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Regional Trials of Environmental Asset Condition Accounting in Australia

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Let me thank the ABS for what is proving to be a very timely conference.

Environmental accounting is a very rapidly evolving public policy space both internationally and here in Australia and this conference has provided the opportunity for sharing what is rapidly becoming a wealth of knowledge.

1. Introduction

I am going to introduce this topic by addressing the question: why do we need environmental accounts that measure the condition of environmental assets; and then describe the benefits of a common unit of measure of condition that we are using in these regional trials.

Carla Sbrocchi will then update you on progress we are making in testing the practical application of this methodology across Australia, and present some examples on how this model of environmental asset condition accounting can be used to link the environment to economic decisions.

2. Let me start with why.

Since 1970 the size of the world economy has more than trebled. Over the next 40 years global GDP is projected to almost quadruple, despite the recent recession.

That's a seven fold increase in GDP in the lifetime of one human being.

While economic growth has pulled millions out of poverty, it has incurred significant costs to the environment. According to the Millennium Assessment, human impacts on the

environment are now approaching (and in many cases have already exceeded) the ability of biophysical systems to meet future demands on them.[i]

In its most recent *Outlook* report, the OECD warn that "providing for a further 2 billion (people) by 2050 and improving the living standards for all, will challenge our ability to manage and restore those natural assets on which all life depends", and that without new policies, continued degradation of natural capital risks irreversible changes that could endanger two centuries of rising living standards.[ii]

The problem is, we have heard all this before.

The introductory section to SEEA describes its genesis at the Rio Earth Summit in 1992. The Earth Summit produced the *Rio Declaration on Environment and Development*, as well as two legally binding international agreements: the *Convention on Biological Diversity* and the *Framework Convention on Climate Change*.

Australia, along with the vast majority of other nations, is a signatory to that declaration and to the two conventions.

The Rio Declaration comprised 27 principles, the first of which was that "Human beings … are entitled to a healthy and productive life in harmony with nature."[iii]

1992 was 20 years ago, and even the most optimistic assessment would have to acknowledge that we are a long, long way from achieving those objectives, that on most indicators we have gone backwards, and that the sheer scale of growth means that attaining those aspirations is getting harder, not easier.

That's a pretty dim picture. So what of the future?

If development (or progress) is to be sustainable, it must maintain the environment in a condition that can continue to provide goods and services to humanity, indefinitely into the future.

There can be no other definition of sustainable development.

Economists tell us that the rapid expansion of the global economy, and in particular the resource intensive nature of economic growth of China and India,[iv] combined with population growth, the increasing demand for food and fibre, and climate change, will combine to place even greater pressures on the world's environment.

Given these realities, we have only one policy option available - we need to decouple economic growth from ongoing damage to our natural capital.

That's why an effective measure of <u>condition</u> of our environmental assets is the holy grail of environmental accounting, because it is impossible to protect, maintain or restore an environmental asset if you don't measure its condition.

If you don't measure it, you can manage it.

Decoupling economic growth is a phenomenally difficult challenge for all the reasons we discussed yesterday, made all the more difficult, because we do not have the information systems that measure the condition of our environmental assets at scales which can inform economic decisions.

It is this specific area of environmental accounting that our regional trials are seeking to address.

We are not describing ecosystem services and we are not building an alternative to the land use and water use accounts – we simply are testing the practical application of a scientifically robust model, that places a non-monetary measure of the condition of any environmental asset, that can be applied at any scale.

3. The Condition Measure

One of the more challenging elements of the *Accounting for Nature* model that is being used for these regional trials, is establishing a common unit of measure of condition for all environmental assets, using the science of reference condition benchmarking. We call this condition measure an *Econd*.

There is a world of science sitting behind this, which I will not go into today, but if you are interested, I can provide it for you.

An *Econd* is "a scientifically accredited measure, metric or model which reflects the condition of an environmental asset, and is created by combining (where appropriate) condition scores of environmental indicators against a reference condition benchmark."[v]

The reference condition benchmark is a scientific estimate of the natural or potential condition of an ecosystem in the absence of significant human, post industrial alteration.[vi]

Current condition is compared against the reference condition benchmark. This gives us a relative condition of any environmental asset, at any scale, irrespective of the unit of measure of each indicator, out of a scale of 100.

What is important, and this is where the value lies, is that in the same way monetary currencies convert infinite complexity into an easily understood and usable means of exchange, so too does a common unit of measure for the condition of environmental assets. Science does all that work for you, before the information is put into the accounts.

Why go to all this trouble? There are many reasons - but let me give you two:

1. Firstly, the common unit of measure allows information to be presented in a simple format that distils scientific complexity so that we can compare the relative condition of an asset to any other asset anywhere, at any scale.

   Society intuitively understands the value of a dollar – a unit of measurement that normalises the 'cost' of things. We do not intuitively understand how our ecosystems function and that's one of the reasons why we have the problems we have.

2. And secondly, environmental accounting is not just an exercise in building national data sets to satisfy the needs of government.

   Millions upon millions of people, make millions upon millions of decisions every day that has an impact on the environment. They can't be expected to make better decisions that will lead to 'a healthy and productive life' – the promise we signed up to in 1992 - without environmental information that informs their economic decisions.

I cannot over-emphasise how important this use of this common unit of measure is.

It would be absurd to suggest that every decision maker should establish their own measure of asset condition accounting – every individual, every business, every industry sector, every local council, every State government. Yet that is precisely what we are doing.

The best way for me to highlight this point is to reverse the question, and ask you to imagine how much more difficult our life would be, if every transaction of a good or service throughout the economy, had to be conducted without a common unit of exchange.

Imagine you were a farmer who grows bananas for a living, and you wanted to buy a new car, but the car dealer would only accept business shirts in exchange for the car.

If the farmer wanted to buy let's say, a new Hyundai, they would have to find some way of acquiring 418 business shirts.

The farmer would have to find a shop that would take his 57,000 bananas in exchange for the 418 business shirts, so he could then go back to the car dealer to buy the new car.

Imagine what last week's budget papers would have looked like.

It sounds absurd, and I know that I am labouring the point, but this is how we manage our environment. We count business shirts here and bananas there, and then somehow hope to find a way to combine business shirts and bananas to produce a Hyundai.

Elegant theory is one thing, but the real test is whether we can turn theory into a credible system of accounts that can work effectively in the real world.

So let me now hand over to Carla Sbrocchi to take you through the structure of the asset condition accounts that we are using and some of the discoveries we have made in the regional trials using this *Accounting for Nature* model.

Carla joined the Wentworth Group late last year, with funding from the Ian Potter Foundation, to coordinate scientific and technical assistance for the regions as they construct their accounts.

4. The Regional Environmental Accounting Trials

It's one thing to build beautiful theories and another thing entirely to test them.

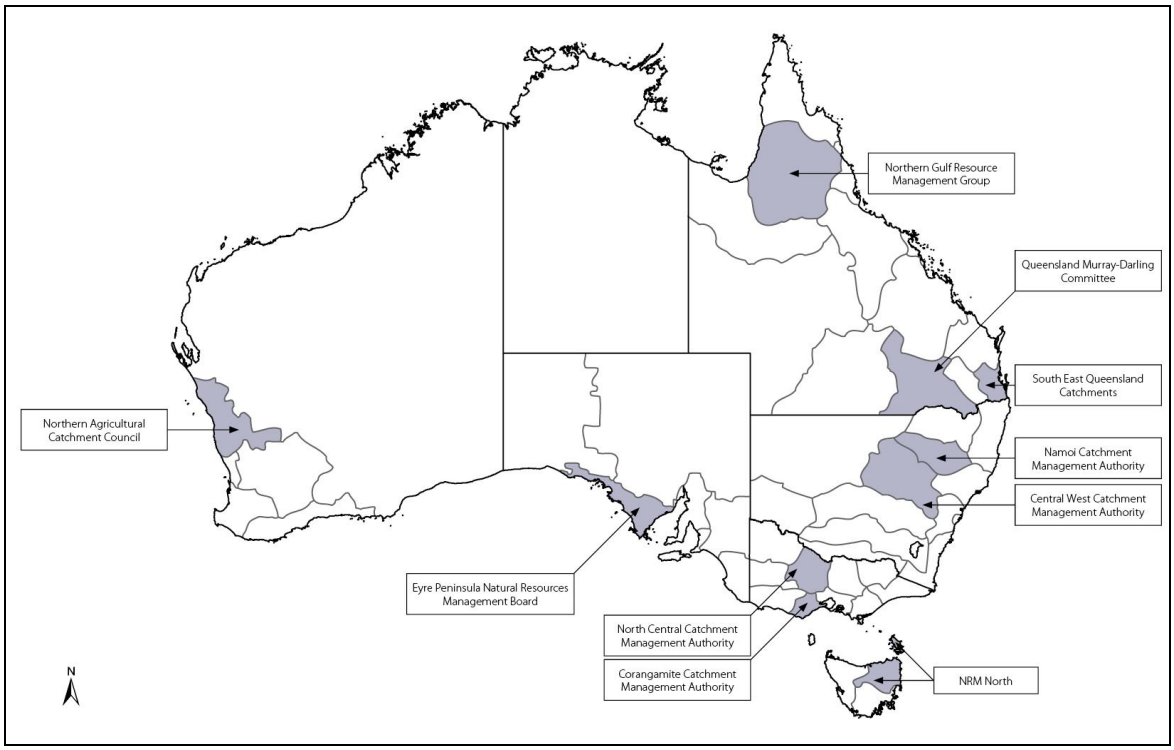
I'd like to take you though some of the progress we have made in Australia where regional natural resource management groups are testing the construction of environmental asset condition accounts.

This is a real world experiment to test a methodology for measuring the condition of any environmental asset, so that it can be used to inform economic decisions at a regional scale, and with the objective of then aggregating this information to form national environmental asset condition accounts.

Using the principles of the *Accounting for Nature* Model (as described by Peter earlier) environmental asset condition accounts need to be based on a common unit of measure, the Econd.

If our policy objective is to 'conserve, protect and restore the health of maintain our ecosystems', then condition accounts also need to be constructed at the scale those ecosystems function – at catchment, landscape and bioregional scales.

These environmental asset condition accounts are therefore based on the regional scale – a scale which has 56 bodies across Australia chartered to manage the environments within their boundaries through community and landholder engagement.



Why did the regions want to be involved? As their core business is to achieve on-ground environmental outcomes, they were keenly aware of how decisions on where to place investment or activities were often made without sufficient information.

Led by the vigour of the natural resource management bodies and in partnership with the Wentworth Group and other experts from the natural resource sciences, the Ian Potter Foundation, the ABS, the BoM, CSIRO, and a number of state government agencies, we embarked on a Trial. We are currently in a "proof of concept" stage, a pilot study if you will, which involves 10 of these regional bodies. We are half way through this stage with the aim to complete by the end of this year.

There are two additional challenges thrown into this ring: no additional resources were sought from federal government to undertake this process, and no new data initially would be collected.

These 10 regions cover a wide variety of landscapes across this expansive country. Each of the regions in our trial varies in its technical capacity, its resourcing capabilities, its data sources, and its organisational arrangements. It's one thing to test a methodology in the most highly resourced regions or agencies; the real test is whether the least resourced, most data poor regions can.

We have established two expert committees to assist with the trials: a Scientific Standards and Accreditation Committee to accredit the science, and a Technical Accounting committee to ensure the information fits within an appropriate environmental-economic accounting framework.

In the past 12 months, the committees have focussed on developing a set of resources that provide advice and structure to constructing the accounts: 'Guidelines' which set out a 6 step process for constructing the condition accounts, an 'Accreditation Manual', which sets

the standards for their accreditation and 'Technical papers' which explore some of the more challenging scientific aspects of determining Econds for some environmental assets.

We have put this effort in at the beginning of these trials to ensure the framework used by the regions is robust and accepted by scientific and statistical communities. I will return to this point again in a minute.

The 10 regions participating in the trial have contributed substantially to the Guidelines which have been a continual work in progress, and have initiated work on the first steps outlined therein: they have begun the process of selecting the key environmental assets for their regions, and identifying indicators and data sources for those assets.

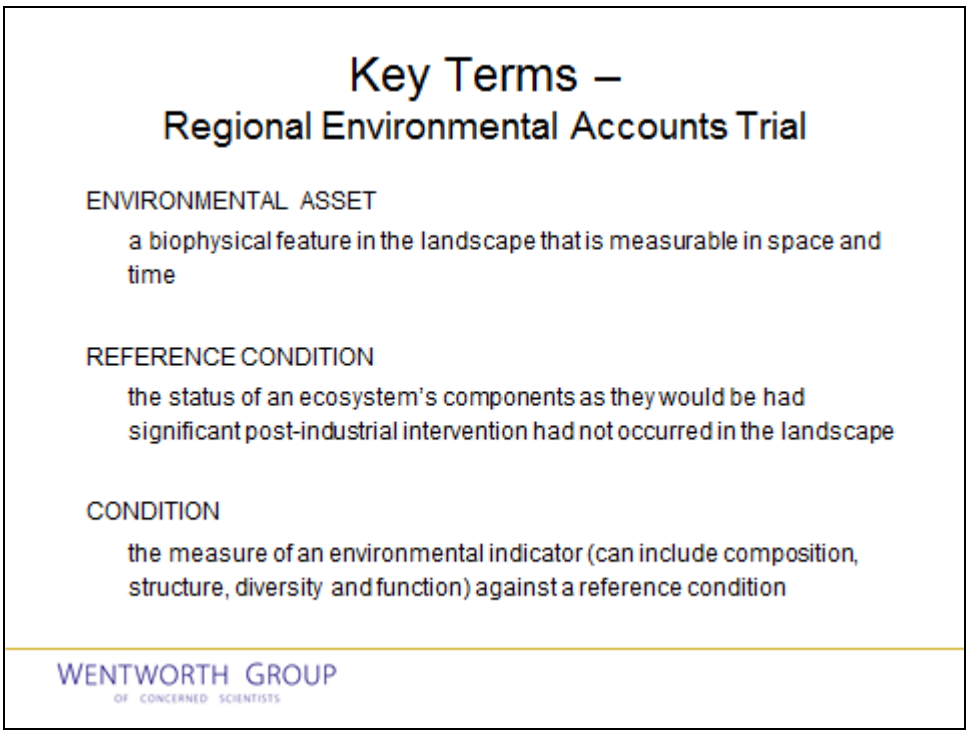
It is because of this collaborative effort, where the different disciplines have willingly come together, that we have been able to make this progress.

5. Structure of the Environmental Asset Condition Accounts

Let me describe the structure of the condition accounts.

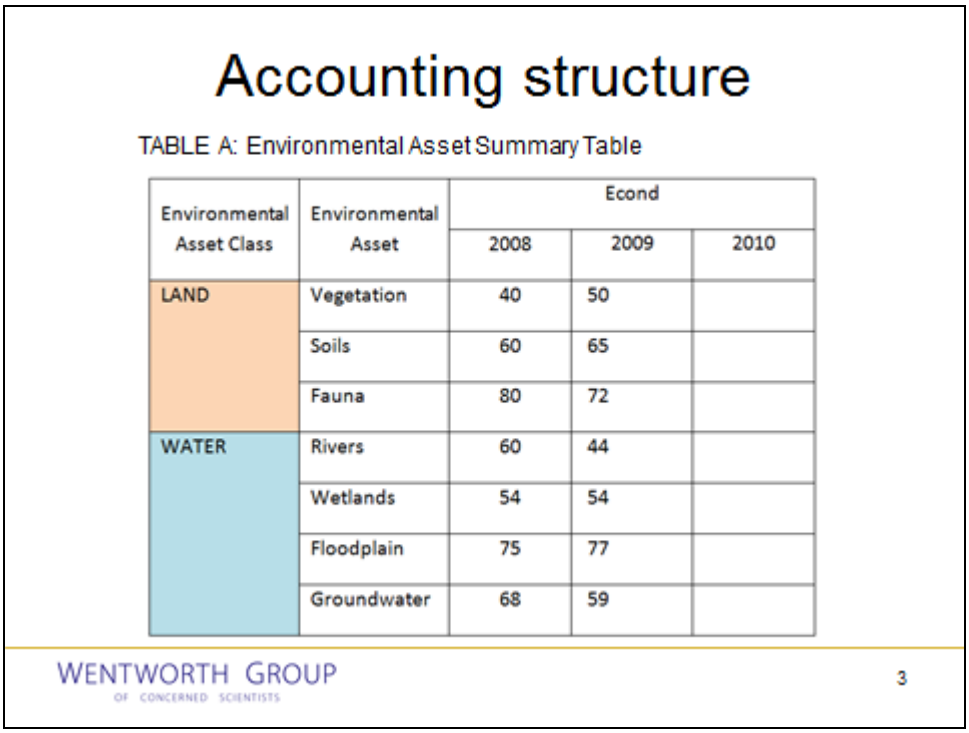
Environmental assets can be described under broad asset classes: Land, Water, Atmosphere, and Marine. Within each asset class there are a range of environmental assets.

We define an environmental asset as "any biophysical feature in nature that can be measured in time and space."[vii]



In other words, an environmental asset can be just about anything that society considers to be an asset. It can be an ecosystem such as a forest or a river system, but the accounts are

not restricted to just measuring the condition of ecosystems. It can be a fishery, agricultural soils, or any other physical feature in nature, such as groundwater, or it can simply be a population of an individual species of whale or birds. It is at the Region level where the assets that are used in the account are nominated – which must accommodate the community-valued assets alongside nationally and internationally-valued assets, such as RAMSAR wetlands.



The Asset Condition accounts are based around three sets of tables. The most basic structure of an environmental account is a summary table, describing the environmental asset classes, displaying each individual environmental asset, and the environmental condition indices (Econds) generated for that time period and over a period of time.

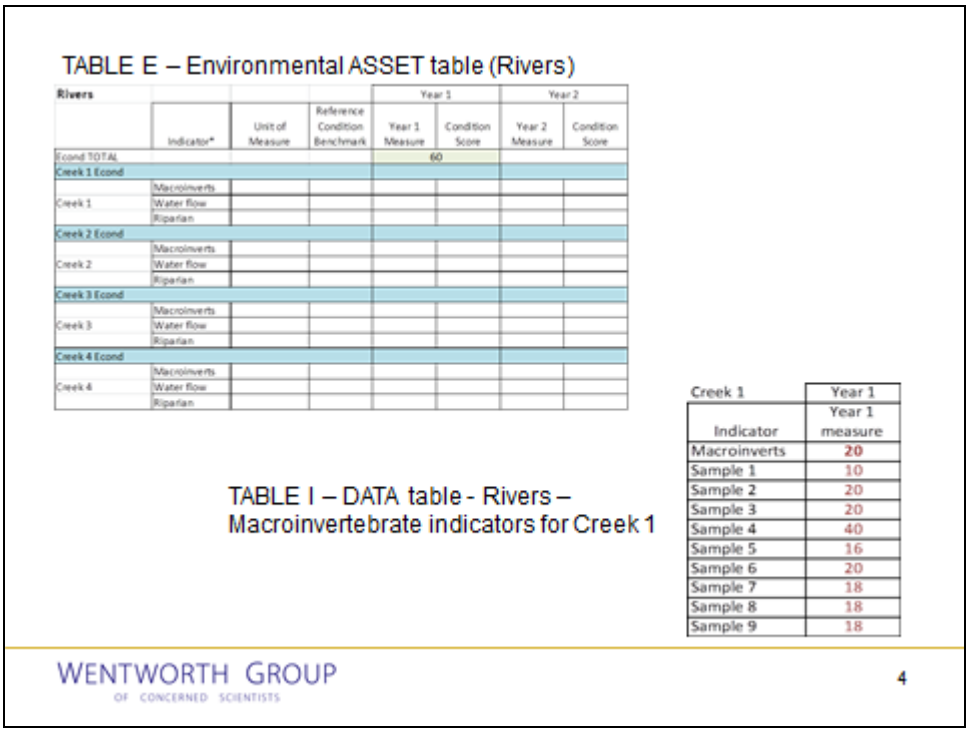


TABLE E – Environmental ASSET table (Rivers)

Rivers				Year 1		Year 2	
	Indicator*	Unit of Measure	Reference Condition Benchmark	Year 1 Measure	Condition Score	Year 2 Measure	Condition Score
Econd TOTAL				60			
Creek 1 Econd							
Creek 1	Macroinverts						
	Water flow						
	Riparian						
Creek 2 Econd							
Creek 2	Macroinverts						
	Water flow						
	Riparian						
Creek 3 Econd							
Creek 3	Macroinverts						
	Water flow						
	Riparian						
Creek 4 Econd							
Creek 4	Macroinverts						
	Water flow						
	Riparian						

TABLE I – DATA table - Rivers – Macroinvertebrate indicators for Creek 1

Creek 1	Year 1
Indicator	Year 1 measure
Macroinverts	20
Sample 1	10
Sample 2	20
Sample 3	20
Sample 4	40
Sample 5	16
Sample 6	20
Sample 7	18
Sample 8	18
Sample 9	18

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The second set that sits underneath contains the asset tables for each environmental asset. These tables describe the Condition Scores for each indicator, and calculate the Econds for each asset.

The third set of tables contains the raw data. This data table shows the data for the samples used to calculate the condition scores in for each indicator of the asset.

These tables are all linked so that users can drill downwards through the cells and because they are structured around a common unit of measure they can also be aggregated upwards.

These tables are a simplified version of, but consistent with the Asset Tables in Chapter 5 of SEEA.

You will recall I spoke a moment ago about ensuring the framework is robust and accepted by both the scientific and statistical community: let me show you an example account for one asset of one region in our trial – vegetation condition.

The region has taken the steps outlined by the committees and presented condition scores for each of their vegetation types, which have been scaled to give an Econd for the asset.

However, the users of the account need to know that the number presented here as the number that describes the condition of native vegetation in this particular region is, in fact, a valid number. This highlights the importance of an accreditation process – a process that can clearly and robustly ensure the reliability of the numbers presented in a condition account.

As part of our trial we are also trialling this accreditation process – one that analyses the sampling methods, datasets and analysis procedures and provide an accreditation score, like

a confidence rating, to each of the Econds generated in the account. An accreditation score of 0 is not allowed into the account, 1 is minimally acceptable and 5 is comprehensive.

The user can then be confident in how the data might be interpreted or used in various communication products or analyses. This also overcomes the practical issue of only using data that currently exists – data that may not be the most sophisticated, but that is available. This allows the region to make this valuable condition information available to the account, with the view of incorporating more sophisticated and sensitive measures of condition into their planning processes over time.

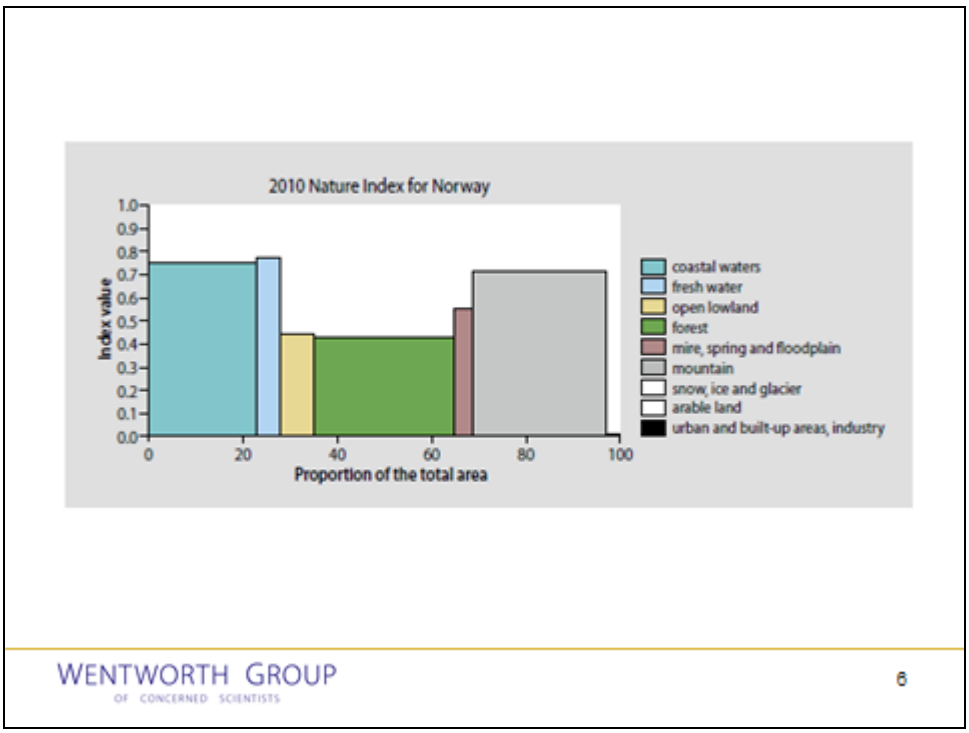
This, for us, has highlighted the need and the value of integration b/t statisticians, scientists, managers, community.

6. Information to Inform Decision Making

Let me give you some examples of how this accounting model can produce information to inform better decisions.

Summary tables

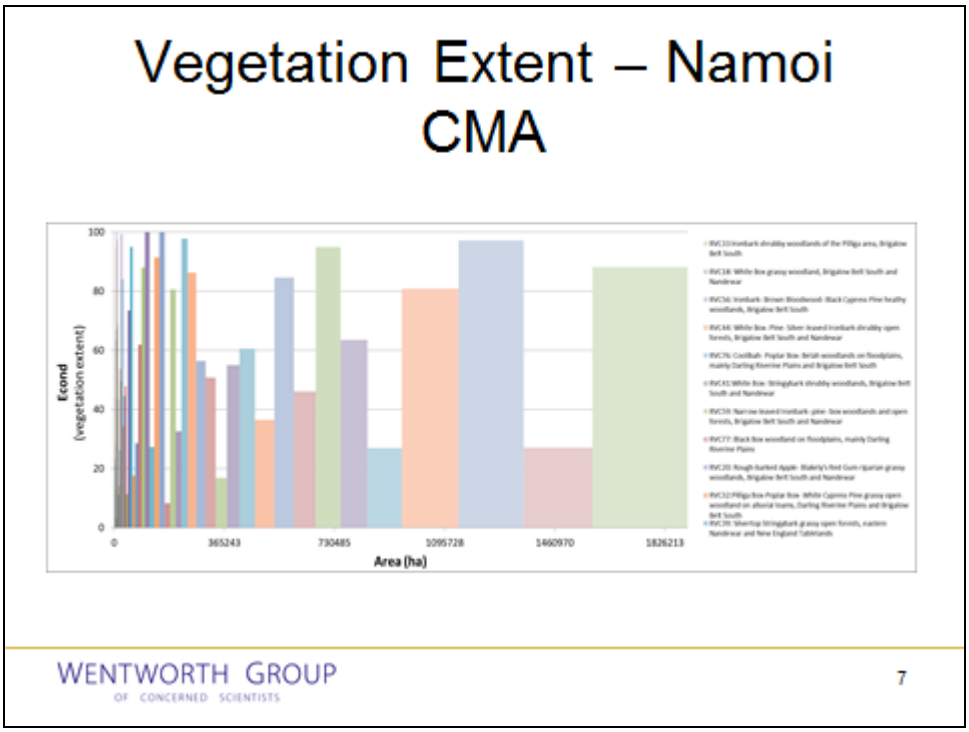
The first benefit on a common unit of measure is that it provides a simple, but scientifically robust process, that distils scientific complexity so that we can compare the condition of any environmental asset to any other asset, at any scale, anywhere.



Using reference condition methodology in a similar manner to our Econd methodology, the Norway Nature Index can be constructed.

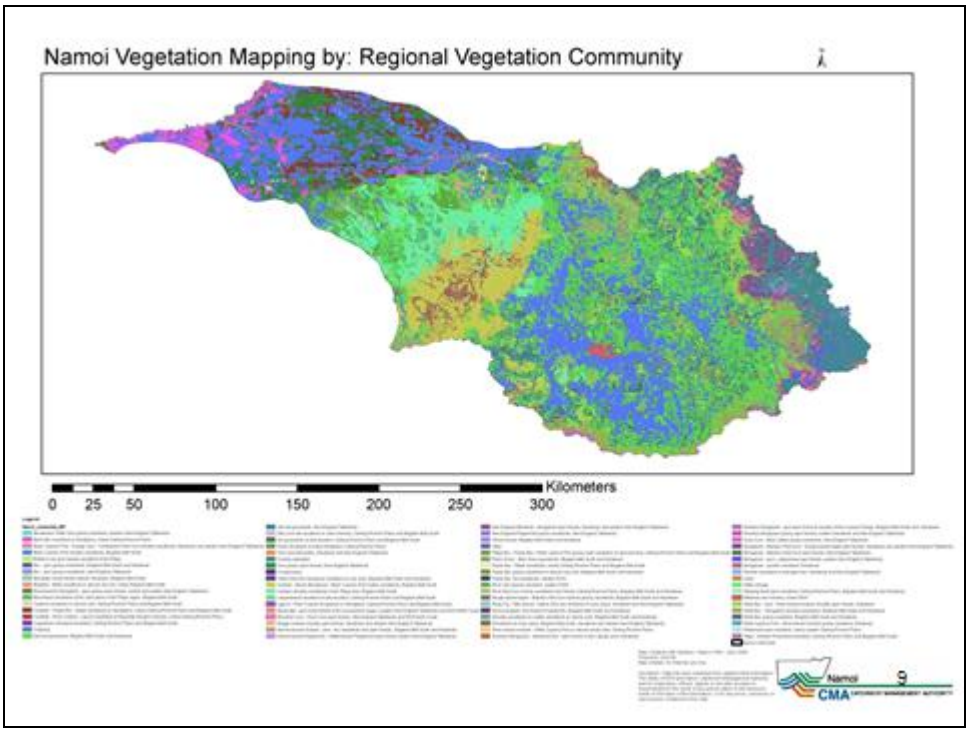
This graphic is very clever, because not only does it present the condition of all assets on a common reference scale (in their case 0 to 1), it also describes the spatial representation of each of those assets relative to each other.

Embedded in the condition accounts is the underlying information from which this type of summary can be constructed.



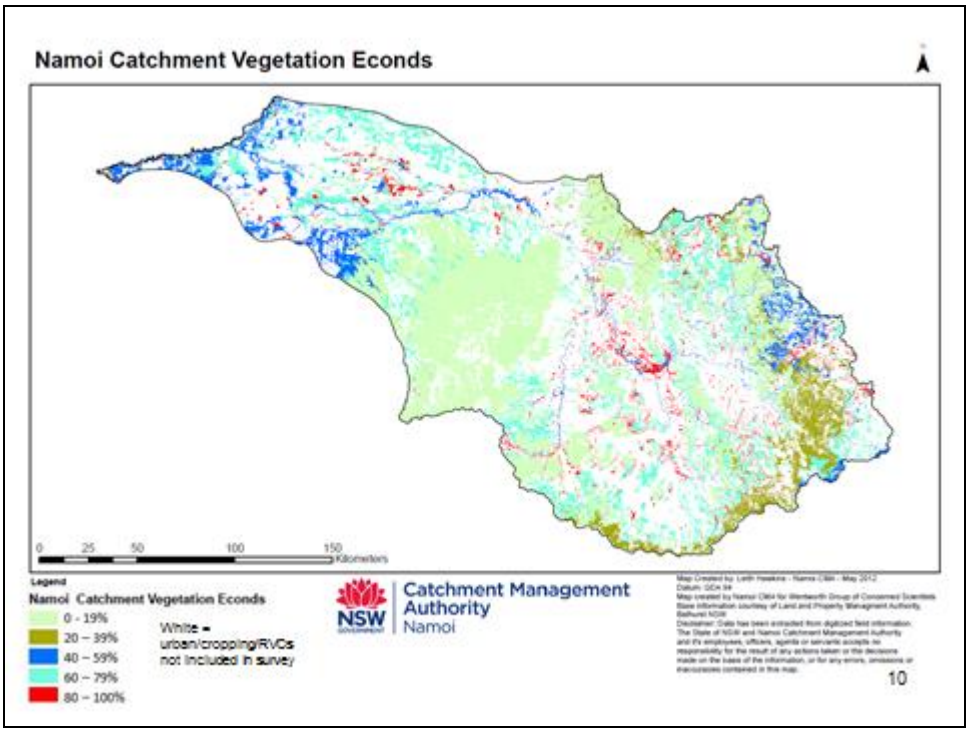
We have applied this cleverness to graphics from our Trial regions: this example is from the Namoi CMA in NSW, which shows just a sample of the extent of the 77 types of native vegetation that are present across the Namoi region and the area each occupies.

It is also possible to use this same account information to describe the native vegetation extent spatially.



Extent versus condition measures

This example from the Namoi shows you the location of various types of vegetation communities, however, it does not tell you the condition of each. If we were to then use the same extent information as an indicator of native vegetation condition, we could observe the following:



This immediately provides context to the vegetation extent map by showing the condition of the vegetation that remains in the catchment.

In that regard, it is not dissimilar to what could be derived from the SEEA Accounts.

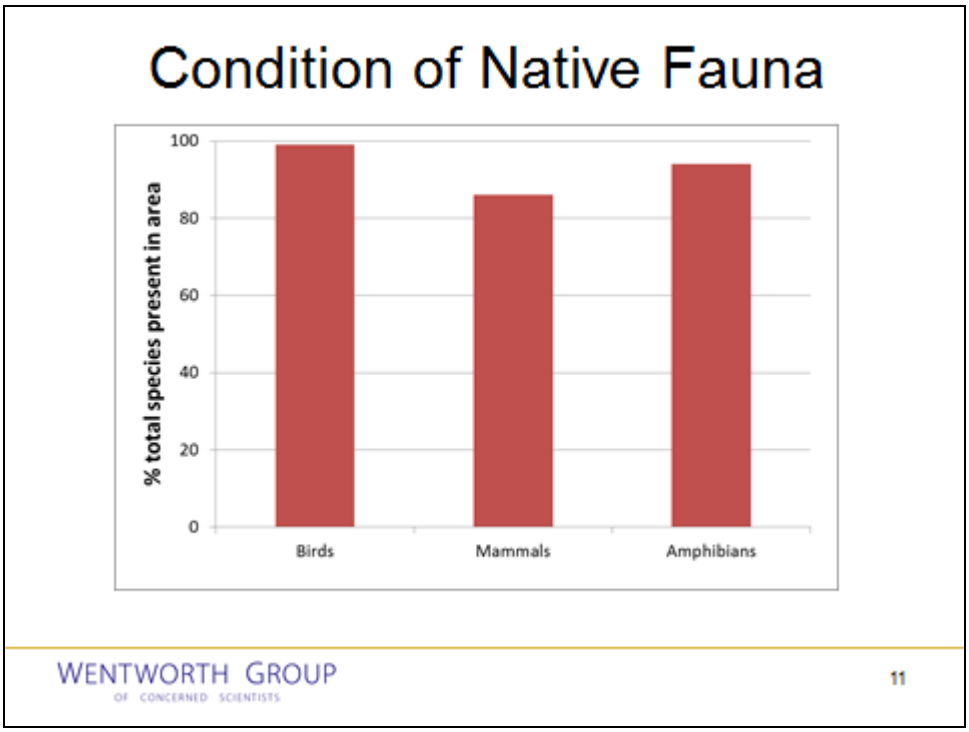
And here is where we need to be careful: If environmental accounts are to be accepted by markets and decision-makers, they must have confidence that the environmental condition accounts contain information that accurately reflects the environmental assets being measured.

Let me give you an example:

The ABS Land Account tells us that 75% of the Australian continent is covered in native vegetation. If policy makers simply used the extent measure as an indicator of condition, the conclusion would be that the Australian landscape is in a pretty good health, overall. However, science tells us that only 10% of this vegetation is in an undisturbed condition suggesting that much of the continent is in very poor condition.

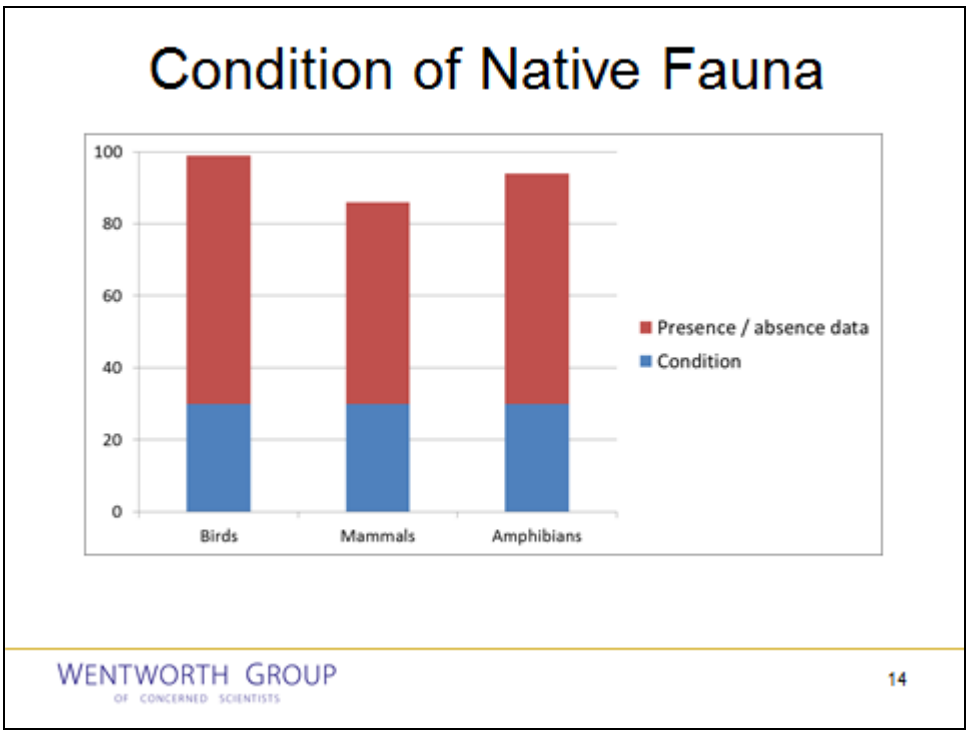
The point? Sometimes vegetation extent is a valid indicator of condition, at other times it is not. If the wrong information is used to populate condition accounts, either the accounts will be ignored as the information is seen as useless, or, they will be used, which will lead to very poor policy decisions.

Let's look at another example: Central West CMA has information on observations of birds, amphibians and mammals in their region since European settlement. By comparing the records of these vertebrate species that exist today with those that were historically present, it looks like this: (you saw this slide yesterday).



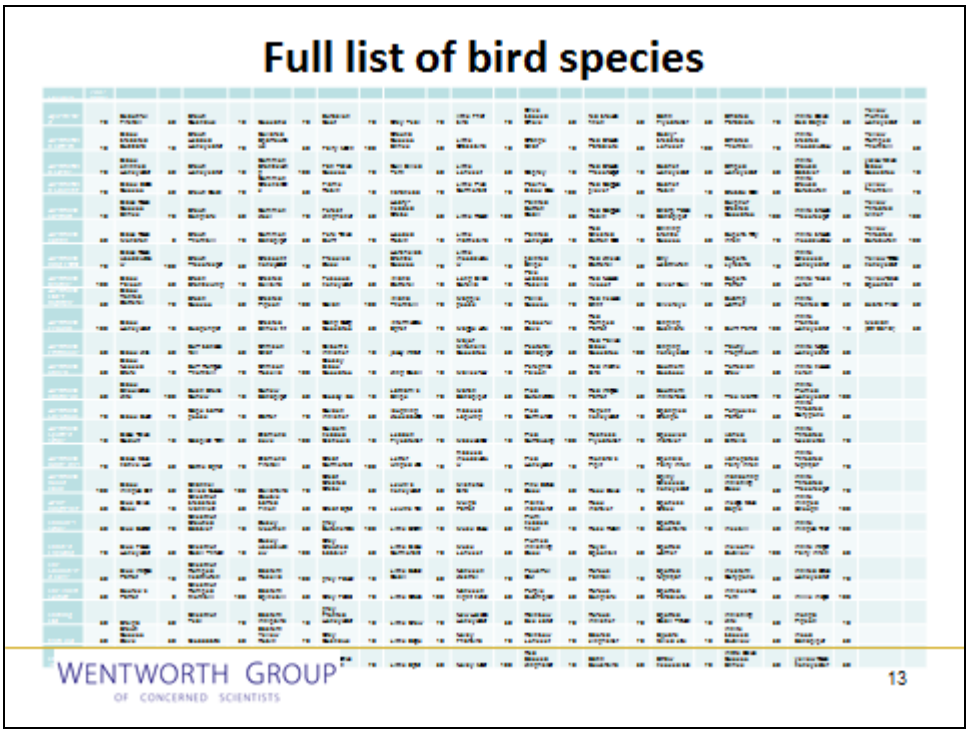
If presence/absence was accredited as an indicator of the condition of native fauna we would conclude again, that our native birds, mammals and amphibians in the Central West are in a good condition.

However, when the condition of each individual species was assessed and assigned a condition score based on its conservation status, it revealed a very different picture.



It is for this reason that we believe it is necessary for a formal process of scientific accreditation to be built into the construction of condition accounts. This accreditation process involves experts assessing accounts against a set of standards and making a judgement as to whether they meet the standards to an acceptable level.

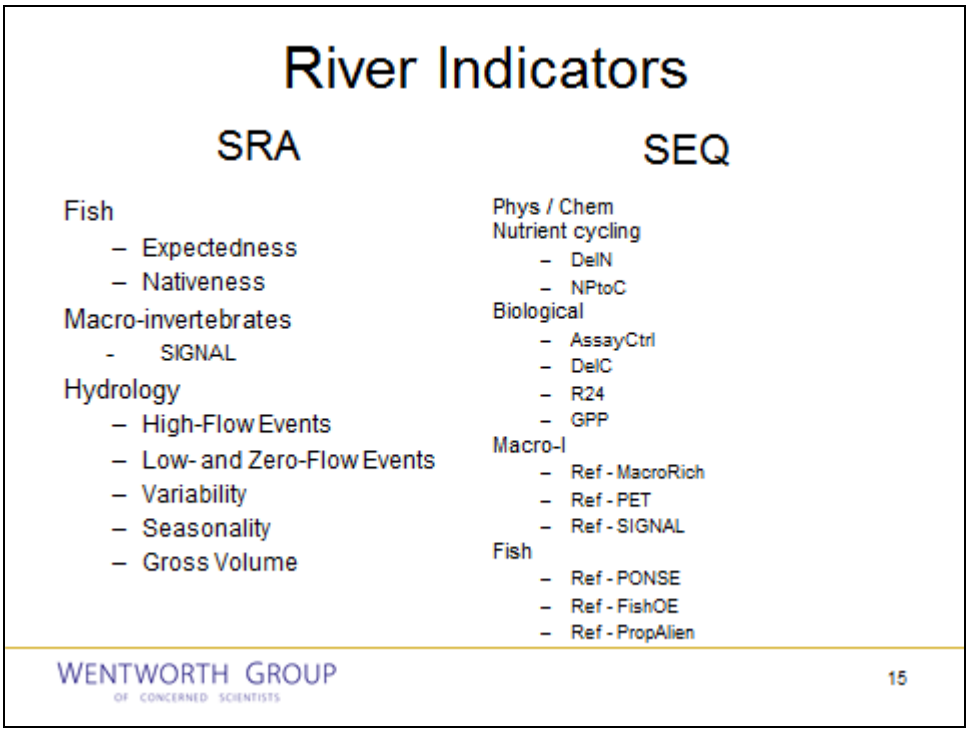
It is also for this reason it is important to store the data used in the account in the data tables, so that anyone who wanted to know what the summary tables were drawn from could.



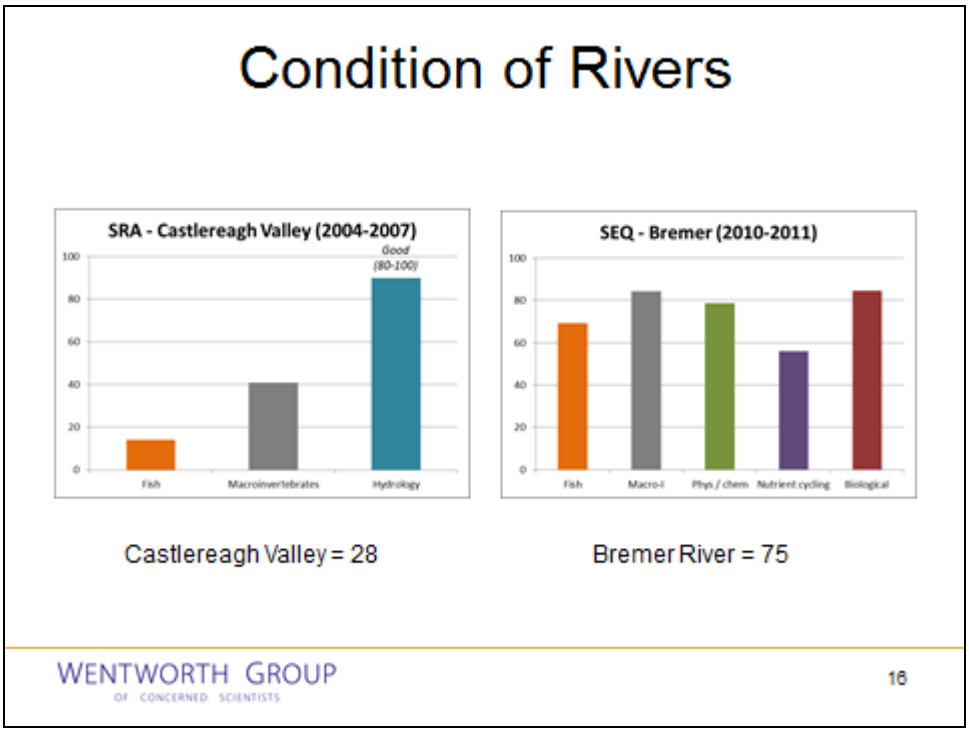
Comparing the same assets using different indicators

Another question we are testing is how the condition of the same assets can be recorded using different indicators.

Below are indicators represented for measuring the condition of rivers in two programs, the Sustainable Rivers Audit for the Murray Darling Basin and the Ecosystem Health monitoring Program for the waterways of South East Queensland.



Once an account is constructed using these indicators, the following condition scores are shown:



Because both of these assets have assessed condition using a scientifically accredited set of indicators, and because both use a reference condition methodology their overall Econd can be an accepted measure of its condition and judgement of its health.

Measuring Trend

Understanding the health of an environmental asset not only requires an understanding of the condition of an asset at a particular point in time. The direction and rate of change is of equal significance in environmental management.

Collecting trend data takes time, and in landscapes with high climate variability, it will be many years before a sufficient data base can be constructed to give useful trend information. That's just a fact of life, and the bottom line is that the sooner we begin, the sooner we will have trend data.

Having said that, there is a lot of information about the condition of environmental assets that does go back, in come cases decades. We do for example have in many river systems across Australia, historical river flows data going back many decades. One of the challenges we will test in these trials is whether such historical information can be used to establish a reliable estimate of trend in the condition accounts.

We are currently working for example, with the DCCEE to test whether their tree cover data base they use for their national carbon account, which uses annual satellite imagery dating back to the 1970s, can be used to construct trend data on changes in vegetation extent.

We can also innovate in other ways, as one of the members of our Science committee reminded me – you only need two points in time to establish trend – even if this does only provide a course indicator of trend.

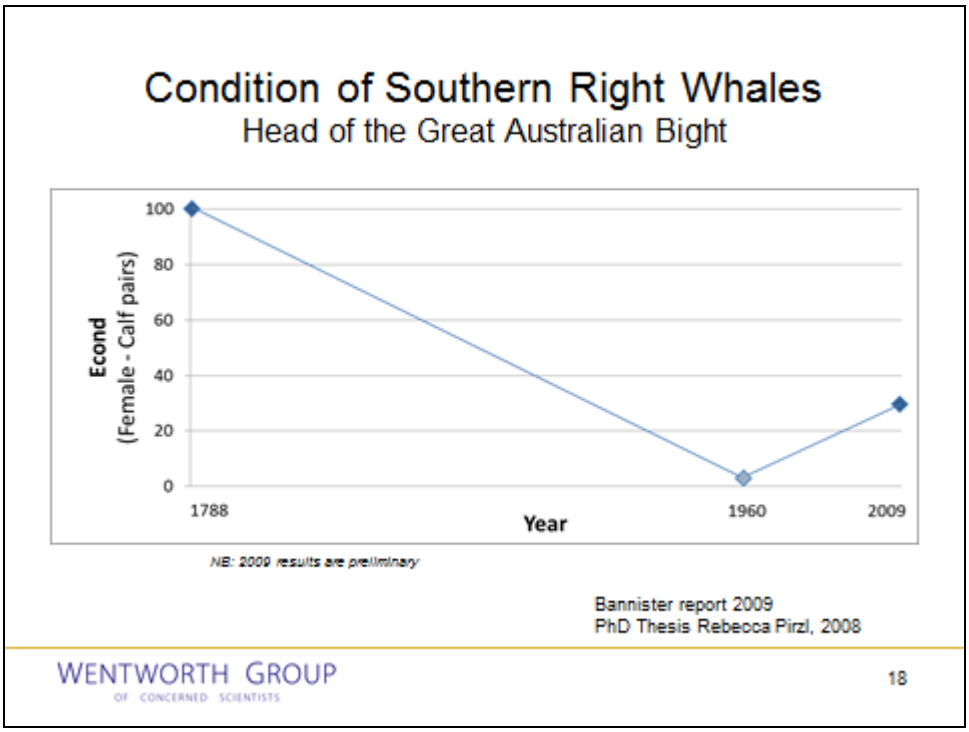
One innovation being tested is in the Eyre Peninsula in South Australia. Their Board listed Southern Right Whales in the Great Australian Bight as an environmental asset for their region, however, they held very little data on the condition of the whales.

Some information was available on estimates of world wide and current Australian populations, but we also wanted to know historical numbers of female-calf pairs… so two assumptions were made: 1) historical whaling (& decline in populations) was consistent across the world, and 2) whale populations are recovering at equal rates around the world (7% *Bannister 2009 and NOAA*).

In doing so we now know that, not only the number of female calf pairs in the GAB in 2009 was 63, but that those numbers represent approximately 30% of their pre-whaling levels.

From this information, the region with the help of South Australian government staff has been able to estimate the reference condition of the population, to produce an *Econd* of 30.

Knowing that whaling ceased in 1960 we can take this estimate a step further and construct a trend graph for the condition of the Southern Right Whale population in the Great Australian Bight.



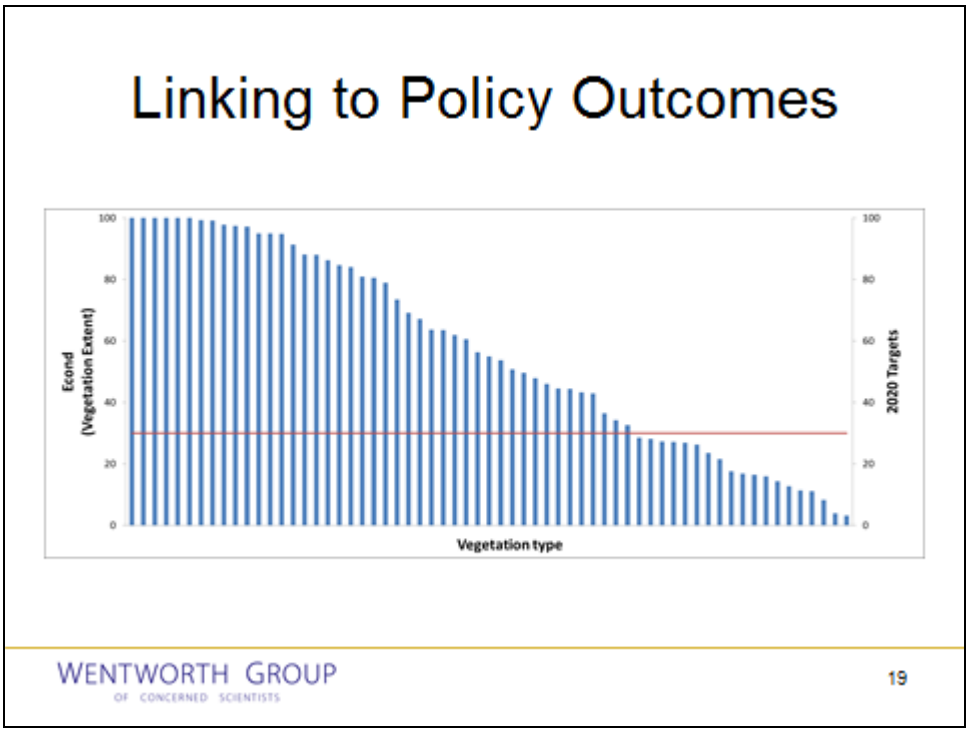
It might seem crude, but it provides an incredibly valuable insight in our understanding of the impact of whaling in Australia and the recovery of this very iconic species.

7. Using the Condition Accounts to Guide Policy Development

The second benefit of the common unit of measure, the Econd, is that it makes it much easier for policy makers to use condition accounts to inform the setting of environmental standards and targets across a range of assets or within an asset class, estimating program investment budgets, and assessing cost effectiveness to prioritise projects.

Let me give a more simple example of the use of native vegetation to show how condition accounts can be used to both inform policy and set investment targets.

This graph is produced from the same Namoi CMA native vegetation condition account, but this time showing all of its 77 vegetation types, ranked from the most extensive to least extensive.



This information was used to set policy targets for prioritising investments in native vegetation management. Their Catchment Plan process, conducted over a number of years, concluded that the Namoi valley would be a more healthy and productive environment, taking into account social and economic factors, if the 19 vegetation communities with less than 30% were restored to that level. This has become a policy target in their Catchment Plan.

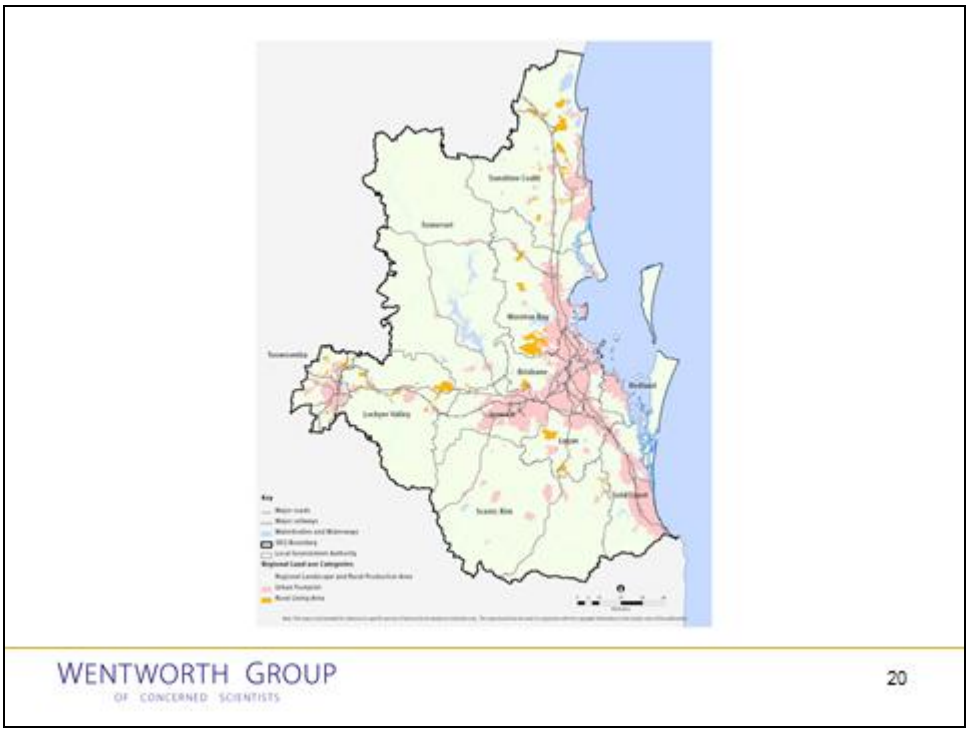
The same Namoi vegetation condition account that was used to inform that policy process can now be used to calculate the cost of meeting their 2020 target.

By taking the current extent of each under-represented vegetation type, it is possible to calculate the area of restoration required to achieve the 30% target. By combining this data for all 19 under-represented vegetation types, the total area targeted for restoration priority can be easily calculated. If you were to cost the restoration of each of those hectares based on previous project expenditure, you could estimate a total restoration cost.

It is also possible to estimate the carbon sequestration value of achieving that restoration target. We are only able to do this, because we have designed an environmental condition account which connects asset condition to policy targets and policy targets to investment decisions.

8. Using Condition Accounts to Improve Investment Decisions

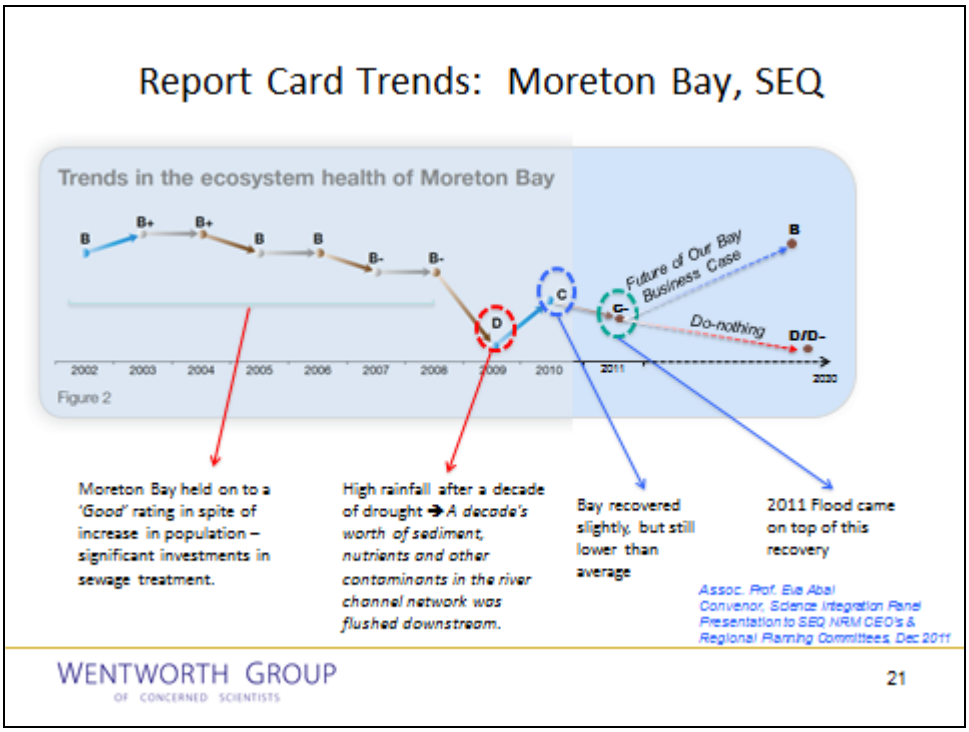
Finally, let me describe how asset condition accounts can be used to improve investment decisions aimed at maintaining the condition of our natural capital, using south east Queensland as an example.



The SEQ region around Brisbane is facing huge social economic and environmental pressures from a rapidly growing population. In just the last 8 years, the population of south east Queensland has grown by over 600,000 people, to 3.2 million people, and is expected to add another 1.3 million by 2030.

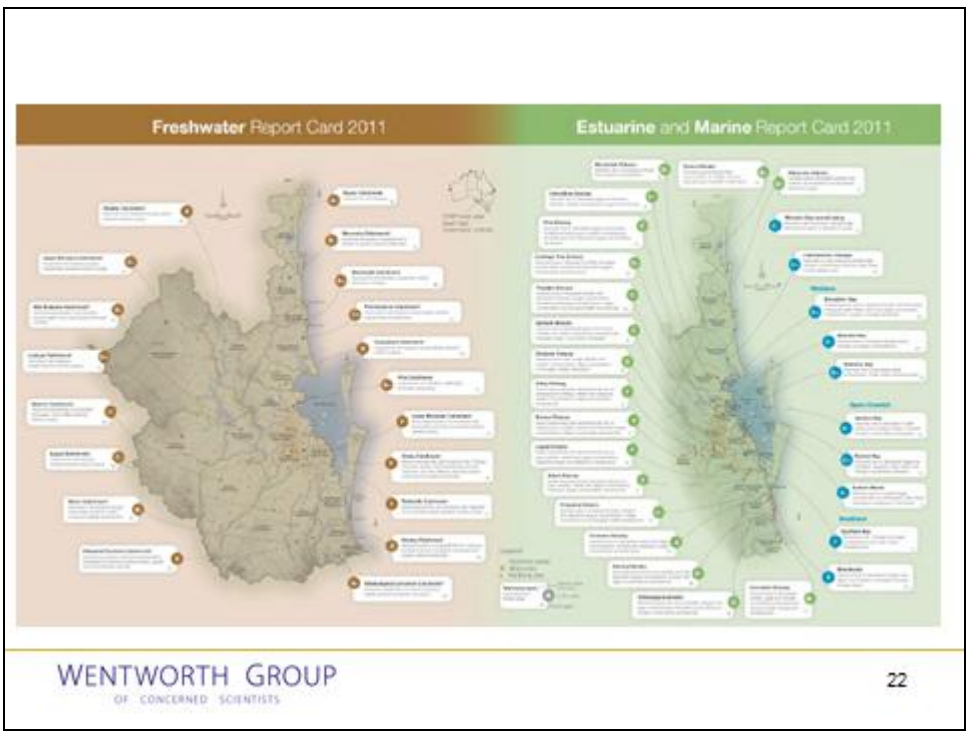
To give you some idea of the scale of economic impact this is placing on the state of Queensland, the infrastructure investment program for this region, between 2010 and 2031, is $134 billion.

The increased pollution caused by urban development is placing significant pressures on the condition of the waterways flowing into the Ramsar listed Morton Bay estuary.



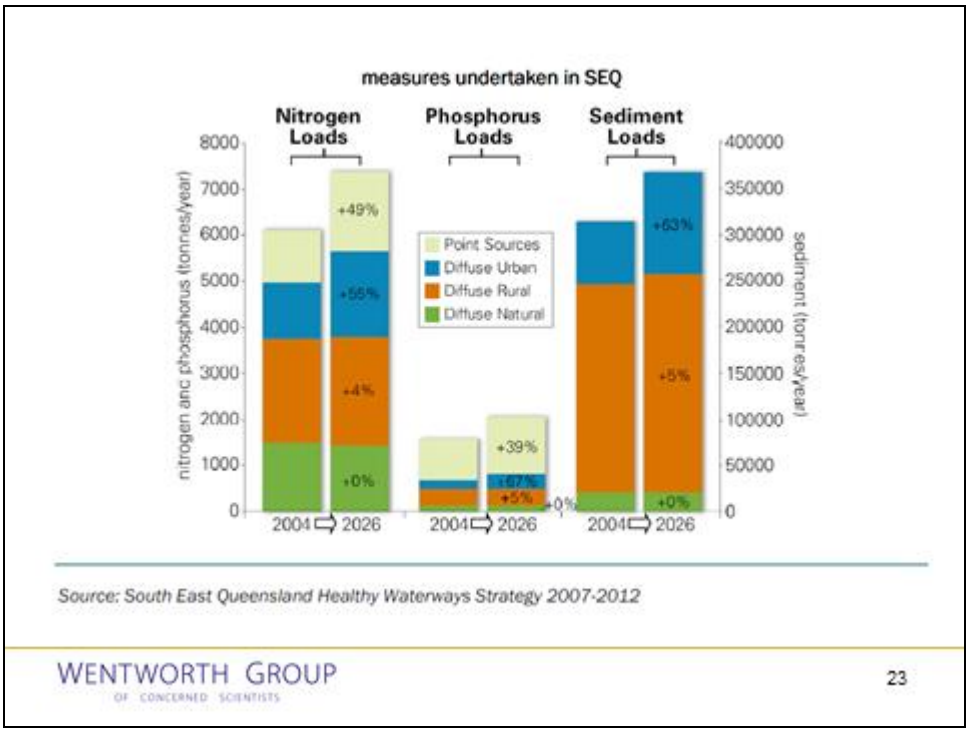
This is the slide Professor Thom used in his keynote talk on the role of science in environmental accounting on Monday.

SEQ Catchments, the regional NRM body for this region, has produced an infrastructure investment plan, using the asset condition accounts that were developed over a decade ago from the Health Waterways Partnership.[viii] It was this initiative that provided the foundation for the *Accounting for Nature* model in 2008.



Don't be fooled by the simplicity of this reporting system. There is a world of science behind this monitoring program, which is all readily accessible on line.

Last year the Catchment Authority was able to use the information in what we would call their asset condition accounts, insert the decade of time series information into their hydrological and other modeling tools, …



…and to cost the infrastructure investments needed to satisfy their policy objective of maintaining the waterways in their current condition.

Table 5. Long-term annual marginal abatement costs (TSS loads)

Actions (including low and high cost estimates where available)	Amount of action (ha unless otherwise stated)	Cumulative load (tonnes/pa)	Cumulative cost ($/pa)
Gully treatment (low)	800 km	100,000	$5,000,000
Filter strips or buffer zones (low)	60,000	126,460	$6,991,115
Diversion banks (low)	20,000	135,770	$8,192,105
Diversion banks (high)	5,000	138,098	$8,842,641
Minimum tillage (low)	5,000	140,499	$9,849,261
Road runoff management (high)	2,000	140,989	$10,065,228
Livestock exclusion (low)	5,000	143,194	$12,245,973
Riparian projection or revegetation (low)	12,000	148,956	$18,564,445
Filter strips or buffer zones (high)	5,000	151,161	$21,124,450
Minimum tillage (high)	2,500	152,361	$22,621,473
Bioretention basins (detached house developments)	All greenfield development	154,246	$25,128,523
Bioretention basins (attached house developments)	All greenfield development	154,355	$25,325,813
Livestock exclusion (high)	1,000	154,796	$26,164,926

Source: MainStream analysis

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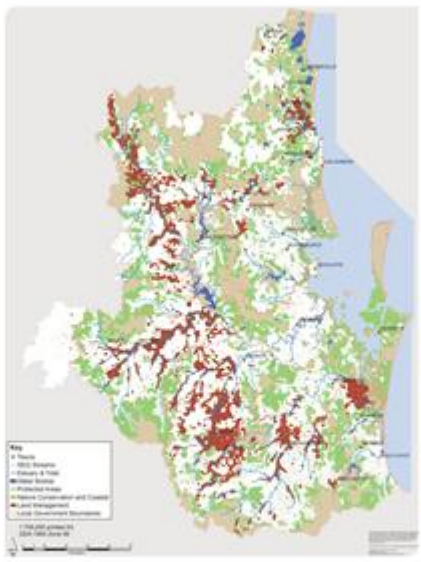
That investment comes to $570 million over 15 years, or $38 million per annum.

This sounds like a lot of money – it would consume one year of the entire budget of Commonwealth government's national environmental program, *Caring for Our Country*.



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But when seen though the perspective of maintaining the condition of natural capital, this $570 million investment represents less than half of one percent (0.43%) of the SEQ infrastructure program budget for that period.

The point is, a scientifically credible set of environmental assets condition accounts, collected regularly over a sufficient time to establish trend, can not only provide decision makers with information to underpin the setting of evidence based policy targets, it can also be used to formulate an investment package to deliver those targets, and where in the landscape to target those investments.

This is one example of how scientifically robust asset condition accounts can mainstream environmental management into long-term economic investment decisions.

And, it will be the same condition accounts that will monitor the progress of those investments into the future.

9. Conclusion

We still have some work to do to further test these concepts and their potential to inform our decision-making, but with the level of commitment to this process so far, we are optimistic and prepared to meet the challenge.

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[i] Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC.

[ii] OECD, 2012. *OECD Environmental Outlook to 2050. The Consequences of Inaction*. p 20

[iii] United Nations, 1992. *Rio Declaration on Environment and Development*. Annex 1. Rio de Janeiro, 3-14 June 1992. A/CONF.151/26 (Vol. 1)

[iv] Henry K, 2010. *Measuring what we do or doing what we measure: challenges for Australia.* Plenary address to the NATSTATS 2010 Conference. 16 September 2010.

[v] Australian Natural Resource Management Groups, 2011. *Australian Regional Environmental Accounts Trials, 2011. Draft Guidelines*, Version 6.1, November 2011.

[vi] Stoddard JL, Larsen DP, Hawkins CP, Johnson RK and Norris RH, 2006. Setting expectation for the ecological condition of streams: A concept of reference condition. *Ecological Applications*. 16(4): 1267-1276.

[vii] Australian Natural Resource Management Groups, 2011. *Australian Regional Environmental Accounts Trials 2011: Draft Guidelines.*

[viii] Healthy Waters Partnership. http://www.healthywaterways.org