

Northern Midlands land management in the spotlight

A team of 30 researchers led by UTAS Centre for Environment director Professor Ted Lefroy is studying the Northern Midlands as a case study in regional sustainability.

Its mission is to work out how Tasmania can achieve its potential to be the food bowl for Australia and at the same time protect its unique environment.

The Landscapes and Policy research hub is funded for five years by the federal Environment Department to examine the environmental, social and economic impacts of land-use change, climate change, demographics and government policy in two contrasting regions: Tasmania's Northern Midlands and the Australian Alps.

The research team includes ecologists, climate scientists and social researchers from the Australian National University, Griffith University, Murdoch University and the Antarctic Climate & Ecosystems Cooperative Research Centre (ACE CRC). Divided into eight core research teams, they are pooling their expertise to examine the likely implications of different scenarios of climate change, land use change, demographics and infrastructure development in the Midlands on

ecosystem services, agricultural profitability and habitat suitability for selected species of plants, mammals, reptiles, birds and amphibians.

One objective in the first year of the project has been to talk to key land owners about their farming operation and get a feel for what they currently do to encourage biodiversity and find out what the obstacles are to reducing their impact on the surrounding environment.

On a recent tour of the Northern Midlands, the research team visited Andrew and Edwina Colvin's farm, *Nosswick*, at Blackwood Creek near Cressy. Prof. Lefroy said that this farm is of particular interest as it provides an example of a highly productive "synthetic woodland" emerging out of a very modified landscape.

"Strategic tree planting is gradually converting this heavily cleared grazing property into a network of connected forest patches encompassing a mosaic of intensively farmed areas of high-value, irrigated cropping," he said.

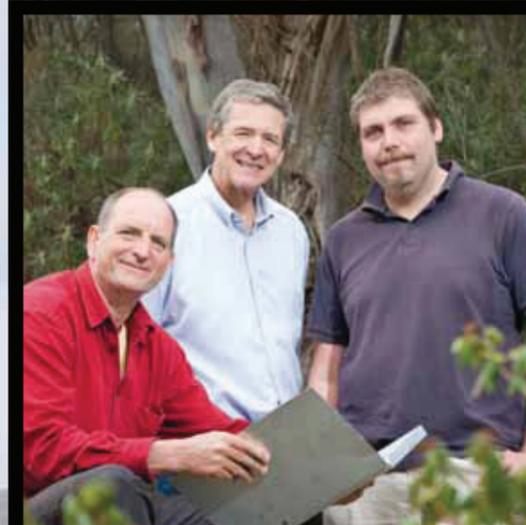
"The principle behind Andrew's vision is that there will be multiple benefits from surrounding his intensive areas with a network of trees.

"The trees will soak up excess water and nutrients from shallow soils prone to water logging; provide shelter for crops against damaging winds, habitat for birds and insects including beneficial species that play a role in pest control; provide a source of carbon credits; improve the aesthetics of his farm and contribute to the farm's energy budget."

The "forest net" is being established in the corners of each paddock that the pivot irrigator cannot reach. Each corner is being planted with a mixture of trees and shrubs to eventually re-connect the farm to the unbroken forests of the Western Tiers. The researchers will test hypotheses about the role of different types of vegetation in a cropping landscape including competition, opportunity costs, water yield and the benefits of wildlife habitat and corridors.

"Every landholder has emphasised the bottom line: that they are in business and must make a profit," said economics professor John Tisdell.

"But their preferences are more than simply profit maximisation because they are also concerned about the condition of the bush on their farms, their attachment to place and intergenerational equity."



How Tasmania can achieve its potential to be the food bowl for Australia and protect its unique environment: Research team members Professor David Bowman, Professor Ted Lefroy and Dr Grant Williamson.

The Landscapes and Policy research hub is funded for four years (2011-2014) with \$6.57 million from the Australian Government's Department of Sustainability, Environment, Water, Population and Communities.

Encouraging biodiversity in Tasmania's Northern Midlands: Researchers visit Andrew and Edwina Colvin's farm, Nosswick, at Blackwood Creek near Cressy.