



Together We're Making a Difference

**LACHLAN CATCHMENT
MANAGEMENT AUTHORITY**

CENTROC

Oberon

25th November 2011

**Presented By: Chris Glennon
General Manager**

Lachlan Catchment Management Authority



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Clean Energy Future

- CMA/Local Government Opportunities

- **A “Switzerland“ presentation.**
- **Background and context.**
- **Current Policy opportunities.**
- **CMA / Local Government collaboration.**



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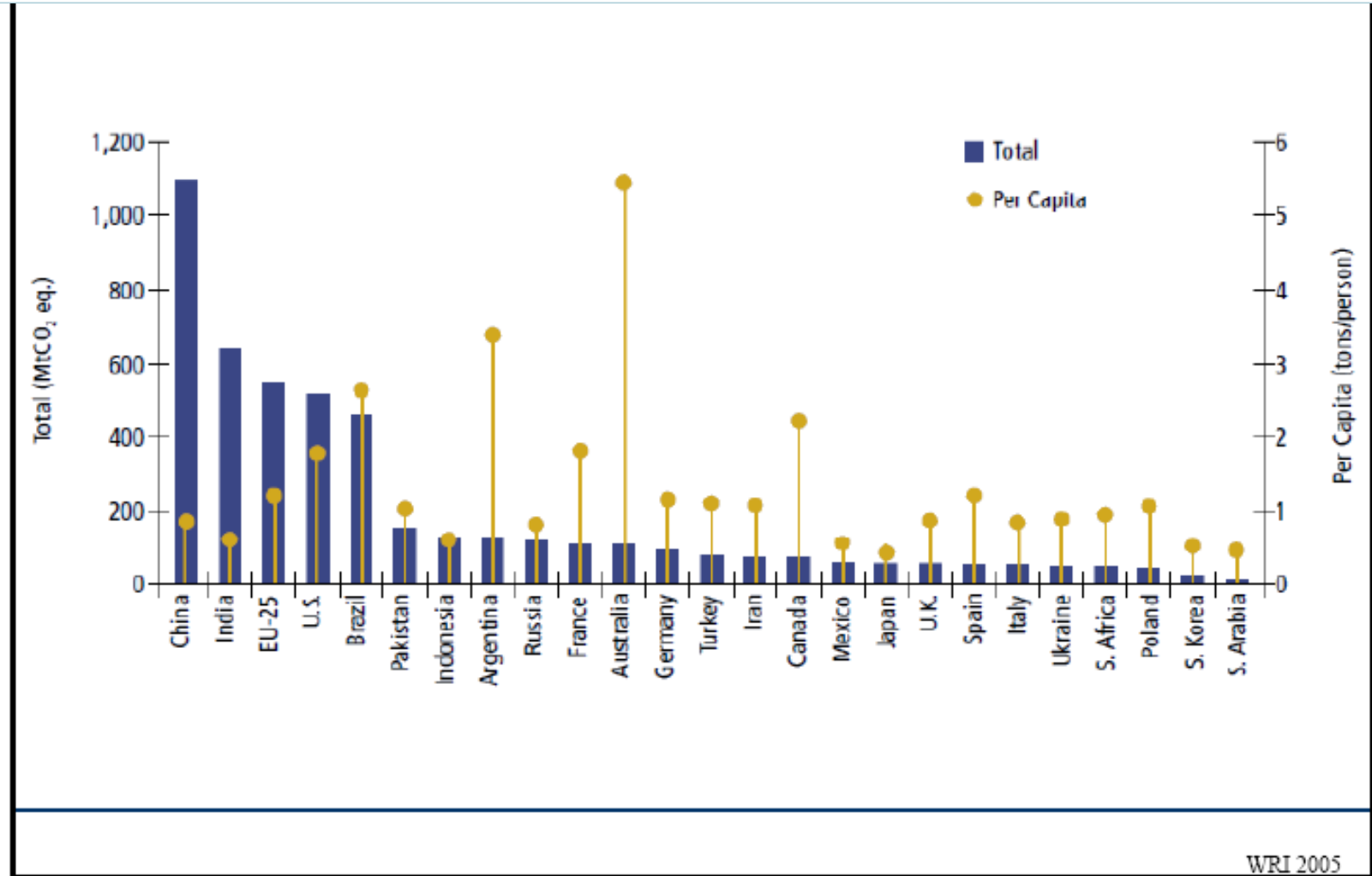
Background



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Total greenhouse gas emissions by country



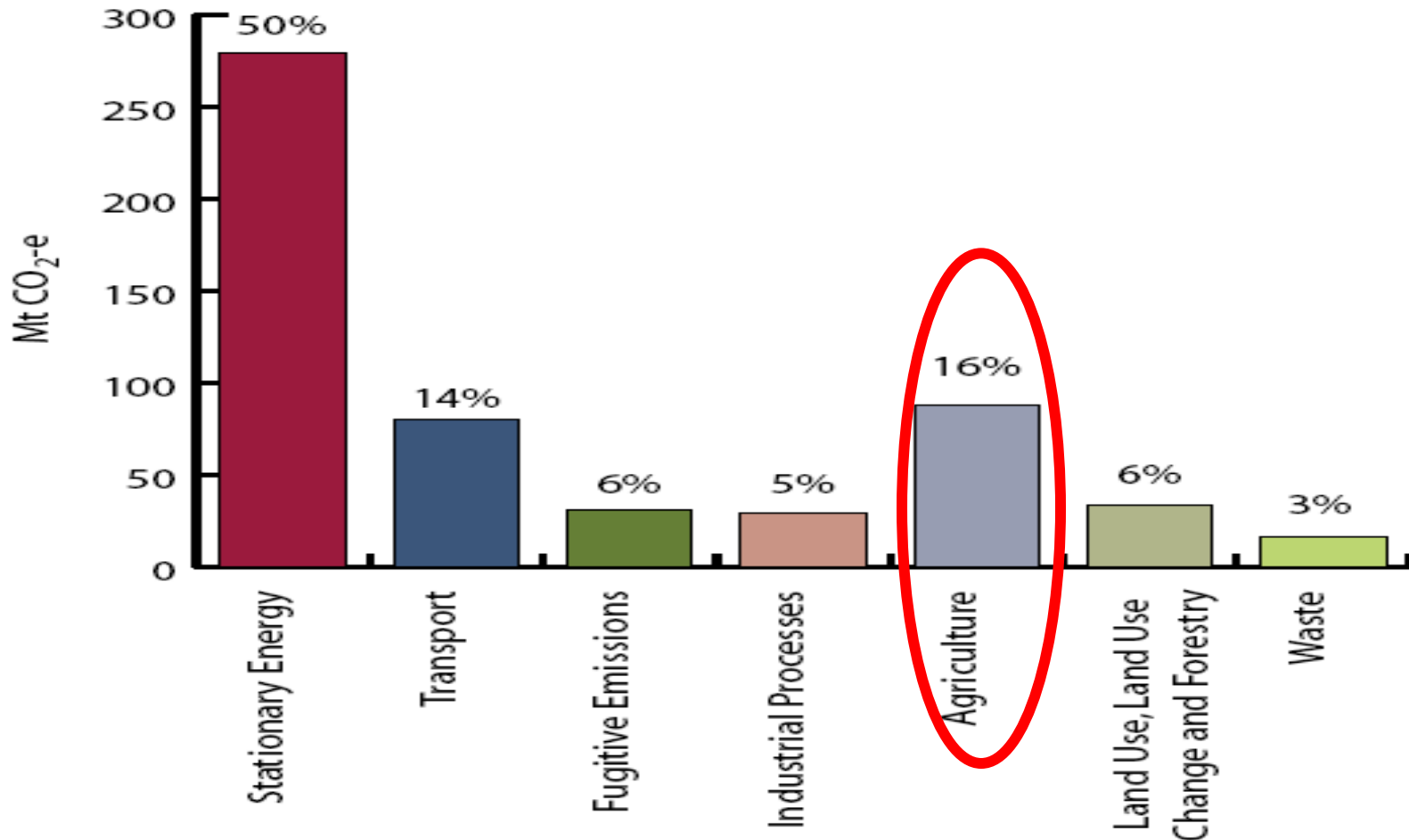
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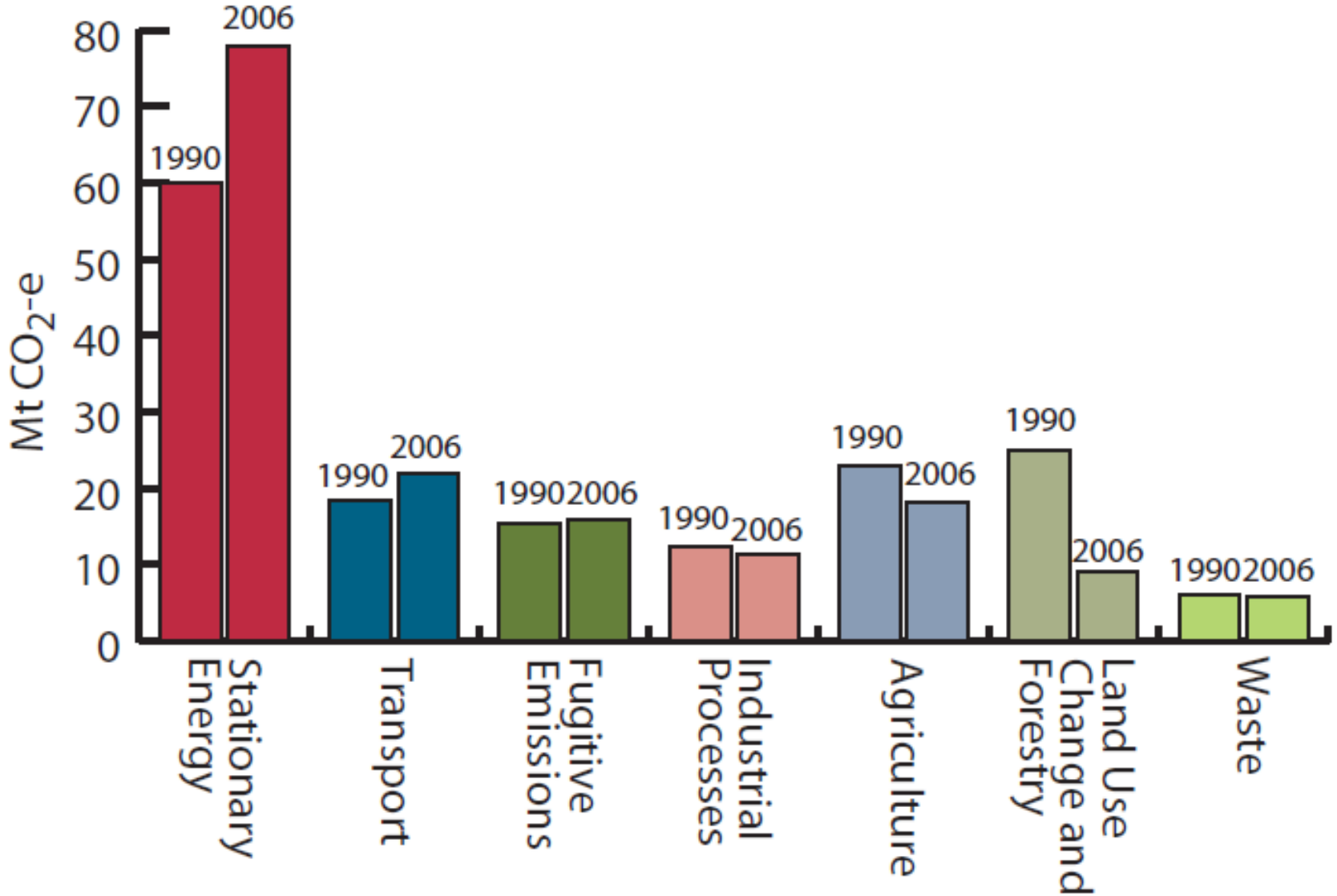
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What emissions?





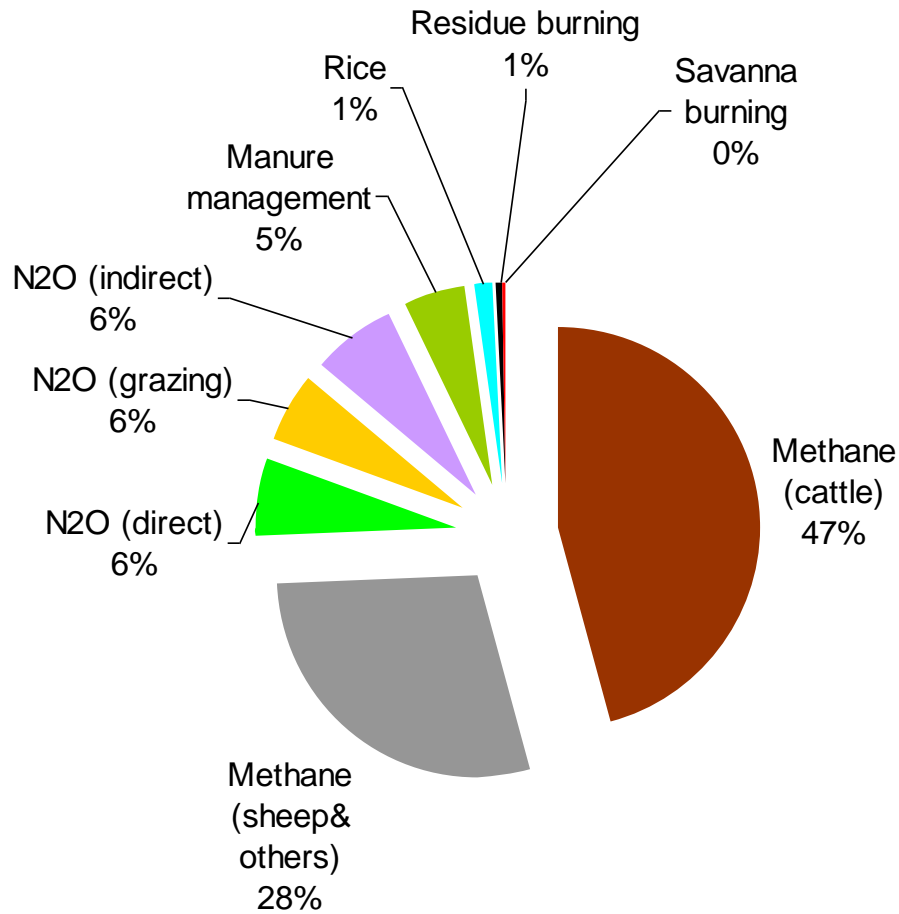
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Why all the fuss – it's the Global Warming Potential (GWP)



Carbon Dioxide (CO₂)

GWP for CO₂ = 1 for all time periods

Methane (CH₄)

Shorter residence time in atmosphere, 8-12 years

GWP for CH₄ = 72 x CO₂ on a 20 year time horizon

= 21 x CO₂ on a 100 year time horizon

Nitrous Oxide (N₂O)

Long residence time in atmosphere, 100-120 years

GWP for N₂O = 310 x CO₂ on a 100 year time horizon



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Opportunities



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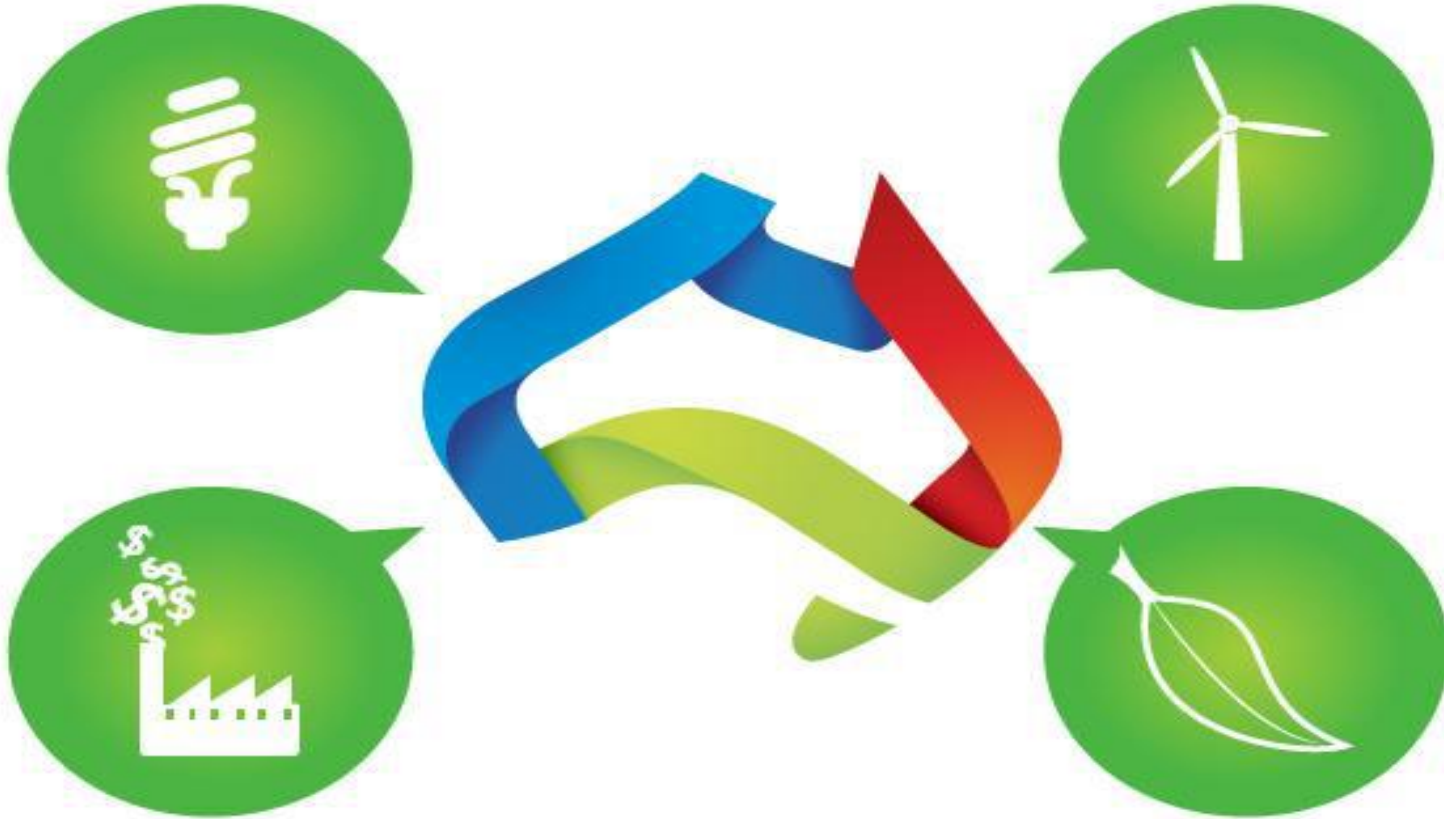
Clean Energy Futures



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Clean Energy Future





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Land Sector Package

- Land Sector Biodiversity Board - \$4.4 mil
- **Regional NRM Planning for Climate Change** - **\$43.9 mil**
- Carbon Farming Initiative non-Kyoto Carbon Fund - \$250 mil
 - (Includes \$50 million for soil carbon credits over 6 years from 2013 to 2018)
- Carbon Farming Skills - \$4.2mil
- Biodiversity Fund - \$946.2mil
- Indigenous Carbon Farming Fund - \$22.3mil
- Carbon Farming Futures Package - \$429mil
 - (Includes \$2million for biochar research to June 2013)

Total funding of \$1.7 billion over 6 years



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Regional NRM planning

CMAAs to develop “climate ready plans”

Two streams of funding:

- Development of plans to guide the location of carbon farming projects in the landscape to protect against adverse impacts and help landholders identify opportunities to reduce carbon pollution. (\$28.9 mil) - DSEWPaC.
- Research and development of regional climate change impact scenarios to assist natural resource management and land use planning (\$15 mil) – DCCEE.



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Carbon Farming Initiative (CFI)

- **CFI is not dependent on the Clean Energy Future Program**
- **Passed by both houses of parliament in 2011.**
- **Will award carbon credits for offsets provided by the agriculture sector**

Started July 2011.

Allows for Kyoto and non-Kyoto compliant actions

Voluntary participation

Has links to the voluntary and mandatory markets.

The Carbon Farming Initiative (CFI)



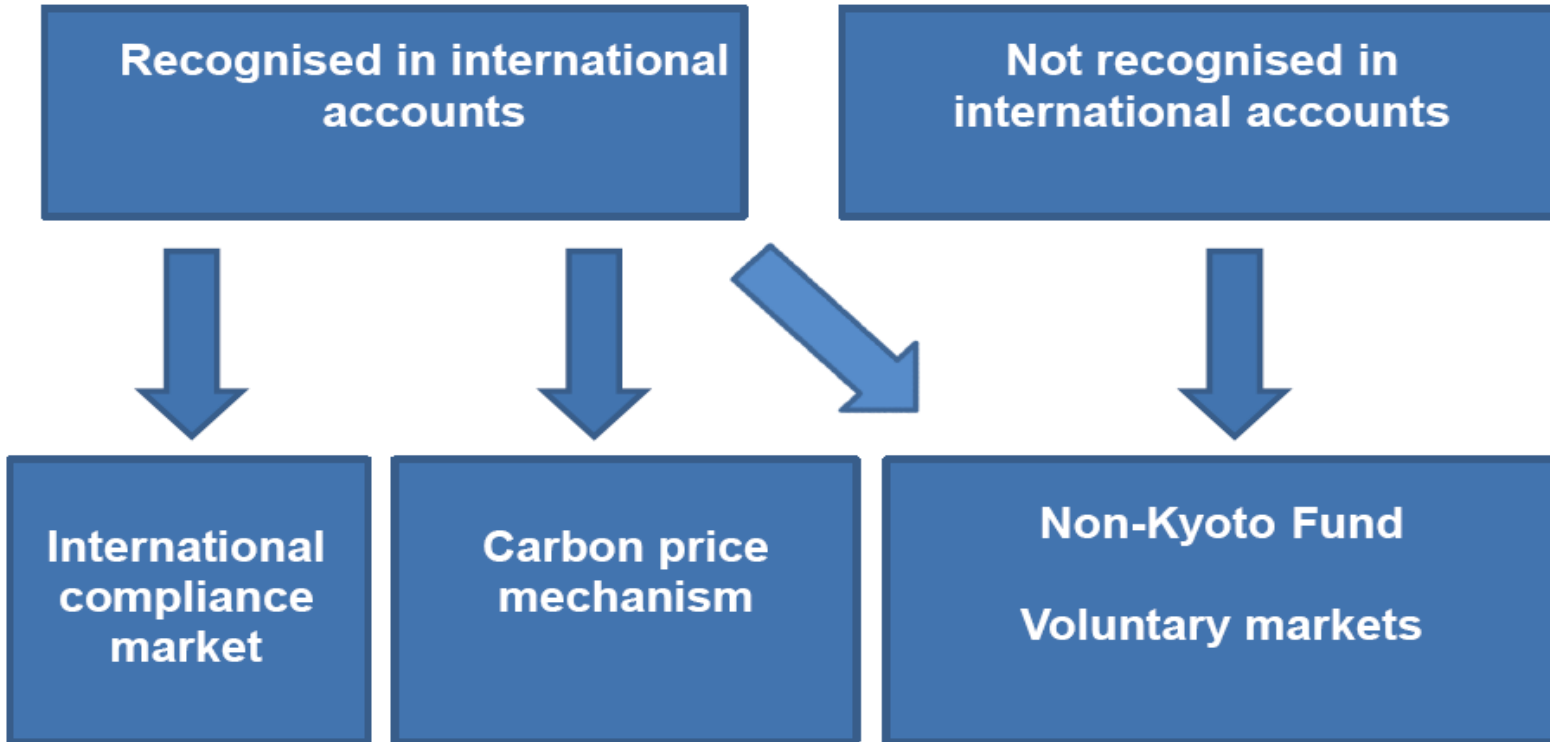
- **Landholders (including LG) can receive carbon credits for:**
 - Reducing emissions from agriculture and land use.
 - Increasing the carbon stored in soils and vegetation.
 - Kyoto and non-Kyoto activities.
- **People and businesses can buy CFI credits to offset their emissions.**



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Markets for different credits





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What makes of Kyoto and non-Kyoto

Kyoto Sinks

Reforestation / Afforestation

Avoided deforestation

Kyoto Sources

Enteric methane

Nitrous oxide

Manure management

Non – Kyoto

Soil carbon sequestration

Managed forests

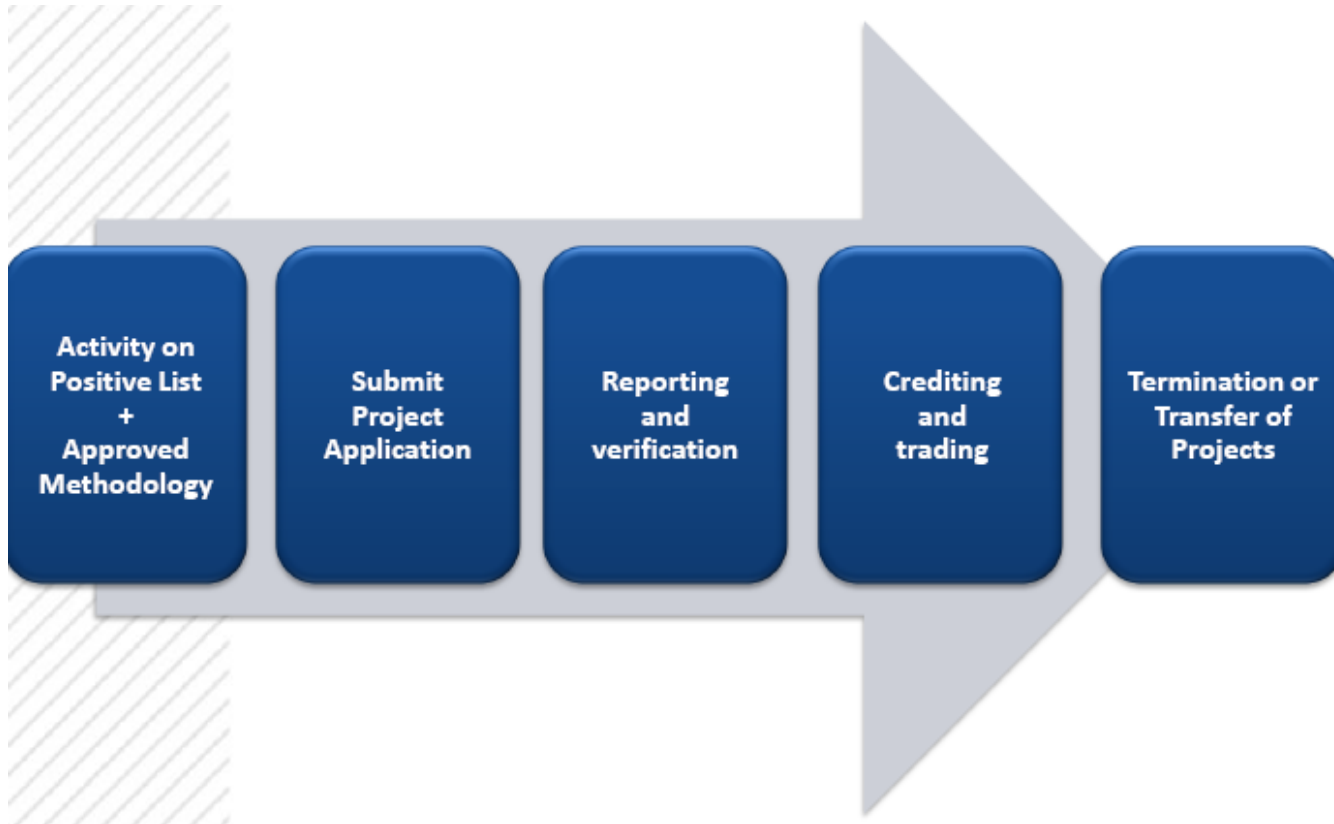
The World Bank estimates the global carbon market at \$145 billion



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Scheme mechanics – key processes





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Integrity Principles – need to be met to be a CFI project.

- **Additionality**
- **Permanence**
- **Measurability**
- **Avoidance of leakage**
- **Independent audit**
- **Transparent**
- **Registration**



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Positive and Negative List

- Permanent environmental plantings after 1st July 2007 on land that is not conservation land
- Establishment of permanent mallee plantings after 1/07/2007.
- Natural regeneration through the removal of livestock, or the management of grazing
- Restoration of wetlands
- **Application of biochar**
- **Methane combustion from landfill**
- Use of tannins as feed supplements
- Use of urea inhibitors – fertiliser and urine
- **Diversion of putrescible waste from landfill to energy**



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Negative List

- **Forestry managed investment schemes**
- **Establishment of known weed species**
- **Projects that are mandated by law**
- **Establishment of vegetation on lands that has been subject to clearing of a native forest**
- **The cessation or avoidance of the harvest of a plantation forest**
- **The planting of trees in an area that received more than 600mm – (excludes environmental plantings or if the project proponent holds a water access entitlement that provide high security for at least the volume of water likely to be intercepted)**

AVOIDED EMISSIONS FROM DIVERTING WASTE FROM LANDFILL FOR PROCESS ENGINEERED FUEL MANUFACTURE



PREPARED BY CORPORATE CARBON ADVISORY AND SITA RESOURCE CO

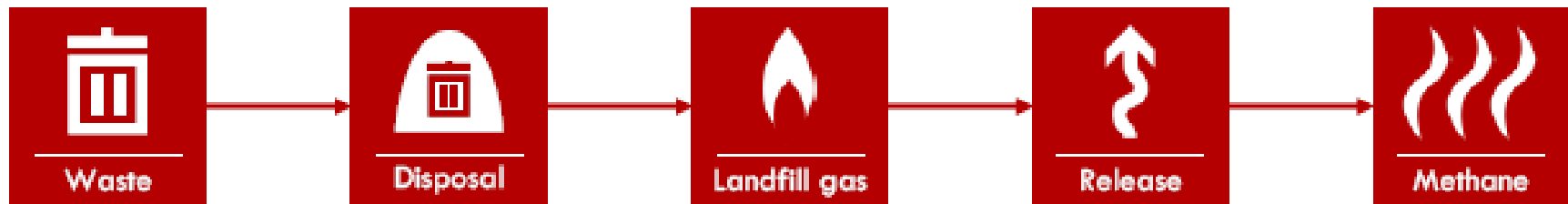


Figure 1 – Mixed waste disposal to landfill baseline scenario¹

¹ All icons derived from UNFCCC, 2010, 'Clean Development Mechanism Methodology Booklet', United Nations Framework Convention on Climate Change, Bonn, accessed at http://cdm.unfccc.int/methodologies/documentation/meth_booklet.pdf, April 2011.

Process Engineered Fuel (PEF)

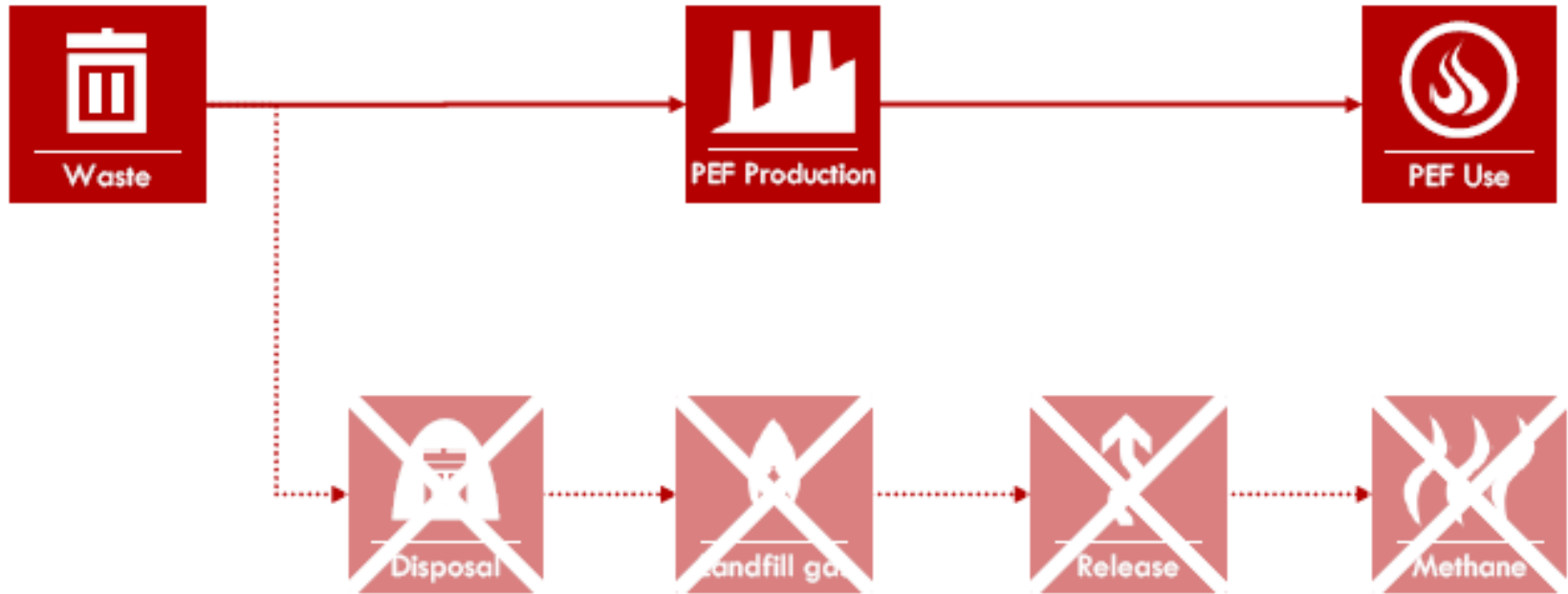


Figure 2 – Avoided emissions by diverting organic waste from landfill project scenario



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Indigenous Carbon Farming Fund

- **The CFI will enable Indigenous landholders and land managers to earn carbon credits through projects to reduce emissions or store carbon in the landscape – starting July 2012.**
- **Implementation will be based on outcomes of consultations with Indigenous stakeholders.**

Two streams of funding:

R&D (\$5.2 mil) funding for research and reporting tools for CFI methodologies. - DCCEE.

Capacity building and business support (\$17.1 mil) to help Indigenous communities establish or participate in carbon farming projects. Includes funds to support access to carbon market and business specialist, expert legal advice to develop governance and contractual arrangements for projects involving land holder interests. - DSEWPaC.



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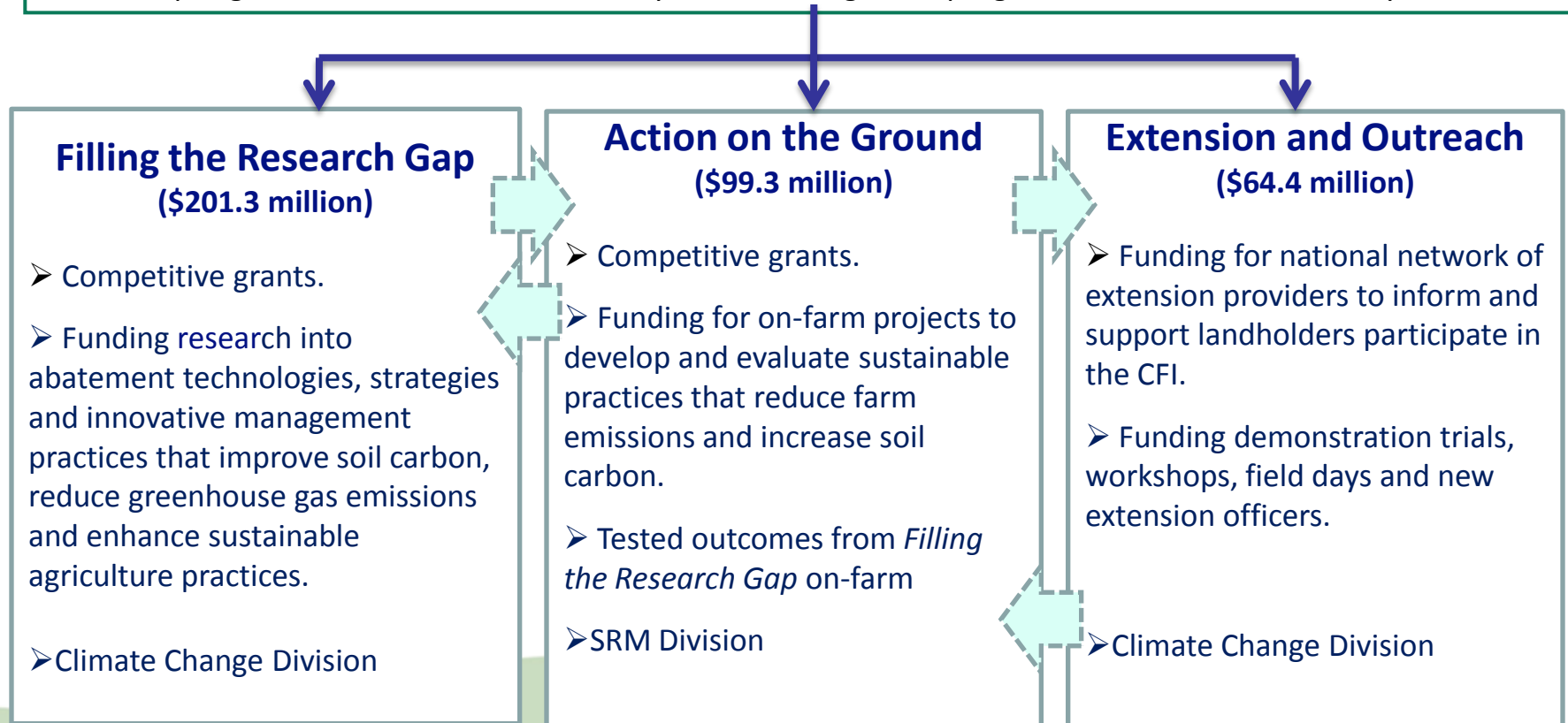
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Carbon Farming Futures

Carbon Farming Future (CFF)

\$429 million (2011-12 to 2016-17)

Dept Agriculture, Fisheries and Forestry administering three programs - \$364 million over six years.





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Local Government Opportunities



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Energy Efficiency program



The Government's Low Carbon Communities program

- significantly expanded to promote energy efficiency at a local level and among low-income households.
- Funding increased from \$80 million to \$330 million.
 - will demonstrate how whole communities can reduce their energy use.
- Local councils and community organisations will be able to apply for grants to undertake energy efficiency upgrades and retrofits to council and community-use buildings, facilities and lighting.
 - including stadiums, education facilities, town halls and nursing homes.



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Energy Efficiency program



Two New Initiatives

- **Low Income Energy Efficiency Program** will provide grants to pilot approaches that assist low income households to reduce their energy costs.
- **The Household Energy and Financial Sustainability Scheme** will support low income households to improve their energy and financial sustainability.



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Investment in renewable energy



- **Clean and renewable energy will receive a major boost through the Government's new \$10 billion Clean Energy Finance Corporation.**

The Clean Energy Finance Corporation

- **assist businesses seeking funds to get innovative clean energy proposals and technologies off the ground**
- **commercialise clean energy projects.**
- **A great deal of this investment is expected to flow through to regional and rural Australia and create new employment opportunities**
 - Delta Mallee Project (Forbes, Condobolin, West Wyalong)
 - Biomass for Biofuels (2nd Generation Biofuels utilising Crops/tree biomass, Municipal Waste etc)
 - Solar Thermal (Lake Cargelligo)
 - Wind Farms
 - Solar Farms
 - Decentralisation of the Energy generation industry



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Clean Energy Future

- Local Government



Significant opportunities

- **Energy Efficiencies- cost savings**
- **Regional Economic Development**
 - Partnerships with decentralised energy industry
 - Biofuels and New Technologies
- **Climate Ready and Resilient Rural Australia**
 - Land sector Initiatives
 - Economic diversity
- **Partnerships with City Councils-**
 - (to follow in next session)





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Questions?

More Information

- **Online: www.climatechange.gov.au/cfi**
- **Email: CFI@climatechange.gov.au**
- **<http://www.carbonoffsetguide.com.au/glossary>**
- **lachlan@cma.nsw.gov.au**