

# Government Investment Initiatives under the Plan of Action

## RESEARCH AND INNOVATION FOR AGRICULTURAL AND FORESTRY MITIGATION AND ADAPTATION

September 2007



Supporting work programme for Pillars 1 and 2

### Description

A Strategic Research Framework on Sustainable Land Management and Climate Change will be developed with the agriculture and forestry sectors to provide a comprehensive research and technology programme to underpin the *Plan of Action*.

The framework will help research providers and sector partners to ensure consistency, avoid duplication and focus new funding on priority areas.

The Government will substantially increase its funding of research in this area.

### Background

Introduction of an emissions trading scheme (ETS) will be insufficient to significantly reduce agricultural emissions in the medium to long term without a further technological breakthrough.

The Strategic Research Framework will:

- provide a framework for all research activity underpinning the *Plan of Action*, including work undertaken by the Ministry of Agriculture and Forestry (MAF); the Ministry of Research, Science and Technology (MoRST); the Foundation for Research, Science and Technology (FoRST); the Ministry for the Environment (MfE); and the agriculture and forestry sectors;

- substantially increase the funding of 'public good' research in this area;
- target 'public good' research effectively to allow New Zealand to respond to its international obligations on climate change and position New Zealand as a world leader in agriculture and forestry climate change research.

The following broad themes for action have been identified for the framework following feedback from consultation, and discussion with other departments and research providers:

- the effects of climate change and adaptation to them;
- mitigation of agricultural and forestry greenhouse gas emissions;
- incorporation of mitigation technologies into the national inventory of greenhouse gases;
- cross-cutting issues including economic analysis, life-cycle analysis, farm and catchment systems analysis, and the social impact of climate change.

### Initiatives

MAF will work with representatives from the agriculture and forestry sectors, science organisations and Māori over the next six months to develop the Strategic Framework.

The programme will be supported by research programmes funded through other government avenues, such as FoRST.

Immediate research will focus on priority areas including:

- a tree-breeding programme for bioenergy;
- development and commercialisation of cost-effective collection systems for wood residue bioenergy;
- mitigation potential of nitrous oxide technologies including nitrification inhibitors, stand-off pads and other potential practices to reduce emissions.

#### Links to other government initiatives

Many other programmes under the climate change *Plan of Action* have research elements associated with them. They include:

- the agriculture inventory, measurement and reporting research programme;
- international research collaboration (*see separate sheet*);
- technology transfer;
- the potential of biochar in New Zealand land management systems (*see separate sheet*);
- life-cycle analysis of agricultural business opportunities;
- adaptation.

Work on these programmes will be carried out as

part of the development of a research strategy. This will have elements that link into other government and industry programmes, including:

- the Sustainable Water Programme of Action, Sustainable Land Management, Adverse Events, Sustainability, and Flood Management programmes;
- other parts of MAF, including Biosecurity NZ (particularly with respect to risk assessment and adaptation to additional biosecurity risks);
- the Government's broader sustainability goals.

#### Next steps and implementation

The research strategy will require close cooperation at a national and international level among research organisations, scientists, government and the land-based sectors. This is likely to involve:

- establishing a Research Working Group that includes representatives from the land-based sectors, research organisations and the Government. This working group may also involve members representing the technology transfer element of the *Plan of Action*.
- research workshops;
- preparing a draft research plan over a period of six months.

#### Government investment

Initiative	2007/08 \$M	2008/09 \$M	2009/10 \$M	2010/11 \$M	2011/12 \$M	Total up to 2012 \$M	From 2012/13 annually \$M
Research	4.300	6.475	8.475	10.475	10.605	40.33	10.605

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