

Planning strategies needed to protect food sources

August 6 2009

(PhysOrg.com) -- Climate change and urban expansion could threaten the sustainability of horticultural industries in the Adelaide Hills unless a long-term strategy is employed, according to a senior geographer at the University of Adelaide.

Geographical and Environmental Studies lecturer Douglas Bardsley has spent the past four years working in partnership with the SA Government and the Adelaide Mt Lofty Ranges Natural Resources Management Board on long-term planning approaches to cope with climate change.

Together with the Department of Water, Land and Biodiversity [Conservation](#), and Primary Industries and Resources SA, the group has developed geographical models with the Apple and Pear Growers Association to predict how warmer temperatures and urban expansion would affect their growing conditions.

“Projected warmer temperatures and rural residential development pose serious risks for industries such as the apple and pear industry, worth \$25 million a year to South Australia,” Dr Bardsley says. “The area available in the Hills to grow high-quality apples could shrink considerably.”

The apple and pear industry is one of seven case studies undertaken since 2005 to assess the impact of global warming on South Australia’s natural resources. “These projects, which consider impacts on

agricultural industries, water, soil, [biodiversity](#) and coastal management in the Adelaide region, highlight the need for land use policies which respond directly to the risk of climate change.”

Other key projects include looking at groundwater systems in the McLaren Vale area to ascertain how the Southern Vales would be affected long term by a drier climate and examining how changes in wind and rainfall patterns would alter soil management north of Adelaide.

Another study undertaken in conjunction with the CSIRO suggests that 14 plant species that are considered of high conservation value in SA would be particularly vulnerable to changes in temperature and rainfall.

“Years of drought in the Murray-Darling Basin have, in part, led to the collapse of important water management systems in South Australia. Projections suggest that these weather conditions are more like what we can expect in the future,” Dr Bardsley says.

“The potential impacts of climate change for South Australia are likely to be negative for many stakeholders in the rural sector. It will be insufficient for us to simply try and manage environmental crises as they emerge.

“We need to integrate science into our future planning approaches and also work closely with key stakeholders to ensure the decisions we make incorporate the risks of future climate change,” Dr Bardsley says.

He says as a result of his and his colleagues’ research, the regional Board and local councils are investing significant amounts of time and money into [climate change](#) initiatives to make their regions less vulnerable.

“The challenge is to plan long term, beyond political cycles, to ensure we

protect our natural resources.”

Provided by University of Adelaide ([news](#) : [web](#))

Citation: Planning strategies needed to protect food sources (2009, August 6) retrieved 27 April 2024 from <https://phys.org/news/2009-08-strategies-food-sources.html>

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