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Garnaut Review Secretariat
Level 2, 1 Treasury Place
Melbourne 3002 VIC

Dear Professor Garnaut,

Total Environment Centre (TEC) welcomes the opportunity to make this general submission on the most appropriate role for biosequestration in Australian climate policy.

General Submission
The proper role for biosequestration in Australian Climate Policy

Biosequestration stands to play a pivotal role in Australian and International climate policy. The IPCC Fourth Assessment Report revealed that the atmospheric concentration of CO_2e stood at 455ppm in 2005. This figure contrasts with our need to stabilise below 400ppm to give us even a 1 in 4 chance of staying below 2 degrees of warming (on pre-industrial levels)- the commonly accepted threshold for 'dangerous climate change.' These figures make it clear that we not only need to dramatically reduce current emissions but that we also need to start drawing down CO_2e from the atmosphere. We need to address both the *flow* of CO_2e as well as the *stock*. The only large scale mechanism we have to draw CO_2e down from the atmosphere is biosequestration. However, current debate proposes a role for biosequestration that would ensure this potential would never be fulfilled.

By including biosequestration projects in carbon markets (regulated or voluntary) the promise of reducing atmospheric concentrations of CO_2e would never be fulfilled. Allowing biosequestration projects to generate offsets would mean that 1 tonne of sequestration would be swapped for 1 tonne of emissions- thereby ensuring that the atmospheric stock of CO_2e remained unaffected. Given the need to draw down CO_2e from the atmosphere it is important that biosequestration be provided with a unique role outside of carbon markets. One model would see revenue generated through the auctioning of permits directed towards groups engaging in biosequestration activities. Such an approach would see an emissions trading scheme progressively reduce the annual flow of emissions at the same time as biosequestration activities worked to reduce the stock of emissions in the atmosphere.

The case for keeping biosequestration out of carbon markets is compounded by the difficulties that such projects have in generating credible offsets. Perhaps the most fundamental problem with biosequestration is the *prima facie* eligibility criteria required for the generation of domestic offsets. By

definition, under a cap and trade scheme, domestic offsets can only be generated in uncovered sectors. The only reason a sector would be uncovered under an ETS is that there does not exist the ability to measure emissions from these sectors with the rigour and accuracy required by an ETS. It remains a stark paradox then that we disallow the direct entry of a sector into an ETS because of measurement problems but in the same breath allow for its indirect entry through unlimited offset generation. The measurement issues that made it impractical for the sector to be covered by the ETS are dismissed when it comes to the question of how these sectors will credibly generate offsets that will be treated as fungible credits.

Issues of measurement aside, there still remain fundamental issues of impermanence with regard to biosequestration projects such as tree plantations. Guaranteeing permanence is fundamental to recognition as a credible offset. Permanence does not require that the project continues forever, just that the emissions benefit of the project is irreversible. For example, if an energy efficiency project was 'closed down' the emissions benefit derived during the life of that project would be 'locked in' -the emissions benefit would be irreversible. This is also true of renewable energy projects, methane flaring, organic waste diversion, and recycling. In fact this is true of all projects but those involving some form of biosequestration. In this regard biosequestration projects are unique.

Biosequestration projects, such as tree plantations, are inherently impermanent. Once a tree plantation is 'shut down' there exists the risk that all the emissions benefit generated during the life of the project will be reversed- as the trees are cut down and processed, or die and decompose. In effect the tree plantation is only a temporary reservoir for carbon. For this reason the Clean Development Mechanism (CDM) only affords *temporary* recognition to such projects. That is, purchasing offset credits through tree plantation projects only allows parties to *temporarily* offset their carbon liability. In effect tree plantations under the CDM only allow parties to defer offsetting their emissions to a later date. Two instruments were specifically created for tree plantations; the *temporary Certified Emission Reduction* (*t*CER) and the *long-term Certified Emission Reduction* (*l*CER). Parties holding a *t*CER can only defer buying permanent CERs for 5 years before seeking reaccredidation.

TEC is concerned about market developments in Australia's offset market that have seen temporary biosequestration projects marketed as 'permanent.' Some providers have attempted to argue that if a biosequestration project exists for 100 years then it can be accepted as 'permanent.' Others have put the number at 70 years. However, neither 70 nor 100 years equates to permanence. No discrete period of time can. Permanence requires irreversibility throughout time. Once these arbitrary periods of time have passed, the legal liability to retain the stored carbon onsite is extinguished and there exists no guarantee that subsequent activities (logging) or events (fire, pests, disease, drought, climate change) will not release the sequestered carbon into the atmosphere. These problems render biosequestration projects unsuitable for the purposes of generating credits under an emissions trading scheme.

The obvious question is why these problems would not be equally prevalent if biosequestration projects were financed outside of carbon markets as a mechanism that worked to reduce the stock of emissions whilst abatement measures worked to reduce the flow. In short, they wouldn't. What would be different however, is the impact. If any series of events led to the release of

previously sequestered carbon the impact would be much lower than if the project was initially financed through the sale of offsets. By allowing for carbon to be truly drawn down from the atmosphere, we would have maximised the atmospheric 'space' available to us and would have thereby given ourselves the best possible chance of avoiding dangerous climate change.

A 'parallel measures' approach to biosequestration would also give greater weight to broader public policy goals, such as the restoration of ecosystems, and the promotion of biodiversity. Where the sole goal of a biosequestration project is to achieve reportable emissions abatement there exists every incentive to implement projects in a way that ignores issues of biodiversity and ecosystem restoration. Planting monocultures in very straight lines enhances the reportability of the subsequent sequestration but does very little to promote ecosystem restoration and enhance biodiversity.

Enhancing Australian, and International, climate policy requires that biosequestration be established as a parallel measure designed to reduce the atmospheric stock of emissions at the same time as abatement measures progressively reduce the flow.