

The Tamar Principles



Outcomes of the Conference
Biodiversity:
balancing conservation & production

Launceston, Tasmania, Australia
26th–28th June 2007

Tamar Natural Resource Management
in association with
The Centre for Environment, UTAS



Carbon Neutral

The carbon emissions of this conference as estimated by Origin Energy were off-set as Origin's contribution to the conference

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The conference organisers acknowledge the Panninher as traditional owners of the country on which this conference was held.

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Contents

	<i>page</i>
Introduction	4
Preamble to The Tamar Principles	5
How the principles were created	6
The Tamar Principles	7-8
1. <i>Respect</i>	9-13
2. <i>Consider the Future</i>	14-18
3. <i>Set Goals</i>	19-23
4. <i>Be Open</i>	24-28
5. <i>Learn</i>	29-32
6. <i>Demonstrate</i>	33-36
7. <i>Share</i>	37-40

Introduction

Tamar NRM* is an independent grass-roots organisation with a strong history of involvement in Landcare, environmental, and agricultural issues in the Tamar region of northern Tasmania.

With great support from Launceston, George Town and West Tamar councils, industry, the National Landcare Programme, the University, the Australian Government and the community, the idea conceived eight years ago—that the goal of community biodiversity education could be developed by a Biodiversity conference—was realised in July 2007.

The conference was built around the idea of collaborative research between landholders and researchers—hence the subtitle ‘Case studies from the real world.’

Over four days, more than fifty-five presentations were made before approximately 265 people. Delegates came from overseas, every state of Australia, every level of government, and every major primary industry.

The outcomes of the conference include this summary report, video podcasts of seven case studies relating to The **Tamar Principles** and a book.

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* Tamar Region Natural Resource Management Strategy Reference Group Inc.

Preamble to The Tamar Principles

What would happen if scientists, government agencies and environmental organisations from around the country worked hand in hand with farmers, foresters and fishers to improve Australia's biodiversity?

What would happen if they all came to one place and shared their knowledge and experience with each other?

What would happen if you asked them to distil their wisdom into seven principles?

*All this happened at the
Tamar Natural Resource Management Biodiversity Conference*

When the question was asked:

"For individual producers to build businesses that allow biodiversity to thrive, what must we do?"

The **Tamar Principles** became the collective answer of the conference delegates.

How The Tamar Principles were Created



Gerald Castles (top, left) facilitated a workshop on the final day to distil the collective wisdom of the delegates. To start with, he asked all delegates to sit in small groups and share stories of their conference experience. Each group then shared one of its stories with all the delegates. Delegates were then asked to suggest current and emerging trends to fill a 'trend-wheel'— a large blank sheet with the producer in the middle. Trends were recorded radiating outwards (pictured below). Every delegate then assigned a level of significance to each trend by placing one of their five 'dots' against the trends they thought most significant. Gerard then posed the question: *"For individual producers to build businesses that allow biodiversity to thrive, we must..."* Each small group had to brainstorm answers to the question. Each answer was written down and stuck on the wall. Four helpers shifted the papers around to put like-ideas with like. This created, serendipitously, seven idea-groups. Dividing into seven new small groups, delegates then reduced each group of ideas to one sentence. These seven sentences are their collected wisdom: *The Tamar Principles*. They are condensed on the page opposite but appear in full throughout this document. Indeed, this conference summary has rearranged the conference proceedings around the seven principles.



The Tamar Principles



The Tamar Principles

1. Respect

Our respect for nature and natural process starts with respect for ourselves and for others.

2. Consider the Future

We have a duty of care to those around us as well as to future generations.

3. Set Goals

Our goals are as clear as we can make them and we fit our actions to the scale of our goals.

4. Be Open

Keep an open mind about new ways of thinking and doing.

5. Learn

Personal anecdotes, the experiences of our neighbours, scientific and technical writings, the land and the sea: we listen and learn from them all.

6. Demonstrate

We record our successes and our failures and we recognise, celebrate and promote all who progress.

7. Share

We seek ways to share or spread across the whole community the costs of biodiversity.

Tamar Principles

1. Respect

Our respect for nature and natural process starts with respect for ourselves and for others.

I'm proud to be a farmer. I think producing food and fibre for the world is a worthwhile occupation.

Ian Dickenson

In the mid-1990s we began to question the way we were thinking about the land we farmed. We began engaging with our land as a living being in its own right, with its own history, its own aspirations.

Graham Strong

Farmers have a very strong sense of place. Conservation of our natural heritage is as much about people, their actions and reactions as it is about the things being conserved.

Tom and Cynthia Dunbabin

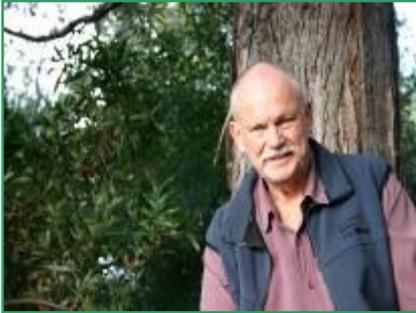
Sustainability requires a partnership that gives recognition and respect for farming traditions and addresses the need to have viable business enterprises.

Louise Gilfedder

Keynote Presentation

Peter Hay

Ethics, politics and humankind's relationship to other life



We are living through the sixth mass extermination of species in the history of planet earth. The cause is habitat loss. The problem is us, and we know it is us. But does it matter?

What argument can justify biodiversity? One argument is that Nature provides services that would be very expensive and in some cases impossible for us to have otherwise: environmental services. Also, the loss of many little bits of life—like knocking the rivets out of an aeroplane—frequently culminates in the loss of very large bits of life like whales—and perhaps us.

Perhaps not. Perhaps some biodiversity can be dispensed with without destroying us. There is no scientific reason to justify biodiversity. Ben Rider suggests that no ethical argument for biodiversity can be founded on ecosystem service either, with the concept of biodiversity part of the problem because it is an abstraction.

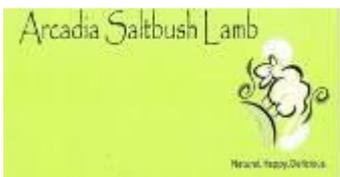
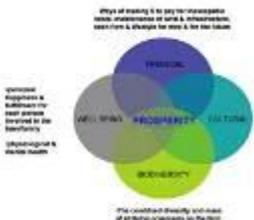
Fortunately, apart from reason, we have a fellow feeling for other life forms, a 'biophilia' or Ecological Impulse. Aesthetically, species loss reduces us as humans, it is part of our psyche and our soul. But the impulse does not extend to all people, nor to all creepies and crawlies. Most people live in large cities radically separated from other life forms, moreover we are more fascinated by ourselves and the things we create. We may be hardwired for land clearance; civilisation being our escape from the terror of the woods. In the Judaic-Christian tradition non-human life is not valued because man, made in God's image, partakes in God's radical separation from all other life. Our biophilia is tempered, restricted, perhaps absent.

Biophilia is not a scientifically valid or philosophically rigorous ground for informing policy and so neither business nor government have accepted it. But to stem the extermination, a revolutionary reconstruction of our rights concerning and our obligations toward non-human life is required. In the seventies that revolution in thinking began with concepts such as Sentience and Cell-based life put forward. These provide First Principles defence for biodiversity because they offer moral standing, and thus value even to an ecosphere.

Dr Hay begun by paraphrasing the bumper sticker: *Everything you wear and eat has been either dug up or cut down*. Inescapably true, he agreed; we must have production but we must also somehow contrive to retain biodiversity—and it is the production system that must make the adjustments.

Respect in Action

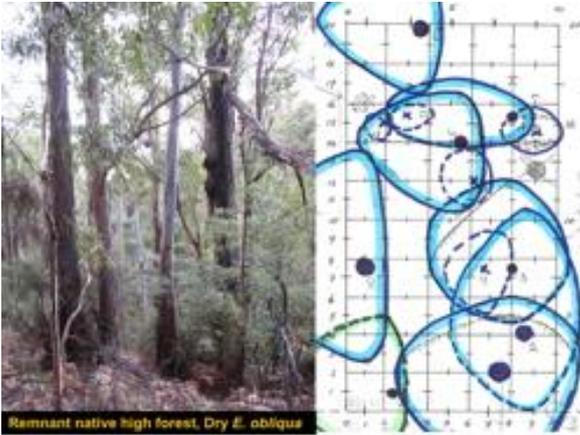
Graham Strong, Narrandera NSW *Regenerative Agriculture – a dialogue with nature*



If biodiversity collapses, civilisation will collapse. We've seen that over thousands of years. We had a salinity crisis 10 years ago and the answer was Landcare. Planting strip of trees but keeping all the chemicals and the dieback. Instead of integration they separated the two out. That just buys time. Compromise = both sides loose. I blame the dichotomy between the two—biodiversity and production. I went back to the beautiful native patches around our farm and just spent some time there. Listened. Didn't ask, just looked. Noticed all these beautiful things and then decided we'd act. (We put ourselves in the Faith Healers camp). I gave biodiversity its own agency and being. I saw it as a type of production, then I added Cultural and Personal Wellbeing to Financial Wellbeing—and I wanted it all. I collected roadside seeds, my parents joined the Field Naturalists, Mum planted Quondong trees and we planted hundreds of thousands of native tree seeds. We also looked at culture; we had dance parties combined with tree plantings. Had WOOFers (Willing Workers on Organic Farms). Had Afghan refugees. Where we'd planted we found weeds thrived so we put *all* our sheep in amongst it, trampled the weeds. It worked. The trees survived. Ten years on, we're still cropping, still wool farming, but we're doing pasture cropping: growing crops in native pasture. It's limited to no (or little) spraying, no fertilisers: it's a very cheap polyculture. We don't hand feed at all—another great cost saving. And it really makes you feel good about the land. We're into biological farming, natural fertilisers, eliminating chemicals. We've got the culture, got the landscape, Mum's selling quondong jam, I'm selling saltbush lamb, going around the back door of the mass-produced, and finding the people who don't want to be part of all that. Now we've invested in carbon trading. I say, 'Don't be scared of being a little crazy.'

Respect

Greg Unwin, John Lord & Arthur Lyons
Great Western Tiers, Tasmania
Integrated Farm Forestry



An integrated matrix of native forests and plantations on farms can protect biodiversity (as well as satisfying a broad basket of social and community benefits) while satisfying the silviculturist's forest production goals.

Dean Roberts & Don Haines
Wimmera, Victoria
Project Hindmarsh



The revegetation of 2000 kilometres or roadsides between Victoria's Big and Little deserts has captured the local community's attention, expanded into wildlife corridors and remnant vegetation fencing and now draws tree-planters from as far away as Melbourne.

Respect

Many conference delegates spoke about respect. Their collective view might be expressed as:

Natural resource management is, in essence, about respecting natural process and ensuring that human activity does not compromise its survival. The building and maintenance of productive human relationships across traditional social, cultural and political boundaries is imperative.

What can I do to have respect for self, others and natural processes?

Observations by Delegates

Approach everything you do with a respectful attitude and an open mind.

- *Respect sociological, environmental, productive, cultural dimensions.*
- *Build and foster trust, respect and credibility between, for example, government and farmer or consumer and farmer, etc.*
- *Establish timelines maintaining consistency help and long term planning for both biodiversity and productivity outcomes.*
- *It doesn't have to be all or nothing.*
- *Support others.*
- *Build coalitions.*
- *Have a belief in what you are doing.*

Tamar Principles

2. Consider the Future

*We have a duty of care to those around us
as well as to future generations.*

We only take what the landscape will provide without itself suffering, way into the future.

David Marsh

The instruction to our bushmen is...“Leave the best and take the rest.” The more valuable our forests are, the more care we will put into them.

Ian Dickenson

Our ‘true’ population is not 20 million because we have a phantom population [a population impact equivalent] of 400 million and so the proposal—when the country is buckling under the current impact—that Australia needs a population of 200 million sends shivers down my spine.

David Lindenmayer

Keynote Presentation

Barney Foran *Consuming the World*



By integrating the flows of globalised trade with the IUCN's list of endangered species we have revealed what we instinctively knew: we are consuming the very fabric of our existence. It is the centres of North America and Europe that propel the clear felling and rainforest burning in South America and Asia. And the same drivers operate between regions in Australia: the affluent suburbs use twice the resources, and have twice the environmental impact of the poorer suburbs. What to do? Going backwards, giving up everything we have become used to is simply not an option, but we have to undergo a radical change, and lead as well as help, less advantaged economies.

Individually, one way of changing our impact is to measure the triple bottom line of all similar products and choose the one with the least impact. Thus, out of beer, wine and Coke, beer has the lowest embodied environmental impact (without forgetting the healthy antioxidant content of a full glass of Shiraz). This is the Balancing Act.

But the Big Picture is that we also need great big plans and policies that cut across all sectors, more astute design of our guiding frameworks so that the marketplace refurbishes rather than consumes our environmental stocks. Markets, lifestyles—these will be radically different—but the alternative is chaos and destruction.

Consider the Future in Action

David Marsh, Boorowa, New South Wales
A Different Approach to Balance

Our family farm is 800 hectares of grassy woodland country. Once upon a time we saw ourselves as graziers and croppers; now we see ourselves as managing sunlight, plants and time. What we do is pasture cropping: sowing annual crops into native pastures. Nothing has to die. It is low cost, low risk, relatively low-yielding but highly profitable. Since 1990 we've increased native grass pasture from 1 hectare to 50. We match our livestock to our carrying capacity. That is a very difficult act but in the drought we had green grass and 100% cover, whereas the paddock next door was denuded. We plan for Diversity, increasing perenniality, full-ground cover, an effective water cycle, more soil organisms, more time for plants to grow—so we harvest more sunlight. Planned grazing (we increased the times between grazings) allows us to see at least 4-months ahead all the time and we change stocking accordingly using a program called KLR Marketing for marketing livestock sales, especially in difficult conditions. By slowing up grazing, we increased spontaneous regeneration. When you allow plants time to grow, they will grow. We haven't used any inorganic fertilisers since 1989. I'm not saying we won't in the future but we don't need it now and to me it seems a myth that you need things out of bags to make things grow. In many instances, it is the timing that makes all the difference, not the inputs. We have fencing divisions, mobile water. By maintaining ground cover we reduced run-off to zero. We increased litter, we reduced the distance between perennial plants—even during a drought. Scaled areas covered themselves up. The landscape can bounce back very quickly if we change what we do. It's all happened through having a holistic goal and a holistic framework for making decisions.

Consider the Future

Tom and Cynthia Dunbabin, Dunalley, Tasmania ***Nature conservation is not just threatened species***

There has, and always will be, uncertainty about the conservation needs of any landscape. The challenge is to develop practices that cope with these uncertainties.

Col Dyke, Little Swanport Estuary, Tasmania ***Caring and Sharing***



The oyster farmer is totally reliant on a healthy estuarine ecosystem. As a national pilot project, the estuary is now well advanced on the path to total catchment management.

Jai Ranganathan, India ***Agricultural biodiversity over the Millennia***



In the tropical countryside of India, after more than 2000 years of agriculture, most of the pre-cultivation species have survived because forested landscapes and agriculture with high structural complexity (in this landscape Areca nut palm plantations) have been retained.

Consider the Future

The collected view of the delegates on managing for the future might be expressed as:

Producers are privileged to live and work on the land. Fundamental to the management of biodiversity is balancing the responsibility of management for future generations with the rights of ownership.

How do I manage for the future?

Observations by delegates

Landowners should understand their duty of care to manage for future generations.

- *What happens on the land impacts on aquatic and marine systems.*
- *We must promote and maintain a diversity of farming practices (enterprises) to maintain a heterogeneous landscape environment.*
- *Recognise the message from 'the silent partner' – the land on which our agricultural systems are based.*
- *Embrace the concept of Land Stewardship.*
- *Landholders don't own the land, they merely borrow it from the next generation.*

Tamar Principle

3. Set Goals

Our goals are as clear as we can make them and we fit our actions to the scale of our goals.

It's all happened through having a holistic goal and a holistic framework for making decisions.

David Marsh

To be effective the desired outcomes of conservation programs must mesh with the goals and aspirations of the landowner, including their need to be profitable. Programs need clear, outcome-based objectives and practices that have the capacity to meet them whilst coping with changes and risks in the environment.

Tom and Cynthia Dunbabin

Keynote Presentation

David Lindenmayer
Where have we got to?



The integration of production and conservation is the major issue facing western society. And it is not really an argument between the Greens and the Browns. It is about how you really go about integrating the two. But six things disturb me (my Irritated Male Syndrome, **IMS**) about the way we're going forward.

The concept of sustainability has been around for more than two decades and can be found deep within the psyche of almost all policy makers and natural resource management agencies, and much of the business world

but it has become a 'weasel word'. **IMS #1:** Sustained production is not the same as Ecological Sustainability.

IMS #2: The gap between what is required to achieve ecological sustainability and what action we are taking is widening. Indeed, in many cases, the fundamental drivers of this widening gap are entirely overlooked—either inadvertently or deliberately. We are guilty of immaculate self-deception.

The solution is in knowledge, goals, research, adaptive management, and monitoring. But, **IMS #3:** we are, in the case of my current area of study, forest management, doing none of the above. We have a policy surplus but action deficit. We do not fully understand a single forest ecosystem. Our record on monitoring is nothing short of atrocious. We don't know how we're going so we can't gauge sustainability. Our management is more akin to alchemy than science. We have not embraced genuine adaptive management. If results threaten the goals of management we bury them rather than take action on them.

IMS #4: We insist on repeating our mistakes. We always overcommit our landscapes. We treat them like magic puddings. We need a landscape accounting. How much environmental margin are we going to have? A classic example of this is that we do not accept that fire is a natural part of the landscape, and therefore that we should leave an environmental margin for it. We treat fire as a disaster. We are not planning for what is natural. **IMS #5:** Environmental management is crisis management. And it always costs a lot more. And is in many cases spectacularly unsuccessful.

It is clear that we have not made nearly enough progress however principles to guide the ecologically sustainable management of landscapes, and the natural resources in those landscapes do exist. And an international panel has, drawing on 30 years of knowledge, recently codified them. **IMS #6:** The question now is: will we act on them?

Set Goals in Action

Ian Dickenson, Blessington, Tasmania
Balancing on a 3-legged stool



I'm proud to be a farmer. Maintaining a family farm, maintaining a balance on a three-legged stool—social, environmental and economic—in an increasingly global market requires careful, long-term planning, commitment and compromise. The decision about whether we conserved or converted 204 hectares of native forest to plantation demonstrates this. We agonised over it because we enjoyed walking over it and hunting in it. So firstly I wrote to the Tasmanian Forest Reserve Program about a Covenant. They said they could do better elsewhere. Its conservation value was \$61 000. Second option was to harvest. Harvest offered a stumpage value of \$752 000 (and \$5 million in finished goods.) It also provided 10 man-years employment. So to conserve = a 'gift' of nearly \$700 000. And the difficulty with that is that we have to achieve on the other two stool legs or someone (Managed Investment Schemes) will come along and buy us out. We cut it, and put in 122 hectares of hardwood and softwood plantation. We kept 70 hectares native and converted the rest to agriculture. Harvesting allowed us the money to do some environmental work. Because our properties are in Launceston's water catchment, a major stream was fenced off. The environmental service of that land was calculated at \$3000 per year, but I think this calculation is 'Early Days', It's not yet rigorous. In conclusion, farmers manage 70% of Australia's land and have invested \$3.3 billion of their own on NRM. This goodwill needs to be nurtured through commonsense government policies. I think we need Stewardship Agreements, not 'Lock-it-up-and-Leave-it'. We also need partnerships with scientists to better manage environments. We need new tools. The ones we have been using haven't been sufficient—I won't say unsuccessful—but they haven't been sufficient.

Set Goals

Sue McIntyre, Grassy Eucalypt systems of the nation ***The Constant Sum Game***

Balancing conservation and production is a constant sum game where the benefits and losses to all players sum to the same value because taking a larger slice for one reduces the amount of 'cake' available for the others. High productivity and high diversity are not compatible. A landscape mosaic makes compromise achievable.

Set Goals

The collected view of the delegates on goals might be expressed as:

Action needs to be appropriate to the scale of the goal. For instance, if it relates to a species, it needs to be based on some understanding of that species life history, habitat and home range. If it relates to managing a degrading process such as salinity, it needs to be based on an understanding of the spatial scale over which hydrologic processes occur. Goals or objectives could relate to individual species, to multiple species, to communities, to environmental processes (such as water filtration, vegetation cover, soil erosion) or the management of pests. Small goals are more likely to succeed. Even first steps should keep in mind the ultimate goal of change.

How do I set clear goals?

Observations by delegates

- *Start with a small achievable goal.*
- *Operate at a scale appropriate to your goal.*
- *Set clear goals. |*
- *Set clear objectives.*

Tamar Principles

4. Keep an open mind about new ways of thinking and doing

The landscape can bounce back very quickly if we change what we do. It is changing ourselves that is the problem.

David Marsh

Don't be scared of being a little crazy.

Graham Strong

It seems to me a myth that you need things out of bags to make things grow. In many instances, it is the timing that makes all the difference, not the inputs.

David Marsh

Our most threatened landscapes are already populated with exotic plants and animals and conservationists must consider them as assets, not just threats.

Tom and Cynthia Dunbabin

What makes people change? We all want to believe that what we're doing is good. And so if we acknowledge that what someone else is doing might be something that we aspire to do, we've [also] got to say that what we're currently doing isn't so good.

David Marsh

Keynote Presentation

Severn Cullis-Suzuki *Finding Opportunity in the Challenge*



We are revolutionaries and we don't even know it, for every revolutionary's life and actions shift society. In the developed realm we are causing large—disproportionately large—changes to the world, whether we realise it or not. We do not grasp that we are acutely dependent on the environment. This disconnect is at the heart of the ecological mess. The western conception of Nature may be the most significant difference between us and indigenous cultures where there is sometimes no word for 'nature' because it is not something separate.

For us, it still is. The basis of indigenous resource management, my Auntie Diane taught me, is Respect. Respect for yourself, for your own body, for your food, for the land: respect for everything.

I grew up eating homegrown vegetables, fishing in the lands of Canada's First Nations people and feasting. So, for me food, identity, environment, jobs and community morale were always closely associated. I was also taught that every person has a duty to speak out against what they knew to be wrong. And so when I was taken to the Amazon rainforest and lived in it for a while as a child, and then, as I left it, saw it on fire I came home knowing I had to say something. I started a club, 'ECO' The Environmental Children's Organisation and this led, eventually, to my attending the UN Earth Summit in Brazil, as a child, in 1992 and addressing the Plenary Session of the world's leaders. I said to them that as well as being world leaders and politicians, they were parents and their first duty was to their kids.

Since the Earth Summit numerous disturbing reports have confirmed that biodiversity (as well as the Ethnosphere) continues to shrink. We know this ourselves. Fish my parents once brought to the dinner table are now on the endangered list—I hope you don't think there is a direct correlation there.

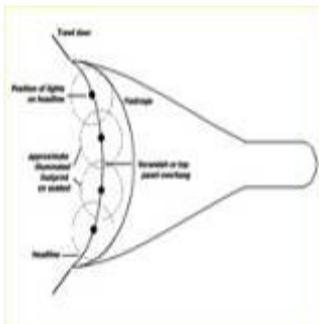
The new awareness of the situation is a huge opportunity to make the environment a framework issue, and translate awareness into action. One of the tasks of the 21st century is to connect the source of the change with the solution—to put the connections back into our world—professionally, politically and personally. We need to leverage one of the most powerful human forces: intergenerational love. Intergenerational love makes parents, inherently, environmentalists. No other generation has had such a big global responsibility, nor such an incredible opportunity to create a culture of sustainability and justice. And I ask you, after this conference, to do something different in your daily lives. It might be: Fly less. Refuse to drink bottled water—it is a scam. Ask people, gently, 'What are you doing about climate change?' Join the ranks of the scientist-advocates.

Be Open in Action

David Maynard, North Queensland *Tackling Prawn-trawler by-catch*



Trawling is a highly *un*selective fishing method. Tropical prawn trawling is responsible for nearly one quarter of all global fisheries' discards. So, for every kilogram of prawns your family eats, between three and twenty kilograms of small fish are caught and killed but then discarded. On the deck, they call it 'trash'. The Australian Fisheries Management By-catch management plan stipulates a radical change: the prawn fishery must halve its bycatch by 2008. Step One was save the 'charismatic mega-fauna'. The turtle excluder device had a 100% success rate, but who cares for all the little fishies? Me. I do. The problem was that the fish are the same size as the prawns. A range of further engineering solutions have been made, some by industry (they too can be quite innovative) like square mesh and 'fish-eyes', radial-escape sections, but just because we don't bring them to the surface doesn't mean the fish aren't harmed. That got me to thinking: Can we make fish *avoid* the net? We got \$9000, some sturdy lights (Fishermen walking down the dock said: 'Why does your net look like a Christmas tree?'), and a friendly prawn fisherman, the skipper of the *Stella Anne*. What happened? When we turned on the lights one in three fish swam away safe and—*and*—prawn and crab weight went up more than 30%. We think we can integrate all the technologies to create, basically, a big Exit Sign for fish. The fishermen can then steam around 30% less of the time, chew up 30% less of the seabed and still catch the same number of fish. So you've got a happier seabed, very happy fish and very happy fishermen.



Be Open

Terry Walshe & Tilo Massenbauer, Warden Wetlands, WA *Deciding what to do when the benefits are uncertain*



How do you decide what to do when the competing solutions are both based on intuition? Try Bayesian Belief Networks and info-gap analysis.

Matt Byrne, across rural Tasmania *The Deer Hunter*



Fallow deer had—had—long been the subject of conflict in Tasmania between farmers, shooters and government. Property-based wildlife management plans have seen a dramatic reduction in this conflict, greater understanding of wildlife, reduced usage of 1080. Now covering over one million hectares of land, the plans have now been adopted in other Australian states.

Nicole Walsh & Brian Baxter, Tamar Valley, Tasmania *Wildlife fencing*



Brian Baxter, a fourth generation farmer from the Pipers River District, used fencing for multiple purposes: to protect his pastures, soils, water and vegetation, thereby increasing his profitability by sustainably managing.

Peter Stronach & Brooke Groombridge, Rubicon River, Tasmania *Improving river health*

By maintaining a whole-of-catchment approach and by engaging many different landholders and industries we dramatically improved the riverbanks.

Be Open

The collected view of the delegates might be expressed as:

To have profitable production systems that encourage and enhance greater biodiversity, we all need to be flexible, innovative, and be prepared to abandon old ideas and practices.

What can I do to be open to new ideas and ways of acting?

Observations by delegates

- *Be open to innovation (ideas, ways of doing, thinking outside the box).*
- *Be prepared to take risks.*
- *Think outside the box – renew the paradigm.*
- *If you plan for it, you can manage risk.*
- *Choose actions based on current recommended practice.*
- *Be flexible – expect perverse and unintended outcomes and be prepared to change.*
- *There is no 'One Way'.*
- *We must use our votes wisely to elect leaders with a vision that promotes goals that integrate production and conservation.*
- *You have to actually embrace flexibility, innovation and risk.*

Tamar Principles

5. Learn

Personal anecdotes, the experiences of our neighbours, scientific and technical writings, the land and the sea: we listen and learn from them all.

I advocate partnerships with scientists to better manage environments. We need new tools, the ones we have been using haven't been sufficient—I won't say unsuccessful—but they haven't been sufficient.

Ian Dickenson

Translating research is critical to success. Conservation advice should be delivered in the context of the farm enterprise/business and recognise the importance of a landowner's 'sense of place'.

Mary Goodacre

Learn in Action

Janelle McGufficke, New South Wales ***Environmental Champions***

Environmental Champions is a grassroots movement to demonstrate sustainability achievements in the Rice industry in Southern NSW. It is a small industry, 2000 family farms. Rice is a rotation crop. In the late 1990s the farmer's were feeling there was a plethora of information to understand and increasing legislation and community criticism over environmental concerns. Above all they wanted a healthy farm and a healthy community to pass on to their kids. They wanted an Environment Policy but the consultant said she wouldn't write it. She would facilitate *them* writing it. Stakeholders were involved. Then they needed a way to deliver those things on the ground—too many policies stay on the shelf. That's where Environmental Champions came in. It's the delivery mechanism, it focuses on the people. It has nine components, five levels of achievement—it is a change process. But it's not just about doing things; it is about formally recognising what they have done. The heart of it is the network of small cluster groups. There are 5-10 people in each, they're self-selected, (as neighbours or friends). They all meet and talk, plan together, learn from each other (and the 'experts'). This creates confidence and motivation, links productivity with conservation, and has many social benefits. On top of the 15% who always jump in, we wanted as many as possible involved at some level and after three years 25% of the industry is engaged. Groups have created vegetation corridors together—and much sooner than they might have individually, others have gathered information about the benefits of increased health across the whole farm, shared that information and drive further research and learning. Communication between organisations across the region has further increased adoption through combining efforts and pooling resources.

Learn

Donna Hazel, Southern Tablelands, New South Wales ***Win/Win for grassy ecosystems***

How do native grasses, sedges and forbs respond to grazing? And what is the best advice for maintaining or maximising biodiversity on grazed lands?

Rowan Reid, Otway Ranges, Victoria ***Multipurpose tree growing***

The AgroForestry Network (a non-profit community group) has raised over one million dollars to help farmers chose the best (not just best-bet commercial) tree-growing options for them on their farm in their catchment in their community.

Learn

The collected view of the delegates might be expressed as:

All sectors must continue to develop and maintain open channels of communication to enable dialogue, understanding and information sharing. Formal and informal sources of knowledge and communication all have their place. Personal anecdote, the shared experience of neighbours, other producers and scientific literature on ecological process are all important contributors to building a collective understanding and capacity.

How do I learn from others and share knowledge?

Observations by delegates

- *Producers have an understanding of what biodiversity is on their place and in their landscape.*
- *Listen to the landholder. Acknowledge Sense of Place and assist and strengthen this (provide the necessary support).*
- *Provide more forums for direct interaction between science and producers.*
- *Empower producers to enable them to do the "right" thing.*
- *Seek advice and learn from others' experiences (good and bad).*
- *Communicate with your neighbours and think at a bigger scale (or picture).*
- *Communication: educate, inform, inspire, listen—these are reciprocal.*
- *Build collective skills capacity.*
- *Be well-informed: gain an understanding of options, baseline information etc and share your knowledge.*
- *Educate everyone.*
- *Create opportunities in schools to learn more about ecology and production systems.*
- *Understand ecological processes.*
- *Increase knowledge transfer to farmers (how to do); sharing knowledge, acknowledgement of previous work.*
- *Understand society's expectations for biodiversity conservation. You need to understand the context of biodiversity to producers and to the general public.*
- *Integrate (production and environment).*
- *Sell our story to farmers, the wider community, decision makers.*

Tamar Principles

6. Demonstrate

We record our successes and our failures and we recognise, celebrate and promote all who progress.

Australian Maritime College acknowledges that to get credibility with industry, to sell the results of research, you need to be seen out there doing research.

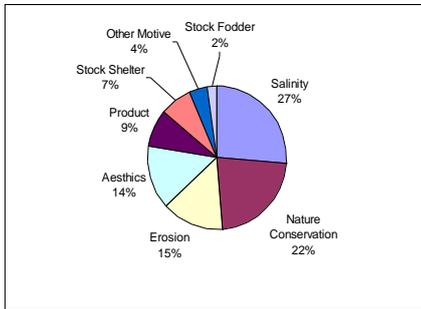
David Maynard

It makes you feel incredibly good to see your farm doing alright when there's dust flying around. These are fat sheep in a drought that have never been fed.

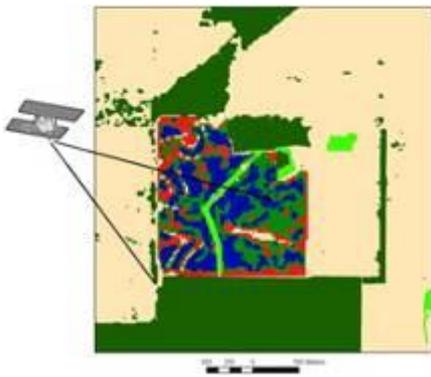
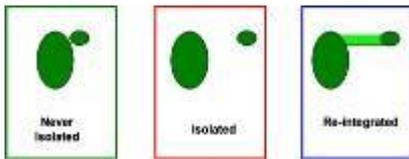
David Marsh

Demonstrate in Action

Patrick Smith & Gavin Morgan, central wheat belt, WA
Good Farmers and Green



For birds both the size of patches and their spatial relationship to other vegetation is important.



When Western Australia's central wheat belt farmers increased their farms' perennial vegetation cover from 9% to 14% onlookers dismissed them as crazy but extensive analysis shows otherwise. After two years study—and we threw everything at it (satellites, soil pits, ground surveys, consultation)—the good news story is that of the three types of regenerated areas ('Never Isolated', 'Isolated' and 'Re-integrated') the re-integrated remnants have *nearly* as much diversity as the Never Isolated remnants. So, revegetation works. But it also costs. The challenge was to maximise the benefits and minimise the costs by focusing the revegetation on the least productive land. To go beyond gut feeling and find places where farmers were throwing away money—and save that money. Well, (where we've looked for it) we're finding they're pretty good managers. These farmers not only have measurable biodiversity benefits but their farms are operating at or near their economic optimum. Science can still help. By really studying the land, we can (in consultation with the landowner) create the most cost-effective revegetation corridors. In one case the first option was to create a 30-hectares reveg zone which would have cost (that is lost) \$95 per hectare per annum. But careful study of the ground showed that using other land we could get 80 hectares of reveg at half that price per hectare. So, the farmer had to pay more in total, but the loss per hectare was halved and the amount of reveg was more than doubled. And it is this kind of result we look for: it maximizes the gains and minimizes the costs.

Demonstrate

John Ive Hall, New South Wales

Environmental progress as a precursor to production gains

After transforming a third of 'Talaheni' to native vegetation my wool and beef production increased in both quantity and quality.

Cam Nicholson, Victoria

The value of bugs



Patches of native vegetation—especially grasslands—provide a 'pool' of pest managers.

**Jann Williams & Mary Goodacre,
SA, Tas, Vic, NSW & SE Queensland**
Profitable, diverse wool production

Five years of work demonstrated that—regardless of the farming system— wool growers can generate both biodiversity benefits and profits.

Geoff Park & Dwain Duxson, North West Victoria
Landscape Restoration and Native biodiversity



Two large Victorian farms at different stages of landscape restoration are both experiencing profound landscape change while continuing as viable farms.

Demonstrate

The collected view of the delegates on demonstrating the benefits might be expressed as:

To build a case for change within communities, industries and the broader society, we need to record and document in words, pictures and numbers our successes and failures, and to recognise, celebrate and promote our progress in a consistent way.

How do I demonstrate the benefits?

Observations by delegates

Understand and demonstrate the benefits of integrating biodiversity and production and recognise those who achieve it.

- *Keep a record (at least photos).*
- *We must market the good work to the wider community.*
- *Increase recognition of primary producers' useful contributions.*
- *Recognition of the public benefit from landholders retaining and managing landscapes and biodiversity.*
- *Be able to quantify the costs and benefits of conservation activities*
- *Demonstrate the benefits (production, social and biodiversity) and understand the costs and who should pay which costs – show the causal link.*
- *Understand barriers to / drivers of uptake of biodiversity friendly practices.*
- *Demonstrate the benefits.*
- *We must promote and celebrate the good work.*
- *Identify and learn from those doing it and recognition.*

Tamar Principles

7. Share

We seek ways to share or spread across the whole community the costs of biodiversity.

About 30% of all the energy goes into sustaining the organism, but we humans have captured that and put it into our mouths and our pockets. We call it income but it is really landscape capital liquidation. Our approach now is to take a little interest off the top, but we don't want to delve into the capital.

David Marsh

Share in Action

Alexandra Knight, Murray Darling, New South Wales *Bringing back ground nesting birds*



The Murray catchment is home to three of NSW's endangered ground-nesting birds and all three depend on remnant habitat on private property. Some landholders take great interest in the birds, however their actions and knowledge were largely hidden from (and unsupported by) government. And the dialogue between government and landowners had been less than friendly. We have spent a few million each year, mostly on fencing, a little bit for weed and pest control, hundreds of thousands of trees and tube stock. So, we have existing incentives and we hope it has been effective but there is a fair bit of alchemy and hope. We also got (and get) a lot of feedback from the community suggesting they would like input into how we spend the money. So we are trialling a program called Nest Egg. It is different from the usual grant-based approach. It's an auction approach. Rather than advising farmers what they should do, it lets farmers decide what they can do and bid for funds to do it. It relies on the landholder's knowledge and business acumen. It is focussed on outcomes. The hard part is...*how do you develop a habitat benchmark?* Scientists couldn't give us a model for this. We're going for Species diversity, understorey height, water depth, and so on. Before the launch we developed photographic guides to good habitat, and rule-of-thumb cost estimates. We also created bonuses of between \$10 to \$30 per hectare if they exceed the habitat benchmarks and a bird 'bounty': \$1500 for a pair of brolgas, \$1500 for a curlew and \$1500 for a sighting of a Plains Wanderer. Finally, we workshopped with farmers how to put in an upfront per hectare bid. Now we are getting expressions of interest. It is risky, it might not work but we are paying farmers for diversity.

Share

Kate Steel, Murray Darling Region, Queensland ***Bush Tender***



Biodiversity outcomes are a funding challenge. Voluntary conservation programs like Land for Wildlife and Bush Tender are proving cost-effective.

David Walker & Rob Frend, Gunnedah, New South Wales ***Land management tenders***



Most farmers would not consider nature conservation their 'core business' but Land Management Tenders combine sustainable production with environmental outcomes and leverage farmer contributions.

Louise Gilfedder & Rae Young, Tasmanian Midlands ***Conservation and Grazing***



Approaches to covenanting in Tasmania are broadening. 'Fixed-term' covenants join 'Forever' covenants and a shift from strict conservation to allowing for the sustainable management is being trialled.

Alice Knight, Woody Yaloak, Victoria ***Combining production & Conservation***



More than two-thirds of Woody Yaloak's landholders are members of their catchment group and over 90% have been involved because the goal of increasing productivity is as important as achieving conservation aims. Productivity is now above the regional average and soil erosion has decreased.

Share

Producers are playing an important role in the development of policies and markets promoting and rewarding production systems that manage for biodiversity goals. Managing biodiversity within production systems frequently comes at a cost. Experience showed that profits can be made but the whole community must share the costs of managing and conserving biodiversity. Producers have a role in the education of policy makers, consumers and the wider community about the benefits of their efforts to maintain biodiversity, its inherent costs and the public benefit derived.

How do I encourage the wider community to participate and share the costs?

Observations by delegates

- *Provide marketing information that allows producers to make informal decisions and marketing regimes that promote quality products rather than quantity.*
- *We must, as a community, be willing to pay for environmental services provided by individual producers.*
- *Ensure consumers are aware of the true cost (eg energy, carbon, etc) and pay for biodiversity conservation.*
- *Reward change with incentives and acknowledgement.*
- *Include biodiversity in usual business accounting.*
- *Remove perverse market signals eg drought funding, tax incentives.*
- *Farmers must be in the black.*
- *We must ensure that those that practice sustainable NRM are paid better than those who don't.*
- *Be more discerning consumers.*
- *We must broaden society's definition of prosperity beyond \$\$, understanding the value of natural capital and considering the reality of environmental debt.*