

Australian Greenhouse Office

Inquiry into value-adding to Australian raw materials

QUESTIONS ON NOTICE

1 How can carbon sinks sequester carbon? Isn't the carbon released at the end of their growing cycle when they die?

The Kyoto Protocol provides credit for establishing new carbon sinks and thereby increasing the area of land globally under forest. While such new forests are growing, they sequester carbon, both in above-ground biomass and in the soil. If the trees are harvested, then emissions will be released back into the atmosphere but in basic terms cycles of harvesting and replanting are carbon neutral over time. The specific rules for operationalising the inclusion of sinks in the Kyoto Protocol have however not yet been agreed. As soil carbon is retained after harvest and builds up over time, this store will provide some additional ongoing credits.

2 Does not the method of harvesting determine how much CO₂ will be released from the soil to the atmosphere?

There are small differences between most harvesting techniques used in plantations. Post-harvest burning, which releases the greatest amount of carbon into the atmosphere, is rarely applied in plantation forestry.

3 In terms of carbon sink development, would we be better off to look at full forestry (state, federal and private) or short rotation harvesting?

Greenhouse considerations will not be the only factors taken into account when establishing forestry or other sinks projects - the economic benefits will typically drive decisions on harvest cycle. Both short rotation and longer term forests offer additional benefits, for example hardwood products, pulpwood, salinity abatement, that will influence the type of project developed. Only forests established after 1990 are recognised under the Kyoto Protocol, so existing forests estates will not be eligible for sequestration credits.

4 Noting the New Scientist article on sink saturation, will sinks be of benefit in terms of the greenhouse effect?

Sink enhancement activities will form significant part of Australia's national strategy to meet its Kyoto target. Australian negotiators will seek to ensure that the rules for including sinks activities, which will be decided at the sixth Conference of the Parties to the UN Framework Convention on Climate Change, take into account Australia's national circumstances.

The New Scientist article referred to during the Inquiry hearing is considered misleading by many Australian experts. 'Sink saturation' refers to a point, possibly mid next century, at which existing terrestrial sinks (on the scale of the global biosphere) begin to decline in response to increases in atmospheric carbon dioxide. The article ignored the important role that creating new and additional carbon sinks can play in offsetting energy emissions. This would act to slow the growth of carbon dioxide concentration in the atmosphere, effectively delaying the onset of any such 'saturation'.