



TSI NATIONAL PEER REVIEW MEETING NOTES

29TH April 2008, Canberra

Present: Linda Lee, Alan Williams, Vicki Ratliff, Anita Smyth, Gerry Leach, Stuart Pearson, Blair Wood, Vicki Hodges, Juliana Lazzari, Cam Nicholson, Kevin Paris, Cindy Nickerson, Stefan Hajkowiz, Kerry Bridle, Kay Bailey, Christine Kershaw, Kerry Collins, Don Defenderfer, Ian Sauer.

The following notes are a combination of notes taken during the TSI project national peer review meeting in Canberra on 29th April 2008.

Presentation by Dr Stefan Hajkowiz

NRM expenditure in Australia (see Power Point presentation)

The Australian government expenditure on Natural Resource Management (NRM) programs has grown sharply since 2000 and is projected to level out soon. The Australian government's newly introduced 'Caring for our Country' NRM initiative has committed approximately \$2.2 billion from 1 July 2008 to June 2013. Establishing the institutional arrangements for NRM organisations in recent years throughout Australia has resulted in 56 regional NRM bodies with plans accredited by Federal/ State governments. Questions are now being raised about the cost efficiency of these arrangements. There may be a stronger focus in future programs on stewardship payments direct to farmers for specific environmental outcomes.

Recent audit reports have indicated that there has been insufficient information to make an informed judgement as to the progress of the NRM programs towards environmental outcomes in recent years. We still haven't adequately addressed the issue of how to spread NRM investment. Part of what we are doing today is to start looking at metrics used on a regional level to help input more robust science behind these investment decisions.

Presentation on the science behind the metrics (see Power Point presentation)

Feedback and discussion

- The logic and transparency behind the TSI is excellent, the real issue with these metrics is the conceptual relevance of what you are trying to achieve and that is bigger than the mathematics. The objectives and outcomes of the TSI should be clearly stated otherwise the way that you develop your indicators could result in the wrong end result. The Nature Assist program in Qld is one example where unfair weighting of the index disadvantaged small blocks of high value assets. In the end this was ok because we were after larger catchment/ regional scale outcomes.

- There is very little value in just talking about gross budgets on an annual basis, we need to get down to what is core funding to what is peripheral. There is now a smaller amount of Australian government core funding that is topped up by large amounts of spending on peripheral issues. Don't trust short term ephemeral funding, we need more core funded programs.
- In policy we are constantly asking what the objectives are. Can you design a system that emerges with the objectives for conservation, productivity, public benefits etc. In doing this you still need to include the multi disciplinary thinking, in metrics there has been a lot of emphasis put on the scoring systems and how to optimise the best projects but there has been little emphasis on NRM planning.
- What the government has used in the past is a bottom up, large infrastructure model with NHT. We haven't used the top down priority setting very well in the past. Caring for our Country will be more precise about what it wants to buy. We will need to calibrate the tools to meet objectives of the policy makers.
- The issues we are now facing are across farm boundaries. How can the TSI work across farm boundaries? What about where issues interface across public and private land? Where does the context of length come into setting weightings, for example landscape context? The NSW biometric does attempt to give some landscape context.

Response by Stefan: The tool should respond to the needs of the policy maker and learning by doing in reality is how this happens. What are the purchasers investing in? The TSI offers a range of indicators that can be selected and combined to meet any number of objectives. It is up to the program designers to ensure that they have clear objectives and outcomes and then design the TSI to fit those.

Presentation by Dr Cindy Nickerson - US Dept of Agriculture, Washington DC

The United States spends approximately US\$30b on conservation and natural resource management issues each year. In 2007 most of this expenditure was in 4 areas: conservation technical assistance e.g. field officers; land retirement programs (take land out of production); working land programs; and land preservation. Since 2002 the emphasis on conservation has increased.

Conservation Reserve Program (CRP)

The Conservation Reserve Program (CRP) was established in 1985, with a single focus to reduce soil erosion from cropping land by asking farmers to take land out of production. The objectives of program were later expanded to include other environmental benefits, which is when the Environmental Benefits Index (EBI) came into operation in the 1990's. The EBI is an index used to select projects based on six sets of weights and criteria. The criteria include wildlife benefits, water quality benefits, soil erosion, enduring (post contract) benefits, air quality benefits and costs are also added into calculations.

Only farms with highly degradable land are able to apply and only 2/3 of the applications are accepted. The weights and criteria have been fairly stable over recent years. Weights are announced in advance so that farmers can work out what their EBI bid can be. The bidding process allows farmers to alter their bids.

The CRP expenditure is approximately US\$1.9 billion per year. Not all the bids offered in the CRP are purchased by the index. The average payment is about US\$43 / ha. The Conservation Reserve Enhancement Program (CREP) is also used to enrol farmers into the CRP. The CREP is used to identify high priority areas and farmers can work out if they are located in these areas. If located in a high priority area, these farmers do not have to join the competitive bid path and are likely to get a higher payment. The average contract timeframe is 10-15 years.

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) commenced 10 years after CRP. The objective of the EQIP is to seek multi environmental objectives constrained by a budget cap that is set by congress (approx US\$1.3b per year). The EQIP is set up differently than CRP in that EQIP distributes money to the states and the states then control enrolments (contracts) through a competitive bidding process.

The program operates at both the federal and state level. At the federal level, an index is used to allocate money to the states. The states then use their own index to distribute funds to state based programs. At the state level a third of the states allocate money to county level and county then make purchase decisions. A third of the states allocate money towards specific environmental issues (e.g. soil erosion) to address resource issues at the state level and then landholders compete for resources in that pool. The remaining third of the states allocate their funding through a mixture of the two methods.

There are 3000 counties in the US that select applications in different ways. There could be as many as 300 indices operating. When EQIP first started applications were rated on cost benefit. In 2002 congress decided that EQIP would maximise benefits all round. This was interpreted different ways. Some states took out costs all together, some took costs into account in an additive way and some still did a cost benefit. This was implemented because congress felt that small farmers were less able to compete competitively with larger farmers. Congress also legislated that farmers would not be allowed to bid down on what they were willing to accept.

EQIP is purchasing soil condition, sediment delivery, nitrogen delivery, phosphorus delivery, water conservation, grassland health and habitat quality. Each criterion has a target but it's difficult to measure actual physical outcomes because the science is lacking. For example, exactly how much reduced sedimentation do you get when you plant some riparian bushland? States are being told that they now have to include national priorities and give some sort of positive rating compared to local priorities.

The difficult thing about using an index is that it's all about expected benefits in the future, which are difficult to measure. There are challenges ahead including increasing program effectiveness, simplifying the menu of options for producers, balancing efficiency with fairness and increasing the transparency.

Presentation by Dr Kevin Paris –OECD Paris

The OECD represents 30 countries including many in Western Europe, the US, Australia and New Zealand. Most of the OECD work is economic analysis of policy and generation of indicies.

OECD issues currently include:

- Is environmental performance getting better or worse?
- What are the environmental effects of agric policies?
- Is trade liberalisation good or bad for the environment?
- Can markets work to improve the environment?
- When should farmers pay for pollution and be paid for environmental goods and services?
- Which policy measures are most cost effective at improving the environment with least distortion to production and trade?
- How will climate change and water scarcity affect agriculture? We are now doing a lot more work on water and climate change.

Lessons learnt from countries about evaluating policies:

- Problem of establishing the counterfactual of what would happen in the absence of policy.
- Emphasis tends to be on environmental effectiveness rather than economic efficiency.
- Quality issues and gaps in underlying AE data.
- Knowledge gaps in both causes and effect of AE linkages and underlying science.
- Problem in choice of index weights, but equally problems in measuring the monetary value of environmental outcomes, especially biodiversity and cultural heritage benefits.

Where to from here (OECD)

1. Encourage quantification of cause and effect linkages.
2. Improve quality and regular collection of primary data.
3. Undertake CBA of data collected for use in policy monitoring and evaluation.
4. Develop a repository of AE evaluations.
5. Provide possibility for external review of evaluation.
6. Assist in developing inter disciplinary approach.
7. Establish monetary valuation of costs and benefits.

Issues for discussion on the TSI

Does the TSI satisfy the criteria of:

- i. Policy relevance – relevant to policy makers
- ii. Analytical soundness – science based
- iii. Measurability – data availability, temporal and spatial
- iv. Interpretation – easy to interpret and unambiguous

Policy relevant

- While NRM is overall focus, difficult to identify policy objectives at Federal, State and regional and farm level.

Analytical soundness

- Sound science vs. social preference problem, e.g. dilemma of tidy landscape vs. messy biodiversity
- Problem of science knowledge gaps and highlighting co-benefits of a programme, e.g. tree planting, carbon sequestration, biodiversity.

Measurability

- The tyranny of size an impediment of effective monitoring and targeting of agri environmental payment in Australia?
- How to overcome the problem of neglecting the more difficult measurement of large scale long term environmental benefits e.g. creating wetlands for flood control compared to focusing on those aspects more easily measured e.g. creating a habitat specific to a certain species?
- How to improve the institutional coordination of data collection e.g. CSIRO, ABARE, ABS, DAFF, DoffE, State government etc.

Interpretation

- Can decision makers (from farm to government) easily make choices based on an index rather than money values?

Our objective is to establish the science to support the growing investment in environmental projects in Australia.

The TSI seems to be consistent with some important policy developments including the need for:

- More robust, science based approaches to NRM investment decisions that adds transparency, auditability and accountability;
- Longer term programs that work outside of 3 year funding cycles;
- The ability to demonstrate that NRM investments are actually leading to NRM outcomes, e.g. through contract security arrangements such as ongoing monitoring and performance review;
- Meaningful partnerships with industry and private landholder groups e.g. greater transparency and inclusive consultative processes.

Tools such as the TSI can be powerful policy instruments. If the TSI can create a value or environmental score for specific practices or activities that happen on private land then the way that this tool is weighted and designed can be used to pass on some very powerful messages or 'market signals' to industry. The type of message can be changed by changing the way the TSI is applied.

But although it could be a powerful policy tool, the TSI is only as useful and effective as the policy framework and programs that it supports. With this in mind, I would like to open up our discussions now about how the TSI fits into current NRM policy frameworks?

Feedback and discussion

- Weighting of indicies. We need to have responses to the weighting process to engage participants and not put them off – forms an integral part of the tool use (care required not to lose social capital). There is nothing like being at the end a process where you're the one that's being left out. We risk getting 'buy in' from farmers who then become disgruntled if they don't understand how the process was put together or have not been invited to participate. It's important who you invite to become involved in the development stage of any indicies. It would be highly valuable to have the National Farmers Federation involved.
- The TSI is an excellent tool but it's important to see it as a tool in a policy context. It's the tool by which you may get to the dollar value. The objective of the purchaser will dictate what you include in the index.
- Important not to get too wrapped up on science. The process that you have to go through to implement these programs is much more important. There has to be follow up built into the process.
- Public versus private benefit is always an issue and it is the purchaser that takes the risk.
- TSI is good for a conceptual framework to see the type of information you require but you still need to tailor the criteria to focus on the things that a program needs to deliver. There needs to be more emphasis on bringing NRM planning within the tool design (i.e. bring their objectives into the tool). You need to separate out what your region would require in terms of deciding what the overall condition and trends and natural resources could be e.g. land cover.
- From a policy perspective, there are inhibitors to implementing MBIs. You can have it all set up ready to hand the money out but farmers want to know what is going to happen 18 months down the track. Is there ongoing support? Farmers are sick of government initiatives that have no follow up.

- You have to change stewardship type programs every 3 years because people learn to play the system. We should go out into the market place.
- What do other NRM regions in Tasmania think of the TSI? Most NRM projects are looking for ways to increase sustainable land management if that's your objective. Where you have a broader targeting mechanism, then this tool could be applied.
- How do you take into account landscape context e.g. salinity? How does the TSI cross farm boundaries? You may need to have more indicators to capture landscape benefits better. Broader targeting of issues is ok in general but not for specific issues such as salinity.
- What is the cost effectiveness of using the TSI i.e. transaction costs? The US programs have about 28% administration costs, transaction costs can be greater. What are the farmers costs, these should be included.
- The Australian government is currently going through a process to develop NRM targets and programs and locking them in. Besides MBIs, there is a capacity building designer carrots program. TSI could be one of the tools that could be identified on the designer carrots web site. Then users could design the TSI to apply more Caring for our Country outcomes.
- It is important to have science to underpin policy. Who will benefit, index for what?
- We need economies of scale regarding monitoring.
- Qld EPA is interested in trialing the TSI in Qld. We will contact some of the regional NRM groups to see if they are interested in a trial.

Summary comments at the end of the day:

1. It would be good to do comparisons between the different indices that are currently being used. The concept of TSI is good but the process is really important, often more important than the tool itself. You need to get the programs objectives really clear at the beginning. The new government may be more directive.

The transparency of the TSI is its true strength, everyone knows how you have arrived at an answer / decision. It's a tool, don't underestimate the challenges to get a whole suite of individual regions to use it. It could be made nationally applicable. You must recognise that it is one tool amongst many others.
2. I still have concerns about the complexity of this index and the ability to explain it to users. What is the process on what we decide to include? How can we present the information visually? When talking to policy makers you want to be able to present it in an easy and effective way.
3. Can this tool look forward in terms of helping policy makers. Can it be used as a predictive tool?
4. Can we put a paper together to document the process and show how it was developed and why we had successful consultative outcomes?
5. These tools are great but we need to remember that they help to guide investment decisions not to make the decisions. It is all pre programmed on today's valued weightings. It can indicate to you what the benefit of something is today but it cannot tell you what the actual outcomes really are. You have to go on ground to do that. Difficult to imagine one index for the country when so many different programs are competing for attention.

6. Similar tools used elsewhere. There are elements about it that we need to clarify. I support the earlier comments about the need to set clear objectives and outcomes and that when you use it as a decision support tool it should not make decisions for you. The TSI should not be a 'black box' that makes decisions for us.

Keen to see what the limitations are e.g. GIS data. It can be complex to explain to people why they were not successful in their bids.

7. I am optimistic that with more development the TSI could be used as a template from a regional to national level. Could be a useful tool for the purchaser and excellent value in terms of transparency. It is also extremely subjective though and trying to relate back to someone why they were unsuccessful may be difficult. If we are coming up with the wrong answer then the weightings are wrong.

For every dollar the government provides in Australia, the purchaser puts in \$2.60. I suspect that figure in some projects may be double that.

8. There is more than one way to skin a cat. This is only one tool and we need to trial it in different NRM regions. Capturing and maintaining social capital is important. Can't just get stuck in one process and one program. True cost considerations need to be part of that. Process is the key. How can we use it to enrol people, to develop ownership?
9. Tool is great conceptually. Indicators are important for any tool and we need to make sure that the index takes into account not just resources that are present but also those that need to be restored. The notion of keeping farmers interested is really important. There will always be farmers who want to be involved but are they the ones you really want? What is the process of getting farmers involved?

Having an index doesn't preclude being able to set funds aside for specific issues eg salinity. It will be important over time to monitor how the weightings are contributing to actual outcomes.

Closing comments by Stefan

I would like to see the TSI applied in the Tamar NRM region on a larger trial basis. There are lots of questions and the research challenges are huge but they are worth tackling. We need to get better at targeting our investments, to look at what has been learnt overseas about linking expenditure to outcomes. The index can help but we need the models. The structure of TSI is good and our support tools are getting better all the time but we need to build on what we have done together and develop a tool that engages rather than disengages farmers.

The value of the TSI framework is that you can take out components that you don't want included in the index. If we could express the dollar value of all investments it becomes a commensurate unit that can be compared across programs. The ability to put a value on environmental outcomes and the development of indices that can compare benefits has the potential to create huge potential benefits for NRM.