

Executive Summary

A significant body of scientific research developed over the last two decades indicates that the Great Barrier Reef is being harmed by changes in its catchment. The Australian and Queensland Governments are taking the matter very seriously and responding with a Reef Water Quality Protection Plan. One of the major thrusts of Reef Plan is measures to improve runoff from the river catchments that drain to the Great Barrier Reef.

One of the key issues is take-up of better management practices by landholders. Grazing and agriculture are major land uses in the catchment. This project scoped issues associated with grazing and agricultural industry practice, focusing on how take-up can be accelerated. Its specific task was to:

1. identify the realities and complexities of farmers' situations and understand the barriers, triggers and support required for change, and
2. understand what approaches to education and learning are likely to be most effective to support change.

The core of the research was (i) interviews with graziers, cane growers, horticulturalists, NRM professionals and researchers, (ii) a workshop held in Townsville with representatives of all these groups, and (iii) advice from a Key Informants Group (KIG) about how the research should be approached and matters that should be considered. Our local partner in this research was the Burdekin-Dry Tropics NRM group.

Working cooperatively with producers to foster changes in land management that make financial and lifestyle sense for producers, and benefit the environment, is currently the most cost-effective approach from both government and producer perspectives. There are many practices that make sense from a business perspective and improve catchment water quality that could be adopted more widely (Box 1). The report's recommendations therefore focus on what producers need from government to make this cooperation work in practice.

Workshop participants and interviewees provided us with extensive feedback on barriers to the adoption of new practices. Major areas of difficulty include:

- ◆ costs of change,
- ◆ risks of change,
- ◆ uncertainty about what will work in practice,
- ◆ tensions between government and producer agendas, including:
 - » different levels of commitment to private and public benefits, and
 - » producers' focus often at the project level, and governments often focused on larger scale outcomes,
- ◆ weak community networks, and
- ◆ producers' capacities (e.g. the skills needed for evaluation and reporting).

Producers' needs

Support that is highly valued by farmers and graziers is:

1. Business focused.

What producers need, centrally, is to understand the significance of a practice for their business.

2. Respectful.

For very many decades, government policy and Australian culture strongly valued and supported improving, and maximizing, the productivity of agricultural and grazing land. Their productivity was seen as vital to the nation's economic wellbeing. Environmental outcomes, on the other hand, were very secondary considerations. Respectful support understands this history. It is not naive about the mistakes that have been made in the past, it takes responsibility for governments' failures, and it is aware that mistakes may be being made now.

3. Easy.

It is easy to create barriers for producers, unintentionally, by designing a procedure that producers find difficult in practice. Proposed processes need to be evaluated from producers' perspectives, when they are being designed.

Producers' preferred methods of support are:

1. Financial assistance.

Farmers and graziers look for some support when they are asked to make changes that provide a poor return on the investment of their time or make them worse off from financial or lifestyle perspectives. Diverse kinds of financial support can be helpful. These include:

- ◆ incentives for adoption,
- ◆ payments for outcomes delivered on farm, and
- ◆ underwriting risk.

2. Practical demonstrations.

Practical on farm demonstrations are a highly valued form of support. They greatly reduce the risk to farmers of adopting a new practice, because they can see:

- ◆ how a new practice has been used on farm,
- ◆ how well it has worked out financially, and
- ◆ whether there are significant differences between the demonstration site and their own property or business situation that need to be taken into account in considering its relevance to them.

3. Extension officers.

The key benefits that extension officers can offer (whether government, industry, commercial or NRM group based) are:

- ◆ direct assistance in the process of working out how a new practice can be used on a particular property;

- ◆ support that complements farmers on-farm efforts, by managing the interface with government agencies who are a source of funds and to whom producers are accountable; and
- ◆ keeping abreast of changes in practice, so that staying up to date is much less work for each individual farmer or grazier.

Recommendations

1. Funding simplification and flexibility

Develop alternative funding models that give flexibility with accountability and efficiency by decreasing the emphasis on paperwork and increasing the emphasis on conversation. This will involve less effort for the funded, and richer communication that will help funders understand better how programs are playing out on the ground. The increased difficulty of demonstrating transparency and accountability to third parties will be managed by finding ways to shift the emphasis in funding programs from inputs to outputs and outcomes.

2. Financing options review

Review financing of efforts to accelerate take-up of beneficial practices by producers by assisting producers with the risks of changing practices, the costs of using new practices, and transition costs. Identify effective, equitable options, developing innovative strategies as necessary.

3. Incentives for innovation

Catalyse faster innovation in practices by establishing a framework to make successful innovation in practices profitable for primary producers, beyond the benefit that accrues to them from using the innovation in their own businesses. In particular, consider establishing a scheme to generate some kind of income stream for innovators, for instance, a royalty over a period of ten years, paid in proportion to the practice's take-up.

4. Aligning lending practices with sustainable development

Investigate the contribution of banking and other investment institutions (especially lending decisions) to unsustainable land management, and (i) develop training materials for institutions to improve their lending practices, to better align them with sustainable development goals, and (ii) develop training materials for borrowers to help them better evaluate their risks as property purchasers.

5. Best practice sites review and online directory to BMP information

Provide an online resource for producers and those who support them that provides a directory to demonstration sites and a directory to best management practice material, that is designed so that it builds users' capacities to manage farms in ways that protect the Reef.

6. Enhancing take-up processes for practices with substantial potential

Assist farmers and graziers to think through ways to use promising practices in their particular businesses (given constraints re time, money, land, etc) by enhancing and complementing existing tools (e.g. Best Management Practice manuals) used to help producers take up new practices.

7. Sustainability for grazing properties with small carrying capacities

Identify pathways to sustainability for properties with small carrying capacities or high levels of debt relative to their carrying capacities. These properties contribute disproportionately to water pollution, because financial pressures drive graziers to overgraze.

8. Strengthen industry support networks

Develop or expand incubator functions (for new businesses), development functions (for established successful businesses), and clinic functions (for businesses experiencing difficulties), in each industry sector.

9. Develop advocates' capacities to champion practice innovations from business perspectives

Develop the capacities of professionals and non-professionals who are championing good land management practices to explain to farmers and graziers how beneficial changes in practices make sense from business and lifestyle perspectives.

10. Skills development for new extension officers

Establish a process of relatively rapid skills transfer, within extension officer networks, that substantially decreases the time that it takes for new officers to get up to speed with an industry and a region, and the time that it takes for them to build trust. This is particularly important because staff turnover in many of these positions is relatively high, because funding is insecure.

11. Developing capacities for complex problem solving

Use complex, multi-disciplinary decisions that participants are making as occasions for learning a variety of ways of solving problems and thinking innovatively in capacity building workshops. This will contribute directly to current natural resource management in each region, build networks, and develop stakeholders' capacities at the same time.

We have taken the view in this report that where there are cooperative, win-win paths to follow, which have a real prospect of achieving what is needed from a Reef perspective, then that is where efforts to catalyse change in farming and grazing practice should focus, in the first instance. This is the main thrust of this report. If, as adaptive management of the catchment-Reef ecosystem proceeds, we learn that harder choices are unavoidable, it will still have made sense to pursue these lower cost improvements to catchment management first.