



# Stream A: Forestry and Agriculture



# Introduction

9.00 am	Welcome and Introductions
9.10 am	How we got here
9.25 am	Overview of the ETS
10.00 am	Forestry in the ETS
<b>10.30 am</b>	<b><i>Morning Tea</i></b>
10.50 am	Forestry in the ETS (continued)
11.10 am	Agriculture in the ETS
11.50 am	Plan of Action
12.20 pm	Review and Wrap-up
<b>12:30pm</b>	<b><i>Lunch</i></b>

# Introduction

1.30 pm	Feedback from participants
2.15 pm	Panel discussion
3.15 pm	Key themes reviewed
<b>3.30 pm</b>	<b><i>Afternoon tea</i></b>
4.00 pm	Plenary Session (Streams A,B,C) Report back from chairs
4.30 pm	Closing remarks
<b>5.00 pm</b>	<b><i>Close</i></b>



# How we got here – consultation history and outcomes



## Process to date ... (1)

- Consultation in 2002 on climate change policies (included agriculture and forestry)
  - Deforestation cap
  - Government retention of credits and liabilities
  - Agriculture not to face price measures before 2013, provided adequate research

## Process to date ...(2)

- 2005 – major review of policies
- December 2006-March 2007 consultation on *Sustainable Land Management and Climate Change, NZ Energy Strategy, NZEECS, Post 2012, Transitional Measures*
- May 2007 Government announces work on economy-wide ETS

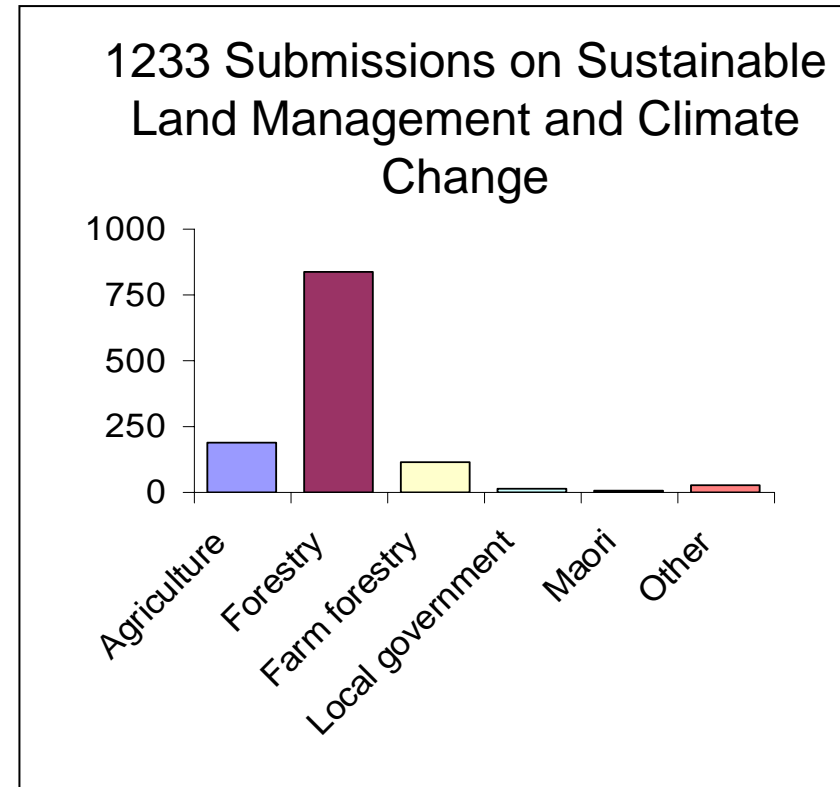


## 2007 consultation – what people said

- Strong support for action
- Everyone should play their part
- Forestry:
  - Wanted recognition for positive contribution of forests
  - Strong support for AGS and devolved credits and liabilities
  - Did not want deforestation controls or distinction between pre and post-1990 forests
  - Prefer trading regimes to regulating

# 2007 consultation – what people said

- Agriculture:
  - Support for research, technology transfer, and incentives
  - Opposed nitrogen charge and regulations BUT some interest in trading regimes in long-term
- Overall:
  - Farmers and foresters wanted more incentives and land use flexibility



# Overview of the ETS



# Emissions Trading Scheme: Key in-principle decisions ...(1)

- Economy-wide ETS covering all sectors and all gases
- Sectors' entry into ETS will be staggered – forestry first
- Units of trade will be a New Zealand Unit (NZU)
- NZUs will be convertible to Kyoto Protocol units (with limits)
- Kyoto Protocol units can be used to meet ETS obligations
- Each NZU must be backed by a Kyoto unit
- Key obligation - participants report their emissions (or the emissions that will arise from their activities) and surrender units equal to those emissions

# Emissions Trading Scheme

## Key in principle decisions ... (2)

- Point of obligation will be mainly upstream
- Absolute emission levels not intensity based
- Severe penalties for deliberate failure to meet obligations
- NZUs will be freely allocated to those most affected, but phased out over time
- Households most affected will receive assistance



# Entry to the ETS by sector

<b>Sector</b>	<b>Commencement of obligations</b>	<b>End of initial compliance period</b>
Forestry (includes deforestation of pre-1990 forest land and afforestation post-1989)	1 January 2008	31 December 2009 (first compliance period for deforestation two years)
Liquid fossil fuels (mainly transport)	1 January 2009	31 December 2009
Stationary energy (includes coal, natural gas and geothermal)	1 January 2010	31 December 2010
Industrial process (non-energy) emissions	1 January 2010	31 December 2010
Agriculture (includes pastoral and arable farming and horticulture)	1 January 2013	31 December 2013
Waste	1 January 2013	31 December 2013

# Estimated retail price impacts for electricity and fuel over business as usual

	<b>Date effective from</b>	<b>Price impact @ \$15/t CO<sub>2</sub>-e</b>	<b>Price impact @ \$25/t CO<sub>2</sub>-e</b>
<b>Electricity</b>	2010	1 cent/kwh	2 cent/kwh
<b>Fuel</b>			
- Petrol	2009	3.7 cents/litre	6.1 cents/litre
- Diesel	2009	4 cents/litre	6.7 cents/litre

# Forestry in the ETS



## Forestry in the ETS – post 1989 forests

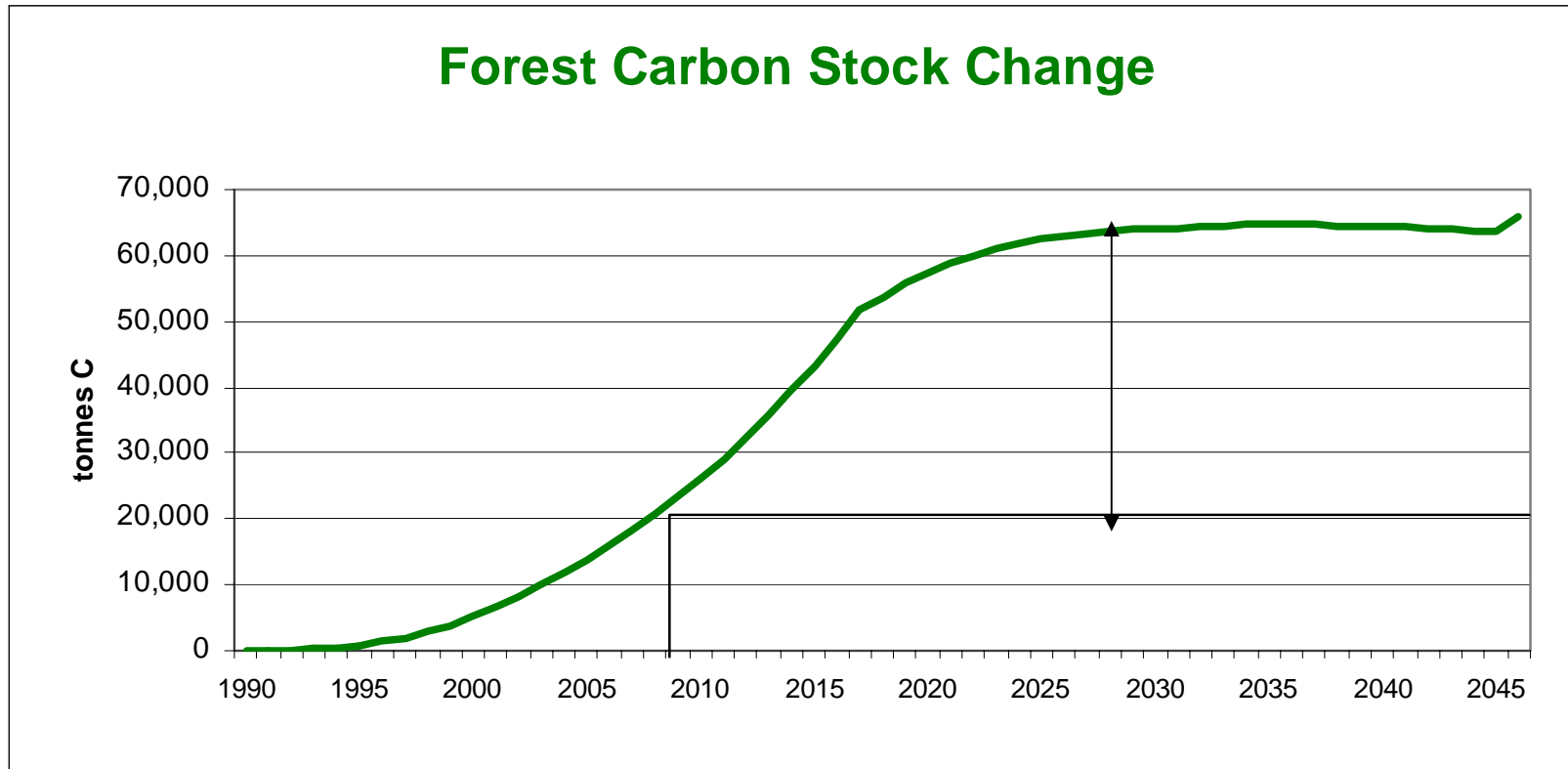
- All post-1989 (“Kyoto”) forests can receive credits and associated liabilities
- Applies to carbon stock changes from 1 January 2008 onwards
- All costs and risks will rest with forest owners who join ETS
- Obligations and future liabilities run with the land and bind future owners
- Forest owners will receive NZUs convertible to Kyoto Units
- Reporting must be at the end of 2012 - can be more frequent

# Forestry in the ETS – post 1989 forests

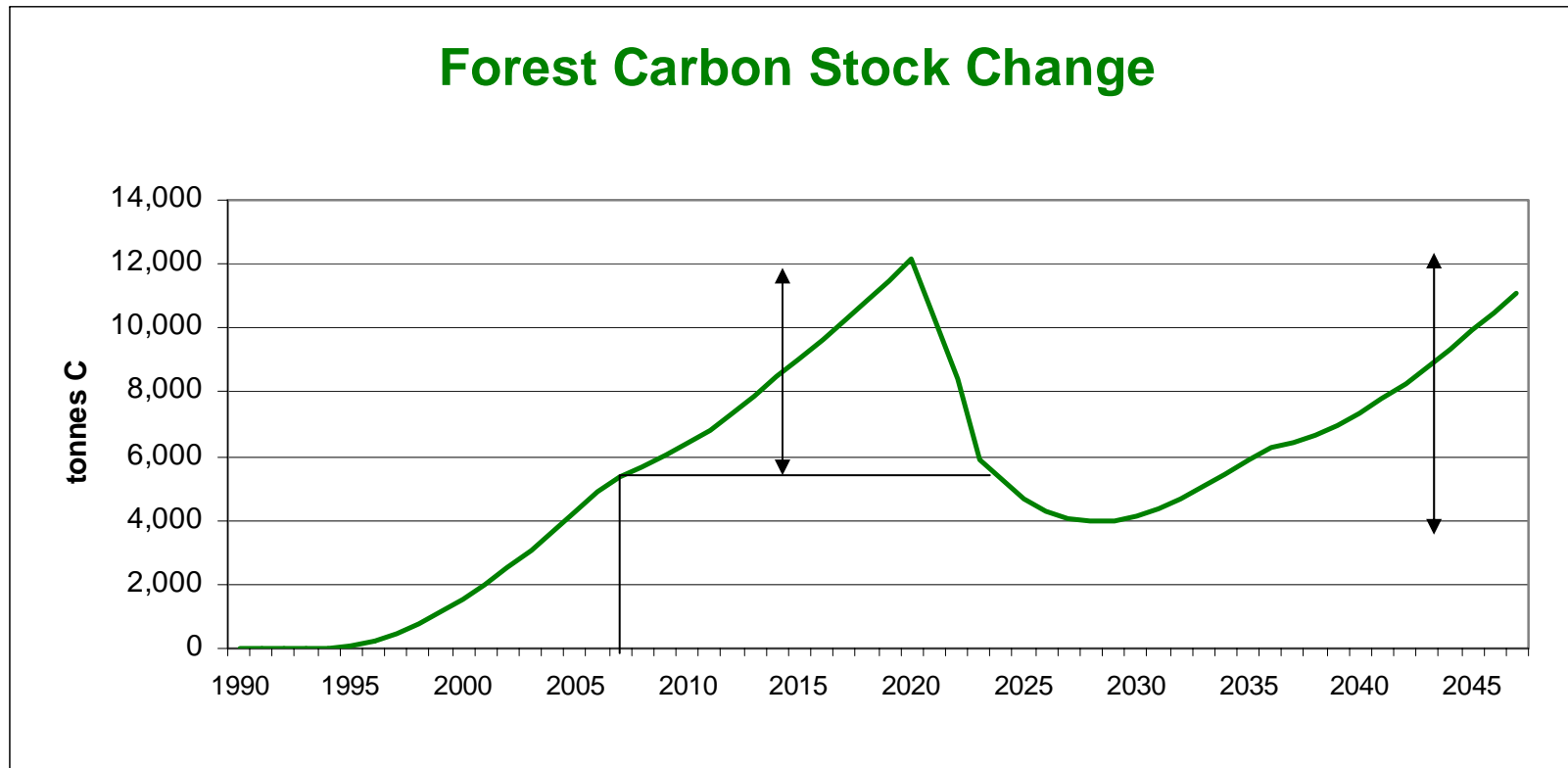
- Measurement will use specified methodologies – based on normal forest practice
- Registered carbon certifiers will be required to certify returns
- Generic penalties will apply for non-compliance



# Example of post 1989 forest: Normal Forest



# Example of post 1989 forest: Single Stand



## Forestry in the ETS – pre 1990 forests

- Deforestation (NOT harvesting) will enter ETS from 1 January 2008 - end of 2009 first compliance period
- One off 55 million NZUs available to exotic pre 1990 forest – 21 for 2008-2012
- Remaining 34 million units allocated up front but post-dated for use after 2012
- Post-dated units would expire if deforestation is no longer in ETS
- Landowners will be the default participant – but some exemptions

## Pre 1990 forests ... (2)

- Exemptions:
  - Owners with 50 ha or less – apply for exemption
  - 2 hectares of total deforestation over 2008-2012
  - Possible papakainga (housing) on Maori land
  - Weed control – apply for exemption



## Pre 1990 forests ... (3)

- If a third party requires deforestation, they must compensate landowner
- If third party has right to deforest, landowners can seek to have obligations transferred



## Pre 1990 forests... (4)

- Total emissions expected from exempted forest (50 hectare and 2 hectare exemptions) will be deducted from total units allocated
- Units will be allocated to landowners
- Allocation will be based on land area
- Preliminary estimate of value – around 39 units per hectare worth about \$585 per hectare
- Pre 1990 indigenous forest – no Government preference
- If indigenous forest comes under ETS a total additional allocation of 8.1 million units available.
- These would be allocated on the same basis as other units

## Pre 1990 forests ... (5)

- Where deforestation began with the harvest of trees during or before 2007, the deforestation will be treated as if it was completed by 1 January 2008 if:
  - there are no trees standing, live or dead, on the land; and
  - all merchantable timber is removed before 1 January 2008.
- If both of these conditions exist no liabilities will be imposed on landowners in respect of such land.

## Forestry in the ETS – general

- Administering agency – MAF administers day-to-day but another agency will have overall responsibility for ETS
- Land status will be tracked on the GIS database at MAF
- Tax issues still being worked through
- Methodologies for estimating carbon being worked through – technical input from sector needed
- Registered carbon certifiers – regime being developed
- Legislation and regulation will be needed

## Forestry in the ETS – other initiatives

- PFSI – some important changes to line up with ETS
- ECFP – available to PFSI unchanged; available to ETS forests at reduced rate
- AGS available for people not joining ETS
  - Cash grants totalling \$50 million over 6 years
  - By competitive tender initially
  - Crown keeps credits and liabilities
  - Regional Councils could assist to target environmental benefits
  - Draft AGS Guidelines and feedback form on [www.maf.govt.nz/climatechange](http://www.maf.govt.nz/climatechange)

# Agriculture and the ETS



# Agricultural gases in the ETS

## Overview

- Scope/coverage
- Entry date
- Point of obligation
- Allocation
- Estimated impacts on the sector
- Approach to engagement

## Scope/coverage

- Covers agricultural gases:
  - Methane from enteric fermentation
  - Nitrous oxide from nitrogen deposited by animals onto agricultural soils or in the form of synthetic fertilisers
- Main sources covered: pastoral agriculture, horticulture and arable production (~98% of emissions)
- Excluding some sources not reported in NZ's GHG Inventory (eg soil carbon); likely to exclude some minor sources (eg horses, crop residue burning etc)

# Entry date for agriculture

- 1 January 2013 entry date to honour the 2003 Memorandum of Understanding and operational challenges
- Sector to monitor and report emissions by 2011
- Five-year lead time offers opportunities for:
  - Pilot schemes for farm level monitoring and reporting
  - Increased contribution to research into mitigation and adaptation
  - Increased contribution to technology transfer, including commitment to roll out mitigation technology (eg. increased uptake of nitrification inhibitors)

# Point of obligation

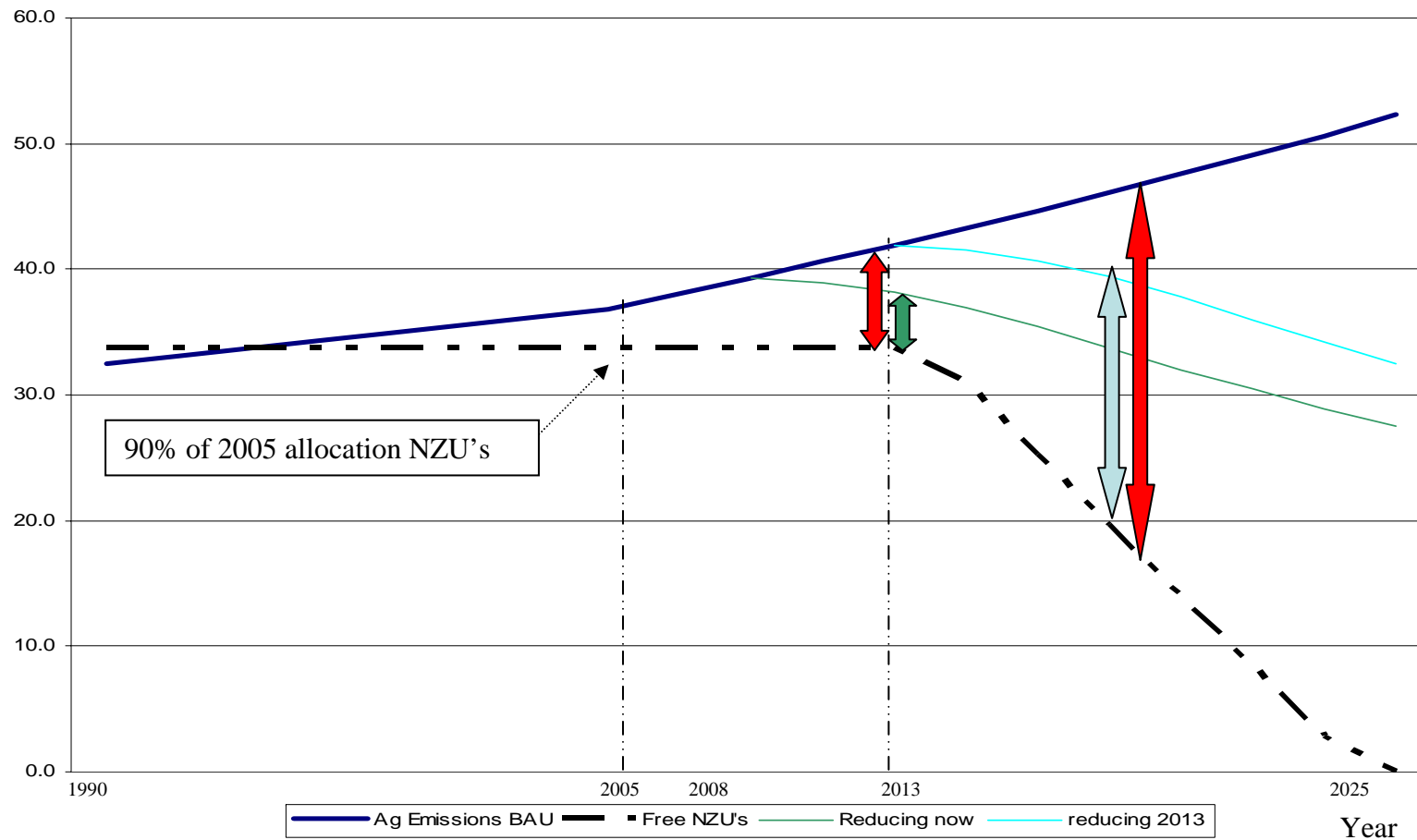
- Principle to minimise the number of participants in the scheme (reduce transaction costs)
- Initial Government preference for company/processor level point of obligation
  - Meat and dairy processors ( $\text{N}_2\text{O}$  &  $\text{CH}_4$ )
  - Fertiliser companies ( $\text{N}_2\text{O}$ )
- Farm level option provides better incentives to change behaviour. Feasibility?

# Assistance to the sector

- Total quantity of free allocation will be 90% of 2005 total emissions
- No decisions made on allocation within the sector
- Government preference is for allocation to benefit farmers
- Three possible options for allocation - to:
  - Farmers
  - Sector bodies
  - Processors/companies
- Progressive pathway approach another option to mitigate impact
  - Less desirable because of reduced incentives

# Transition arrangements for agriculture

Emissions MT



# Estimated supply price impacts at \$15/t CO<sub>2</sub>-e and 25/t CO<sub>2</sub>-e

- Price impacts sensitive to assumptions
- Figures assume:
  - Processor/company level point of obligation
  - Allocation spread evenly across sectors
  - Benefits of free allocation fully reflected in payout
  - No emissions reductions
- Figures based on 2006/07 prices

Emission price scenarios: change in average payout relative to business-as-usual scenario - with <i>no</i> reductions in emissions		
Possible Impact in 2013 (90% of 2005 free allocation)	\$15/t CO <sub>2</sub> -e	\$25/t CO <sub>2</sub> -e
Dairy	-1.0%	-1.6%
Beef	-0.2%	-0.3%
Sheepmeat	-0.7%	-1.2%
Venison	-0.1%	-0.2%

# Estimated price impacts on fertiliser at 15/t CO<sub>2</sub>-e and 25/t CO<sub>2</sub>-e

Free allocation 90% 2005 emissions		\$15/t CO <sub>2</sub> -e	\$25/t CO <sub>2</sub> -e
Fertiliser	t CO <sub>2</sub> -e	\$/tonne	\$/tonne
Urea	2.63	+\$4.69	+\$7.82
DAP	1.03	+\$1.84	+\$3.06
Ammonium sulphate	1.17	+\$2.09	+\$3.48

# Approach to engagement

- Integrated engagement/policy development process
- *Technical Advisory Group* (TAG)
- Individuals participate “without prejudice”
- Work of TAG available to both industry and Government
- Secretariat to:
  - Coordinate and service TAG
  - Coordinate and facilitate a series of Ag-specific ETS seminars to engage wider stakeholders
  - Deliver a technical report to MAF with recommendations
- Government retains full privilege to accept/reject recommendations
- Report will be made publicly available

# Plan of Action for the Land Management Sector

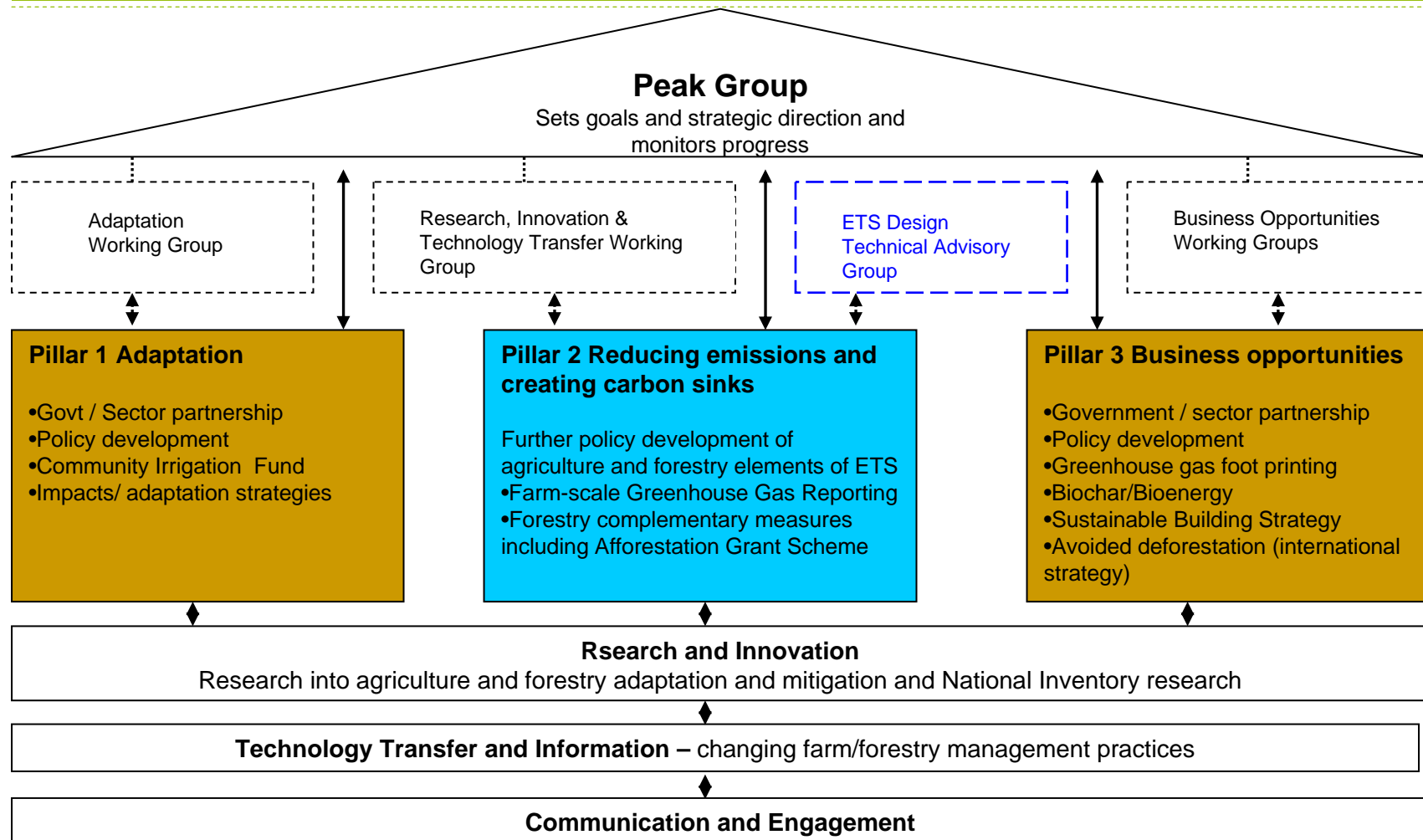


# Sustainable land management and climate change *Plan of Action*

- ETS cornerstone of NZ's efforts to reduce carbon emissions, but:
  - On its own won't do enough to reduce agricultural emissions.
  - ETS won't address challenge for land management sectors to *adapt* to climate change or take advantage of *business opportunities*
  - Government will invest \$175 million over next 5 years on Sustainable Land Management and Climate Change *Plan of Action*
  - Plan will be developed and delivered in close partnership with land management sector



# Plan of Action: Proposed structure and activities



# Pillar 1:

## Adapting to a changing climate

- Govt - Sector partnership
- Development of a 5 year Adaptation Programme
- Build on work done by local government
- Impacts / adaptation strategies
- \$5.7 million Community Irrigation Fund

## Pillar 2:

### Reducing emissions and creating carbon sinks

- Further policy development of agriculture and forestry elements of ETS
- \$ 6 million for farm-scale greenhouse gas monitoring and reporting
- Forestry complementary measures
  - \$50 million Afforestation Grant Scheme
  - Permanent Forest Sink Initiative

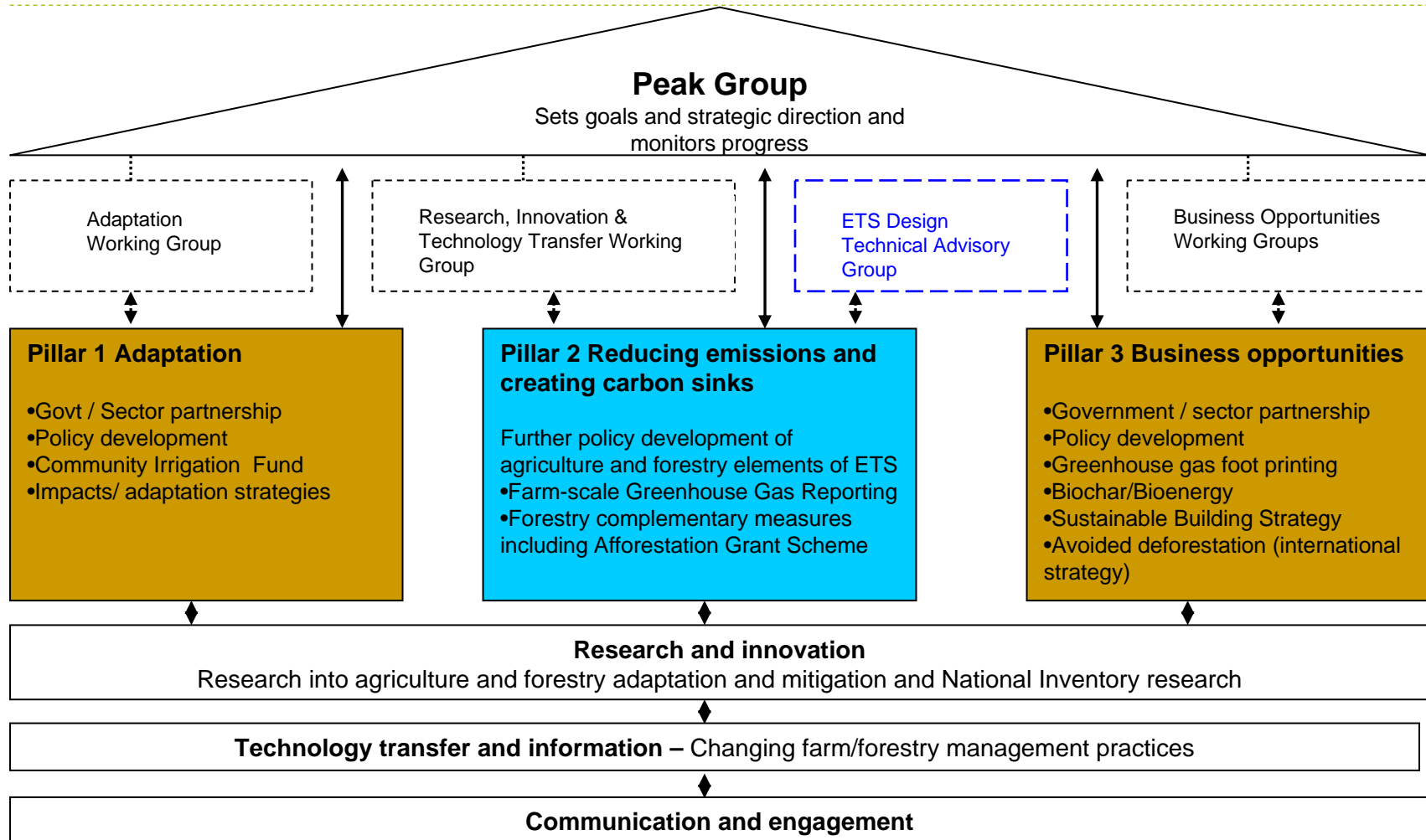
## Pillar 3: Business opportunities

- Govt - Sector partnership
- Development of a 5 year Business Opportunities Programme
- Avoided deforestation (international strategy)
- \$6 million greenhouse gas foot printing
- \$10 million R&D and commercialisation of Biochar/Bioenergy
- \$3.4 million Sustainable Building Strategy

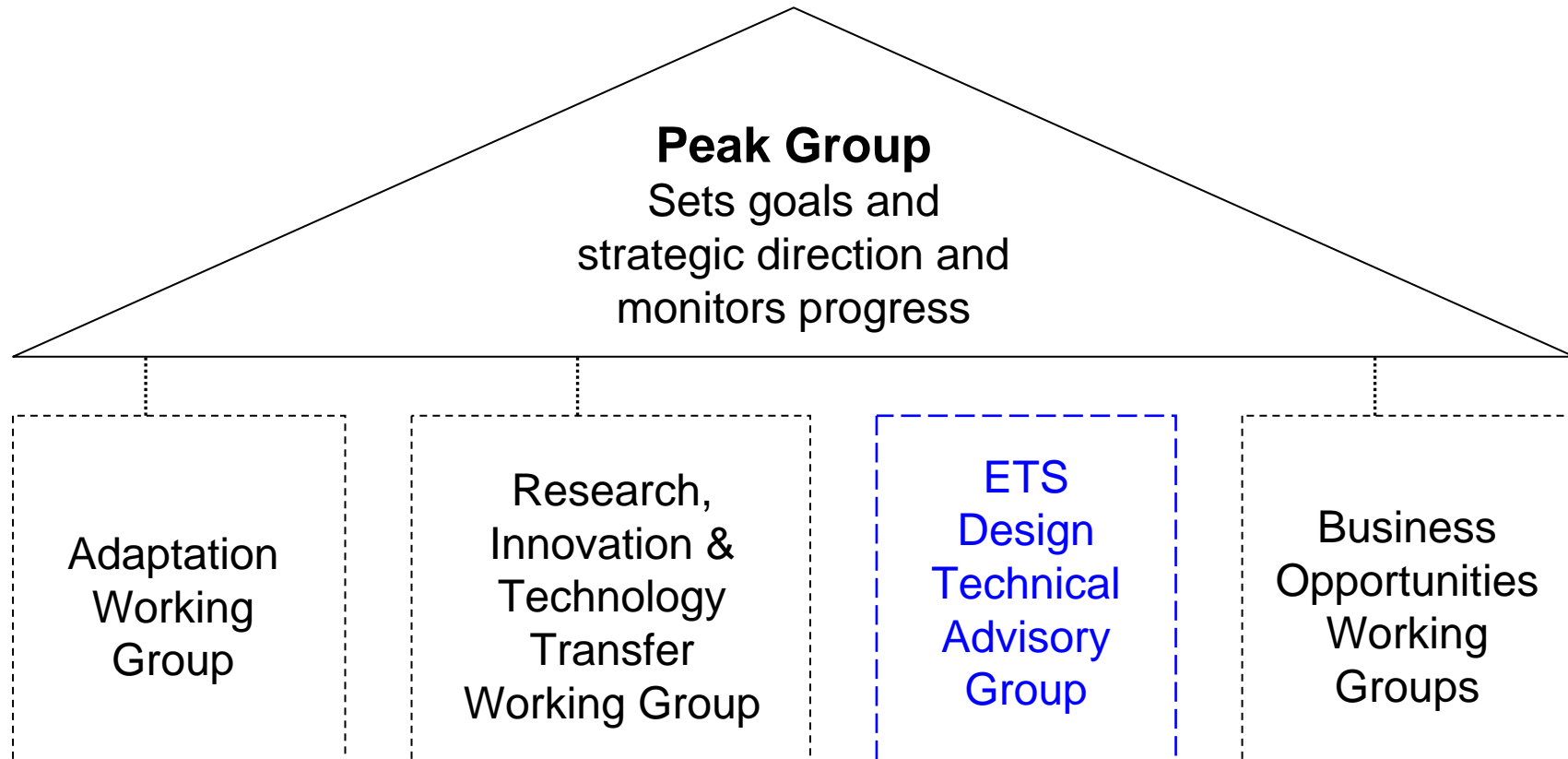
# Three supporting work programmes

- Research and innovation
  - \$45 million over 5 years to turbo-charge our science investment
  - Additional support for National Inventory research
- Technology transfer and information
  - \$41 million over 8 years in technology transfer and farmer education
- Communication and engagement

# Plan of Action



# Peak Group and Working Groups



# Peak Group and Working Groups

- Peak Group composition:
  - Maori (2)
  - Pastoral agriculture (3)
  - Horticulture (1)
  - Fertiliser (1)
  - Forestry sector (2)
  - Research (2)
  - Local Government (2)
- Government-Sector working groups support Peak Group, provide detailed technical advice on programme and implementation

## Next steps – Plan of Action

- Establishment of Peak Group – October 2007
- Technical working groups on adaptation, business opportunities and research and technology transfer established
- Report back to Ministers on;
  - Adaptation Programme - June 2008
  - Business Opportunities - March 2008
  - Strategic Research Framework – March 2008
  - Technology Transfer Programme – June 2008
- Roll out of immediate initiatives over 2007/2008
- Websites: [www.climatechange.govt.nz](http://www.climatechange.govt.nz)  
[www.maf.govt.nz/climatechange](http://www.maf.govt.nz/climatechange)

## Next steps - ETS

- Stakeholder engagement – October 2007
  - 15 Hui
  - 3 Emission trading workshops
  - 7 regional forestry meetings
  - Sector meetings
- Final report to Ministers – November 2007
- Legislation introduced to House – December 2007
- Select committee process – early 2008
- Technical working groups e.g. Agriculture in the ETS, measuring carbon in forests
- Report back to Government on Agriculture in the ETS – December 2008