Media are welcome to attend the AARES annual conference at the Grand Chancellor Hotel Brisbane. Please contact Cathy Reade 0413 575 934 to arrange interviews or to register to attend. The conference program is here, with Australian and international specialists making over 200 presentations across a broad range of energy, agriculture, development and environment issues.

Embargo: 9am, 10 February 2025

RETHINKING LAND-USE POLICY WITH THE BENEFIT OF AI:
Faster, intuitive decision-making tool delivers better value for land users

A land use policy rethink is vital to give taxpayers better value for money from policies that address climate change, biodiversity loss and food security. A decision support tool combining artificial intelligence (AI) with state of the art scientific and economic models is delivering faster, more intuitive results that enable policymakers to make better policy.

This will be discussed by Professor Ian Bateman OBE, a specialist in environmental science and policy, and long-term Government Advisor from the Land Environment Economics and Policy Institute (LEEP) at the University of Exeter, United Kingdom at *Meeting the Challenges of Transition to a Sustainable Future*, the Australasian Agricultural and Resource Economics Society (AARES) Conference, 11-14 February in Brisbane. AARES is the pre-eminent society promoting research relevant to Australasia in agricultural, environmental, food, and resource economics and agribusiness.

"We are working to produce a decision support tool to help policymakers understand how farmers and land managers will react to different policies and alter agricultural land use. The tool also reveals the influence on land use of changes in the market and the environment, across locations and across time," said Prof Bateman.

"Land use change is crucial to addressing the existential threats of climate change and biodiversity loss while enhancing food security. It makes sense that these challenges be addressed simultaneously, but governments around the world commonly focus on these challenges separately, not considering that they are linked together" he said.

"Similarly, policies often subsidise activities rather than outcomes. For example, governments pay for converting areas into woodlands on conservation zones, rather than rewarding farmers for the amount of carbon those trees store or the increase in wild animals. This results in areas being subsidised that are frankly not good value for money in terms of the benefits they generate."

"The decision support tools we have developed use AI to bring together some of the most sophisticated models of food production, farm incomes, carbon storage, biodiversity enhancement, water quality, recreation and so on so that policymakers not only understand how to change land use, but also what the full consequences of such change will be."

"The tools are co-designed with decision makers to be intuitive and easy to use allowing different policies to be explored, improving outcomes and enhancing value for money to the taxpayers that fund those policies."

Prof Bateman and his team applied the decision support tool to the UK net zero commitment to increase carbon storage by planting trees in an area that was previously devoid of forest cover. Exploring different approaches revealed that current subsidies deliver poor value for money and relatively low environmental improvements, with some options also reducing food production significantly. The tool also allowed much better policies to be identified, balancing food and environmental outcomes.

Previous tools from the LEEP team have been released for free use and it is intended follow suit for the present decision support system.