



Growing sustainable communities:  
Landcare's evolving roles and relationships in Australia's NRM for the future

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Concerned Scientists









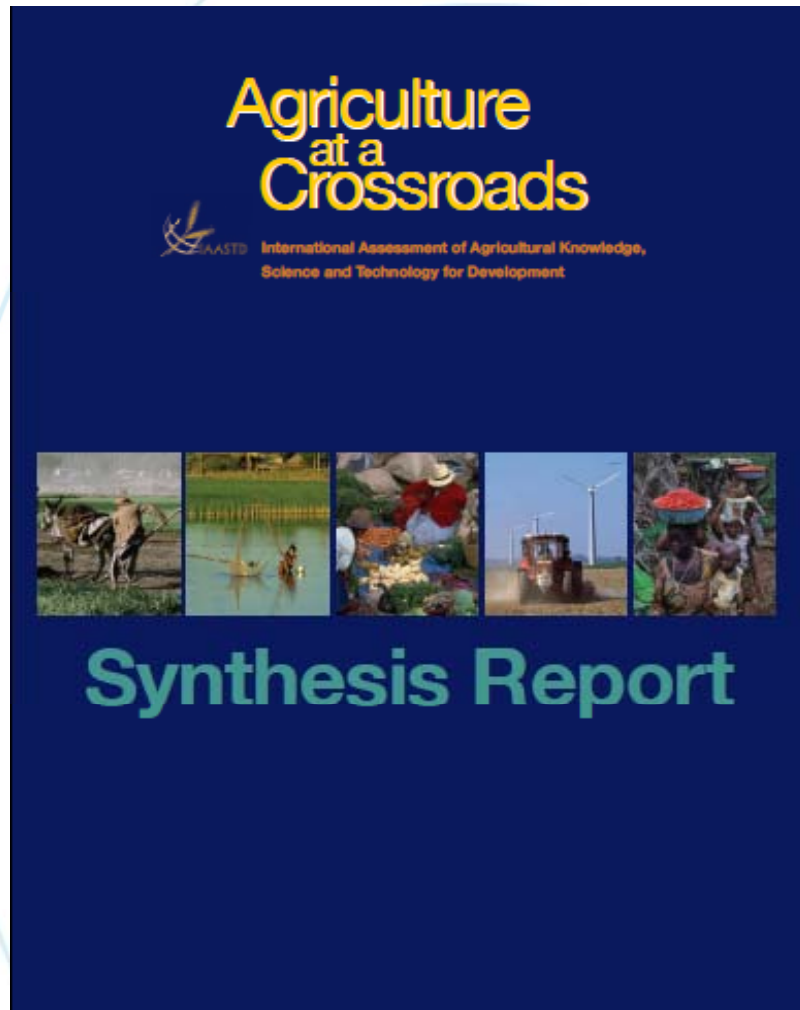


# A complex landscape means complex challenges...

*Image sourced from the Australian  
Greenhouse Office, Copyright  
Commonwealth of Australia 2004*

- Population growth
- Land-use change
- Climate change and variability
- Sea level rise

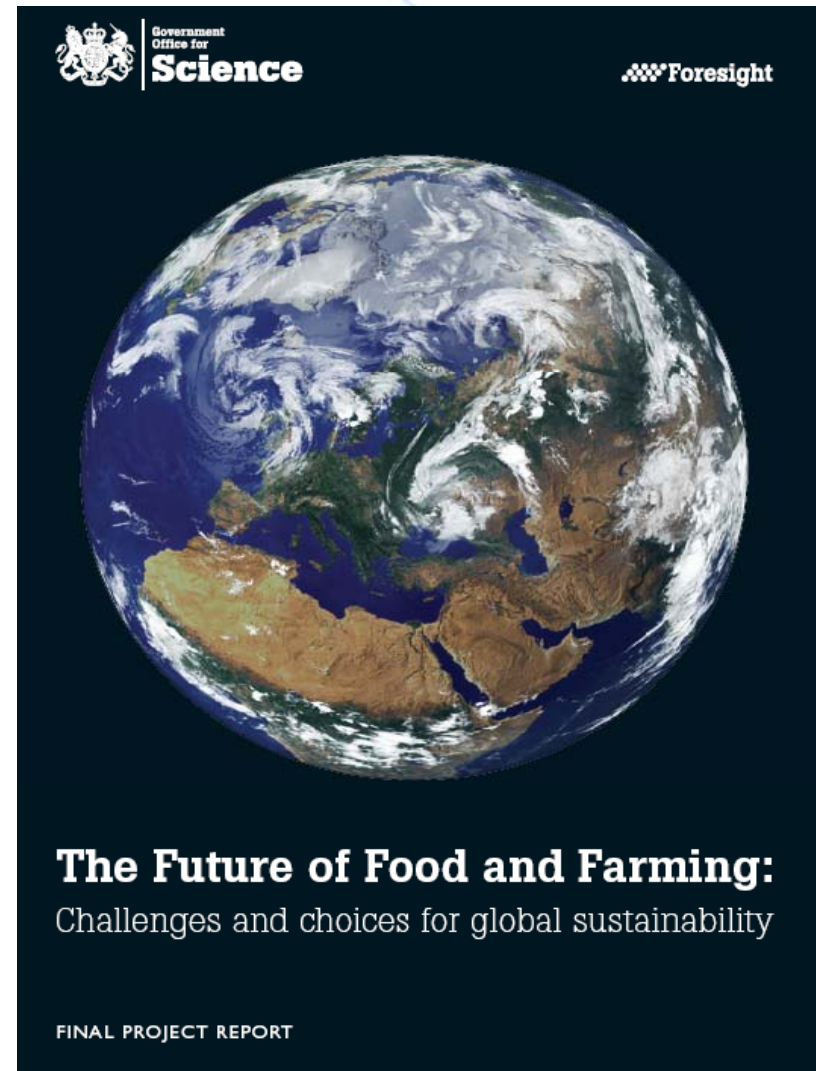
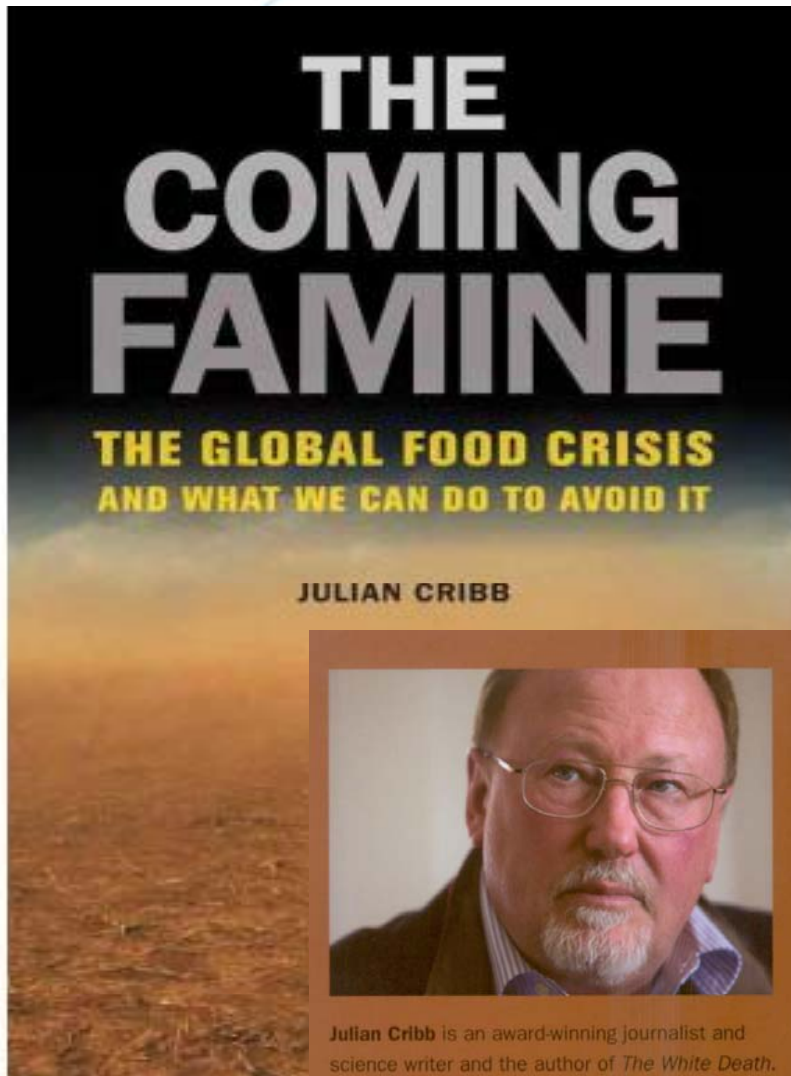
# Food or environment



**To avoid the emerging food crisis without further and increased damage to the environment and natural resources.....**

- world population expands
- at a time of rising costs for energy...fertilizer/pesticides
- Evidence that peak P is near
- within a spectre of climate change





## DECLINE IN PRODUCTIVITY GAINS MUST BE REVERSED

OVER 40 YEARS = 1.75% pa  
Currently = 1% pa

NEEDS TO BE BETWEEN 2-3% pa

# Food or Environment

This is perhaps the greatest challenge yet to face

- agricultural sciences
- Policy-food and NRM
- communities and society
- Landcare movement

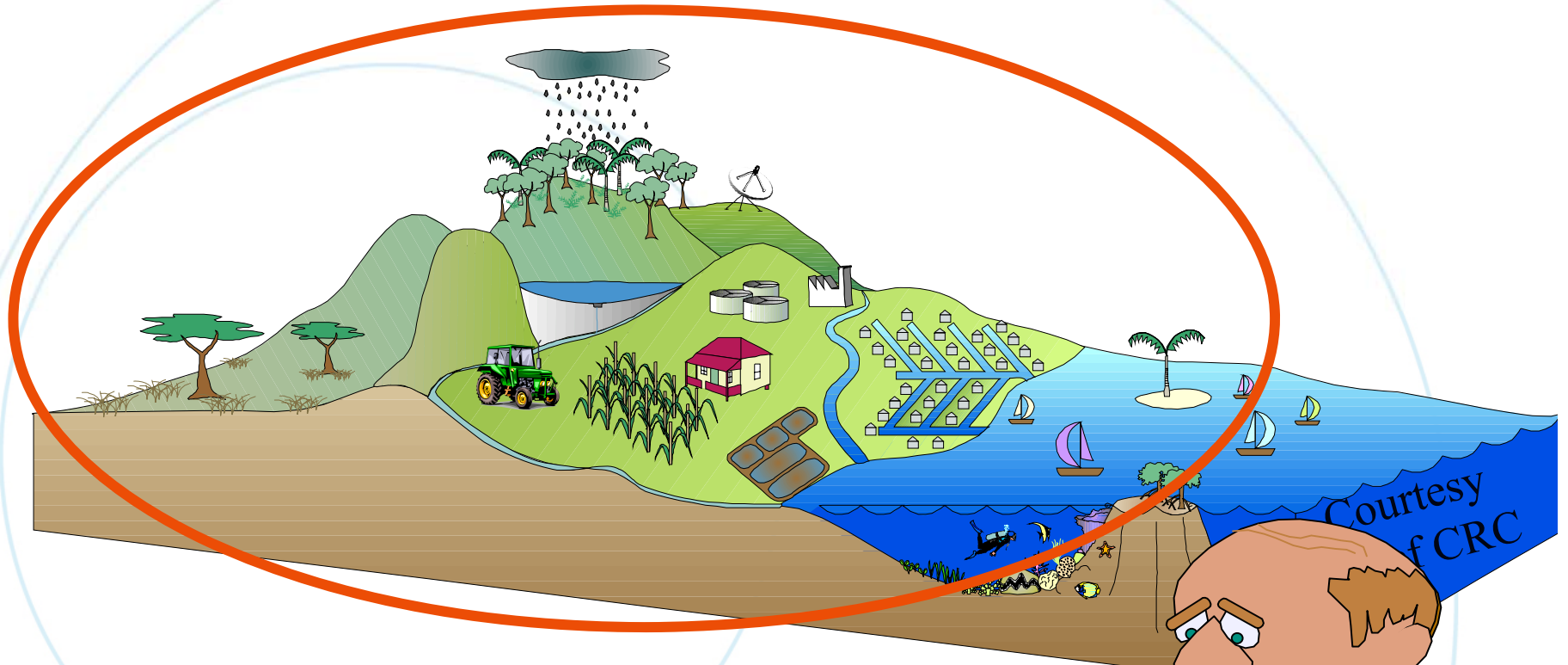


# Whole Systems Science Solutions Urgent

- **We've got to look at ecological, energy and water systems as a whole to appreciate the impacts or the footprint of our food on our natural resource base.**
- **This was a core message from the recent International Assessment of Agricultural Science & Technology (IAASTD) report**



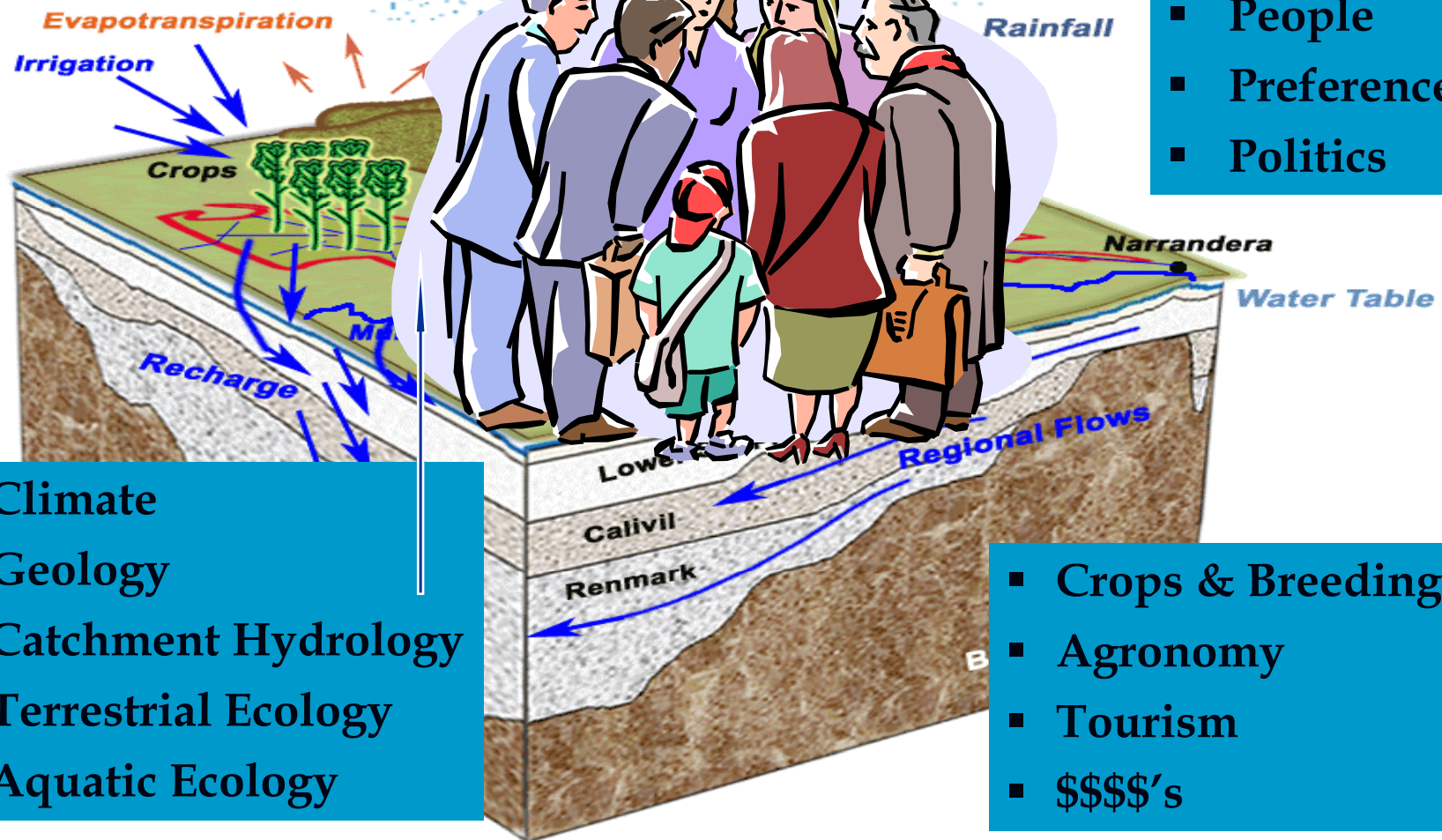
# WHOLE SYSTEM PLEASE



Courtesy  
of CRC



# Integrated Catchment Solutions Urgent

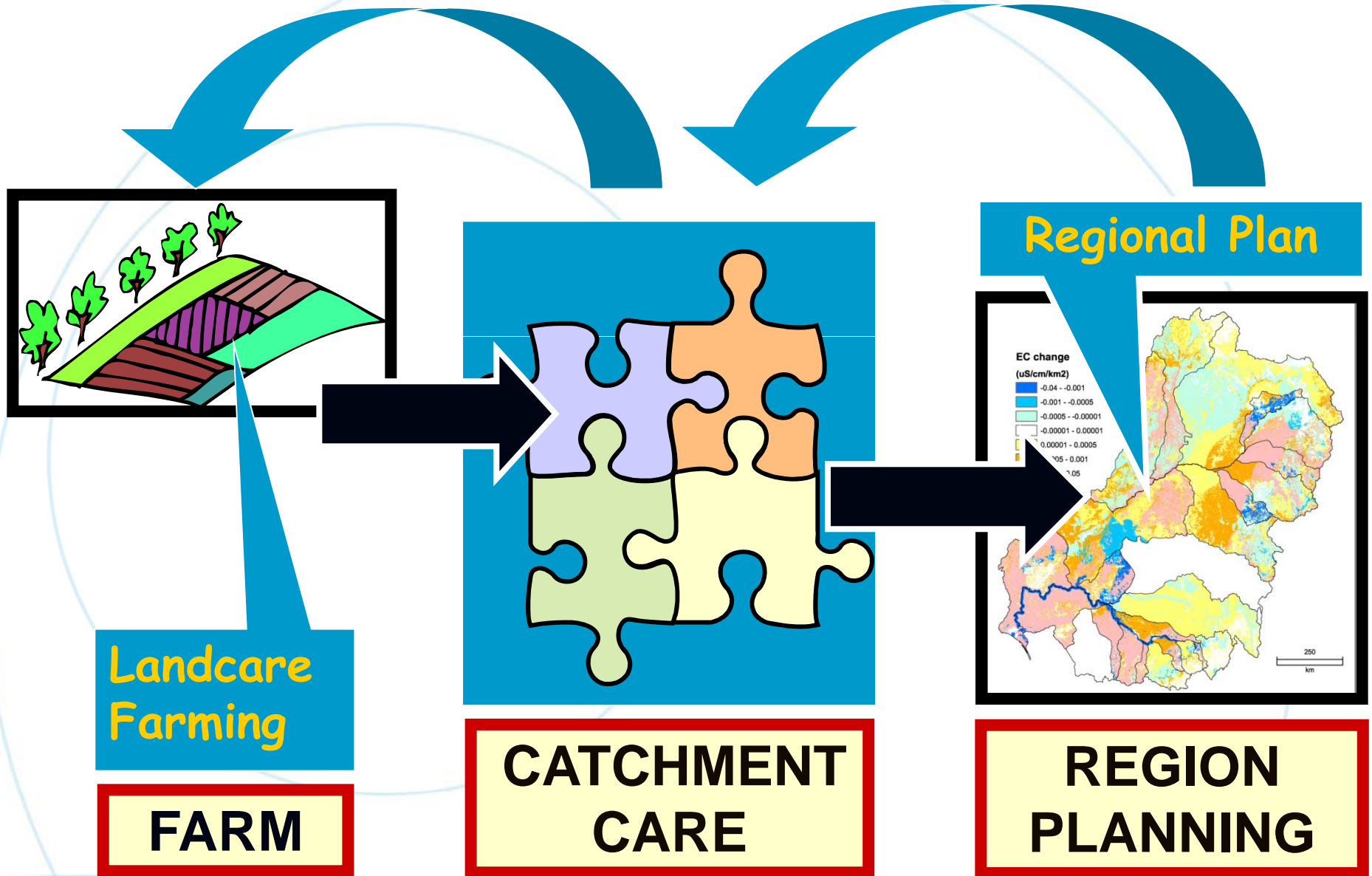


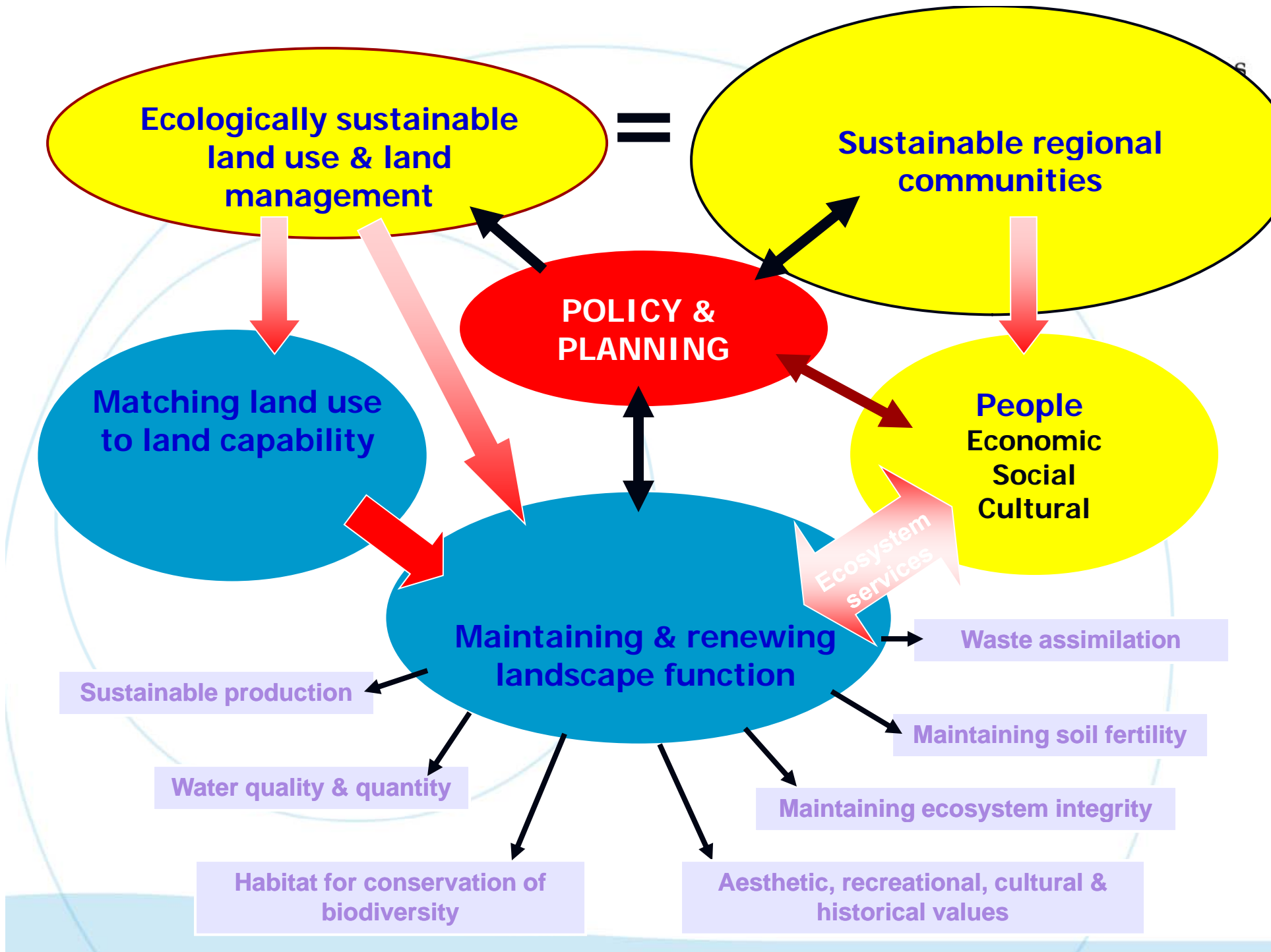
- People
- Preferences
- Politics

- Climate
- Geology
- Catchment Hydrology
- Terrestrial Ecology
- Aquatic Ecology

- Crops & Breeding
- Agronomy
- Tourism
- \$\$\$\$.s









# Pricing Food for Sustainability

- **Cost of food doesn't include cost of maintaining natural resource base.**
- **We need governments to adopt policies that create incentives for sustainable practices and costs to the environment being internalized in the economy.**
- **Traditionally, food prices do not include the cost of environmental damage. The natural resource base (land, water, biodiversity) for agriculture continues to suffer.**
- **We can't afford to keep running down the systems that feed us.**

# Pricing Food for Sustainability

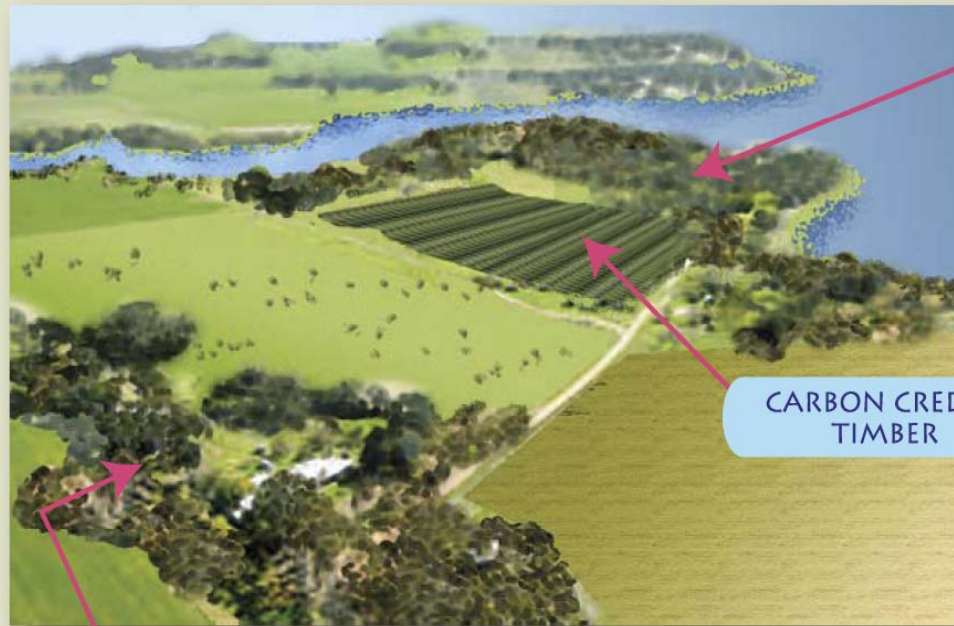
- **Rewarding the provision of ecosystem services is a good start**
- **We need investment in the economic valuation of ecosystem services**
- **With a market for these services, farmers in the future will not only be paid for the goods they produce but also for the services they deliver through the management of healthy landscapes, rivers, wetlands and estuaries for the public good**



# Ecosystem services



# A future form of sustainable agriculture



BIODIVERSITY CREDITS

CARBON CREDITS  
TIMBER

WATER MANAGEMENT/  
SALINITY CREDITS

RENEWABLE ENERGY



COMMODITY	BUSINESS SHARE %	CLIENT
WHEAT	40	WORLD MARKET
WOOL	15	WORLD MARKET
TIMBER	10	PULP WOOD, BIOMASS ENERGY, SPECIALTY TIMBER
CARBON CREDITS	7.5	STEEL MILL
SALINITY CREDITS	7.5	COST SHARING FOR CATCHMENT MANAGEMENT
WATER SUPPLY MANAGEMENT	15	WATER SUPPLY COMPANY
BIODIVERSITY CREDITS	5	PUBLIC/PRIVATE TRUSTS

(Credit: Dinah Johanson. Modified from Wayt Gibbs, Scientific American, 2005)



# Pricing Food for Sustainability

- **For as long as the cost of maintaining and improving the natural resource base in agricultural systems is not included in the price of food, farmers will never be able to farm sustainable and profitably.**
- **We need market and trade policies that remove perverse subsidies which drive damage to land, water and biodiversity.**
- **The cost of sustaining and improving our natural resources must instead be built into the price of our food.**

## Australian Landcare Management System

Australia's only national system for land management



- *To motivate landholders to improve environmental outcomes we need a positive feedback loop between effort and reward.*
- *However we are missing the essential link which is an on-going and widely applicable land management certification system.*

Gleeson T and Reid C (2007) Integrating land based systems-five easy steps. Paper delivered at the EMS conference Hobart, Tasmania [www.alms.org](http://www.alms.org)



## Australian Landcare Management System

Australia's only national system for land management



### ALM FACTS

Number 1 March 2009

#### Australian Land Management Group

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### Capturing the benefits from improving environmental outcomes

#### Quick facts

- ALM Certification System requires continuous improvement and operates whole of farm and across land use types
- Improves land based environmental outcomes from public and private land
- Improves the self esteem and wellbeing of landholders
- Partners provide support and add to the credibility of the system

# Pricing Food for Sustainability

- **regulatory framework to ensure food production minimises damage to natural resources & environment**
- **need an Australian standard for sustainable agriculture for local & imported products**
- ***'Australian Sustainable Agriculture Standard'* must include whole life cycle analysis of energy, water, land & biodiversity inputs into production**



## Where have we come from?

- The Landcare movement has achieved a great deal since 1986.

**The biophysical and environmental achievements have begun to repair the damage, to stabilize the situation, heal the wounds, and treat the symptoms.**



# Where have we come from?



**Equally as impressive are the social achievements.**

- **The strength of Australian Landcare is that community groups and networks, with government and corporate support, conceive their own visions and set goals for local and in some instances regional environmental action.**
- **Working from the ground up to achieve these goals creates freedom and flexibility, giving communities a great sense of purpose.**



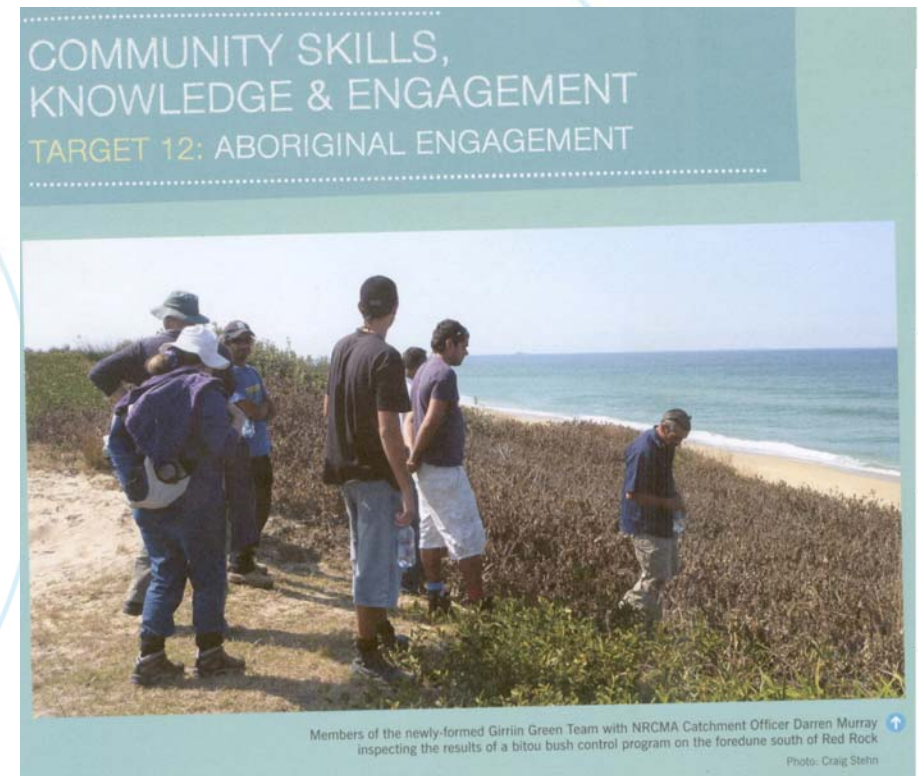
## Where have we come from?

- Awareness of Landcare greatly increased.
- Australians know about Landcare, and thousands have demonstrated their solid support for its ethic.
- Landcare movement is well respected



## Where have we come from?

- **Indigenous communities have also increased their engagement with Landcare, particularly in northern Australia and in estuary and river management in eastern coastal communities.**



# Where have we come from?

- The 'Decade of Landcare' ended in 2000, and over the following 10 years Landcare continued to evolve and respond to significant challenges and changing circumstances.
- The form and delivery of government support transitioned through four major funding programs:
  - National Landcare Program (1993-2008);
  - The National Heritage Trust (1997-2008);
  - National Action Plan for Salinity and Water Quality (2000-2008)
  - Caring for Our Country (2007- now)



# The next decade – 2011 to 2021

- Landcare movement emerged from rural communities and it has now taken root and flourished in urban and coastal Australia.
- The *Australian Framework for Landcare* builds a vision for the next decade where Australians from all communities and cultures can actively take responsibility for the health of Australia's natural resources and environmental assets.



# The next decade - 2011 to 2021

- With the ultimate aim of a sustainable future for all Australians, the Landcare philosophy will involve learning about landscape function and adopting actions that are more suitable for managing the way we live, work and play in our landscapes.



# The next decade - 2011 to 2021

- The Landcare community will continue to raise awareness of landscape function and the impact of inappropriate land management practices and planning.
- In doing so, it will encourage more suitable management methods to enhance the health of Australia's land, water and biodiversity.
- Landcare now mainstream



# The challenge to treat the causes remains

- Landcare must shift focus from awareness and symptom management towards treating the causes of landscape degradation.



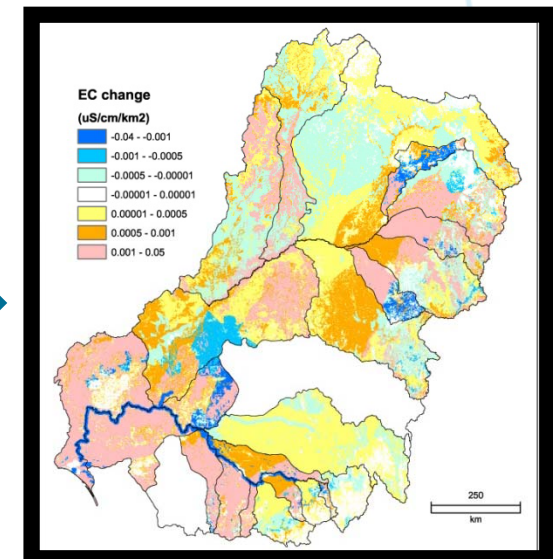
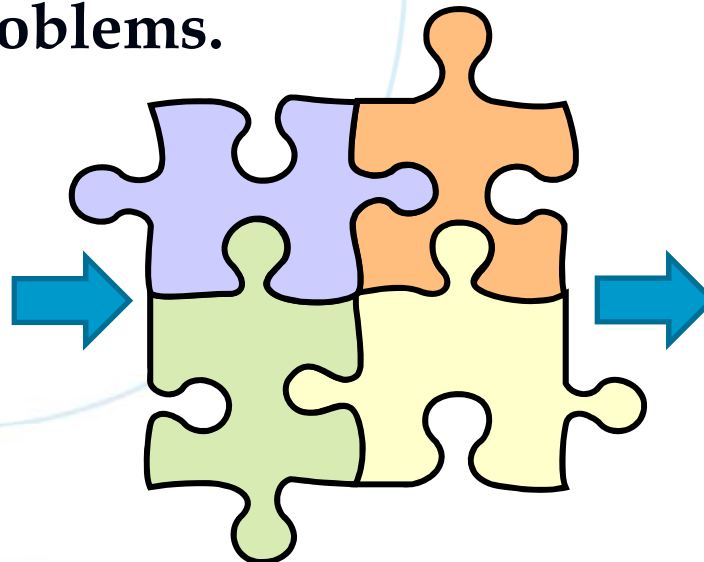
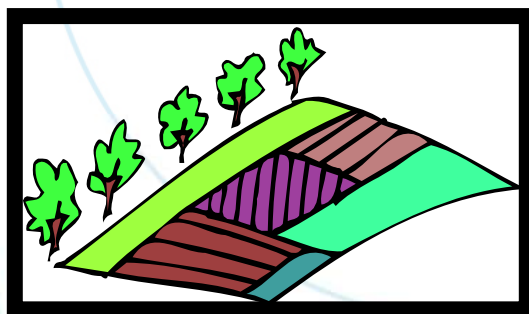
Millet sown into native pasture, helps to integrate productivity with the ecological processes of the landscape. Photo: Matt McKenzie



Sorghum established with minimum tillage and a trash blanket is an example of improved farming practice to cope with climate variability and improve soil health. Development like this is needed to increase food security and reduce damage to the environment. Photo: Matt McKenzie

## The challenge to treat the causes remains

- In addition to the innovation and good work at the local and paddock-scales, we need to be coordinating these efforts towards shared goals at a region or system-wide scale.
- We need collective interventions across sectors and geographic areas at a scale that can start to match the scale of the problems.



## Getting the scale right: Landcare in Partnership with regional NRM

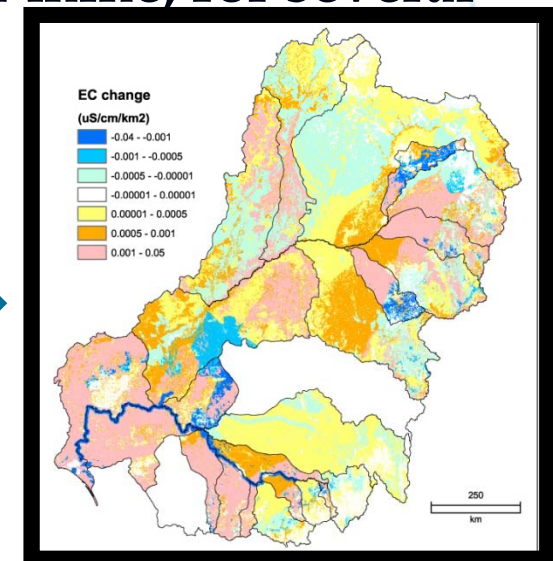
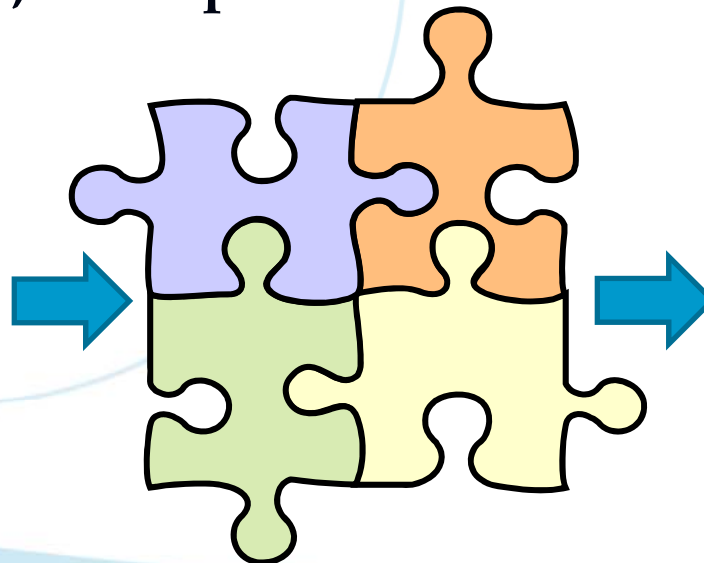
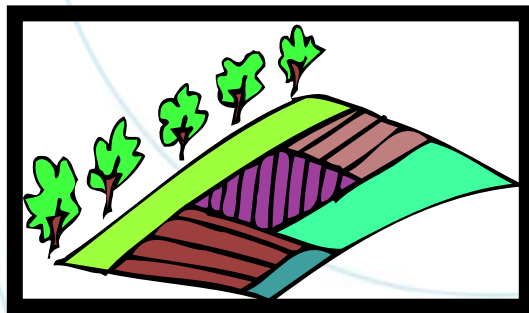
- Landcare has been a stable presence at the local level throughout several decades of institutional churn at the regional, state and national scales.
- Now, after several different incarnations of catchment management organisations, CMAs and Regional NRM bodies have been in place for nearly eight years.
- This continuity has helped government and communities learn and improve the way we manage our landscapes.





# Getting the scale right: Landcare in Partnership with regional NRM

- We now have the maturity, experience and right institutions in place to truly manage our catchments in an aligned and integrated way.
  - that is, to manage all components of the landscape together at the catchment-scale, in partnership with the community. This has been a policy aspiration of governments, and a personal interest of mine, for several decades.



## Getting the scale right: Landcare in Partnership with regional NRM

- **This continuity and experience also means that the catchment management authorities, Landcarers and communities have a wealth of new knowledge and understanding about their regions that must be used to inform upgraded strategic plans.**
- **This gives us all the opportunity to learn from the experiences of the last seven years, use the best available information to update our understanding of the landscape, and have a fresh think about what the priorities should be for the next 10 years and beyond.**



Building community capacity  
for natural resource management along the  
New South Wales coast





# BIODIVERSITY & NATURAL ICONS

## TARGET 2: REDUCING THE IMPACT OF WEEDS



Paul Reynolds from Colo Valley Landcare, with splatter gun in hand, sets off with Duke of Ed kids and Friends of the Colo members at the November 2010 Colo Meroo (camping ground) lantana weekend



Photo: Colo Valley Landcare



# COMMUNITY SKILLS, KNOWLEDGE & ENGAGEMENT

## TARGET 12: ABORIGINAL ENGAGEMENT



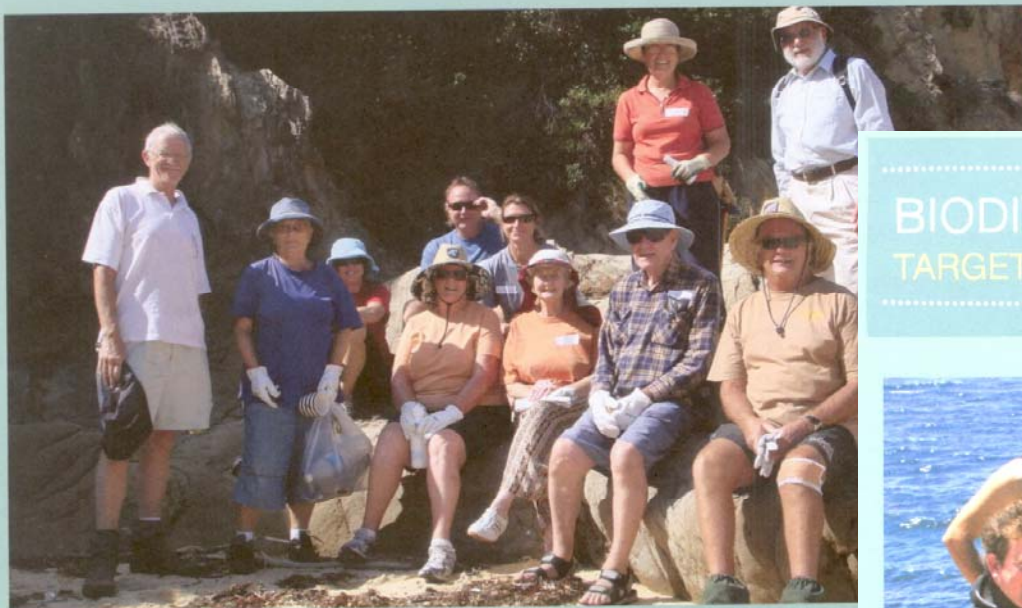
Members of the newly-formed Girriin Green Team with NRCMA Catchment Officer Darren Murray inspecting the results of a bitou bush control program on the foredune south of Red Rock

Photo: Craig Stehn



# COASTAL ENVIRONMENTS & CRITICAL AQUATIC HABITATS

TARGET 6: INCREASING COASTAL COMMUNITY ENGAGEMENT



The newly formed Potato Point Coastcare group take a break  
Photo:

# BIODIVERSITY & NATURAL ICONS

TARGET 3: MANAGING WORLD HERITAGE AREAS



Combined Hunter Underwater Group, with staff of the National Marine Science Centre and Hunter-Central Rivers CMA, about to undertake their inaugural training dive at Port Stephens

Photo: Tina Clemens



# SUSTAINABLE FARMING PRACTICES

## TARGET 7: IMPROVING LAND MANAGEMENT PRACTICES

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Oyster farmers, Koori Work Crew and volunteers who participated in the Pacific oyster clean-up on the Clyde River 

Photo: Courtesy Kirsti Samson

# Landcare's evolving roles and relationships in Australia's NRM for the future

Landcare emerged from rural communities and it has now taken root and flourished in urban and coastal Australia.



# Landcare's evolving roles and relationships in Australia's NRM for the future

*The Australian Framework for Landcare* builds on this evolution to outline a vision for the next decade where Australians from all communities and cultures can actively take responsibility for the health of Australia's natural resources and environmental assets.





# Landcare's evolving roles and relationships in Australia's NRM for the future

With the ultimate aim of a sustainable future for all Australians, the Landcare philosophy will involve learning about landscape function and adopting actions that are more suitable for managing the way we live, work and play in our landscapes.



# Landcare's evolving roles and relationships in Australia's NRM for the future

For landcarers to more effectively achieve our aims we must increase our collaboration and partner formation for both sharing knowledge and resources, and collaborating for on-ground delivery of improved natural resource conditions and trends.



Peter Ellyard wrote at the conference in 2001 and his words continue to be true and to my mind will be more important than ever in the decade ahead.

*“The future is not some place we are going to.  
It is a place we are creating.  
The path to the future is not found.  
It is made.”*





## Further reading

- **Youl, R, Marriott, S, Nabben, T (2006) *Landcare in Australia: founded on local action.***
  - [http://www.daff.gov.au/\\_data/assets/pdf\\_file/0017/29141/landcare\\_in\\_australiaJune08.pdf](http://www.daff.gov.au/_data/assets/pdf_file/0017/29141/landcare_in_australiaJune08.pdf)
- ***Australian Framework for Landcare Reference Group (2011) Australian Framework for Landcare.***
  - [http://www.daff.gov.au/natural-resources/landcare/the\\_australian\\_landcare\\_framework/framework-for-landcare](http://www.daff.gov.au/natural-resources/landcare/the_australian_landcare_framework/framework-for-landcare)

## Further Reading

- von Braun, J., 2007. The world food situation: new driving forces and required actions. Food Policy Report. International Food Policy Research Institute. Washington DC.
- Cribb, J., 2008. 'CSIRO erodes its own grand place in the world' in The Canberra Times, 9 June 2008.  
<http://canberra.yourguide.com.au/news/opinion/editorial/general/csiro-erods-its-own-grand-place-in-the-word/785452.aspx>
- Cribb, J., 2010. The Coming Famine: the global food crisis and what we can do to avoid it. University of California Press, Berkley and Los Angles, California, USA.
- IAASTD, 2008. The International Assessment of Agricultural Knowledge, Science and Technology for Development. See at <http://www.agassessment.org/>
- Kiers, E.T., Leakey, R.R.B., Izac, A., Heinemann, J.A., Rosenthal, E., Nathan, E. and Jiggins, J., 2008. 'Agriculture at a Crossroads' in Science, Vol 320, 18 April 2008, 320-321,
- Williams, J., and McKenzie, F. (2008). Farming without Harming, Australasian Science, Vol 29, No7, 31-34, August, 2008.
- Foresight. The Future of Food and Farming: Challenges and choices for global sustainability (2011) Final Project Report. The Government Office for Science, London.