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14th July 2011

Ms Julia Morris
Committee Secretary
Standing Committee on Climate Change, Environment and the Arts
ccea.reps@aph.gov.au

Dear Ms Morris

RE: New Inquiry into Australia's Biodiversity in a Changing Climate

Thank you for contacting the Border Rivers-Gwydir Catchment Management Authority (CMA) regarding our views on the terms of reference for the Standing Committee on Climate Change, Environment and the Arts' inquiry into Australia's biodiversity in a changing climate.

I have provided our comments in this letter as they relate to the inquiry's terms of reference. I have also included supporting information relating to the impacts of a changing climate on biodiversity as an appendix to this letter.

Should you have any queries or require additional information, please don't hesitate to contact Ms Amanda Bigelow, Program Manager based in Inverell on (02) 6728 8022.

Comments

1. Connectivity between ecosystems and across landscapes that may contribute to biodiversity conservation.

Increasing connectivity in fragmented landscapes is an appropriate response to undertaking biodiversity conservation in a changing climate. In addition, the character of these connections between ecosystems and across landscapes is important for them to function effectively, including considerations such as size, shape, location, composition and management over time.

Existing approaches to conservation, specifically the national reserve system, do not adequately address connectivity between ecosystems and across landscapes. Whilst the traditional reserve system approach will play an important role in protecting specific environmental characteristics for conserving biodiversity and offering refuges, it does not facilitate the strategy of adaptation required for biodiversity conservation in a changing climate.

To achieve connectivity between ecosystems and across landscapes, a greater emphasis on off-reserve conservation is required. This would include facilitating the adaptation of native flora (genetic pathways) and fauna (both genetic and migration pathways) via connected ecosystems. Strategies to achieve this will include:

- Adequate incentives or funding for off-reserve conservation schemes. Including but not limited to the continuation, and expansion beyond a handful of endangered ecological systems, of the Australian Government's environmental stewardship program;
- Establishment of extension-style education to promote voluntary self-management for biodiversity by landholders; and
- Use of regional-scale planning to integrate off-reserve conservation with the national reserve system.

How climate change impacts on biodiversity may flow on to affect human communities and the economy.

Human communities and economies are intrinsically linked to, and reliant on, the ecosystem services provided by diverse natural ecological systems. Unmitigated impacts on biodiversity associated with a changing climate will narrow existing biological diversity, subsequently weakening the services provided by these systems.

Australia is faced with a significant challenge associated with balancing the needs of maintaining and strengthening biodiversity and meeting the needs of a growing domestic and international population for food and fiber production. A strong and resilient natural resource base enables Australia to meet these needs in conjunction with technological and efficiency improvements in our production systems.

Strategies to enhance climate change adaptation, including promoting resilience in ecosystems and human communities.

The recent evolution of natural resource management thinking to include the resilience of ecosystems is providing a valuable framework to address the challenges associated with humanity's modification of the planet.

A concerted effort is required to support the capacity of ecosystems and ecological communities to absorb disturbance and still retain their basic functions and structure. A management approach using resilience as the foundation for planning, investment and actions to support ecosystems is in developmental stages across the nation.

A resilience framework – a model for establishing the levels of acceptable disturbance and associated thresholds of the ecosystems we depend on at a local and regional level is being implemented by Catchment Management Authorities across NSW, and elsewhere.

The important aspects of managing ecosystems for resilience are; that ecosystems can change dramatically when they experience a shock. If the shock is great enough a threshold may be crossed and the result is often a change in the state or function of a particular ecosystem.

The resilience framework for addressing the challenges presented by a changing climate's impact on biodiversity is an extremely valuable approach, but the knowledge to effectively apply this framework at a landscape level is not complete. A major risk exists - that many of the ecological systems we rely on may cross thresholds

that significantly alter their ecosystem services and ability to be restored. The work being undertaken by Catchment Management Authorities, and their associated partners, requires additional resources to establish the levels of acceptable disturbance and associated thresholds of local ecosystems in a timely manner.

Mechanisms to promote the sustainable use of natural resources and ecosystem services in a changing climate.

Mechanisms already exist to promote the sustainable use of natural resources and ecosystem services in a changing climate. However, they are not adequately resourced. There is no need to reinvent the wheel; the existing mechanisms need to be better targeted and resourced. Sound natural resource management is crucial to the function of Australia's social and economic systems and it requires significant long-term investment.

Mechanisms, such as regional delivery bodies, have in the last decade experienced a significant reduction in financial resources to undertake their natural resource management activities. This represents an unfortunate irony – we live in a time when the needs and role of natural resource management is better understood and communicated, yet there has been a reduction in resources to undertake these activities.

Significant additional financial and knowledge resources are required to enable the existing mechanisms to promote the sustainable use of natural resources and ecosystem services in a changing climate.

An assessment of whether current governance arrangements are well placed to deal with the challenges of conserving biodiversity in a changing climate.

The need to integrate production, biodiversity, social and cultural values, into the objectives of natural resource management, all within the context of accelerating climate change, presents unprecedented challenges to current governance arrangements.

A long-term national issue that is worth mentioning, is that Australian Government priorities and funding for natural resource management often change and do not necessarily match the on ground needs of a catchment or region. This has led to many issues and consequences for all levels of government, and for the security of our natural resources. Four characteristics of effective governance to address these challenges are:

- Robust, cooperative arrangements between the Australian Government and the States;
- A revised partnership model for delivery of funding and reporting between the Australian Government, the States and natural resource management bodies. Such a model would be more responsive towards natural resource conditions and priorities in catchments, and provide increased autonomy for natural resource bodies.
- A more integrated institutional architecture at the sub-state level, with local government, regional natural resource management bodies and Landcare groups all playing particularly important roles in environmental management; and

- Increasing fiscal and policy dominance of the Australian Government to ensure consistency and coordination.

The existing regional delivery model, via Catchment Management Authorities for example, is well placed to deal with the challenges of conserving biodiversity in a changing climate. Past government environmental policy delivery has eroded the trust between landholders and governance arrangements. Regional delivery models of governance have regained some of this trust and have established meaningful relationships to enable the effective delivery of programs and policies for conserving biodiversity.

However, the regional delivery model is just that – a delivery model. Significant additional coordination of other governance arrangements, knowledge support and collaborative partnerships is required to ensure that the regional delivery model continues to be effective. In particular, provide and/or facilitate regional natural resource management bodies with knowledge relating to the resilience the disturbance thresholds of the ecosystems they are responsible for managing.

Mechanisms to enhance community engagement.

The Border Rivers-Gwydir Catchment Management Authority has made significant inroads to achieving effective mechanisms to enhance community engagement, including:

- Benchmarking and monitoring their stakeholder's attitudes regarding natural resource management decision making;
- Educating landholders as to the role resilient ecosystems have within their production systems – the importance of biodiversity to the provision of ecosystem services;
- Delivering property management planning training to landholders to facilitate better integration of social, economic and environmental systems into long-term property management;
- Developing partnerships with other government delivery agents and non-government groups – e.g. CRCs, Landcare, etc.
- Building meaningful relationships and trust between government and landholders; and
- Utilising effective communication systems to effectively achieve our goal of helping people in our communities to look after their land for future generations. For example, utilising landholder champions to communicate concepts to avoid the concept of 'government telling us what to do'.

Yours sincerely,

Paul Hutchings
General Manager

Attached: Appendix – Supporting information relating to climate change impact on biodiversity