

# **National Biodiversity and Climate Change Action Plan**

**Response to the consultation paper – Developing a National Biodiversity and Climate Change Action Plan prepared by the National Task Group on The Management of Climate Change Impacts on Biodiversity convened under the NRM Ministerial Council’s Land, Water, and Biodiversity Committee**

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## **Introduction**

The Fitzroy Basin Association (FBA) is a community based natural resource management group structured as a peak body of sector groups in the Central Queensland region. It has been in existence for about ten years, and in 2002 was charged with responsibilities of a regional body under the National Action Plan for Salinity and Water Quality (NAPSWQ). Its geographical area includes the Fitzroy Catchment, a focus catchment for the NAPSWQ, and the associated catchments of Boyne and Calliope Rivers and catchments of the Curtis and Capricorn coastal streams. The regional natural resource management plan, currently under development by FBA, is nearing completion and should be available in draft form for comment within weeks.

FBA, as a community based nrm group, believes that natural resource management has no distinct boundaries of influence and impact. Therefore, communities should have power to make decisions regarding natural resource management, as these decisions will affect social, political, cultural, economic, and environmental dimensions of those communities.

## **General comments**

Two overwhelmingly important points are made in papers accompanying the consultation paper

- That the rate of global warming is greater than what has probably been experienced hitherto
- That while the cause of that warming is mostly anthropogenic; there are other very significant anthropogenic impacts that magnify the effect of global warming.

Although the words “adaptive management” appear frequently in the document, the prevailing sentiment is one of “optimum management”. “Optimum management” assumes that a particular desired state exists, and that that state will continue through time to be the desired state. If enough money and effort is invested in trying to reach that state, it will be achieved. Comments with respect to questions in the consultation document are not of this view. The view reflected in these comments is of a world system constantly changing because of impacts of, and adaptations to, effects of anthropogenic and natural origin. Because of that, what constitutes a “desired state” now, may not be a “desirable state” at a later time: constantly adapting system/s.

### **Specific comments**

*The Goal: The preservation of biodiversity and maintenance of ecosystem integrity in the face of climate change threats and impacts*

In a complex adaptive system such as our environment and its human impacts and interactions, preservation is not achievable. Given that the system is not a steady state one, uncertainty exists as to the “current desired” state, and how the actual current state matches up to that. Achieving the “current desired” state would take time, if it could be achieved, and by that time the desirable state may be different.

*Suggested change:* The maintenance and enhancement of resilience and integrity of ecosystems in order to adapt to climate change

### *Key strategies*

Strategies as written appear as the product of assumptions of “steady state” world view and should be changed if an adaptive management philosophy is the guide the plan’s development.

*Question 1: How can planners and decision makers be assisted to be up-to-date on regional climate change scenarios as these affect biodiversity?*

A changed mindset is required so that a temporal element can be built into planning. Current planning processes generally only have tools that can operate in the steady state worldview, which does not easily allow for accommodation of long-term (more than the term of a government) time-scale change. Planning which seeks to build system resilience rather than reach a particular “desired state” does allow for temporal variation, and views ecologically sustainable development not as an endpoint, but as an ongoing process.

If planners and decision makers accommodate this worldview, then system resilience will be built and adaptive ability will be increased. This appears to be the stated cornerstone of the proposed plan.

*Question 2: Should planning make provisions to mitigate adverse impacts where the likelihood of occurrence is relatively high?*

This question belongs in the values (well informed) of those affected by whatever decisions could be made. While provision in planning should be made, the decision as to whether or not actions might be taken would need to be the subject of very close scrutiny in terms of social and economic cost, cost in lost resilience (diversity), who would bear which cost, etc. In addition, actions should be considered in light of what increase in system resilience could be obtained by other means.

*Question 4: Into what current natural resource planning and management processes could consideration of climate change impact on biodiversity easily fit?*

As discussed above, planning processes generally do not allow for change in desired state. Regional natural resource management planning is most likely the level of planning into which actions to address impacts should fit most closely; however, the tools to allow for that incorporation are not yet mature, and require a deal of innovation on the part of planners.

*Question 5: What type and level of information is required?*

A new way of thinking and planning will be most useful from here on, not just stacks of information. However, information concerning condition of biodiversity with respect to other anthropogenic impacts, and identification of critical drivers of resilience in these systems and of the systems themselves is in short supply. Planning tools must be developed to take into account uncertainty; to plan where no certainty exists. To do that, tools must consider drivers, rather than impacts (which will always be uncertain when looking at the future). By mapping drivers and determining the balance between anthropogenic and natural drivers, and what can be dealt with and what can't, planning can take a longer view on time, and incorporate impact lowering strategies where these can be implemented.

*Question 6: Is there sufficient quality data to allow regional decision makers to identify species, communities, and ecosystems at risk from, or threatened by, climate change impacts?*

While the data may exist, generally, there is not sufficient information, particularly for this Central Queensland. Some information exists about particular species, but less about communities and ecosystems. Again, it is not the information about these specifics that is important, but to know what is driving the system, and what scenarios are likely under the influence of those drivers.

*Question 7: Setting priorities for biodiversity conservation:*

- 1. Is the decision analysis approach in Sustaining our Natural Systems and Biodiversity (Morton et al 2002) a useful methodology for setting priorities to address climate change impacts on biodiversity?*
- 2. What do natural resource managers and planners need to assist prioritising action?*

The methodology is useful as it allows for the expression of a value of biodiversity with respect to its diversity, which is the key component of a system's resilience. Prioritisation is always a challenge in that a number of compromises need to be undertaken for best outcomes. These compromises are usually made on consideration of

- Money
- Time

- Community values, the expression of which also incorporates a number of compromises to come up with a consensus

Use of ideas and techniques such as convergence, which has strength in allowing expression of divergence, can be useful in reaching agreed positions. With respect to the Decision Analysis Approach, planners would require the following information

- Nature of the risk to biodiversity
  - Level: ecosystem, community, species, genetic
- Objectives of addressing risks
- Management options to address risk
  - Biodiversity benefit of each option
  - Financial cost
- Community values relating to the risk and options to address risk

This begins to look like a great deal of information if it were only addressing risk from climate change. However, that risk will probably always only be one of the many pressures on the subject. A useful approach in conjunction with the Decision Analysis approach is as outlined in response to question 5: know what drivers are operating and how they balance; and plan to minimise the impacts of manageable pressures, such as those caused by human-induced loss of habitat and food, water quality impacts, etc. In minimising these pressures, systems and individual components of those systems will have greater resilience to climate change impacts.

*Question 8: Are the principles and assumptions underlying the National Reserve System appropriate given current climate change predictions?*

*Question 11: Will market based mechanisms such as taxation incentives be a useful tool for establishing future habitat?*

The National Reserve System should include conservation of areas that are the “safest” for systems, communities, and species. Many of these areas would currently be on private land and may not even be known about by science. Accessing information about these sites will necessitate development of higher levels of trust between stakeholders than is currently enjoyed universally. Market based and other incentives may be a useful vehicle to lower the financial burden of reserve and to encourage players into the market that otherwise may not appear. Offsets and taxation incentives should be encouraged.

The national reserve system would still need to keep in mind that small areas locked up to preserve species/communities that may be on the way out for reasons other than climate change, such as exists for the Northern Hairy Nosed Wombat, are expensive. In addition, such management of these areas is unlikely to do more than provide a little more time for a species/community that is already poorly adapted, or has insufficient habitat remaining for rehabilitation to a viable status. To be successful, the national reserve system should increase resilience of systems, and the chief strategy will be that of lowering the impact of other pressures. Locking up may not always be the only way to achieve that goal and in some cases, could serve to weaken the species/community’s adaptive ability.

*Question 14: Climate predictions:*

- *How would climate predictions improve management and decision making processes?*
- *Is there sufficient biodiversity data to use with climate predictions to support decision-making?*
- *Would the data be reliable?*
- *At what scale would this information be most useful?*

Climate predictions need to be made in the context of management of biodiversity and other natural resources. Whether or not sufficient data exists is not the point: can planners and decision makers access that data as useful information? Probably not, and further, planners are usually very busy with short time frames for plans, etc. Information must be managed and presented in such a way that planners and decision makers can *and do* access it to make better plans and decisions. There is usually a lag time between the emergence of an issue and its incorporation into planning and decision-making; the challenge is to ensure that time is as short as possible.

All nrm information about the future and even the present and the past is fraught with uncertainty. Planners must deal with uncertainty as outlined in response to an earlier question.

The most useful scale for information depends on the spatial and temporal scale of the planning exercise and the subjects of prediction.

*Question 16: How are results of research interpreted and implemented for natural resource management – how is the science heard and converted into action?*

As outlined in response to question 14, there is usually a time lag between emergence and uptake of an issue in planning and decision-making. The Queensland *Integrated Planning Act 1997* is one attempt to shorten that time frame by requiring local government plans to consider a range of pressures in their planning processes. Another example is the requirement of a sound scientific basis for regional natural resource management plans. Some climate change information is included in the Central Queensland regional nrm plan, but only little about its potential effect on biodiversity.

Given the two constraints of needing to deal with causes rather than symptoms and the inability of local individuals to do much about some of the major causes of accelerated climate change, these examples are able to do little to ameliorate the effects of climate change.

Scientists need to be bolder about their findings, and report early rather than late. We are dealing with systems with great degrees of uncertainty – sometimes the scientist's findings/conclusions may be proved inaccurate, but mostly they will be in the bounds of whatever uncertainty prevails. A good example is the now public reporting of the SOI. That index is now a well-established weather forecasting tool, with all its degrees of uncertainty, and it is used by people who rely on weather such as those

involved in agriculture, and in the construction industry. Similar information could be reported about various drivers of climate change.

*Question 17: Who should be targeted for communication? Individual landholders, producer groups, Landcare/NHT/nrm facilitators and coordinators, policy officers?*

All the above have differing needs of communication and different responsibilities with respect to addressing climate change impacts. Therefore, they should all be targeted, but differently, for different outcomes under their responsibilities.

*Question 19: Are the actions above the right measures to address climate change impacts on biodiversity? If not, what measures would you suggest?*

The “correctness” of the proposed actions will only be determined, if at all, after the event. Measures need to be taken, that is certain, and some of those measures must look at addressing impacts, as the ability of any group, or even the nation as a whole to address climate change is limited. That being the case, it is still imperative that anthropogenic causes of accelerated climate change must be addressed at a national scale. These measures should include an accelerated reduction on greenhouse gas emissions, nationally, with incentives to apply to the use of practices resulting in reduced greenhouse gas emissions.

Some of what is needed requires a quantum shift in thinking and that will always be difficult to achieve.

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