

SECTION B:

A PLAN OF ACTION FOR THE LAND MANAGEMENT SECTORS

Goals for a *Plan of Action*

The Government wants to develop and implement sustainable land management and climate change policies for the agriculture and forestry sectors through a single *Plan of Action*. This would include goals, actions and some agreed ways of working together.

The Government:

- *Recognises that the New Zealand economy must be internationally competitive.*
Investment decisions should be based on the real costs and returns available to investors. Land use flexibility, accurate price signals and low compliance costs are important considerations.
- *Acknowledges that the agricultural sector faces particular challenges in responding to climate change.*
Research has not yet found practical, cost-effective means by which farmers can reduce livestock methane emissions, except by reducing stock numbers or production levels. The Government accepts that any reduction in emissions by the agricultural sector may not be as great as those in other sectors, at least in the short-term.
- *Recognises the roles that forests and plant products can play in addressing climate change.*
Plant products can replace many of the non-renewable and energy intensive resources we use today, including oil-based plastics, concrete, steel, aluminium, petrol, gas, and coal. Forests can protect soil and water, thereby reducing flood risks and diversifying rural incomes. They can also help mitigate climate change by removing carbon dioxide from the atmosphere.

Specific goals for agriculture and forestry are proposed below.

Goals for the agricultural sector

Possible goals the Government and the agricultural sector could discuss are to:

- Develop safe, cost-effective greenhouse gas abatement technologies that will lower total New Zealand ruminant animal methane and nitrous oxide emissions by at least 20 percent (compared with 'business as usual' emissions levels) by the end of the Kyoto Protocol's First Commitment Period (2012) and beyond¹⁰
- Ensure New Zealand farmers have access to cost-effective technologies and management practices that have the potential to substantially reduce greenhouse gas intensity per unit of production
- Make New Zealand a recognised world leader in research into ruminant animal greenhouse gas mitigation and measurement
- Ensure that the New Zealand agricultural sector is positioned to take advantage of the economic opportunities arising from new technologies and management practices developed at least partly as a result of climate change (eg. production of biofuels, carbon farming, renewable energy).

¹⁰ This is the current goal of the Pastoral Greenhouse Gas Research Consortium (PGGRC), which is currently being reviewed

Goals for the forestry sector

Possible goals for the Government and forestry sector to discuss are to ensure that:

- Forests are fully integrated into New Zealand's land use patterns to deliver sustainable land management
- Forests and forest products are widely used in adapting to and reducing the impacts of climate change
- Land use flexibility is maintained, taking into account the environmental costs of land use decisions
- The forestry sector is internationally competitive and profitable.

Pillar 4 (*see pages 38-40*) sets out further ideas on how the Government and land management sectors can work together.

Questions: Goals for a *Plan of Action*

Please record your answers in the submissions pages at the back of this publication, or you can file online at www.maf.govt.nz/climatechange.

1. Are there any other goals you consider should be included?
2. Agricultural Goals
How do you rate the proposed goals for agriculture in this section?
3. Forestry Goals
How do you rate proposed goals for forestry outlined in this section?
4. If you wish to make any comment on the goals and the reasons for your choices, please do so.

Figure II: Overview of the four pillars and options for consultation in the land management sectors

<p>Pillar 1</p> <p>Adapting to climate change</p>	<p>Pillar 2</p> <p>Reducing emissions and creating carbon sinks</p>
<p>We are looking for:</p> <p>Your ideas on what could be included in a package of initiatives to adapt to climate change.</p>	<p>We are looking for:</p> <p>Your feedback on specific policy options to reduce emissions and enhance sinks.</p>
<p>Our ideas include:</p> <ul style="list-style-type: none"> Ongoing sharing of information on climate change effects Research into farm and forestry practices to reduce vulnerability to effects of climate change Maintaining systems to manage changing biosecurity risks Technology transfer (demonstration farms, training and advisers) Proactive and reactive management of market risks and opportunities from climate change Joint Government/land management sector communications strategy to promote new adaptation initiatives for the sectors Improving irrigation efficiency (water and energy use) Water storage as a means to respond to increased drought, particularly in eastern regions The use of forest planting to reduce the on-farm and downstream risks of future extreme events Ensuring flood risk management takes account of increased frequencies of extreme events. 	<p>The options are:</p> <p>Agriculture</p> <ul style="list-style-type: none"> Increased research funded by Government and sector, based on new and broader research strategy Technology transfer (demonstration farms, training and advisers) Voluntary reporting of emissions (by farm) Nitrogen inhibitor incentive Nitrogen fertiliser charge Tradeable permit regime to reduce agriculture emissions A scheme to offset agriculture emissions eg. through tree planting Flat charge on land use change from forestry to agriculture RMA controls on greenhouse gases RMA controls on greenhouse gases after deforestation. <p>Forestry</p> <ul style="list-style-type: none"> Afforestation grant scheme (AGS) Landowners choose between AGS and devolved Kyoto credits plus associated liabilities Change of land use flat charge National deforestation cap Tradeable permits regime to address deforestation RMA controls on deforestation.

Pillar 3

Capitalising on business opportunities

We are looking for:

Your ideas on what could be included in an ongoing work programme to capitalise on business opportunities.

Our ideas include:

Identifying and facilitating specific business opportunities

Identifying and removing barriers to business development

Creating markets to recognise the value of carbon

Prioritising investment in research and development

Helping to commercialise technologies eg. biofuels

Raising awareness and public promotion of new technologies and low carbon options eg. wood products

Considering how regulation and procurement policy might be used to promote new technologies and low carbon options eg. wood-based products

Proactive and reactive management of market risks and opportunities from climate change.

Pillar 4

Working together

We are looking for:

Your ideas on how the Government and sectors could work together on climate change issues.

Our ideas include:

Cooperation and collaboration on adaptation initiatives

Consultation on emission reduction and sink enhancing initiatives

Cooperation and collaboration on a business opportunities work programme

Establishing a process for sectors to provide strategic climate change advice to the Government

Establishing a process for sector input to post-2012 negotiations.

Four Pillars underpinning the *Plan of Action*

The Government's proposed *Plan of Action* is supported by four policy 'pillars'.

Not all actions outlined in the pillars would be put in place at once. The Government wants to act immediately in some areas where it is possible to do so. However, in areas where no immediate solutions are obvious, the Government will look to develop workable policies in partnership with the agriculture and forestry sectors. We welcome ideas on how this can be done.

It is important to note that there is a difference in the nature and extent of the information presented under the different pillars, and in the type of feedback the Government is seeking.

- Actions and policy options presented under *Pillar 2 – Reducing emissions and creating carbon sinks* are more developed and quite specific. The Government is seeking specific feedback on the options, and how they are designed, to assist it in identifying a final policy package.
- Actions and policy options discussed under Pillars 1, 3 and 4 are less well developed. The Government is hoping to provoke some original and creative thinking in response to the ideas and objectives it has suggested.

The four pillars are outlined in more detail in the following pages.

Pillar 1: Adapting to climate change

The Government wants to work in partnership with the land management sectors and local government to identify and implement actions for adapting to climate change. These would position New Zealand for a future where:

- There is more detailed information available on the expected effects of climate change on agriculture and forestry
- Land managers and decision-makers understand the implications of increased climate variability and include these risks in their decision-making
- Farmers, forest owners, their advisers and organisations have increased capacity to manage the risks associated with climate change impacts already occurring as well as with future climate variability.

To achieve this, the *Plan of Action* would include actions to:

- Help fill knowledge gaps about the effects of climate change
- Disseminate information in a form that is useful for land managers and planners
- Engage with land managers to increase awareness, motivate action and strengthen their ability to act
- Support infrastructure to adapt to the effects of a changing climate.

Information

For New Zealand to successfully adapt to climate change, the basic research and science supporting global climate projections needs to be further refined. We will need to continue research investment to ensure information is kept up-to-date. To improve awareness and to support decision-making, we need better and more accessible information about future climate scenarios for New Zealand. A major effort will be required to translate this information into technical performance requirements, design standards, planning information, and financial and risk management tools.

Information needs to be promoted and available to professional advisers and decision-makers through training, professional development and best-practice guidance. We also need better information about the likely spread of existing plant and animal pests, and the likely arrival of new pests as they adapt to a changing climate.

There is a need for better coordination and information-sharing among government agencies and with the farming and forestry sectors.

Ideas for adaptation

The Government wants to build on and integrate existing initiatives,¹¹ both government and private sector, that facilitate and promote adaptation to climate change. Key government initiatives include:

- Sustainable Water Programme of Action
- Flood Risk Management Review
- Sustainable Land Management Programme
- Adverse Events Planning and Recovery
- Sustainable Farming Fund initiatives
- Permanent Forest Sink Initiative
- East Coast Forestry Project.

These initiatives will provide useful flood protection, erosion control, water quality and biodiversity benefits, but more could be done.

Further actions to be considered could include:

- Developing a 'big picture' approach through adaptation practices that reflect whole catchments, as well as land use, community and infrastructure needs within these
- Sharing information about how New Zealand's climate is expected to change, and what impact this will have on different regions and landscapes of New Zealand
- Conducting research into farm and forestry practices that can reduce New Zealand's vulnerability to the effects of climate change
- Ensuring systems recognise and manage changing biosecurity risks

¹¹ See page 38, 'Linkages to other initiatives'

- Transferring technology and new farm management practices through established channels such as farm advisers, discussion groups and demonstration farms. The latter are a tried and effective mechanism for:
 - » Testing and demonstrating the results of research
 - » Developing and testing technologies and management practices that farmers can use when making decisions that address climate change
 - » Assessing and exploiting business opportunities (covered further in Pillar 3).
- Training farm advisers and farming leaders so they can build climate change mitigation and adaptation into their own respective practices
- Establishing farming systems that can manage the market risks and exploit opportunities arising from climate change
- Developing a joint land management sector and government communications strategy on climate change, with adaptation initiatives tailored for the different parts of the sectors
- Integrating forests into land management systems. This would be assisted by the afforestation proposals contained under Pillar 2.

Questions: Adaptation

Please record your answers in the submissions pages at the back of this publication, or file online at www.maf.govt.nz/climatechange.

5. Do you have any comments on the ideas for adaptation discussed in Pillar 1?
6. Are there any other actions you consider might be useful in helping the land management sectors adapt to climate change?
7. How important is it that the proposed *Plan of Action* includes an ongoing process to adapt to climate change?
8. How strongly do you agree or disagree that the adaptation actions outlined are heading in the right direction?
9. If you agree, who do you think should lead the process to adapt to climate change: the Government, sectors, or a government-sector partnership?
10. If you wish to make any comment on the reasons for your choice, please do so.

Pillar 2: Reducing emissions and creating carbon sinks

NOTE: Pillar 2 raises some complex issues and presents a range of possible policy options for consideration. This section summarises the policy options proposed. There is more detail on the Pillar 2 options and related consultation questions in Section C.

Feedback on the policy option in Pillar 2

The Government is looking for specific feedback on the policy options put forward under this pillar. Feedback is sought on the advantages and disadvantages of the options outlined. You may also wish to comment on how they might potentially be implemented.

From a total of 16 possible options (10 in agriculture and six in forestry), the Government will select a preferred policy package soon after this consultation concludes. Your feedback will help guide the development of that package.

In making your submission you may 'mix and match' the options presented in Pillar 2. The Government is looking for a mix of actions and policies that would combine to form a balanced and workable package of measures and economic instruments. This basket of measures would need to reflect the Government's identified principles and strategic directions for managing climate change. (*See page 16*)

Pillar 2 overview

The Government believes all sectors of the economy must take some action to address climate change.

Farming and forestry bear most of the risks from changes in climate and increased adverse weather events, which means they are also likely to be the greatest beneficiaries of successful climate change policy. These sectors also stand to benefit in marketing terms from strong climate change policies. It is clear that consumers, especially in premium markets, are beginning to seriously consider whether the products they buy have had a detrimental effect on climate change.

The risk of severe climate change in the future can be reduced only through concerted global action. For New Zealand to influence that action, we must participate in international arrangements and meet our obligations under those arrangements. This includes the Kyoto Protocol.

The projected excess agricultural emissions (above 1990 levels) in the first Commitment Period of the Kyoto Protocol (2008-12) pose a significant cost. This is estimated at \$600 million based on today's international price of greenhouse gas emissions. The cost of deforestation emissions is estimated at a further \$600 million over the same period, if we take no action to address the issue. Under existing policy, all these potential costs will be borne by New Zealand taxpayers. On the other side of the ledger, there are many environmental and economic benefits associated with afforestation, but these are not always recognised and generally go unrewarded.

The range of policies for submitters to consider under Pillar 2 moves land managers towards sharing more of the environmental and economic costs (and benefits) of their land management decisions.

Climate change is a key part of sustainable land management. Many actions taken by farmers

to reduce emissions will bring additional environmental and economic benefits, including greater efficiency of production, better water quality, improved flood protection and reduced soil erosion.

The Government is looking for a package of measures that includes cost-based and incentive-based measures for both agriculture and forestry. When taken together, the elements which make up the final policy package will need to achieve tangible reductions in emissions and increases in sinks, both now and in the future.

The principle underpinning all these policies is to allocate costs and benefits to those who make land management decisions. However, in some situations it may be more efficient to allocate the costs and benefits to an intermediary body.

This paper identifies some advantages and disadvantages of various options. These include some economic impacts. Further analysis of the economic impacts of components likely to be included in a preferred policy package will follow as part of the decision-making process. Economic analysis will be included in the next stage of consultation.

Further detail on all the options discussed in Pillar 2 is provided in Section C of this document, along with consultation questions.

Reducing agricultural emissions

The Government is looking for a balanced package of policies that will help move the agriculture sector towards lowering its greenhouse gas emissions, and prepare it for a future environment (post-2012) where there is a cost on emissions.

Ideally, a package would:

- Identify and establish policies and measures that would work towards reducing greenhouse gas emissions
- Encourage action by farmers to reduce emissions now, where the technology and tools to do so already exist
- Wherever possible, ensure that policy options to reduce greenhouse gases also strengthen agricultural productivity and sustainability.

At this stage in the sustainable land management and climate change policy development process, options to reduce agricultural emissions focus primarily on nitrous oxide – not on methane produced by farm animals. This is because practical and cost-effective means of reducing methane emissions from livestock (other than by reducing stock numbers and/or production) have not yet been found.

Options do exist, however, for better management of nitrogen to reduce emissions, and this is an area that can be influenced by government policy. Improvements in this area also offer the prospect of wider economic and environmental benefits, such as improvements in production efficiency and water quality.

Figure III: Overview of possible options for managing agricultural emissions

Long-term options	Options for encouraging emissions reductions now		
Research, technology transfer and voluntary reporting	Price-based measures		Regulation
	Government pricing mechanisms	Market-based mechanisms	
<p>1. Research Research into adaptation, mitigation and measurement technologies and practices for methane and nitrous oxide</p>	<p>4. Incentive for nitrification inhibitors Pay a financial incentive to encourage the use of nitrification inhibitors</p>	<p>6. Tradeable permit regime for agricultural emissions Devolution of agricultural greenhouse gas emission obligations and permits to farmers</p>	<p>8. RMA standards to control agricultural greenhouse gas emissions Development of a National Environmental Standard to control agricultural greenhouse gas emissions ie. input and/or output controls</p>
<p>2. Technology transfer Use of demonstration farms to promote adoption of mitigation technologies eg. nitrification inhibitors, nutrient budgeting, improved forage crops</p>	<p>5. Charge on nitrogen fertiliser Impose a charge on nitrogen fertilisers</p>	<p>7. Offset schemes for agricultural emissions Farmers required to offset emissions by emission reductions elsewhere eg. tree planting, biofuels etc</p>	
<p>3. Voluntary reporting Voluntary reporting of emissions at the farm level</p>	Options focusing on land use change from forestry to agriculture		
	<p>10. Charge where deforested land is used for agriculture Impose a charge on agricultural emissions created when land is converted from forestry to agriculture</p>	<p>9. RMA standards to control new agricultural land use after deforestation Controlling the greenhouse gas emissions and other effects arising from land use change from forestry to agriculture</p>	

A range of voluntary, price-based and regulatory options for reducing agriculture sector emissions is set out in Figure III above.

The three long-term options (clear boxes on the left) focus on future solutions to emissions reductions. Any of these three long-term options could run alongside any of the other options put forward for consideration under Pillar 2. They could be implemented individually, or together as part of a complete package of measures.

The other seven options (in the blue and grey boxes on the right) focus on encouraging farmers to take action now to reduce emissions. Of these, the five options highlighted in the

darker blue provide a range of possible price-based and/or regulatory options for reducing agriculture emissions across the whole agriculture sector. The Government would want to enact one or more of these options to manage emissions growth.

If implemented, the Government envisages Options 4 and 5 would work together – that is, any nitrification inhibitor incentive would be balanced with a charge on nitrogen fertiliser, and vice versa.

Options 4 and 5 could also be replaced by any of the Options 6, 7 or 8.

The two options highlighted in the grey boxes could be put in place together with other measures to control deforestation (discussed further in the next section). They would put a cost on the increase in greenhouse gas emissions caused by converting forestry land to agriculture.

Reducing forestry emissions and encouraging carbon sinks

Forestry can lead to both the absorption and emission of carbon dioxide.

The Government wants to put a balanced package of policies in place that simultaneously reduces emissions from deforestation and increases absorption through forest sinks.

Figure IV (opposite) sets out a range of measures for afforestation and deforestation that we would like submitters to consider. These are discussed more fully in Part C.

The Government is seeking to enact one afforestation and one deforestation option. We would be interested to know your preferred option in each of these areas.

Two options (white boxes, left column) are identified for encouraging greater levels of afforestation. Either of these would work alongside the Government's new Permanent Forest Sink Initiative or PFSI (described in Annex 3). The four options in the three right-hand columns (grey boxes) show ways in which the Government might control levels of deforestation.

The Government intends to introduce measures on afforestation and deforestation as quickly as possible, preferably before the onset of the first Commitment Period of the Kyoto Protocol in 2008. This may require legislation in 2007.

Figure IV: Overview of possible forestry options

Afforestation options	Deforestation options		
Incentives	Government pricing mechanisms	Market-based mechanisms	Regulation
<p>Afforestation Grant Scheme (AGS)</p> <p>Pay grants to growers who plant new post-2007 forests</p>	<p>1. Flat charge on land use change from forestry to another use</p> <p>Impose flat charge on deforestation of non-Kyoto forests</p>	<p>2. Tradeable permit regime</p> <p>Government allocates tradeable deforestation permits; forest owners who deforest non-Kyoto forests are liable for emissions above the level of permits they hold</p>	<p>3. Centrally determine deforestation levels</p> <p>Pass new legislation to limit rates of deforestation of non-Kyoto forests (national deforestation limit)</p> <p>4. RMA controls on deforestation</p> <p>Use RMA to control deforestation</p>
<p>Choice between AGS and devolution of sinks credits and liabilities</p> <p>Give each grower the choice to receive the relevant sink credits and liabilities or seek a grant under the AGS</p>			

Questions: Pillar 2

Questions on Pillar 2 are in Section C of the document: *Pillar 2 in detail*. Please record your answers in the submissions pages at the back of this publication, or you can file online at www.maf.govt.nz/climatechange.

Pillar 3: Capitalising on business opportunities

Governments and businesses around the world are investing heavily in finding solutions to climate change problems. This creates tremendous opportunities to develop and commercialise new technologies, ideas and systems to both reduce greenhouse gas emissions and better manage the effects of climate change.

Agriculture and forestry are two areas where New Zealand has technical expertise and world-leading research capability. In agriculture particularly, New Zealand has powerful incentives to develop new ways to reduce greenhouse gas emissions. Some of the possibilities now being researched include new types of grass, new management regimes, feed and soil additives, and animal breeding.

If such technologies can be developed successfully, they may find ready markets in countries with strong pastorally-based agricultural sectors – for instance, Australia, Ireland, Brazil, Argentina, and parts of Africa.

Some other possible business opportunities include:

- Bioenergy from agriculture and forestry crops, residues and wastes
- New technologies and management regimes to enhance carbon sequestration in soils
- International carbon markets creating demand for mitigation technologies in both forestry and agriculture
- Generation of carbon credits as a primary or additional income stream
- Development of energy efficient systems and products
- Distribution of renewable energy technologies for primary industry businesses to reduce costs and greenhouse gas impact, and enhance energy security
- Leasing of land for renewable energy production, including wind farms
- Development of sustainable, low-energy alternatives to high-energy products such as concrete, steel, and aluminium. These could include new wood products, polymers and other biomaterials¹²
- Provision of advisory services to land managers, both in New Zealand and around the world, on mitigating and adapting to climate change
- Promotion and development of initiatives such as carbon-neutral products
- Marketing our export dairy, meat and horticultural products on the basis of their low through-life net greenhouse gas impact.

Researching, developing, commercialising and marketing new ways to address climate change requires an integrated and managed approach. Some investors will keep this process in-house, reflecting both their internal capability and the competitive advantage they hope to gain from any new technologies. However, there may be areas where a more collaborative approach is required, including government-sector collaboration.

¹² The rules of the Kyoto Protocol currently do not recognise the climate change value of storing carbon in the form of wood products. New Zealand is engaged in an international negotiation process to address this issue.

With this in mind, the *Plan of Action* could include agreed ways for the Government and sectors to work together in areas such as:

- Identifying specific initiatives to create business opportunities. For example, the Permanent Forest Sink Initiative has been put in place to provide owners of marginal farm land with the opportunity to ‘farm carbon’ as an alternative commercial land use
- Identifying and overcoming barriers to the development of business opportunities, and agreeing strategies to remove barriers such as domestic and international regulatory approval requirements
- Facilitating the creation of markets for emission-reducing technologies, so that the private sector can derive commercial benefit from investment in them
- Identifying where resources are needed for the research and development of technologies, and agreeing on ways to prioritise and fund such activities
- Raising public awareness of the advantages and importance of adopting new technologies
- Considering where regulation and procurement policies might be used to aid the adoption of emission reduction technologies.

Questions: Business opportunities

Please record your answers in the submissions pages at the back of this publication, or you can file online at www.maf.govt.nz/climatechange.

11. Are there any other ideas you would like to put forward regarding potential business opportunities?
12. How important do you think it is that the proposed *Plan of Action* includes actions to capitalise on business opportunities?
13. If you think this is important, who do you think should lead the process of identifying and developing new business opportunities: the Government, sectors, or a Government-sector partnership?
14. Are there any other comments you would like to make on any of the business opportunities outlined in Pillar 3, or any other ideas you would like to raise?

Pillar 4: Working together

The Government recognises that aspects of climate change can be difficult and controversial. It wants to put in place a way of working that welcomes different views, and accepts that people have a right to disagree with proposals that may be made. We are looking for a durable and constructive relationship between the different groups and interests involved. Good relationships will help all concerned to identify key issues, create better solutions, make the most of opportunities and ensure informed decision-making.

Pillar 4 sets out how the agriculture and forestry sectors, and central and local government, can work together to develop, implement, monitor and review initiatives under the *Plan of Action*.

The Government is keen to establish active engagement between central government, local government and the land management sectors, not only under the pillars in the *Plan of Action*, but in other areas too, to achieve the best possible outcomes for New Zealand and the sectors. This could be done by:

- Making links between the *Plan of Action* and other initiatives with connections to climate change (discussed in the 'Linkages' sub-section below)
- Developing and negotiating an international climate change framework for post-2012
- The land management sectors providing the Government with strategic advice on climate change issues, and what these mean for the sectors and New Zealand's export trade.

Linkages to other initiatives

The *Plan of Action* will have important links with a number of other central government programmes aimed at addressing broader environmental issues, including water quality, water allocation, flood protection, soil erosion and industry development. Similarly, many of the actions taken under these other programmes have the potential to deliver climate change benefits. A summary of these government programmes is set out in Annex 1.

It is not only central government programmes that are relevant to the *Plan of Action*. Some sector groups are also developing and implementing their own major initiatives, such as the Dairying and Clean Streams Accord, the Pastoral Greenhouse Gas Research Consortium, the Dairy Industry Strategy for Sustainable Environmental Management and the Forest Industry Development Agenda. These, too, need to be considered in any *Plan of Action*. A more detailed list of sector initiatives is set out in Annex 2.

It is important that all parties remain informed on the actions and initiatives being undertaken. Equally, it is important that people working in each of these areas are informed about what is being done under the *Plan of Action*. This should minimise overlaps and help secure maximum shared benefits.

The Government does not believe other government and private sector initiatives are substitutes for a specific *Plan of Action* for the land management sectors. Rather, they are complementary.

A further point is that Resource Management Act-based measures relating to water use and management are being explored as part of the Water Programme of Action. Officials will report to Cabinet on this in March 2007. Their report will include specific analysis of National

Policy Statements and National Environmental Standards covering the effects of agricultural production on water quality, including conversion of forests to farms.

Local authorities are also likely to continue assessing how their own rules may be developed to avoid or mitigate the undesirable environmental effects of land management activities, and how regulations could be used to complement land management incentives.

Developments under other programmes could have implications for climate change policies, and it will be important to develop and review the *Plan of Action* bearing all new measures in mind.

Joint engagement

The nature of engagement between the Government and sectors will depend on the circumstances and the actions being taken.

Some initiatives will require highly collaborative and more formalised engagement, perhaps to the extent of joint governance and funding of actions. The current research programme undertaken by the Pastoral Greenhouse Gas Research Consortium is one such example.

Other examples of where the Government would like to explore collaborative arrangements with the sector include:

- Rolling out new practices and technologies to land managers
- Demonstration farms
- Communication to stakeholders and the public
- Identifying barriers to business opportunities

In other areas, engagement may take the form of consultation on proposals rather than full collaboration. Initiatives in this category might include:

- Measures to address deforestation
- Afforestation measures
- Possible price-based or regulatory measures to reduce agricultural emissions.

Participation

Working together on climate change issues is complex and multifaceted. It also requires a degree of institutional knowledge and time commitment if it is to progress successfully. Parties who engage in the *Plan of Action* will need to be prepared to commit significant human resources over a sustained period of time.

Those who may not be in a position to commit such resources will continue to be consulted when key initiatives are developed.

What we are seeking from you

Indications of your commitment to, interest in, and creative ideas for the issues and questions discussed under *Pillar 4: Working together*.

Questions: Working together

Please record your answers in the submissions pages at the back of this publication, or you can file online at www.maf.govt.nz/climatechange.

15. Do you have any comments on the proposals and ideas about the Government, local government and sectors working together on the proposed *Plan of Action*? Your answer could include any different ideas you might have.
16. How supportive are you of the land management sectors working together with local and central government under the proposed *Plan of Action*?