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SEEA and Sustainable Development

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Thank you for the opportunity to talk with you today about SEEA, and its importance in measuring sustainable development.

The 29th of February 2012 was a red-letter day for official statistics. It was on that day that the United Nations Statistical Commission adopted the System of Environmental-Economic Accounting Central Framework as an international statistical standard. This was the first time that the Commission had adopted a standard in the field of environmental statistics, and as such was pivotal to mainstreaming environmental-economic accounting, and environmental statistics, more broadly, within the official statistical system. Traditionally, official statistics have focussed on demographic and economic statistics, and in the latter part of the twentieth century, on social statistics. The first part of the twentieth century, will I believe, establish environmental statistics as a fourth pillar, although there is still quite way to go.

So why does SEEA, and environmental statistics more broadly, matter? Well fundamentally, it is because our life, and our well-being, depends on the environment. The environment provides the air and water that sustains us. It provides essential inputs for our productive processes, which in turn provide the goods and services we need to survive and enjoy life. And the environment also provides us with non-economic benefits, such as recreation, information and knowledge, and spiritual and symbolic benefits. Environmental issues, directly or indirectly, permeate a vast array of public policy issues. And it is our job as official statisticians to measure the things that are important to our citizens. Our integrity and our professionalism are critical to there being sound information for decision making purposes.

Of course, the SEEA Central Framework doesn't provide all of the information that is needed about the environment and its interaction with humans. The essence of SEEA is the measurement of the linkages between the economy and the environment. But even with this somewhat narrower scope, SEEA is fundamentally important to our understanding of many of the pressing environment issues we face, at local, national and global levels. Also, while the concept of sustainable development is broader than environmental sustainability, SEEA is the centrepiece for us to be able to understand sustainable development from an environmental perspective. And while social issues pertaining to the environment are not directly measured in SEEA, we know that there are links to the economy and broader perspectives of well-being through the economy's links to work, education, health and so on. So SEEA can also offer us a window into understanding the social aspects of environmental issues.

The adoption of the SEEA Central Framework as an international standard culminated twenty years of work within the international statistical system, firstly by the 'torch bearers'

who early on recognised the need to have a systematic understanding of the linkages between the environment and economy, and then through a widening involvement of national statistical offices and international statistical institutions. Incidentally, as I'm sure many of you know, a prominent torch bearer was Walter Radermacher who is, of course, now Director-General of Eurostat. It's fantastic to know that SEEA has friends in high places!

SEEA had its antecedents in the 1987 Brundlandt Commission. The Brundlandt Commission gave us a modern definition of sustainable development. Importantly, Brundlandt was instrumental in promoting the idea that the environment was not just a physical construct; that it had to be considered in relation with economic progress. We can better understand the environment in relation to development and we can better understand development in relation to the environment, because they cannot and should not be distinguished as separate entities. To quote from the Commission Report;

"...the "environment" is where we live; and "development" is what we all do in attempting to improve our lot within that abode. The two are inseparable"

The Brundlandt Commission led to 1992 United Nations Conference on Environment and Development, commonly known as the Rio "Earth Summit". The Conference's action plan, known as Agenda 21, stated that:

"A first step towards the integration of sustainability into economic management is the establishment of better measurement of the crucial role of the environment as a source of natural capital and as a sink for by-products generated during the production of man-made capital and other human activities. As sustainable development encompasses social, economic and environmental dimensions, it is also important that national accounting procedures are not restricted to measuring the production of goods and services that are conventionally remunerated. A common framework needs to be developed whereby the contributions made by all sectors and activities of society, that are not included in the conventional national accounts, are included, to the extent consistent with sound theory and practicability, in satellite accounts. A programme to develop national systems of integrated environmental and economic accounting in all countries is proposed."

The adoption the SEEA Central Framework as an international standard was a critical milestone in response to Agenda 21. So as we can see, the history of SEEA and the consideration of sustainable development have gone hand in hand for over twenty years.

A critical aspect of the SEEA Central Framework is its modularity. Unlike the national accounts, which typically have to be compiled across the whole economy to be of use, the SEEA Central Framework can be applied selectively and still generate meaningful results. Countries are able to determine those aspects of SEEA that are the most relevant to their own circumstances. For example, for countries where water scarcity is an issue, priority might be given to compiling water accounts, or for countries that are at risk of significant environmental degradation then environmental protection expenditure accounts might be the most important.

Another critical aspect of the SEEA Central Framework is its relationship with the System of

National Accounts. The SEEA Central Framework applies the accounting concepts, structures, rules and principles of the SNA to environmental information. It offers an environmental perspective of the monetary stocks and flows that are already recorded in the national accounts, and complements this with the presentation of physical information in a consistent manner. This strong relationship with the SNA has both benefits and limitations. The benefits arise from the consistency between the SNA and SEEA statistics through the SEEA Central Framework's use of well established national accounting concepts and methods. The main drawback is that by limiting monetary stocks and flows to those already recorded in the SNA -- in other words, only recognising those environmental benefits that have directly observable economic value -- there is an incomplete recording of the benefits that the environment provides to humans. Of course, a significant reason for the exclusion of non-economic benefits from the SEEA Central Framework is that these valuations are not directly observable and there is considerable contention about how these should be valued, or indeed whether it should be the role of official statisticians to seek to make such valuations.

The adoption of the SEEA Central Framework as a statistical standard isn't the end of the environmental accounting story. It has only brought an end to the first chapter. There is still a significant journey ahead of us. We are the end of the beginning, rather than the beginning of the end!

While quite a number of countries have developed environmental accounts in one form or another, the SEEA Central Framework needs to become more widely implemented, none the least because many of the environmental issues we face, and the economic responses to these, are global in nature. Also, as I have mentioned, the SEEA Central Framework has limitations in terms of measuring the full extent of interactions between the environment and people. To help address these, UNCEEA has embarked on the exciting development of SEEA experimental ecosystem accounting. I'd now like to talk a little about the implementation challenges and about developments in ecosystem accounting.

Turning first to implementation, it will take a considerable effort to fully implement the SEEA Central Framework across all countries. In recognition of this, the Statistical Commission, on adopting the Central Framework, stressed that SEEA implementation should be a long-term program, to be implemented flexibly and incrementally, giving full consideration to national circumstances and requirements. The Commission requested that the UNCEEA develop an implementation strategy for its consideration based on these principles. Such a strategy was subsequently developed, and it was endorsed by the Commission at its meeting earlier this year. The strategy focuses on the practical actions that can be taken by international organisations and national statistical systems to maximise the extent to which SEEA can be implemented in the short to medium term.

The SEEA implementation strategy has been constructed against a backdrop of a range of international initiatives relevant to environmental-economic accounting, which can help give impetus and focus to implementation, as well as potentially help marshal resources -- either directly or indirectly -- for implementation. These initiatives include the World Bank's Wealth Accounting and Valuation of Ecosystem Services, or WAVES, program; the United

Nations Environment Program's Green Economy initiative, the OECD's Green Growth Strategy and the European Commission's work on Beyond GDP and related to this the European Union Strategy for Environmental Accounting.

The implementation strategy has a two-fold objective:

- to assist countries in the adoption of the SEEA Central Framework as the measurement framework for environmental-economic accounts and supporting statistics, and
- to establish incrementally the technical capacity for regular reporting on a minimum set of environmental-economic accounts with the appropriate scope, detail and quality.

In line with the Statistical Commission's request, the strategy allows for a flexible and modular approach. This approach recognises that countries do not have to implement all accounts at the same time. Few, if any countries, will compile all possible accounts. It is up to individual countries to determine their own priorities, and their own time frame for implementation. At the same time, the strategy supports efforts by international organisations (such as Eurostat and the OECD) that wish to collect data from SEEA accounts for regional or global or monitoring purposes.

The implementation strategy is operationalised, at the country level, through a number of phases.

The first phase consists of establishing a national institutional mechanism to drive the implementation. Clearly, a key element of this is the willingness of the national statistical office to take a leadership role in implementing environmental-economic accounting. But while this is a necessary condition, it is not a sufficient one. There also needs to be strong support from policy-makers and other potential users of environmental-economic accounts, otherwise there is unlikely to be a sustained program. Building this support takes time and effort, often by senior people within the national statistical office. However, in my experience, if the discussions are framed in a way that resonates with decision makers, it is possible to build strong external support for environmental-economic accounting. Beyond this, where necessary, funding needs to be secured. And because environmental-economic accounting typically requires the statistical office to obtain data from other agencies to complement the economic information generally available to the statistical office, agreements need to be struck with these agencies that the relevant information will be provided.

The second phase of the implementation strategy consists of a self-assessment phase. This phase helps countries identify which accounts have to be implemented to serve policy

needs and what basic data sources will be required to compile these accounts. This should be a demand driven process that prioritises which accounts should be developed first. In developed countries, many of the relevant basic data sets may be readily available, and environmental-economic accounts can be compiled with relatively little effort. However, in some cases, data may be non-existent or of poor quality, at least from an environmental-economic accounting needs perspective, in which case investments in source data may be required. Also, environmental-economic accounting depends on the availability of relevant national accounting data, and this phase should identify what national accounting data are needed to support the accounts that have been identified as high priority.

The next phase is the preparation of a development plan for environmental-economic accounting, which sets out the path by which the high priority accounts identified in the previous phase will be developed, including any investments that are required to the source data sets. The development plan should also consider the skills of staff, as environmental-economic accounting is technically demanding work. If these skills need to be enhanced, there should be a capability development plan. The systems and processes that will be used to produce the environmental-economic accounts need also to be considered, as do organisation arrangements for the work. In regard to the latter, environmental-economic accounting is a bridge between national accounts and environment statistics. The environmental-economic accounts program could be located within national accounts, within environment statistics, or independently of the two. There is no 'right' answer -- what is critical is that wherever the environmental accounts team is located it has good relations with both the national accountants and environment statisticians, and beyond this with source data areas both inside and outside the national statistical office. Ensuring that these relationships are established should be an important element of the development plan. Finally, the development plan for environmental-economic accounting needs to form part of the national statistical office's overall development plan. Environmental-economic accounting should be considered as an integral part of a national statistical office's activities, and not just an 'add on'.

The successful global implementation of the SEEA Central Framework will depend on support provided by the international community. This support should take a number of forms, including the provision of training and technical assistance, the development of manuals, handbooks and other materials to support implementation, the facilitation of the sharing of country experiences and best practices, and ongoing advocacy at the international level to build support among governments, the business sector, the academic community and the general public for environmental-economic accounting. Furthermore, there is a need to ensure that there is effective coordination to facilitate cooperation across those international agencies that have an interest in progressing environmental-economic accounting, and this needs to include the coordination of funding and technical assistance efforts. Underpinning this, there should be a consistent information structure for

monitoring and reporting progress, to assess the efficiency of the technical assistance program, evaluate lessons learned and use resources effectively. Monitoring, reporting and evaluation should be used to identify challenges so that timely interventions can be made to keep plans on track.

To give effect to this international coordination, it proposed that a Partnership Group be established under the auspices of UNCEEA to provide oversight to the global international efforts. There is an aspiration to establish a trust fund to support the work of the Partnership Group, which would complement resources made available by individual international organisations. There will be a conference next week in New York that will determine the level of support for a coordinated approach to the implementation of the SEEA Central Framework, and further explore the ideas and reflect on the means by which this coordination could be achieved.

During the SEEA revision process it became clear that there remained issues, particularly around non-market valuation, where agreement was unlikely to be reached within the time frame of the revision process. It was decided that the best way to take forward this work was to focus on accounting for the environment from the perspective of ecosystems. This compares with the focus of the SEEA Central Framework, which takes as its point of departure the national accounts and considers the environment from this perspective. Ecosystem accounting sees the environment as a system that has a relationship to the economy and other human activity.

This work is presented in SEEA Experimental Ecosystem Accounts. This is not an international standard. Rather, it is a state-of-the-art assessment of this emerging approach to environmental accounting which is bringing together statistical, scientific and academic thinking. The purpose of SEEA Experimental Ecosystem Accounts is to provide a guide to those countries that might be interested in embarking on this type of environmental accounting, recognising that such work is likely to be experimental in nature in its embryonic stage. "Experimental" statistics is one way that national statistical offices can explore new areas of statistics that might not be sufficiently developed to be considered official statistics; in order to explore issue, build experience and develop capability in a manner that invites a positive dialogue with key users.

Ecosystem accounts measure the flow of benefits to humanity provided by ecosystems and the measurement of environmental conditions in terms of the capacity of ecosystems to provide benefits, both economic and non-economic. A systems approach, within a broad framework that can be related to the SEEA Central Framework, has been adopted. The measurement of ecosystems and ecosystem benefits in both physical and monetary terms is described. While the valuations of non-market assets and flows are discussed, no recommendations are made. Our thinking is not sufficiently advanced to make concrete

proposals. Even if there were to be agreement about preferred approaches it is likely that the methods would be those that many national statistical offices would find difficult to incorporate into their statistical systems because of the extent of modelling that would be required. Nonetheless, there remains significant policy interest in obtaining these valuations and further research on how to value ecosystem assets and ecosystem services in a robust way that is consistent with national accounting principles remains a priority. But even if such valuation remains a bridge-too-far for statistical offices, then there is still substantial benefit in ecosystem accounting in physical terms in a way that can be related to economic measures, which can provide broader insights into environmental sustainability than those provided from the SEEA Central Framework. And while there are challenges, I am hopeful that at some time in the future national statistical offices might become more comfortable with the range of information that could be provided.

While there remains a degree of uncertainty about the full extent to which national statistical offices can be involved in ecosystem accounting, there is a strong role for NSOs to work with others to support efforts in ecosystem accounting. Official statistics expertise in organising large, diverse and complex data sets, using standard definitions and classifications, providing relevant socio-economic data, and applying data quality standards are all significant capabilities that are directly relevant to ecosystem accounting. Further, central to the success of ecosystem accounting is the involvement of a wide range of professional communities, since no single organisation can cover all of the information requirements. The coordination roles in regard to broader national statistical systems that most NSOs have make NSOs a natural candidate to provide a leadership role to take the work forward.

I'd like to briefly return to the theme of sustainable development. As we know, there are a range of international initiatives relating to this. These include the actions arising from the last year's Rio+20 conference, including the development of sustainable development goals and the mandate given to the United Nations Statistical Commission to develop broader measures of progress. The processes for the determining the post 2015 UN development agenda are byzantine and it is far from clear what the outcomes will be. Nonetheless, in whatever emerges, I would hope and expect that SEEA will provide the underpinning for measuring those aspects of sustainable development pertaining to environmental sustainability, recognising the interdependence between environmental sustainability and social and economic development. SEEA fits squarely in this space, and the statistical community needs to continue to advocate, at both national and international levels, the benefits of using SEEA as an underlying measurement framework. Not only will this ensure that whatever goals are chosen are capable of actually being measured, and measured consistently across countries, it will also provide an impetus for SEEA implementation.

A critical aspect of this advocacy will be to reinforce the strength of the systems-based

approach underlying SEEA. While policy makers tend to gravitate toward identifying indicators, as these have resonance with politicians and the general public, indicators that are drawn from accounting systems are consistent, comparable and coherent and, as such, more amenable for policy analysis. While by no means will SEEA be the only measurement framework underpinning the sustainable development agenda, as there are aspects of social and economic sustainability that go beyond environmental sustainability, it should be seen as a critical part of the overarching measurement strategy.

Likewise, in developing broader measures of progress beyond GDP, SEEA should play an important role in determining the environmental aspects of progress. The importance of the contribution of the environment to progress was recognised by Stiglitz Commission on the Measurement of Economic and Social Progress, which noted that "choices between promoting GDP and protecting the environment may be false choices once environmental degradation is appropriately included in our measurement of economic performance." The recent Statistical Commission meeting established a process for taking forward the work on developing broader measures of progress, and UNCEEA will be seeking to ensure that SEEA's role is appropriately reflected. Unlike the broader sustainable development agenda, the process for developing better measure of progress is within the hands of official statisticians, and there already exists a strong appreciation of the benefits of SEEA within this community, which was reflected in the decision to adopt the SEEA Central Framework as an international standard.

As I said earlier, we remain on a journey with environmental accounting, notwithstanding the significant milestone that was achieved with the adoption of the SEEA Central Framework. There have been many challenges along the way, and there remain challenges ahead. Notwithstanding these challenges, we can look forward to an increasing prevalence of environmental-economic accounting, and an increasing understanding of the usefulness of environmental accounting for policy purposes. The world, and most of the countries within it, are facing increasing environmental issues, and the evidence base offered by SEEA provides valuable information in dealing with these issues. Critically, because of the links between the environment and the economy that are at the heart of SEEA, these environmental issues can analysed within a framework of sustainable development, which is at the forefront of the international policy agenda. The future is bright for environmental accounting.

Thank you.