

Agricultural Landscapes in the Wet Tropics

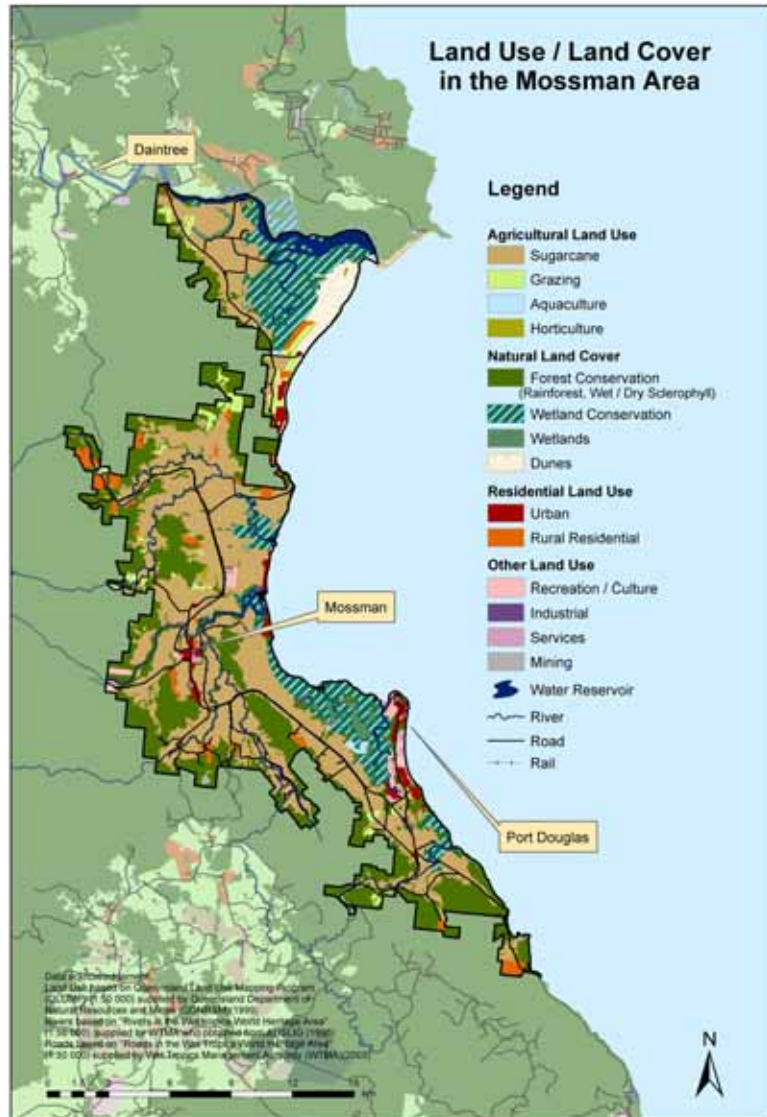
Future visions balancing environmental, social and economic needs

Context

Economic pressures on primary industries in coastal North Queensland are sufficiently strong that industry and the community are asking what impacts new options for agriculture and landscapes might have in the future. This question is multi-faceted, relating to enterprise prospects, community futures, land-use options, ecological functioning of landscapes and the social values attached to farming, lifestyle and landscape.

In the Mossman area the options for maintaining the status quo are most constrained by increasing pressures for rural residential subdivisions, the need for greater protection of the reef, areas of high conservation value and areas that support the services natural ecosystems provide (i.e. filter and buffer functions).

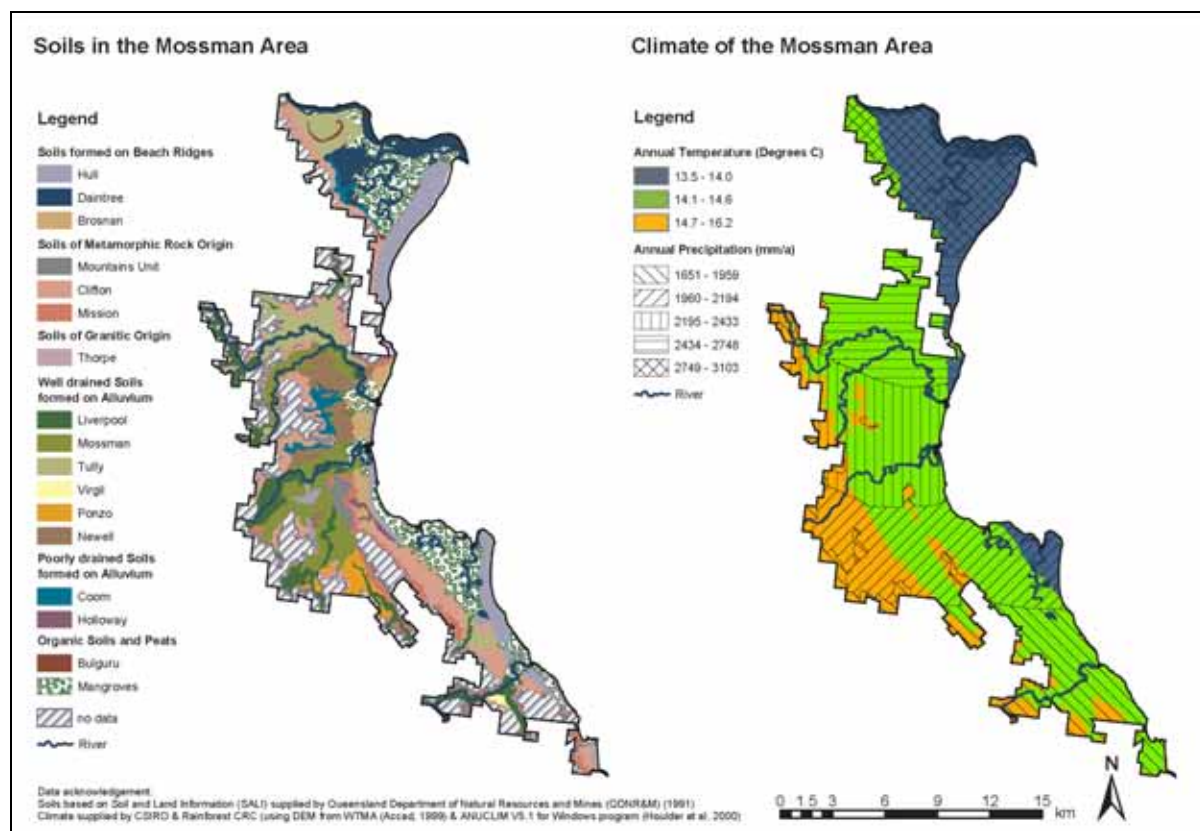
In response to these questions, CSIRO Sustainable Ecosystems, under the Agricultural Landscapes in the Wet Tropics project, developed a socio-ecological framework that allows study of the environmental, social and economic aspects of landscapes and their interrelationships. Production and protection in the landscape are not kept separate within this framework. This is in contrast to the dominant view in industry, community and government that conservation happens in the World Heritage Area and production and economic development happen everywhere else. Consequently the framework facilitates, for example, better understanding of perceptions in the community on the role of agriculture in maintaining ecosystems services and the scope for conservation of biodiversity in the agricultural matrix.



Working towards a sustainable future landscape

The Agricultural Landscapes in the Wet Tropics Project, which started in December 2002, has focused on participatory learning and effective communication throughout the planning process. Farmer, landholder, and community groups, as well as industry sectors and other agencies have been involved in developing future visions for long-term sustainability.

To date, the project has helped to improve understanding of the biophysical and socio-cultural development of the landscape of the region. It has also been able to demonstrate that local people have wide ranging aims and aspirations for the future of the area. This has been achieved through a number of tools and techniques from the practice of participatory landscape planning.



Taking a participatory planning approach

Rather than generating more bio-physical science knowledge, this project worked on social and economic dimensions of communities and landscape by engaging with people. Work was carried out with individuals, groups and industries in the area.

Analysis of interviews with a wide range of farmers and landholders in the area showed that they followed different strategies over time to successfully manage their farm/s. These strategies were found to be closely related to distinct groups of farmers: traditional cane farmers, traditional mixed farmers, early diversifiers, lifestyle farmers and hobby farmers. The analysis also revealed that over the past 20 years the pattern of farming and farming values has been shifting. Innovation in farming has led to changes in land use and management practices and opened up opportunities for new ways of developing and occupying land and small scale farming. Recognition of environmental and amenity values in the landscape has led people to buy farms for a multitude of purposes and values. Programs under the Natural Heritage Trust (NHT) have also contributed to overcoming the divide between production and protection in agricultural landscapes. Farmers have established wetlands that provide a range of ecosystem services, such as filter and buffer functions, recreational and habitat values. Programs that support farmers to adopt improved management practices leading to better environmental outcomes are likely to increase in future.

In community workshops, participants discussed their own visions for the future of the area and identified trade-offs between a variety of options. The results of the workshops revealed the complexities of the issues and offered a range of future scenarios based on the variety of preferences expressed by participants. Results from the workshops reflect values and provide insights into the environmental, social and economic trade-offs as they are perceived by participants.

In the last phase of the project, a range of landscape scenarios developed in the community workshops are being mapped in a Geographic Information System (GIS) and potential trade-offs, also identified in the workshops, will be quantified. Established scientific knowledge, for example, about soils, climate and hydrology will be used to underpin the mapping of the scenarios and to support the trade-off analysis. The outcomes will contribute to and improve future landscape and resource planning.

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