wonderful – green growth, human capital – but there will be economic interest in trying to keep the old things. This is a political discussion and it is a wonderful opportunity. This is a plea for different perspectives and to carry out experimental projects and then look for linkages.

If you would like to have a picture for yourself as an individual of whether you are destroying the environment or not, you do not read in the newspaper about GDP. If you had an indicator in your household, to show what you are actually doing with the environment, this would be a wonderful thing. Not only on the national level.

- **Georges Menahem**

CNRS, France

I come from the CNRS in Paris, France. My topic is what should be accounted and what should not be accounted. My first point is that we have to understand what GDP means. GDP has implicit goals and aims. The main implicit aim is to value everything that makes a profit. What makes profit is valued and what doesn't make a profit is not valued. For example, domestic tasks do not create profit so they are not valued. I can give other examples. Our first aim is to better understand what is implicit behind GDP.

The other aim is to know what should and should not be valued. For example, you say that greenhouse gas does not have to be valued, so it has to be devalued. It has to be a negative value. It is a democratic task to decide what will be devalued, what will have a negative value. For example, greenhouse gas, advertising, and so on. Advertising is a service but it is a service that entails more inequality and even if it makes a profit, even if it is valued by the GDP, it should not be valued for social goals.

- **Aldo Ravazzi**

Chairman

My thanks to all those who have shared their views with us. A last round from the speakers now, choosing some key issues because time is very limited.

- **Isabelle Cassiers**

University of Louvain

Unfortunately, there is not time enough to try to react to all the comments. The first thing I would say is that I totally agree with the last remark. Before going beyond GDP, you have to decide and understand what are the implicit valued items in GDP. What are the goals pursued through this measure? It is very important to know before you change or keep it, and to decide which items have to receive a negative value, because they put the society or the planet in danger. This is an important point.

I would like to react to some points of the panellists and say that I'm very surprised to hear Mr Markandya say that GDP should be kept as an indicator of relative well-being of societies, because I thought that the background of this

conference was the fact that we want to establish clearly now that GDP is not an indicator of well-being of societies and so it cannot be used in a comparative way.

Along the same lines, when Mr Hofheinz takes Maddison's long-term data to show that we have succeeded in so much more welfare today than 200 years ago, again, this is through GDP data, reconstructed for 200 years. This is probably total nonsense, although Maddison is a very great economist and produces the best known and most solid data we can use for long-run studies.

It is only one component. All the work in this conference should show that GDP is not all of progress and maybe not only progress is in GDP. Suppose that in 20 years, if we succeed in establishing another global index that really represents what people understand as well-being, and that - as Maddison did - reconstructed this index through time to go back - 200 years, I'm not sure that we would have the same image of the progress accomplished. Probably we have very different ideas of economic and social history. In my view, we cannot have a linear interpretation. We have to have a systemic interpretation. For instance, when we compare our level of growth today with that of Africa, we have to understand how the West built part of its wealth on slavery and colonization and how it hampered Africa's development.

- **Aldo Ravazzi**

Chairman

The debate between ecological economics and environmental economics is reaching a very high level with refined elements, but we have to go forward. Professor Gadrey, you have the floor.

- **Jean Gadrey**

University of Lille

First, trying to answer Paul Hofheinz, we may or may not disagree on the fact that unlimited growth is possible in our rich countries with respect to ecological constraints. I don't know, but I'm sure that we can agree to adopt indicators that allow us to better measure sustainable well-being and to see if continuous growth is and can be a long-term contribution to sustainable well-being, which nobody can say today.

Second, responding to Anil. Personally, I don't want any suppression of GDP. I don't think that many

people do. I just want - like most people here - to put GDP in its rightful place as one of the means to an end which is something like having happy people in harmony with nature. No more, no less.

Today, many economists are trying to save GDP as being a proxy of well-being. Not perfect, but not too bad. It is going to be more and more difficult as the ecological crisis will concern more and more people. But we should save GDP as a good measure of what the founders of national accounts built in their time without any confusion with well-being. No less and no more.

- **Paul Hofheinz**

Lisbon Council

Just listening to the debate, it strikes me that this is a little bit of a medieval conclave. That we are arguing over the fine points and that actually we agree broadly. I sense more consensus than disagreement on all of the points that have been made, including the ones that the panellists have just made.

The gentleman here asked to hear more about what I said about GDP as a social indicator. This is exactly what I said. I said it is a social indicator. I did not say it was the social indicator. There are quite a few other things we can look at, but GDP does tell us something about well-being, in some ways, in different parts of the world. I used the example of Botswana; if you go there it does mean something that their GDP is as low as it is compared to what GDP in Europe means.

Just to give an example of an area in transition, I would mention China. We are all seeing very serious problems with China's growth both environmentally and socially. But let's not overlook what lies right behind it, which is that their country has come out of a situation only four decades ago where many of them were on the verge of famine. These aren't statistics that I'm disputing, I've been to China and talked to people about it and that is how they see the difference between the social market they have today and Chairman Mao's time.

Briefly about what the lady said about measuring the different types of capital. Thank you for that question. Bring it to a lot of other conferences. You are absolutely right. We need to do more of that. We have tried to come up with a way of measuring precisely what you said, in accounting terms, human capital. I'd be happy to talk to you about it later. It's been problematic, but what we're trying to do is to get the debate moving in that way because if

we can measure it, we can change it. And that's what we're trying to do with that.

- **Anil Markandya**

Rapporteur

Just briefly, the debate really is focusing on two ideas:

- One is how we can modify GDP or improve it as an indicator, perhaps not a perfect indicator, but as a useful indicator of well-being and of sustainability. Some of us have been working in that direction.
- The other direction has been what new indicators can we produce which would complement or do this job better.

I think there is room for both. Both things can be done. I certainly believe from the discussions, from the table, that the audience also feels that there is scope for both these actions to be taken.

What the appropriate new indicators are is not going to be easy to determine. In my role as rapporteur, I can sense that there is a feeling that the appropriate indicators and the appropriate weightings need to be determined in some kind of democratic process. At the same time, we are not absolutely sure what should go into that synthetic indicator. While I do sense that one or two people felt that some of these subjective indicators had some problems, there wasn't a sense that these might be able to be used with the same degree of confidence, that we might be able to use modified or adjusted sustainability indicators.

Somebody asked about the valuation of wealth. In the accounting that we were doing at the World Bank, social capital was measured as a residual. In other words we defined all the other forms of capital relative to the discounted present value of consumption and then picked up the residual. That's not the only way to go and more work can be done to improve on that.

To reply to the comment from Ms Cassiers, I wasn't saying that we should not go beyond GDP because GDP is perfect. I didn't say that. We have done work to look at the elasticity of poverty reduction with respect to GDP and there is a strong correlation. You increase GDP by 10% and you reduce poverty by 6-7%. Not the same amount everywhere. It depends what kind of growth

you have. Of course, that's why it is important to understand what the elements of growth are and to go beyond GDP in that context, but GDP is linked to key social indicators. It may not be a perfect indicator, but the correlations are there.

- **Aldo Ravazzi**

Chairman

You will have the pleasure – and difficult job – of reporting on these things in the plenary, Professor Markandya.

One minute just to close. We had a number of key issues from very different communities of experts. It is good news that so many communities are involved in reflection on 'beyond GDP', in other words using GDP as far as we can use it as a production measure and trying to find indicators, complex or not, which help us understand wealth and well-being.

The European Parliament and the European Commission together with OECD, World Wildlife Fund and Club of Rome have given us a very good opportunity and we must be very grateful that they have brought together all these experts from the different communities, public administration, NGOs, enterprises, research centres, and universities. This could be another good step in the right direction.

May I also mention the good work done at the OECD on these issues that may help us to go forward, which is work on material flows and resource productivity, and on sustainable materials management, as well as the work that the Japanese are pushing forward with the 3 R Initiative (Reduction of waste, Recycling and Reuse of waste and resources). The latter is in the area of the G8 but grows larger and larger. From these areas of work good results and good contributions can also come.

Finally, my last point is that our friends in the European Commission and all the other organizers are asking us to help them and to help ourselves to find ways to move forward by institutionalising indicators, measures, and so on; i.e. finding ways to profit from all the work done at the research level and in public affairs and to not waste all this important work that many of us are trying to do together.

Thank you very much. It is time to go back to the plenary.

Stuart Bond

WWF, UK



I would like to start by suggesting that the scientific evidence shows – and we heard a lot about it this morning – that the human economy has gone beyond limits. It's very clear that the scientific evidence is very strong. We can measure it in many different ways. There are a lot of measurements out there. They can be in ecological footprints, carbon footprints, and water footprints. They can be in the very stark realities of greenhouse gas emissions and of climate change. All these unintended consequences from our past endeavours are becoming very difficult to address: soil degradation, water stress, biodiversity loss and so on. Many of the issues that we all hear are very close to our hearts.

What we really need is not just a step change, but a whole-scale revisioning, an evolution in our economies, our patterns of production and consumption. Most crucially, what we are here to discuss today is the tools that we use to measure the successes or otherwise of that market transformation.

If the human economy has now gone beyond limits, the rules of the game have simply changed. While we keep a very detailed track of the stocks and flows of money, we need to keep just as strong, or even stronger, track of the stocks and flows of materials and energy. I'm not suggesting that we supplant traditional monetary accounts. I think that they do a very good job in the right place. But if we are to preserve and improve upon our stocks of natural capital, clean air, fresh water, and the soil to grow things in, we now need to invest heavily in a programme that measures and tracks materials and energy stocks and flows.

We also need to measure stocks of material and energy flows both on a production basis and on a consumption basis. For a globalised economy we need measures that transcend G8 political boundaries. The footprint approach is one way of doing this. It reallocates to what economists would call 'final demand.'

Much work has already been undertaken in producing a whole series of accounts in a number of dif-

ferent ways, looking at carbon ecological footprints, greenhouse gases, and a range of environmental indicators.

In the UK, we've used an input/output-based approach largely because it talks the language of economists. It allows us to be able to talk to economists as well as to environmentalists. This is a statistical base for the foundation of a lot of the work we are involved in. I would recommend that a comprehensive multi-regional input/output model is developed for the EU, and if money allows, a true system that integrates country accounts in a complete multi-regional input/output framework.

This statistical base is almost nothing unless we get policy-makers and decision-makers to start using and interpreting it and to start making decisions based upon it. Hand in hand with an evidence base, we need applications and we also need to build capacity. As part of an ongoing work programme on the one-planet economy, I have been working on an integrated solutions approach that is based upon a resource flow model as the underlying dynamic of society. Increasingly, this turns the costs of climate emissions into opportunities for supply chain transformation.

A one-planet economy is not just an idea from WWF UK, it is also an idea from the UK government itself and is enshrined in the sustainable development strategy. However, there is no definition of what a one-planet economy is, so the programme of work that we've been espousing is starting with this evidence base, moving on to applications, and building capacity. As part of that, we've developed a definition we're calling 'an economic system of production and consumption', which respects all environmental limits while being socially and financially sustainable.

Clearly such a whole supply chain transformation strategy is not possible overnight. We need to tackle slow structural changes first if we have any chance of success. So far, most policy is based on quick easy wins. We haven't tackled the systemic issues.

I would like to direct your attention to a couple of facts and figures to highlight the size and the scale as well as the urgency of the challenge. We can define the target rate for change by setting a one-planet target at a strategic point such as 2050, which is the current horizon for climate policy. This would mean a year-on-year reduction in total resource use of 3-3½% per year as measured by the ecological footprint. By 2020, the reduction of the total footprint will be about 35%, and by 2050, 75%. If we factor in economic growth at an average of 2¼ -2½%, it's all country dependent, then the required rate of decoupling or improvement in the resource efficiency of footprints of the Euro GDP would be a reduction of more than 5½% year-on-year for the next half century. This is about twice the rate that we've seen in the recent past.

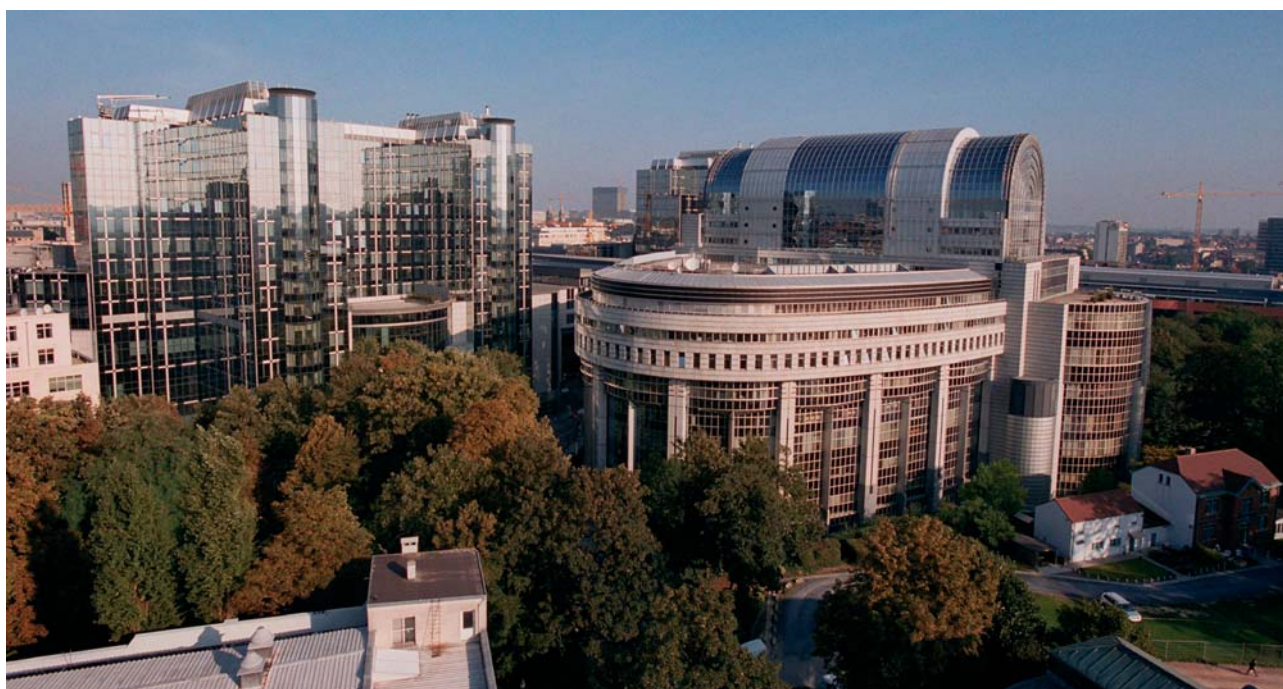
This one-planet target of 3-3½% absolute resource use and 5½% in relative decoupling is the ultimate benchmark for a pathway to environmental sustainability. It is also a guide to the long-term policy framework for public policy and business performance that enables organizations to plan ahead. It can then translate easily into schemes such as the cap and trade principle of the EU ETS, using the cap as a ceiling on emissions, and this should be reduced by 3-3½% per year.

Aside from the technical case, what is clear, and this is really where I started, is that we know something is wrong. So far we have done very

little about it. We've been tinkering at the margins. While this produced some reductions in emissions with some increases in resource efficiency, it is not going to produce the large-scale systemic transformation that is required. A 75% reduction is a massive number in 40 to 50 years. It's a very short time. The time scale is compressing our needs to be able to act and to act very fast.

We need to follow this up. Not only with measures and metrics that go beyond GDP, but with commitments, real political commitments for tenacity to implement a vision – a key vision – over a 40-year time scale. It will take courage and leadership to start now on a long and complex journey. Metrics that lead beyond GDP are an important start but they need to be clear, transparent and robust, and they need to transcend boundaries between environmentalists and economists and to be trusted by both camps.

This strategic programme of transformation in markets, of governments, technologies, and consumer behaviour will also require political maturity that accepts the principle of multi-level and multi-lateral governance. This will help to secure a one-planet agenda that works across every sector from food and agriculture to public services, to business and manufacturing, to consumer lifestyles. We can produce the metrics. As we heard earlier, it is not just about producing the right sort of metrics for the right sorts of people; we also need the political leadership to be able to take this forward.



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Teresa Fogelberg

Deputy Chief Executive, Global Reporting Initiative

Measuring by reporting

I will share with you a method whereby, through a system of global voluntary reporting bottom up, mutually inter-validating information can be publicly communicated on issues which are traditionally not covered by GDP but are key to measuring and assessing the economic and sustainable health of main actors of society, namely and particularly the business community.

If you look at the list of these issues, we all agree that most of them are not included in the traditional GDP indicators, and that we all think that they are important for us to cover today. If you look at the sources of information on these indicators, we have to look at all kinds of different sources mentioned here on the slide. In order to fully capture that we need three kinds of innovations, three changes.

First of all, the nature of the indicators.

Secondly, we should not look only at the geographical entry point such as nations, states or municipalities, but we should also look at actors that borders, i.e. global players, such as the corporate sector, that go beyond national borders and have operations in many countries of the world.

Thirdly, we also have to look at how the information is actually reaching politicians, those who make decisions on investments, such as financial analysts. Therefore we have to look at a variety of actors who provide these data and information and who share them in an inter-subjective interplay and interaction, what we call a 'naughty stakeholder process.'

All of these approaches can be found going beyond national borders using information on environmental, social, and economic performance and using information from different stakeholders and actors in what we call the 'sustainability reporting approach.'

About ten years ago, an organization called the Global Reporting Initiative (GRI) was formed

and is now officially part of the United Nations Environment Programme. It has some 25,000 network members and is based in Amsterdam. It has a board comprised of business, governments, academics, labour representatives, and international accountancy specialists. Together, they have developed and negotiated a reporting framework and principles on how reporting should happen with 70 indicators, both economic, and environmental, and including all kinds of labour practice, human rights, society and product responsibility indicators. All of these indicators have been commonly negotiated between all these civil society, business, and government representatives and are in that sense owned by them. There is agreement on them and they are also formulated in an easily understandable and usable fashion.

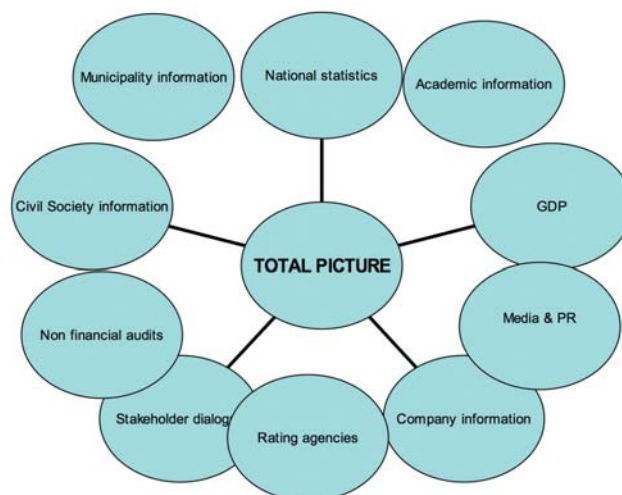
Now there are 1,200 organizations issuing annual reports where they give information on both their financial performance but also specially on these sustainability indicators. Of these, 600 are based in Europe, but the majority are multinational companies and therefore they also give information on their presence in other parts of the world.

What I would like to end with is the question: 'What is feasible in a few years?' and if I go back to the question of the early plenary this morning: 'Where would we be in 10 years from today?' We could easily manage to have 75% of multinationals producing these kinds of sustainability report. It may be a bit more difficult to reach, 75% of public agencies, and here I mean ministries or organizations like the European Commission, to also produce reports on their own sustainability performance. And about half of SMEs will be doing so. In order for this to happen, civil society has to continue to be very critical and watchful of the content of these data and policy-makers should make it happen through their regulatory framework, either by making this kind of reporting mandatory or by creating stimuli to do it on a voluntary basis.

key issues we need to know

- Environmental footprint
- Water use & availability
- Energy use
- CO2 and GHG emissions
- Waste
- Biodiversity: habitat
- Income generation
- Equal pay
- Diversity and equal opportunity
- Child labor
- Impact on local economy
- Innovations?

Reporting is key to get total picture



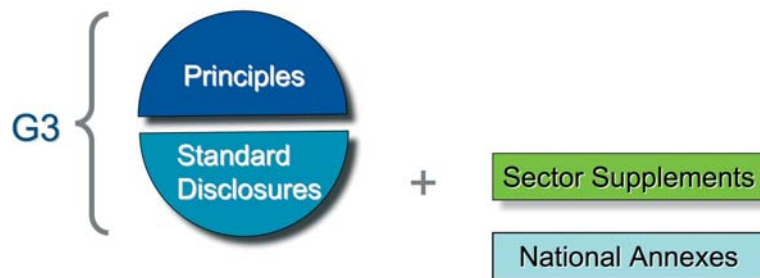
Sustainability reporting



GRI: Network Organization



The Reporting Framework



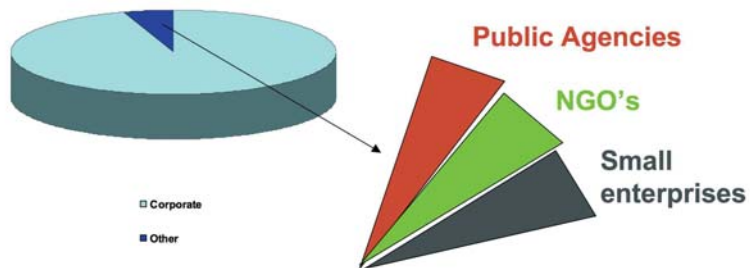
Performance Indicators



Globally > 1000 organisations report



Majority large impact multinational enterprises



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GRI Readers' Choice Awards & Survey



The Amsterdam Global Conference on Sustainability and Transparency
Sustainability Reporting Today: The Readers' Verdict
 Featuring the GRI Readers' Choice Awards

Forest and trees?

[Adjusted net savings \(Genuine Savings\) and Wealth of Nations](#)
[Calvert-Henderson Quality of Life Indicators \(USA\)](#)
[Canadian Index of Well-Being](#)
[Composite Learning Index](#)
[Ecological Footprint](#)
[European Commission environment-related indicators](#)
[European Environment Agency's Core Set of Indicators](#)
[European Values Survey](#)
[EU Lisbon Strategy structural indicators](#)
[EU sustainable development indicators](#)
[Genuine Progress Indicator](#)
[Happy Planet Index](#)
[Human Development Index \(reports, UN\)](#)
[Human Development Index \(HDI\), Human Poverty Index \(HPI\), Gender Related Development Index \(GDI\), Gender Empowerment Measure \(GEM\)](#)
[Sustainable Society Index](#)
[Index of Sustainable Economic Welfare \(ISEW\)](#)
[Living Planet Index](#)
[Measure of Domestic Progress \(NEF\)](#)
[Natural Capital Index](#)
[Sustainable National Income \(SNI\)](#)



Andrea Saltelli, Jochen Jesinghaus and Giuseppe Munda

European Commission, Joint Research Centre, Italy

Well-being stories

Disclaimer: The opinions are those of the authors and not of the European Commission.

First story

The index of sustainability of fiscal and ecological development.

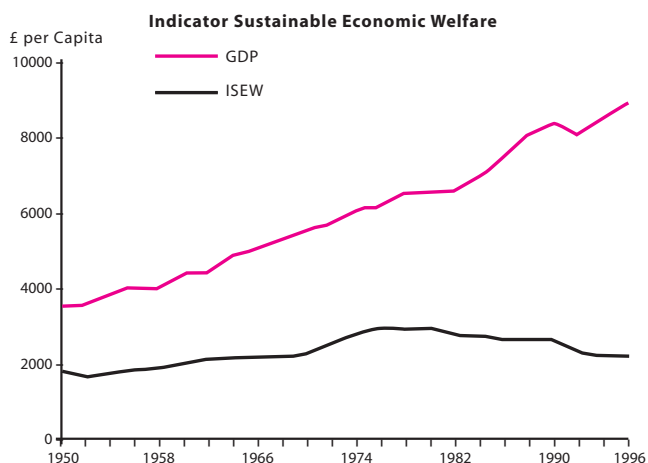
"Russia is outpacing the US, UK and Germany in securing its population's long-term economic and environmental future, according to a new study".

Thus incipit a piece of the FT (September 13 2007) looking with polite disbelief at an 18-country index of **"Sustainability of fiscal and ecological development"** developed by Economists at Germany's **Allianz Insurance** and **Dresdner Bank**. The index ranks Russia sixth in, ahead of the UK (placed seventh), Germany (ninth), and the US (17th).

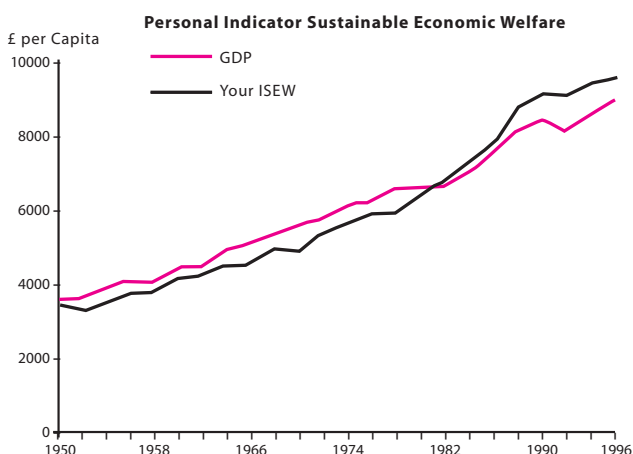
The index is a composite of five indicators: public debt, current account and net borrowing balances, carbon dioxide emissions and energy use per unit of gross domestic product.

Second story

The Index of Sustainable Economic Welfare, ISEW – also available as Genuine Progress Indicator, GPI.



Here is the UK ISEW as we all know it: GDP is rising steadily, while the ISEW reaches its peak in 1975, shortly after the First Oil Crisis (1973/74), and shortly after the publication of *"Limits to Growth"* (Meadows & Meadows & Randers, 1972) – here is *The Scientific Proof* that we have already exceeded the environmental limits, and that we urgently need to change course to *Save The Planet*.



Here is a slightly modified purely environmental ISEW: we eliminated all "social", i.e. inequality, Gini, household work etc. corrections but kept the environmental, i.e. air pollution and climate change items. The result: GDP is still rising steadily, but the ISEW outperforms GDP from 1982 onwards!

Third story

The Ecological footprint

Carrying capacity of ecosystems including humans are difficult to compute as humans' footprint depends on population density, consumption levels as well as on technology. What are the policy implications of the remark that

Netherlands occupies 15 times its actual size in E-footprint? Would the impact of Netherlands' people for the world be better if they were spread thinly over free spots on the planet? How would the EF capture the practice of exporting production and pollution abroad? Can we trust EF data when we know that trees absorptive capacity depends on age and location and that world averages are used? These are but some of the most common criticism to EF heard in Ecological Economics Circles.

The Ecological Footprint, while an excellent advocacy tool, suffers from the same weakness as GPI etc., i.e. from the attempt to aggregate disjoint indicators on the basis of "acres". Neither dollars nor acres are neutral enough to be applied to a wealth of indicators that do not always fit neatly into the metaphor (try using "acres" for the fragmentation of landscapes, or to subtract "dollars" from GDP for correcting gender inequality). This is indeed a strong narrative underpinned by a weak model.

Some Inference

First suggested inference. The metric fallacy.

In our opinion ISEW and the Ecological Footprint suffer from the same problem: *"Incommensurability, i.e. the absence of a common unit of measurement across plural values, entails the rejection not just of monetary reductionism but also any physical reductionism (e.g. eco-energetic valuation). However it does not imply incomparability. It allows that different options are weakly comparable, that is comparable without recourse to a single type of value"*. [Joan Martinez-Alier, Giuseppe Munda, John O'Neill, 1998, Weak comparability of values as a foundation for ecological economics, *Ecological Economics*, 26, 277–286]. One of the most widely quoted paper in the Ecological Economics literature is "The value of a songbird", by Funtowicz and Ravetz. One can imagine the argument from the title. The same considerations apply to other attempts to 'adjust' GDP, e.g. by satellite accounts.

Satellite Accounting is an excellent tool for modelling the interactions between the economy and the environment. It is an essential tool for energy use, greenhouse gases, and a handful of other indicators; however, we fear that non-practitioners misunderstand "environmental accounts" as a generally applicable methodology for calculating a "Green GDP". It is in the interest of the concerned services of the European Commission fostering the

use of these accounts to give a crystal clear message what satellite accounts are good for.

Second suggested inference. The danger of reductionisms. Only economy and environment matter.

As the stories of the index of the Allianz-Dresdner Bank (sustainability of fiscal and ecological development) and the Ecological Footprint show, reducing well being (in the sense of Eudaimonia) to economy and environment runs two major risk:

1. to yield a measure scarcely informative for both dimensions. What, implications for policy can Russia draw from the Allianz-Dresdner Bank index.
2. to leave an entire universe of dimensions uncharted. Would anyone like to live in a country which is prosperous and ecologically minded under a dictator? Would we accept therein the existence of slaves? Incidentally Aristotle would. How can we build a measure of well being in dollars or acres forgetful of equity, cohesion, education and culture? Who would be convinced of it across disciplines and in society?

The environment has an important role in politics, but assuming that economists (including the National Accountants whose GDP someone wants to modify), social scientists and others can be treated as "optionals", is a tactical error that will not promote the good cause of the green community that is so active at "Beyond GDP".

Third suggested inference. Where to go

There is a long path ahead toward a model for well being - while we do not know what the final model will be, we know that the initial input variable set will include as a point of departure what statisticians have painfully collected.

A look at Eurostat's "key" indicators shows that the environment does indeed play a significant role among the 250 Sustainable Development and Lisbon (Structural) indicators present there. But any attempt to go "Beyond GDP" must recognise the complexity of the task to measure societal progress (wellbeing, sustainability, eudaimonia or whatever label one wants to adopt). Picking a dozen of environmental variables, adding a handful of economic and social fig leaves, and aggregating them on the basis of some magic but unfortunately not so transparent unit is clearly not bound to be a successful strategy when trying to challenge GDP growth in its role as key policy guidance indicator.



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on the SDI headline 13 as it played with the Structural Indicators 12!

Clearly our still unknown model will aggregate, and here the trite arguments of the apples and oranges which would be added and the even more trite one of the arbitrary nature of the weighting process. If one were to see how CO₂ emission are converted in dollars by reductionists (a 4 orders of magnitude uncertainty range is considered by practitioners) then some carefully and transparently negotiated aggregation may seem a better option.

If we are to indicate a good practice, then Yale/Columbia Environmental Sustainability Index and Environmental Performance Index are egregious measures of environmental stewardship and we would have liked to see more of them at this conference.

A careful modelled aggregation performed by respected academic or international organisations can bring to page 1 of the literate press issues as diverse and at time specialised such as university ranking, good governance, and the freedom of press which would otherwise be lost on page 14.

Here what the Financial Times says about the World Bank sixth annual Worldwide Governance Indicators (July 12).

Economists are often accused, justly, of thinking that what cannot be counted does not count. In this case, economists are trying to count what - many would say - cannot be counted. The alternatives, however, are worse. Either we ignore this fact or we make subjective guesses. For all its weaknesses, the Bank remains best-equipped to crunch the numbers and deliver the judgment, however unpalatable.

By the way, NOT aggregating a battery of indicators is also not a viable option; neither the 13 Sustainable Development headline indicators, nor the 12 Lisbon headline indicators are sufficiently simple to be understood by ordinary citizens not to capture a headline. In 2004 the Commission 'published' the 12 SI headline indicators and the Financial Times produced itself the aggregation to slam the story in page 3! See Saltelli, A., 2007, Composite indicators between analysis and advocacy, *Social indicators research* 81(11), 65-77. Further these e.g. SDI 13 variables can generate monsters. FT would be surprised to find Romania first if it played

<http://composite-indicators.jrc.ec.europa.eu/>

OPENING AND DISCUSSION OF WORKSHOP

- **Ivo Havinga**

United Nations Statistics Division,
Chairman of Workshop Session 3 Panel 3

I would like to welcome you to this breakout session. It is a pleasure having this large audience to help us get going on this particular topic. We have a list of excellent speakers but before doing that let me just briefly introduce myself.

I am Ivo Havinga from the United Nations Statistics Division, UNSD, responsible for economic statistics in a broad sense and environmental accounting. I know, we all have opinions, but it's not for me to speak. My job is to moderate this meeting. I do that with pleasure.

We have excellent speakers. Let me introduce them.

- We have Stuart Bond, he is sustainable development officer from the WWF, a pleasure, Stuart, to have you here;
- We have Teresa Fogelberg; she is responsible for the global reporting initiative. She's deputy chief executive and has an extensive background in sustainable development and she has also worked extensively in development aid. A pleasure, Teresa, to have you here;
- We also have, Mr Andrea Saltelli; he is an applied statistician at the Joint Research Centre in Italy. Andrea, welcome;
- Then we have Marcel Canoy; he is economic advisor from the European Commission of European Bureau Policy Advisers, and he is our Rapporteur.

In terms of organizing the session, I will take the speakers as I have introduced them to you. That is first Stuart Bond, then Teresa Fogelberg, and then Andrea Saltelli. Basically what I've been asked to do by the organizers is to concentrate on three particular questions. I will read them to you so that you know that I will try to focus discussion on these issues, because this discussion will lead into the next session.

The questions are:

- What are the key opportunities for going beyond GDP?
- What is feasible in the short to medium term and how can implementation be improved?
- How to meet the needs of policy-makers, key institutions, business, media, and the broader public, i.e. how to meet the needs of the stakeholders?

I would like the presenters to concentrate on these three questions.

With that, I would like to give the floor to Stuart.

For the speech of Stuart Bond, please see page 194.

- **Ivo Havinga**

Chairman

Very succinct and very clear. You make a couple of points about opportunity and feasibility. You say we have to have clear policy goals and we have to communicate them very clearly, and you say by 2010 and 2020, 2050. You talk about overall transformation in terms of looking at production, consumption and accumulation.

With that, Teresa, can I ask you to continue?

For the speech of Dr Teresa Fogelberg, please see page 196.

- **Ivo Havinga**

Chairman

We know that the global reporting initiative is a *prima facie* case of moving forward in a terrain at international level, at UN level. Thank you for making that clear. Thank you also for explaining feasibility, because feasibility was also created under the UN auspices and also in terms of the way forward by setting clear goals.

With that, I would like to ask Andrea to take the floor. Thank you.

For the speech of Andrea Saltelli, see page 201.

- **Ivo Havinga**

Chairman

I enjoyed listening to some of your fallacies. You have strong views on the single metric that is used. You don't want to compete between the social dimension and the economic and environmental dimensions. These are strong points.

Laurs mentioned that also from Eurostat he is very optimistic. I hear the same thing from you. So much is already being done and we could

capitalize on what has been done and maybe improve our communications.

Thank you, panellists. I would like to open the floor, more systematically if I may. Maybe you can take the questions one by one.

First question: what are the key opportunities for going beyond GDP?

- **Friedrich Schmidt-Bleek**

Factor 10 Institute

I have very few points, Chairman, that relate to all three.

The first is that without a functioning environment, without healthy nature services, we cannot have an economy and we cannot have any social development. In that sense, it is the guardrails of the laws of nature that are the limiting factors for what we can do in our societies. It has been said that the human economy has gone beyond limits. I fully agree. The question is what are the limits? If we take this seriously, we have to look at what are the profound impacts of the human economy on the environment. We have two choices basically.

One is a symptom-oriented choice. That is on the output side. There is a lot of concentration on CO₂ right now. This is one of the symptoms. There are many others that we could regard. We have learned in the last 30 years of environmental policies that if we relate our thinking only to symptoms, we usually do not do the right thing.

If on the other hand we take a systems approach, we are really thinking about the input side, and resource productivity per unit output. You can take any indicators you wish. It is a question of decoupling against what we do to nature. That is resource productivity on the systems side. That is true on a micro level for products. What can we do? The key issue is to begin to save resources and the most economic way to do that is to increase the price of resources. In other words, to internalise the external effects that we have through resource use. Our policy advice in Germany is to shift taxes from labour to resources. There are some other ways to do that, but this is a key issue as far as I am concerned.

- **Ivo Havinga**

Chairman

What I hear is that you want to bring the effects of human society on to the market and get the prices recognized.

- **Friedrich Schmidt-Bleek**

Factor 10 Institute

To save resources, you have to make them more scarce, that's part of it.

- **Jochen Jesinghaus**

European Commission,
Joint Research Centre

I'm Jochen Jesinghaus from the European Commission's, Joint Research Centre. Andrea Saltelli talked about the various measures that are on the table and we took the ISEW as one of the striking examples of how misleading it can be not to look at the detail, into the methodology. Everybody goes around with this famous ISEW graph showing the gap that opens and tells us how we are on the wrong track, but if we look into the detail we find that it's household work and it's income inequality. It's not the doomsday scenario that we are currently hearing from the IPCC. I agree, we have a doomsday scenario. We have to act and we have to avoid the big catastrophe. But to do that we would have to introduce environmental taxes. We would have to increase the oil price to 200 dollars per barrel, not 100 as we have currently. So we would have to add a tax of about 100 dollars per barrel. In the ISEW, there is CO₂. It's somewhere in there. It's one of the most important indicators, so it has to be in this green GDP measure. Go and check. You will find that it is valued at about 25 US dollars per tonne or so. Maybe it is 40, I'm not sure. But it is only 1/100th of the sum that we would have to impose on CO₂ to get the action that WWF is asking for.

I just want to highlight how misleading are these black boxes that are on the table under the general heading 'green GDP' or whatever. Going for green GDP is just not the right way, unless we rely on a public that is easy to cheat. It is not a sustainable strategy to cheat the audience.

- **Hans Diefenbacher**

Institute for Interdisciplinary Research,
University of Heidelberg

I belong to the Institute for Interdisciplinary Research, University of Heidelberg. I'm one of the young fossils of this debate because I'm one of those who made the time series of the ISEW for Germany about 15-18 years ago.

I completely agree with you. This is just another figure and not a better figure. But the GDP is a single measure as well. And everybody looks at it. This is the problem. The problem is how do we get rid of the one single measure that is misleading us. Maybe it is a good idea to have such a measure, the GDP, and another just in a tiny box on the same page of the publication? So every time you look at the GDP, there might be another truth that is worth a debate. As long as we are not able to get rid of the GDP, I would like to at least raise the idea of another single measure. I completely agree that it is a better to have nice headline indicators. But we cannot get rid of the other strategy for the moment.

- **Marco Malgarini**

Institute for Studies and Economic
Analyses, Italy

In answer to your question of what do we have to do to go beyond GDP, I am more interested in the part related to subjective measurements of personal and national well-being. In this sense, there is some scope perhaps to enlarge the availability of indicators that are on the table right now. If I understand correctly, basically we have indicators that are available over quite a long time span. You've got surveys that try to measure personal well-being every three or four or five years. I wonder, as a question to the audience, if it is worth trying to increase the frequency of this kind of measure. That would be of some interest especially if we are able to look at the individual dimensions of this data. Looking at the individual dimensions of this data may allow us to measure the impact of different policy measures on subjective well-being. In this sense, we could think about developing some high frequency subjective well-being measures.

- **Jean-Louis Weber**

European Environment Agency

I will answer your three points separately because you asked us to do so, but I would have preferred to start with the last one which is the answer to the questions of the stakeholders. But I will take them in the order you propose.

The opportunities of going beyond GDP. I take it as a producer of information for policy-making. First of all there is strong political demand. This conference is one example. The Potsdam Initiative of the G8+5 is quite high-level. I don't know if there is a higher level of demand in the world, and they clearly expressed the question about the cost of not taking care of biodiversity. Like it or not, but the question is there. As professionals we have to answer these kinds of questions.

There is a millennium ecosystem assessment that will be revised now and will be updated by UNEP by 2015. The question of accounting for the economic costs and benefits of the ecosystem and ecosystem services is now on the table. It was not that clear in the first millennium but it is now. You can say that you also have several initiatives in Europe at country level. Several countries are engaged in ecosystem assessments and in ecosystem accounting, including with monetary valuation. You also have initiatives at local level, and last but not least, at company level. Companies are interested in having complete accounting of their environmental impacts. Not only the direct impacts of their use of materials and emissions of residuals, but the indirect impacts linked to their degradation, maybe involuntary degradation, of the environment. Politically, this is a huge opportunity.

Technically, we now have access to a huge number of databases. Maybe the problem is to find one's way through all this data. We have a lot of statistics available. A lot of scientific knowledge. A lot of software to process the data. You have AGS now, very common software on your desktop. What we are missing is some framework to organize the activity of various communities of statisticians and scientists of various domains. We have one framework which is not perfect, but which is under revision and will be perfect by 2010. It is a system of economic environmental accounting. This system is candidate framework to help in organizing the necessary multiple activities.

- **Andreas Siegel**

Council of Europe

If we want to make an impact we need to have a consensus on the indicators. What kinds of indicators are we using and for what purpose, in particular, the so-called subjective ones?

And the question of process management, how do we actually follow up indicators? How do we get politicians to translate the knowledge into action? It is indeed true that we need a complementary approach to different areas, sectors and methods, and to use the best practices available.

To comment on what the Council of Europe does, this is precisely a model where we combine regional and sectoral approaches with a policy management process. We have a total cycle from the beginning, with civil society experts discussing indicators and needs for certain purposes. This is translated into conventions, common benchmarks decided by governments. This is then verified by monitoring mechanisms that then issue recommendations on follow-up. Then again, targeted mechanisms exist to build capacity to reach these indicators. And the whole cycle begins again. This is a sectoral approach, which has worked for 47 countries with 800 million citizens. This is one of the things one could look into as a method to control the whole process.

- **Ivo Havinga**

Chairman

Before you start, I would ask you, if possible, to concentrate on the third question, how do we meet the needs of the policy-makers? We're coming very close to understanding what the key opportunities are and the short and medium term have been cued by Marcel on that, but he feels that we also have to concentrate on the needs. Apart from your own thoughts, maybe you can add a reflection on the needs.

- **Roshan Di Puppò**

Social Platform

I'm the director of the Social Platform, which is a broad coalition of European social NGOs.

To concentrate on the last question. Relation to policy-makers, you first have to see they have a need. As social NGOs, we would be very keen to have alternatives to GDP. For the moment we don't see where is the critical mass of actors that could bring this change. Ideally, you would think of a European initiative. At the global level, it could be a very strong signal that a region decides to adopt this alternative way of measuring.

At the same time, at the moment we don't feel that the Commission is in a position to do it. But now, all the evidence is that they are not really pushing very hard for this kind of alternative approach, because at the moment the discourse is very much about both: a traditional approach to both and everything that was done on CSR has really slowed down in the opinion of the NGOs.

For us, when we talk about the needs of policy-makers, at the moment we have a group of policy-makers who we don't feel need this alternative. They are happy to continue the good old way. I'm really wondering if we could start working with a group of Member States that are ready to take this kind of approach. A new presidency of the EU could take it. All these are important, but at the moment it is difficult to work in a context where the key EU strategy is on growth and jobs. That is the relative worth of NGOs.

- **Tanja Srebotnjak**

Yale University

I feel that the third question can partly be helped by statisticians. We now have a recent study by the UNDP that shows that there are more than 300 indicators that relate in some form or other to the measurement of human well-being and so, while that is a positive development, because it relates closely to the increasing attention that we give to perhaps one of the leading problems of our time, it makes it very cumbersome and overwhelming for policy-makers to sift through and make the appropriate decision for the measure they need for their purposes.

So I think statisticians have an important role to fill by helping policy-makers with decision-making, by providing the index most suitable for their needs. In part we have talked about many measures, but so far very few of them come with uncertainty assessments, confidence intervals, anything that gives the user an idea of how valid and reliable and how variable a measure really is. So that was just what I wanted to add to the debate. It has only come forward in the margins so far.

- **Mathis Wackernagel**

Global Footprint Network

What does it mean that Holland uses five times their own resources? Essentially, to use more than you have, you have to either deplete your own assets or you have to import the difference from somewhere else. So that exposes you to the risk of overshooting. It also means that other countries that try to imitate Holland should probably think twice, because it may be difficult to import that much from other places.

I think it's an important indicator, which leads to your third question: How can we serve stakeholders? Essentially I think we have to focus on how do indicators frame the key question? I think the key question for the 21st century really is as Professor Schmidt-Bleek said "How can we live properly on one planet?" So, rather than having one Holy Grail indicator, we need to have indicators that look at tension. We need indicators that look at how well we live but also, to an extent "Do we live within the budget of one planet?" And it's through this tension that we manage both the interest of stakeholders and the innovation that is necessary to overcome this tension rather than just look away from it.

- **Pavle Sicerl**

University of Ljubljana, Slovenia

I just want to say a few words about how to meet the needs of the stakeholders. I will link it to what Andrea was saying. There is a lot of work done in collecting indicators. So we have a good start from that point of view. But I think that there is also an important aspect which I call "human interface", and that is understanding information and communicating that information. So what I want to say is that when we have indicators, we should take up what OECD is suggesting from statistics to knowledge to policy, and for that we don't just need new indicators and new ways of thinking, but also to see the results of statistical measuring.

I will not dwell much on that, I will just give you an example, the time distance method, which is on the virtual indicators' expo, so you can see it there. But basically it means you can reach new conclusions, for instance, in the European Union, if you are comparing two time series, one is life expectancy male and female. If we compare it statistically, it's 8% higher. If we compare it over time - this is my measure - looking for the same level of the indicator at two times, believe it or not: 29 years, what is the policy conclusion? That you have to have both measures, because if you wish to find out if it is a difficult problem, you use time distance. If you wish to say it's no problem whatsoever, you use 8%. So we need different uses of data, which are already there, better utilisation of data, because otherwise the interest groups, which would like to put it one way would use one measure, and the other interest group would use the other measure. So, I would simply suggest that we don't look for new perspectives on indicators but at the way we discuss, interpret and communicate them.

- **Ivo Havinga**

Chairman

Wonderful. It is good that you brought it out. You know, it's not just statistics. It's also that we have to build knowledge out of your two analyses. Thank you for this intervention.

- **Richard Walton**

European Central Bank

To answer the third question, I can only say that, of course, the needs of policy-makers will undoubtedly vary with the political orientation of the policy-maker concerned.

I would rather address the first question: key opportunities for going beyond GDP. In that I see a limited set of undisputed core indicators, which are linked by an accounting system. Frameworks of national accounts and environmental accounts have been mentioned. This is nothing new, because we already have important target variables like inflation, monetary aggregates, the unemployment rate; so the challenge in answering the first question is to supplement the list of policy indicators with a few social and environmental indicators that are easily incorporated into forecasting models. Examples include life expectancy, adult literacy rates and greenhouse gas emissions.

- **Ivo Havinga**

Chairman

Basically you're saying, keep it simple, but communicate well.

- **John Hontelez**

European Environmental Bureau

I'm Secretary General of the European Environmental Bureau, which is a federation of environmental organisations working on the EU level. As for our needs, it's very clear that environmental organisations need an indicator that becomes as influential as GDP to influence the minds of politicians to determine their priorities. We have a lot of information about environmental decline. We have very good reports from the European Environment Agency. Next year the OECD will come out with a new environmental outlook 2030, which does not only - and this is important - give information about the state of the environment, but also predicts trends. I think the complication with environmental indicators is that GDP is just about growth. When growth is higher, people are happy, when it isn't, people are not happy. But with environmental indicators, we always have to link to an agreed objective, an agreed goal. With climate we have IPCC, with other indicators we lack that a bit, and I personally feel that with footprints now there is too much focus on CO₂ and this may in the end give too little information about other very important things like soil deterioration, water scarcity and so on. But take the view that when environmental indicators are being discussed, we tend to, we can only be believed when we are perfect. But is GDP a perfect indicator? I think the ecological footprint is gaining more importance. If you look at EU contributions to sustainable development commissions and so on, this is being recognised. The only thing is, it doesn't have the same type of recognition yet as GDP. The EU should not seek something instead of GDP, but should rather look at things like ecological footprint, and maybe accept it as a proxy for the time being about questions such as is the quality of economic growth bad for the environment, or are we making improvements.

We do need a main indicator like ecological footprint next to maybe another one that better reflects social indicators like employment, which is the second thing politicians are very impressed with, because when we talk about

the Lisbon process, we need a kind of inherent critique of the quality of economic development in the EU.

- **Pascal Wolff**

European Commission, Eurostat

To come back to your issue on opportunities for going beyond GDP, one big push should be the sustainable development strategy, which is recognised in the European Union as the overarching goal of policies. This issue of sustainable development has got more and more attraction in the general public meaning that it is a clear driver for policy actions.

At the European level, we see that in many countries. So I think it is a great opportunity to use this big policy framework to push other measures of well-being. And the link between sustainable development and well-being, I think, is very clear. For instance, in EU strategy it is defined as maintaining and enhancing the well-being of present and future generations. So we see clearly this link between the two.

There were several speakers this morning talking about the fact that we have different users. Certainly we need different kinds of indicators to address these different users and it is particularly true when targeting policy needs. Large sets of indicators have their limits. They are interesting, because they cover a large variety of topics - objective, subjective and various kinds of measure of economic, environmental, social developments. But we should certainly expect indicators to be more attractive, and this is perhaps the case with some well established composite indicators. But in doing so, we have to recognise that those kinds of indicators cannot go alone, even if, *a priori*, they are more attractive. We cannot talk to policy-makers and tell them, for instance, that they have to decrease the ecological footprint by 5% in order to be sustainable. What does it mean for them? In order to deliver a more efficient message, we need different kinds of measures.

- **Ivo Havinga**

Chairman

I would like to turn to the panellists, simply because we have to stop by 12:10h to go to the other session. I'll give you all one minute to wrap it up. Andrea, can I ask you to start?

- **Andrea Saltelli**

European Commission,
Joint Research Centre

Mathis Wackernagel has done a fantastic job. No other indicators I know of have had the power of advocacy that his indicator has had. Jochen Jesinghaus, who knows these things better than I do, tells me that the ecological footprint can do a great job, especially in efficacy of development, when you talk about official development aid in global partnership studies. That is when you want to make sure that we do not deplete the resources of developing countries.

I was just making an argument about the metrics, which is something I feel strongly about. The careful, cautious aggregations of a variable done by an institution, which has the legitimacy to do this aggregation and is done with extreme care, is the way to go and Tanja's work here is a good example. Look at the environmental sustainability index and environmental performance index produced by Yale and Colombia Universities for the World Economic Forum. EPI as a measure of a country's stewardship to uphold the environment is a very good example of how far you can go.

Of course, at the same time you have to be detailed and parsimonious. You can do that with statistical methods nowadays. I cannot go into this now. And of course you must also be transparent, because if the users and stakeholders cannot understand how you have reached some kind of aggregation, this will not be useful. Finally, of course, you must be able to assess the uncertainties, because if we know beforehand that CO₂ 'numeraire' is uncertain by orders of magnitude, we won't go very far with it. Then we will have a model which is totally qualitative.

One last point and here I return to the question by the Chairman: the media. Now, I argue that you can get even the most abstruse topic on page 1 of the Financial Times by careful aggregation of the nature which I discussed just now. Two days ago, the Times supplement review of higher university ranking (THES), was on page 1 of the Financial Times. The title was "Heidelberg only 60", so all the Germans readers opened the journal and go to page 4 and read the article on university ranking. You know it's done carefully and well by a reputed institution, so it made it to page 1 of the Financial Times. This is what we have to do. I could give examples of global governance and other examples, but this is enough for today.

- **Teresa Fogelberg**

Global Reporting Initiative

I also wanted to refer to the gentleman from Heidelberg, but not because of the ranking of his institute, but because of the remark that he made about trying to endeavour to use maybe two main indicators for the general public. Having said that, listening to this discussion, there has been an overall focus on the environmental. Somebody said, you should not over-focus on climate change issues, CO₂ reduction, but I think if you are trying to make a third very important indicator, I would again like to draw attention to issues of social empowerment, social inclusion, emancipation, equal pay, to that whole grouping of social rights, which maybe in Europe we have already attained to a large degree, but we should have the ambition to have these indexes at a global level. So that's my first reaction to your point. Yes, simple, but let's not forget about these very important social ambitions that we also have as a global community.

The second point is the remark of Tanja, about the validity of data. I think it's a very valid point that you made, but I would say, let's not listen only to statisticians, listen also to civil society, which also has a critical role in following data. And ask the question, are these the right data, and if they are, is the content valid?

I would also like to draw your attention to a whole new profession, and that is the professional assurers. Now that companies are coming up with their own data, of course, we have the financial; we have the accountants, who are all following Sarbanes-Oxley and all the European laws on financial reporting. But the more important environmental and social accounting becomes, the more important it also becomes not only for civil society to critically watch those figures, but also for professional assurers. For instance, the International Assurers Standard Board has now developed very concise methods in order to validate the data being produced by companies. So you get a whole new profession of sustainability assurers; for instance some universities already give Masters degrees in that very specific new profession.

My last comment is that some speakers indeed spoke about the importance of the corporate sector. We should not forget that the corporate footprints of some individual companies in terms of annual budget and turnover, bypass by far the GDPs of national economies. That disappeared a little bit in the discussion, and that was part of my presenta-

tion in the beginning when I talked about the global reporting initiative.

I think that policy-makers cannot afford to ignore the data and the information being produced now by these - at this moment. I was talking about the future, but at this actual moment, the majority of these companies (Fortune 500 companies). And I met Vice-President Verheugen this summer, and he sees it as a competitive advantage for the European corporate sector that they actually go through the discipline of providing these kinds of statistics and data on their own footprints. Therefore it's not only of statistical importance, but it is also important for policy-makers both in terms of the environment, and also in terms of competitiveness.

- **Stuart Bond**

WWF, UK

Can I just pick up on the father of time series comments? Do we need new indicators, or do we need new perspectives? I think that we can measure things to the n^{th} degree, but does that preclude action, and I think there is a time, and climate change is one of those big driving forces that is really, really compressing time, and it is forcing us to take action, to make choices. We really need to move beyond simply measuring. The point of measuring is to actually create change. We need to produce relevant measures and the measures need to be communicable. That is partly the power of the ecological footprint: people understand what we're talking about, and even though they don't get the ins and outs of it, they can get the concept. And so not only indicators. We don't have to keep on measuring, we need to keep on communicating, and communicating not only to consumers, but to business, and to government. This is the idea: to create an economy that lives with, and works with environmental limits, and that also has a sense of achieving some very key objectives – millennium development goals, biodiversity goals and so on. There was a gentleman who talked about oil prices and so on. We could get to a stage where peak oil drives oil prices up well above 200 dollars a barrel. Do we want to get to that stage or are we collectively intelligent enough to move somewhere smarter, somewhere better? Somewhere where you get to work less and where you get to live more. All of us think we would like to get there, but we're not really taking action.

I'll just pick up on your point about the media. Indicators are readily picked up by the media. We've done a lot of work recently on the ecological footprints of cities, which was picked up well across the media all the way through the UK. You know, my footprint is bigger than yours, all that sort of stuff. What is useful is that we can communicate it, we can make it relevant for policy, and it measures something that we want to know. And the media will happily pick up on key issues that say, I'm bigger than you, I'm smaller than you – whatever. That's a media story. For us, we want to know: Is it useful for policy? Is it going to measure what we want to know? Is it going to help drive change? Because if it's not driving change, it's not moving us in the right direction.

And then just to finalise, we've had some talk about business and there was talk earlier about households and so on. It's very clear that consumers can't measure, nor can they get increased resource efficiency from car manufacturing and so on. That's something business can do. But it's also clear that current business models are predicated on the fact that growth is good, and that "growth is good" model actually derives from a collective will, largely from a sort of governance perspective. It also seems to be very clear that it is governments that have the ability to pull together the right sort of multi-level, multi-lateral partnerships across the board, from consumers, from interest groups, from business, to lead a sort of key sectoral transformation to take us from the place where we all know we are now to a better place where we want to get to.

- **Ivo Havinga**

Chairman

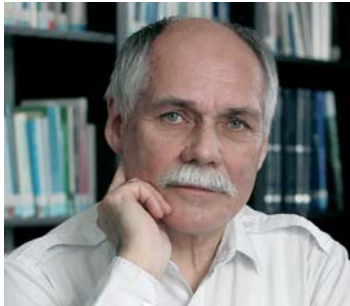
I would like to thank the panellists for this discussion. I would like to thank the audience for their interaction and the succinctness which they have been willing to stick to in the one or two minutes which they had. I think it was an excellent meeting. I thank you all and I look forward to the continuation.



Session 4

Collaboration opportunities





Bedřich Moldan

Professor at the Charles University, Czech Republic

I will try to summarise my recommendations in 5 points.

My **first point** is that I would recommend focusing on modifications and supplements to GDP, and not replacing it. In fact it was said here too and I think that after all, GDP itself and its use, is modelled that approach, because we are all talking about GDP as an overarching indicator. But if you look at what the statistical offices are reporting regarding economic performance, there are other indicators which are also very important and which supplement GDP from the economic point of view, like labour productivity, like unemployment, etc. So we should not forget that GDP does not stand alone. So we should not go the way, in my view, of having a 'magic bullet' just replacing GDP.

My **second point** is – and here I quote Oliver Zwirner, who said this morning and I think it was very important – is that our approach should also include timeliness. I think that it is extremely important if we are about to really supplement economic indicators like GDP, like unemployment, all that, that it should be developed in such a way to be equally timely, and it is up to the statistical offices to find ways as to do it. We environmentalists who are monitoring and measuring have so many online systems, it is a pity and it is a shame that we are not able to deliver timely information like economists. In fact I don't understand the reasons for that.

My **third point** is that we should rely more on indicators and measures which respond to specific policy requirements. Look at climate change, for instance. We should focus on reliable, good and

salient indicators to answer this issue. There are certainly many other policy issues with concrete targets, so we should really respond to that and develop indicators which are adequate for these purposes.

My **fourth point** is that certainly you can cite many features which good indicators should fulfil. I would focus on just one and that is the indicators should be scientifically robust. I would prefer simple indicators with units based on concrete measures and I am afraid that I personally do not believe too much in democratic weighting and the like. By training I am a natural scientist and I would prefer simple, robust indicators like material flow analysis, which is quite a straightforward approach and is very telling. It could be a model for that.

My **fifth point** is that when we are talking about environment especially, I would recommend three things:

- First to my mind the most reliable and fruitful approach is to focus on pressures, because this is something very concrete and very instructive.
- Second, and again I quote one of the previous speakers of the morning, Jacqueline McGlade: try to develop indicators on eco-systems services, because this is something which is really very important.
- Third, focus on linkages, and one typical linkage is decoupling indicators, try to compare and economic performance and pressure on the environment. This is an example which I would very much recommend to develop further.



Willy de Backer

3E Intelligence

I am of course first and foremost a journalist now, an independent journalist after having worked for about 8 years as a chief editor for Euractiv.com, the policy portal that probably a lot of people in the room will know. But my background, as you said, has been in politics. Anders Wijkman started this morning by saying that there was a similar debate about ten years ago in the parliament. I know, Anders. Back in the eighties already I was in a similar debate in the UK called the Other Economic Summit, I think where also Hazel Henderson was present. So it is not something that is absolutely new or only from the last ten years.

What is the problem? If it was already discussed in the eighties, why hasn't it reached politicians yet? There seems to be a problem between the good instruments, the indicators that you have, how to communicate it, and then after you have communicated it, how to get it into policy-making. And I would like to try to address these kinds of things.

First of all, I think the problem is that we do not see that GDP has become what I call a "hegemonic myth." And when we try to tackle it, when we need to come up with something new, you will have to come up with another hegemonic myth. Otherwise you will not be able to get it into politicians' heads. What does that mean? It means it has to be simple. It has to be comprehensive. I know it has been said several times already, this is not a beauty contest about what is the best indicator. So in a way you do not need to make a decision on should we use this one or that one, or should we concentrate more or put more money into this or that one. But you should find a communicatable narrative on the basis of some of the indicators. If I look at all the different indicators that I have been following over all these years, I think there is only one up to now that has really reached the awareness of the media, and probably also the awareness of some parts of citizens. And that is the ecological footprint. That is the only one. As for the happiness index, if I talk to friends

of mine, they do not know what it is. It maybe fantastic, it may be very good, but ecological footprint, they know what that is. And now - and there is a bit of a problem with it - it is even being "hijacked" by others, by business. I was listening to CNBC last week, where some businessman was saying "we have a big footprint in Asia." He means of course a presence in Asia, but he calls it a big footprint. You see, it has filtered through, to the businessmen, which is an important thing. I think the ecological footprint is something that we should build upon, and maybe in a way we can "ecologise" GDP by trying to combine them and then creating a new hegemonic myth.

The use of media: that is the next point I would like to tackle, having been in the media myself and being a journalist. I think you will have a very difficult time working through traditional media to get your new alternative indicator of this new hegemonic myth across. There is, on the other hand, another system, or another instrument now, which is blogging. As a journalist, I have moved from traditional online media to professional blogging. I can give the example of the Peak Oil Community. I do not know if lots of people know about it here, I am not going to go into details, but it is about reserves of oil, gas, etc - this Peak Oil Community has actually managed - in about three years (using blogging) to create a community and to start influencing the politicians now. So you can use that, and I think it is something to pick up for this conference as an instrument later. See if you can actually create a "beyond GDP blog" community and just not have this kind of meeting every ten years.

An other point. It was said that we have no lack of data. I would like to contest that. In the area of resource depletion, there is a big lack of transparent data. Even the International Energy Agency - I was in London when they presented their last outlook - was very clear on this, and next year they want to concentrate on bringing more transparency into the data on

resource depletion, because it is not clear at all what our oil reserves, our gas reserves, and our coal reserves are. So let us also make sure that we get transparency there.

And then one last question. There is one institution where we also have lots of statistics, and where it actually goes into policy-making. That is the European Bank of course, and national banks. They use statistics to make policy. The difference is that actually when they monitor monetary poli-

cies, etc. They have sort of become independent from politicians, so that the whole lobbying process and all that does not come into play anymore. Maybe we need, and this is my question, like the European Central Bank, a kind of independent sustainability institution that looks at policies and can, like the bank does, feed in their ideas and say to politicians "Sorry but this is the wrong way to go, because of these and these data." I think that is what I wanted to say broadly. I have a few more ideas, but I'll keep it to this.



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Johannes Blokland

Member of the European Parliament

In the seventies we had in the Netherlands a long debate about employment and unemployment. Different institutions all had their own indicators. Some of them used mainly employment whereas some of them more used unemployment. And so you saw that there were different indicators. For each goal there was an indicator about employment and unemployment. This gave rise to a lot of discussion between politicians. It was not very helpful. So in the end, The Netherlands took the decision to give the job of employment and unemployment figures to the statistical office, an independent institution. Ever since we have no discussions about the figures. That was fine.

Two years ago, we had a debate in this parliament, and also in the Netherlands, about the figures on air quality. And each party, each partition had its own features. There were different measurement methods, different models and different correction factors. What was the conclusion? That it is not very helpful for politicians when each organisation has its own features. So what we have to do is to find conditions for the development of indicators of progress through wealth and well-being which are broadly accepted.

I have some criteria for that:

- First, we need harmonised measurement methods.
- Second point: reproduction is very important. Each scientist must be able to see how the others have developed their figures. When that is impossible, and each scientist has his own figures, then we are on the wrong track.
- A systematic approach is very important. Comprehensibility of the system is very important, as well as comparability and objectivity. We also need time series. We have to see what the development in time is, and what we have to do with the figures is also to make prognoses. We have to see what will happen in the future if we continue in the same way.

My last point is that we already had an accepted accounting system. More than ten years ago, the European Parliament and the Council accepted a system of economic accounts, environmental accounts and social accounts as a basis for thinking. Therefore we can go further along that path. What is fine with this system is that it meets all the conditions. So it is objective, we have time series, we can make prognoses so I think that we have to go further in that direction. I am very afraid when each party has its own indicators. Then we just fight each other with indicators and have no common basis to go further. And this is ten years after acceptance of the accounting system the Parliament established. This is a pity.



- **Pieter Everaers**

Director, European Commission,
Eurostat, Chairman of Workshop
Session 4

My name is Pieter Everaers. I am Director at Eurostat, responsible for agricultural statistics, environment and statistical cooperation.

I have the pleasure to chair this session number 4, "Collaboration opportunities". We have the big challenge to give a message to Anders Wijkman so that he can this evening take the output of the expert workshop to the large conference.

Next to me I have the three rapporteurs and on my left I have two of the panellists. We are still waiting for Johannes Blokland. We have about 30-35 minutes. I have asked the rapporteurs to be brief and to focus on the main points. I will give them each about 4 minutes and then I will ask the panellists to discuss the steps forward. The main questions - just to repeat them – are: *What are the key opportunities for going beyond GDP? Second question: What is feasible in the short to medium term? And how can implementation be improved? And the third question: How to engage policy-makers, key institutions and business, and other stakeholders?* I think that is the summary and I am sure (I was watching and listening to panel number 1) that it is not easy to summarise along the lines of these questions, but I hope that you will give some provoking statements to which the panellists will be able to react. So let me start.

Mr Blokland, welcome. Let me start by asking the rapporteurs to react. I am starting with the rapporteur for Panel 1, Fulai Sheng. He is an economist working for UNEP, focusing on integrated policy-making. Previously he worked for the World Wildlife Fund, actively involved in taking nature into account. I am ready to listen to the report from panel 1.

- **Fulai Sheng**

Rapporteur Session 3 Panel 1

I just wanted to report to you that in Panel 1 we had a very interesting discussion, and we heard a diversity of views on how to move this work forward and how to address the questions raised. Let me try to summarise some of the key streams of thoughts that came up from the panel discussion.

Number one. I would describe it as the issue of empowering people to use indicators. In this stream of thinking, I just wanted to identify some of the key points or phrases, not always in complete sentences. There is a point that people at different levels should be able to use the indicators. People from different groups need to understand each other better, what indicators mean to them. Also very importantly: how do we translate indicators into meaningful policy actions? Of course in terms of empowering people, that would really take us to the next stream of thinking.

Number two. I would describe it as really the emphasis on a bottom-up approach, which means that in order to be able to use the indicators to initiate actions, to be able to understand each other, we really need to build indicators from the bottom, from the grassroots level, because we need to know what issues are important to people. And what are the issues that people really care about? In this regard, there has been a lot of emphasis on communication, how we could utilise communication techniques and communication tools, different ways of communication to engage people at that level, or rather at different levels. In this regard, as far as communication is concerned, there was some discussion on the role of statisticians, whether statisticians have done their job once they have compiled the data and statistics, or should they be doing a little more. Certainly the role is not of course confined to statisticians. Other players have perhaps an even more important role to play, in other words, to take the results from statisticians and then to communicate really to different levels of communities. I also wanted to emphasise that there is a question of integrating data users, indicator users, from the beginning, from the beginning of a process, to compile meaningful indicators.

The third stream of thinking from the group is something I would describe as the diversity of ideas. Diversity of ideas, or perhaps it is rather a plea, a plea for cooperation, a plea for tolerance, for the diversity of ideas. And certainly we did hear a number of ideas here. We heard for example that in France there was an idea to put environmental

price on products. But there were some different perspectives in terms of avoiding multiple prices and rather to include ecological cost into the pricing mechanisms directly through taxation and other instruments. There are ideas of taking the role of environmental certification into account in the valuation exercise. There is the idea of really including public services, very importantly, in the compilation of indicators, because people's well-being is significantly influenced by the kind of services that are provided.

So there are various streams of ideas and different ways of articulating what should be in the indicators. There are also ideas for using the data we already have, the kind of indicators we already have to do some projections, to make use of existing indicators to project into the future trends, linking in to several major global and environmental outlooks that are being released this fall or next spring.

In a nutshell, in this stream of thinking, there are these different ideas, but one issue that seems to stand out is that it may be very difficult to really measure the individual preferences for well-being or what each individual considers to be well-being, or sustainable development. That remains a major challenge, but the concluding remark on that stream of thinking is that a lot of these ideas are not mutually exclusive. We should really try to identify synergies and build on the synergies rather than try to compete with one another.

The final stream of thinking coming from this group is really an emphasis on how to move the technical part of this work forward. There is an emphasis on having a limited number of indicators. There is emphasis on the importance of linking the indicators to national accounts, and to achieving international comparability. There is also an emphasis on the importance of having indicators from authoritative bodies, to be published by authoritative bodies. There is also an emphasis on a stepwise approach, on trying not to rush into this exercise.

Finally there is a plea for simplicity. Again, back to the first point of using the indicators in order to be able to communicate, to mobilise different communities of people.

- **Pieter Everaers**

Chairman

I am now giving the floor to Anil Markandya, who is working at the University of Bath. I'd like to ask him to report from Panel 2.

- **Anil Markandya**

Rapporteur Session 3 Panel 2

The discussion showed more convergences than I thought would emerge when we started. The first point was that most people accepted that GDP is certainly not a perfect, or even a very good measure of well-being and sustainability, but that it is linked to some important aspects of well-being and there are modifications possible to improve it. These modifications are possible, and the work in this direction is useful and important. In this context there is also ongoing work in terms of sustainability using wealth accounting and wealth indicators. As to how good – or imperfect – a measure it is, there was some difference of opinion. Some thought it was pretty useless, others thought maybe it has some saving graces and can be saved.

The second broad conclusion was that it is worth trying to develop some other synthetic indicator of well-being which can complement or run alongside the modified GDP indicator. The exact determinants of such a synthetic indicator were not provided in the discussion we had, but most people's comments suggested that a lot of work needs to be done to develop such an indicator. A few points were made which are relevant to this. One was that the process of selecting the components and the weightings should be democratic. There should be some degree of public accountability, public discussion as to exactly what goes into such an indicator. It is important, agreeing with the previous rapporteur, that issues of information and knowledge about the indicator are also important and need to be stressed. The issue of where and how to apply these indicators, and when to use them and for what purposes, needs to be clarified and discussed. This, of course, applies also to the modified GDP indicator. Even with these modifications it will not be the appropriate indicator for all policy purposes, but it will be for some, and where it is appropriate and where it is not, are issues that need to be worked on. As to the areas that we need to cover in developing or modifying the existing structure or developing new structures, one that was raised was the distributional question: how

issues of the distribution of well-being in society are picked up; and obviously issues related to changes in the environment, green growth and especially of course greenhouse gas emissions; questions of sustainability more generally and questions relating to the development of human and social capital. Are we able to pick these things up in our indicators? In some of the discussions there was brief mention about the use of subjective indicators, indicators of happiness, and things like that. Some doubts were expressed on that front.

The last point I would make is that a number of speakers noted that the indicators that we need of course have to be linked to what use is made of them. But not only are those indicators relevant at national level, it is also important to have indicators that are appropriate for decision-making at a regional and local level. The structure between the regional, local and the national also needs a degree of clarification.

- **Pieter Everaers**

Chairman

We are now going to Panel 3, and I am happy to introduce Marcel Canoy, who is working at the Bureau for European Policy Advisors, which is the think tank advising President Barroso.

- **Marcel Canoy**

Rapporteur Session 3 Panel 3

In selecting the input from the group as a rapporteur I have decided to concentrate on the more concrete results, because there is always a certain risk in this type of conferences that everybody agrees more or less. Environment is very important, social stuff is important as well, and we share the experience almost like Hare Krishnas and everybody goes home with a warm glow. So I think the purpose of this conference is not only to go beyond GDP but also to go beyond warm glow as it were. I will just go through the three questions and take them one by one.

First one was: what are the opportunities or challenges? Starting with what are not opportunities or challenges according to the group: there is no lack of data. There is no lack of indicators. We really have a lot of information available, more than at any other time in the past. So the opportunity then comes not from gathering extra data, but grouping it together in a meaningful way. We all know that aggregation has its problems, but we also

know that aggregation is needed. Somehow the first opportunity is there: how can we aggregate data in a meaningful way to get a limited set of indicators? We know that there are problems with aggregation but as long as we know what is behind there, communication can continue. So that would be the first opportunity.

The second opportunity is that we know that we live in a world of wasteful usage of resources, but we also know that there are many countries with high GDP who are much less wasteful than other countries with high GDP. And the same applies for countries with low GDP. So how can we decouple growth and GDP with more efficient resource allocation? This is a very important opportunity.

The third opportunity has nothing to do with measurement. It is well known by most politicians by now what to do about certain aspects of well-being, for instance, in particular about the climate. So how can we use these instruments, in particular pricing instruments, which every scientist knows is the thing to do, but every politician knows is difficult to implement? So these are the groups of opportunities.

Then there was another question related to what are the short-term and medium-term goals that we can achieve. Here again, I did not look for consensus. I just picked up a couple of interesting thoughts because they can steer the debate. One thought was very concrete. It says: OK, in 2020 (or you can have another date) 75% of all multinationals should report on sustainability. Now, this is a different way of approaching things. First of all it focuses on business, which is an important aspect which is sometimes neglected in the debate, and it is very concrete. Similarly, not only 75% of multinationals should report but also government bodies. Governments can report on their own impact, and not another policy report which states that we want to do this and this, but what is the ministry of finance in Germany's imprint? How much paper does it use? Just to give you an example. SMEs, similar story. So this is a very concrete idea, to which I would add: policy-makers when they draft policy papers should also target themselves: a minimum something percent and they should mention indicators other than GDP. Then they are setting a good example. I mean leading by example is always a good thing.

Still another very concrete idea that came up was that by 2020 we should achieve a 3% reduction in resource usage (you have other ways of calcu-

lating this). This is also very concrete and this is something that policy-makers can aim at.

Another totally different type of target would be that whenever there is a report in, say, the Financial Times, or other equivalent outlets, it would be great if every time they report something, they give GDP and then another number showing a different truth. This is also something that can be worked on.

That was the strand of questions on targets, and I have just picked out a few concrete results. Another question that came up was: how can we convince policy-makers or other stakeholders to actually use the rich material that is out there? Because we started by saying there is a lot of material but apparently it is difficult to get the message through to the levels where decisions are taken.

Three types of proposal were mentioned.

First: can we not go for what I call a sort of European human development indicator, a simple aggregate index, which we know has flaws, like the human development indicator, which Fulai Sheng himself called "a vulgar instrument". Human development, may not work for Europe because the countries are all the same more or less, but there could be an equivalent to it, a simple indicator, in which we know at least what is behind it, so if there are debates, we can always go back to what is behind. But this would be one way of getting politicians on board.

The second one is that looking at the European Commission, there was somebody who said: OK growth and jobs is all very well, but other dimensions of well-being are not there. I think what could help us, is if European politicians, whether from the European Commission or elsewhere, articulate very clearly what they need in terms of indicators. Society will deliver them. And as long as the core message is growth and jobs, maybe this other message gets pushed a little bit into the background.

Finally, not only is it important to articulate these alternative indicators, but also having a thorough debate on how to overcome this tension between wasteful usage and GDP could really help to steer the debate.

• Pieter Everaers

Chairman

In listening to the rapporteurs, at least for me it is clear that we have a very good panel on this side. What came up is clearly that there seemed to be enough data. Integration, or working via a certain direction, composite indicators, integrating systems, a step-by-step approach were terms used by the panels.

If I look at communication, an important point from at least the first two panels was communication with the general public. Democratic approach was mentioned: "empowering" was a term which was used. I think there are also possibilities to react to that, not just from a communication perspective but also from a political perspective where democracy and cooperation with politicians, but also down to a lower than national level, could be interesting issues to discuss.

I think for the panel this is enough food for thought, but I would like to ask the panellists to concentrate on just one of the issues. I think listening and looking the persons, I would like Bedřich Moldan, who is university professor and director of the Environment Centre of the Charles University in Prague, to concentrate maybe on the more technical issue.

I would be very happy if Mr de Backer would concentrate on the communication issue, and I could imagine that Mr Blokland would focus on the political issues. So I am giving the floor first to Bedřich.

• Bedřich Moldan

Charles University, Czech Republic

In fact, I was planning to say something from a more technical point of view, because I have been in this indicators business for something more than 10 years. We have published some books, so I may share some experience and some views on that, also from listening to the debate this morning which was very rich and useful.

For the speech of Bedřich Moldan, see page 214.

- **Pieter Everaers**

Chairman

Thank you, Bedřich, for these very concrete recommendations. When introducing you, I forgot to say that you, of course, have been for many years the chair of the scientific board of the European Environment Agency in Copenhagen, and I think this experience is very much appreciated in this context.

For the second part, I would like to give the floor to Mr de Backer. Willy de Backer is as an independent businessman, working on environment, energy and economy. He has worked for the Parliament, even been in the Parliament, but that is ten years ago I understand. So you also have some links to politics.

For the speech of Willy de Backer, see page 215.

- **Pieter Everaers**

Chairman

Thank you very much, Willy, for these ideas, some – in the context of statisticians – quite innovative ideas. The word is now for politics, for the Parliament. Mr Blokland, please.

- **Johannes Blokland**

Member of the European Parliament

Before I became a member of the European Parliament, I had a long history as an economist in different institutions, and also as an environmental economist. So I am not only a politician. I will give you some small experience from the past.

For the speech of Johannes Blokland, see page 217.

- **Pieter Everaers**

Chairman

I think as a statistician you are speaking from my own heart, I would almost say. Being responsible for the system of economic and environmental accounting in Eurostat, this is a way which we naturally see as one of the options, and the option on which most of the emphasis can be put. Anders, I think it is your turn, to try to summarise what came out of this expert workshop. We invite you to tell the audience.



Session 5

Workshop conclusions





Anders Wijkman

Member of the European Parliament



Conclusions by the chair

It has been a rich discussion, in all three working groups. I will now try to summarize what I heard this morning, both from the working groups and from the five speakers in the first session. I will not be able to cover everything, but I hope to capture the main points.

Firstly, there seems to be total agreement that GDP is not sufficient as an indicator of welfare and well-being. Some people even think it is useless. Others say: let's keep it and let's complement it in important policy areas where we face particular problems. There are some of you who dream of or aspire to a corrected GDP, call it sustainable national income or whatever. Others, and that seems to be the majority, say let us instead use parallel indicators and present them in a way so that the linkages are well understood.

There seems to be a general impression, particularly from the point of view of statistics that we have good data in many areas. How to package and present the data then becomes the critical issue. Also, it was pointed out that in some areas there are statistics available for each quarter or annually, while in other areas we do not have the same kind of precision when it comes to time limits. It appears to be very important to get a balance here.

Now we have also heard that in several areas we do not have information, we do not have the data required. One such area, obviously, is ecosystem services and natural capital. We need ecosystems accounting, at local level, national level, and global level. We have heard a lot of discussion about bottom-up approaches and participation, and the need for people at local level to be informed.

That being said, I would submit that if I go to a small village in Sweden, and start discussing these issues, they will have difficulties understanding the global linkages. They will not be able to understand by themselves what outsourcing in China or India

means for the economy, for development, for the ecology and for the atmosphere. So we need accounting at different levels, and I would suggest we need a combination of a top-down approach and a bottom-up approach. We cannot manage with one *or* the other.

Another area where we need more information and better understanding concerns the interlinkages between different areas, including the unintended consequences of various policy decisions, as Jacqueline McGlade put it. And that of course goes to the heart of policy-making. In the European Parliament or in the European Union, we have three parallel processes ongoing, with high relevance for the theme of this Conference:

- The Lisbon Strategy, which aims at strengthening jobs, growth, competitiveness, etc;
- Parallel to that there is the Sustainable Development Strategy. A few of us said early on, in 2001 – when both strategies were being launched - let us merge them. Very few listened to that message and it did not happen. Today the argument in favour of a merger is even stronger, if not overwhelming. But we still have two parallel tracks, although I see a “narrowing trend”;
- The third strategy, of course, is climate change mitigation.

How we are organised in relation to these three objectives is critical! Of primary importance, of course, is for the experts to tell us about the interlinkages between these policy areas. But then it is up to us, as politicians, to draw the right conclusions when it comes to the way we are organised. And here we still have a long way to go!

Yet another area where information has to be improved concerns information to consumers about the consequences of the choices they make in their daily lives. There was a representative from

France, referring to recent debates in France – which obviously have been interesting compared with the past – where consumers call for information both about the market prices of products, but, as well, about the “shadow prices”, in order to obtain information about the hidden environmental cost. Obviously we don’t have enough data to do that properly today, but it’s an interesting approach and we have to improve whatever we do in the field of consumer information - whether we call it eco-labelling, information based on lifecycle analysis, etc. The European Commission is coming out with some proposals early next year, one on sustainable consumption, one on sustainable production and one representing a review of the European Ecolabelling System.

Then, from a social point of view, I was struck by the plea to understand better – at a disaggregate level – what is happening at household level, both in terms of income but also about access to public sector services. It goes without saying that a lot needs to be done here in order to respond to people’s needs, to improve their well-being.

We also touched upon the apparent tension between leisure time and time with your family on the one hand, and the fact that all governments in Europe now want as many grown-up people to work full time as possible. There is a tension here and many families experience a lot of stress, a lot of unhealthy living, etc. These are dimensions of measuring welfare and well-being that have to be better captured.

I also picked up, that when it comes to human capital – education and investment in education, knowledge and skills – we need to improve the statistics.

One comment made early on shows how difficult it may be to agree on a precise definition of well-being and happiness. It was a lady from Brazil who said, that *‘in my city, Rio de Janeiro, probably the most important thing for happiness is to feel secure.’* In my country, Sweden, I can say that most people feel secure. So for us “security” would come ‘way down’ whereas in Brazil it comes ‘way up’ on the list of priorities. That is just one example.

Lastly but not the least, let me make a general point with regard to the interface between growth and the environment. I am a little bit hesitant regarding this notion of “decoupling” economic growth and resource use. I do understand and



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appreciate that in Japan for instance they are much more efficient in their resource use than what is the case, for instance, in the United States. The difference is almost a factor of three.

On the other hand, if we start describing “decoupling” as **the solution**, we give the impression that you can somehow grow without using energy and resources and you cannot. Of course, we can and should make resource use much more efficient, but we cannot separate the economic model from the natural world and this notion does not seem to be well understood by people in general. There are limits to growth!

Finally, how do we package information once we have all that beautiful data? Information and knowledge result in very little action unless they lead to better understanding – so that is of course a very important challenge. One of our speakers shared some experiences from the media world and we all know how difficult it is. When asked to comment to the media on issues related to growth and the environment we are asked to express things very briefly – normally ten, fifteen seconds – whereas what we are called upon to explain is very complex and can hardly be done in the form of “sound bites”.

We need better information for policy-makers like me, but also for people in general and this is a huge challenge. I think we should employ some of the best marketing companies in the world to help us do this, because otherwise we will fail.

There were a few interesting suggestions from the discussions in terms of information. One was to put pressure both on governments and companies to spell out more clearly how they are using resources and how the trends are going in terms of efficiency. That’s a very simple message that would help us to elevate the discussion on these issues.

Another important suggestion was: set clear goals on where we want to be in five and ten years. Maybe the conference could try to address some of those goals tomorrow afternoon.

Then, finally, a few personal comments. I strongly think we have to take a fresh look at how taxation is being organized. Finance Ministries depend on the system we have in place today and they are normally dead scared of changes in the way the economy is organized – so here we need specific studies.

I also think that we have to take a fresh look at education. If we don’t give people a better possibility to understand how things are interlinked, how can we then expect them, in their professional capacities, to address those linkages with a view of policy integration?

I would particularly single out economists. I trained as an economist. I would submit that in most schools of economics in the world, it is not compulsory to learn anything about the atmosphere and the biosphere and the interconnections between economics and the natural world. To me this is an unacceptable situation! How can it be like that?

The market economy is said to be good at dealing with scarcity. This may be true for products traded in the market, but it is definitely not true for environment scarcity. Here we need an instant reform of the economic model to help us address the depletion of natural capital and ecosystem services.

Let me close there. Once again, many thanks for your active participation and many valuable contributions. I am looking forward to seeing you all at the Conference, starting immediately after lunch!