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Submission to the House Standing Committee on Climate Change, Environment and the Arts inquiry into the Carbon Farming Initiative bills

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1. The Government is to be commended for introducing the *Carbon Credits (Carbon Farming Initiative) Bill 2011*. This is a much welcomed initiative as it aims to provide incentives to land managers to reduce emissions of greenhouse gases. As noted in the recent Garnaut update chapter on land carbon and the rural sector, avoiding and reducing emissions from land carbon stocks is a necessary and complementary measure to the deep cuts needed in fossil fuel emissions if we are to stabilize atmospheric concentrations of greenhouse gases at a safe level. My comments here are aimed at refining certain sections so as to remove the possibility of inappropriate and unhelpful interpretations and to give fuller affect to some of the Garnaut update's recommendations.

2. Under *5 Definitions*, it is commendable that native forests have been defined and distinguished from plantations, thereby correcting a major short-coming of the Kyoto Protocol definition of forest. It is also appropriate that a *native forest protection project* has been defined so as to include projects that avoid emissions of greenhouse gases attributable to the clearing or clear-felling of one of more native forests. This is a necessary and appropriate class of project because of the emissions associated with the depletion of forest ecosystem carbon stocks arising as a consequence of deforestation and clear-felling. However, the term 'clear-felling' is but one of a range of harvesting treatments all of which result in emissions of carbon dioxide through depletion of forest ecosystem carbon stocks[i]. Therefore, to be comprehensive and avoid creating an emissions loophole, the definition should be modified thus: '(b) to avoid emissions of greenhouse gases attributable to the clearing or harvesting, including clear-felling, of one or more native forests'.

3. Under *27 Declaration of eligible offsets project (4)*, the Administrator must not declare that an offsets project is an eligible offsets project unless the Administrator is satisfied that (j) the project does not involve (i) the clearing of native forests or (ii) using material obtained as a result of the clearing or harvesting of native forest. The wording of (i) should be modified so that it is consistent with (ii) and also with my recommendation above regarding the definition of a native forest protection project; i.e., so that it reflects the reality of greenhouse emissions associated with harvesting. A suitable wording would therefore be: '(j) the project does not involve (i) the clearing or harvesting of native forests'.

[i] The carbon dioxide emissions arising from the impacts of harvesting in native forest have been documented in all the world's forest biomes, including Australian native forests, for example: Asner G.P et al. (2010) High-resolution forest carbon stocks and emissions in the Amazon. *PNAS* 107: 16738–16742; Bryan J., Shearman P, Ash J. and Kirkpatrick J.B. (2010) Impact of logging on aboveground biomass stocks in lowland rain forest, Papua New Guinea. *Ecological applications* 20: 2096-2103; Keith H., Mackey B., Berry S., Lindenmayer, D. and Gibbons P. (2010) Estimating carbon carrying capacity in natural forest ecosystems across heterogeneous landscapes: addressing sources of error. *Global Change Biology* 16: 2971–2989; Keith K, Mackey B. and Lindenmayer D. (2009) Re-evaluation of forest biomass carbon stocks and lessons from the world's most carbon-dense forests. *PNAS* 106: 11635-11640; Leighty W.W., Hamburg S.P. and Caouette J. (2006) Effects of management on carbon sequestration in forest biomass in southeast Alaska. *Ecosystems* 9: 1051-1065; Nave L.E., Vance E.D., Swanston C.W. and Curtis P.D. (2010) Harvest impacts on soil carbon storage in temperate forests. *Forest Ecology and Management* 259: 857–866.