UN Committee of Experts on Environmental Accounting

New York, June 2011

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Speaking Notes

Peter Cosier:

- Director of the Wentworth Group Concerned Scientists
- based in Sydney, Australia
- trained in natural resource management
- career in environmental policy
- 6 years - Advisor to the Australian Environment Minister

Wentworth Group:

- formed in 2002
- the goal of connecting science to public policy
- science has a very important role in the sustainability challenges of the 21st century, but we nave not been very good at presenting science in a manner which can be readily used by policy makers.
- Our work is focused principally in 4 areas:
    - deriving multiple benefits from terrestrial carbon offsets
    - Water resource management in the Australia's largest river system and primary food growing region, the Murray Darling Basin
    - Climate change policy – both mitigation and adaptation
    - National environmental accounts

Our interest in Environmental Accounts:

- Australia is trying to deal with 2 centuries of land and water degradation, the loss of biodiversity, and the over-exploitation of our marine resources.
- This is an issue we share in common with many other countries as we seek to manage the impact the industrial revolution has had on the health of our natural systems.
- Over the next 40 years, the need to feed 9 billion people will place greater pressures on the health of the world's natural resources and this is against a background of a new challenge of climate change.
- The economic parallels are compelling: the world is working its way out of a global financial crisis because we borrowed more from the future than we were able to repay, and the system broke.
- We are also facing great environmental challenges for the same reason – we have been increasingly living off and degrading our natural capital beyond the ability of nature to replenish.
- The difference is that we have a far greater ability to correct our economic mistakes than we have in correcting our environmental mistakes, because after the crisis of Great Depression the world put in place a system of economic accounts.
- If we are to have any hope of managing the environmental challenges of the 21st century, we are going to have to apply the same discipline to environmental management that we apply to managing our economy.
- Australia, as has many other parts of the world, have for decades now been trying the traditional approaches to environmental policy, such as *State of the Environment* type reporting.
- These have all failed, simply because we have not found a means to systematically measure the condition of our ecosystems in a way that can be integrated into economic decision making.
- The mistake science has made was not to learn from the experience in building economic accounts.
- And if you don't measure it, you can't manage it.

Accounting for Nature:

- A number of people have said how difficult ecosystem accounting is – and it is complex – ecosystems are complex.
- I sometimes feel we are where economic statistics were in the 1940s – We know we won't have the answer overnight, but where do you start?
- The Wentworth Group came to the view that if we are to successfully integrate ecosystem health into economic decision making, we needed to find a way by which science can talk to economists and statisticians.

- We realised that the design of environmental accounts can benefit greatly from the experience and discipline that has evolved in economic accounting over the past 50 years.
- We gathered a group of experts, including economists and accountants to look at a new approach.
- After 18 months of work, in 2008 we produced "Accounting for Nature".
- This Accounting for Nature model confronts two problems that have plagued previous attempts:
    - We recognised that we do not have, nor will we ever have, enough money to systematically measure everything – as scientists often demand; and
    - Even if we did, we don't have a common unit of measure that allows us to place scientific information into an accounting framework - and without this, it is not possible to link ecosystem health to economic decision making.
- I'll return to this in a moment.

2011 Australian Trials

- In Australia we have a regionalised natural resource management system in place: 56 regions covering the continent of 750 million hectare.
- In 2011, 9 of these regions, covering a variety of landscape types and varying levels of professional and technical capacity are trailing this 'Accounting for Nature' model.
- We are doing this in partnership with government agencies – in particular the Australian Bureau of Statistics, Bureau of Meteorology, government departments, and CSIRO
- The first year trials are trailing a process as much as a product.
- We have created two committees – a Scientific Accreditation Committee and a Technical Accounting committee - one to accredit the science, the other to ensure the information fits within an appropriate accounting framework.
- We are also in the process of developing two manuals - 'Guidelines' for how to construct the accounts and an 'Accreditation Manual', which sets the standards for their accreditation.

Relationship to SEEA

- To date the emphasis in the SEEA accounts has been on measuring the economic impact of resource depletion.
- This is important, because revealing the prices associated with physical assets can tell us how efficiently natural resources are being used to support our economy and how this activity impacts on the stocks of those physical assets.
- However, if environmental accounting is to contribute to the sustainable management of the world's natural capital, it must also be able to measure the impact economic activity is having on the health of ecosystems.
- These trials are to test whether the Accounting for Nature model will satisfy this test.

The concept of a Common Currency for Ecosystem Health

- National economic accounts are built using a national currency which assigns a common value for the exchange of goods and services.
- We do not have a common measure for the environment and as a consequence, environmental policy is still built around a barter system.
- The starting point for building a system of environmental accounts must therefore be the creation of a common unit of measure that is capable of assigning a value for all environmental assets and indicators of ecosystem health.
- Creating a common measure for environmental health must address a number of challenges:
    - no two environmental assets are the same;
    - often different indicators are needed to measure the same asset in different locations;
    - the cost of data collection creates significant variation in the quality of information collected; and
    - no single indicator can provide a complete picture of ecosystem health.
- There is no doubt that modern science is capable of providing this information. What is needed is a system of accounts that systematically organises and reports that information.
- The *Accounting for Nature* model creates a common unit of account for all environmental assets and indicators of ecosystem health, irrespective of the unit of measurement, by using the science of reference condition benchmarks.
- The science of reference condition based indicators provides for environmental accounting what economic accounts already have - a common currency.
- This common currency does <u>not</u> imply a monetary value; it is simply a scientific method for standardising the measurement of environmental assets so the

relative state of one asset can be compared with another, and information at different scales and for different assets may be aggregated.

- This method allows environmental accounts to adopt an economic accounting framework.
- There are many parallels between economic accounts and environmental accounts.
- However, there is a subtle, but important difference behind the collection of economic statistics and environmental accounts, that is all to often not recognised in their design.
- In economic policy, the focus is to measure economic growth (or otherwise) in the economy, whereas the policy focus for environmental accounting is to maintain an environmental asset at a certain condition so that it can continue to provide services to humans indefinitely.
- Economic policy is focussed on increasing the flows of good and services, and in doing so improving our economic wellbeing.
- Environmental policy is not just about increasing or decreasing quantity, it is primarily about maintaining the condition or quality of a stock.
- If environmental accounts don't measure the change in the condition of a stock, and simply measure a change in quantity, then they are of no value to policy makers.
- The Account for Nature is built around this understanding: reference condition is a benchmark that describes an environmental asset in its most healthy state.
- It can be:
    - an estimate of its pre-industrial condition; or
    - an estimate of the best condition at a site; or
    - a modelled condition that reflects the least disturbed condition possible.
- By using the reference condition methodology, not only does it measure the change in all environmental assets on a common scale, it also describes how each is asset is tracking towards or away from a benchmarked healthy condition.
- Having said that, I must also emphasis that reference condition accounting does not imply or suggest that environmental assets should be returned to a pre-disturbance condition:
    - it simply uses this information, in the same way national accounts are used, to inform policy development through other processes and products that are derived from these accounts.

Regional Scale trials

- We believe this method is capable of working at all spatial scales – property, catchment, regional, national, and international, because it enables data that is collected at a local scale to be aggregated.

- Our trials are focussing on a regional scale – this is driven both by need and by the fact that we believe we have access to sufficient information at this scale on which to base the trial.
- These trials will take existing information – both current and past – and use the reference condition benchmarking to create a common environmental currency that allows this information to be systematically organised into an accounting framework.
- There is a lot of environmental information around – and with remote sensing technologies there is a lot more to come. What it needs is a structure that organises all this information into an accounting structure.

Guidelines and Accreditation Standards

- If environmental accounts are to be accepted by markets and decision-makers, they must have confidence that the common environmental currency properly reflects the condition of the environmental assets being measured.
- Statisticians and economists need to be confident that the science is robust, and that the accounts satisfy statistical standards.
- Accreditation involves experts assessing accounts against a set of standards and making a judgement as to whether they meet the standards to an acceptable level.
- Accreditation standards have been established to define such standards and assess the regional environmental accounts in these trials.
- Our objective is that these environmental accounting standards should also be able to be applied in the construction and accreditation of local (sub-regional) and property scale environmental accounts in the future.

Review

- I'm delighted to be here with you today, because I feel that, through SEEA, we are about to embark on a journey that in years to come will see environmental accounting evolve into the same level of sophistication that economic accounting has reached.
- It won't solve all the world's problems, but it will at least give us humans the tools to do so.
- In recognising this, at the end of this first year of our regional trials, our intention is to have the process peer reviewed, and take lessons from the experience.
- Our goal is to produce the first set of national environmental accounts using information supplied by all 56 regions within 3 years.

Accounting for Nature

Australian Regional Environmental Accounts Trials 2011

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