

# Government Investment Initiatives under the Plan of Action

## CLIMATE CHANGE MITIGATION – BIOCHAR

September 2007



Pillars 2 and 3

### Description

This initiative will involve the establishment of two professorships and a research budget for the study of production and use of biochar in New Zealand.

### Background

Biochar is a stable form of carbon that can be incorporated in soil as permanent carbon store. This would potentially create a major carbon sink that removes carbon dioxide from the atmosphere through plant growth and stores it as inert carbon in soils. It also has potential to suppress nitrous oxide emissions and reduce nitrate leaching into waterways.

Biochar can be used to make a bioenergy co-product that can be used to produce heating, electricity generation and other applications.

### Initiatives

The plan is to establish two professorships focusing on biochar and soil science, and pyrolysis processing. Pyrolysis is combustion in the absence of oxygen – the process used to make charcoal. Each of these professorships will be funded for four years, after which universities will need to seek other funding sources.

The professorships will be supported by one-off grants of \$1.25 million in 2008/09 for research, laboratory equipment and facilities.



## Government investment

Initiative	2007/08 \$M	2008/09 \$M	2009/10 \$M	2010/11 \$M	Total to 2011 \$M
Biochar	0.375	1.750	0.500	0.500	3.125

### Links to other government initiatives

This initiative is linked to the wider climate change policy programme, particularly other mitigation work and climate change business opportunities. It has secondary links to the Sustainable Water Programme of Action, because biochar can potentially reduce the leaching of nitrates into waterways.

Bioenergy is a co-product of biochar production, so there are also links to the National Energy Strategy.

### Next steps and implementation

The next steps will be to call for proposals from all New Zealand universities to establish the professorial positions.

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