Australian Government
Australian Centre for International Agricultural Research

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Global Research Alliance (GRA) on Agricultural Greenhouse Gas Emissions

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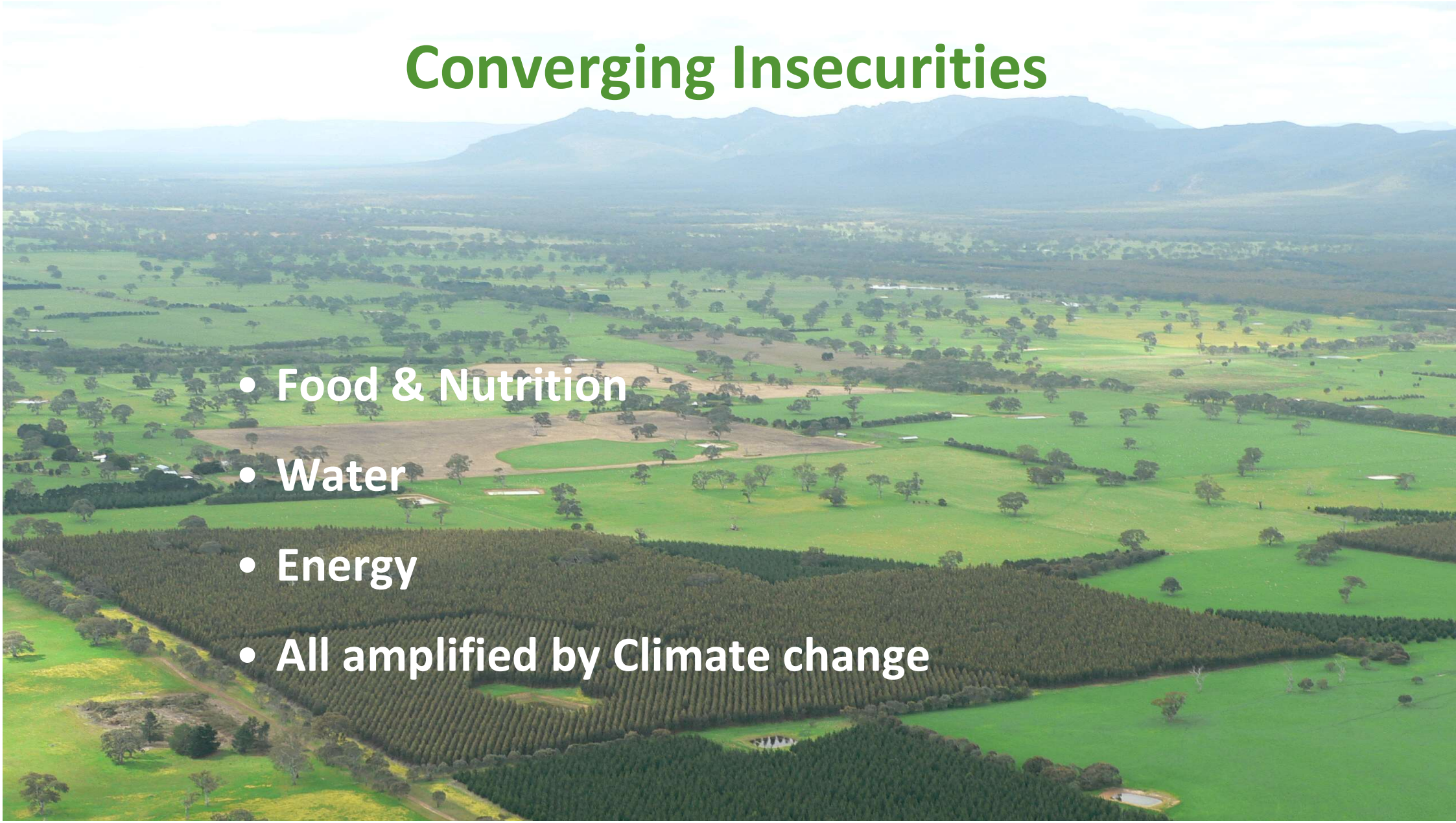
Converging Insecurities



- Food & Nutrition
- Water
- Energy
- All amplified by Climate change

The role of Agriculture

In the Anthropocene, agriculture is the biggest lever humans can pull (3 Fs)

- Biggest employer of people
- Biggest water user (75% of diverted freshwater)
- 26% of global greenhouse emissions
  - food on track to be the largest emitting sector
- Causes 78% of eutrophication
- Uses 87% of ice-free, non-desert land
- The main driver of deforestation

AND

- **The most effective way to lift people from poverty**

Foreign Minister The Hon Julie Bishop MP launched the ACIAR 10-year Strategy 2018-27 in Parliament House Canberra in February 2018

ACIAR OBJECTIVES

ACIAR **brokers and invests in research partnerships** to build the knowledge base on which developing countries can progress crucial development objectives:

1. **Improving food security and reducing poverty** among smallholder farmers and rural communities;
2. **Managing natural resources** and producing food **more sustainably**, adapting to climate variability and **mitigating climate change**;
3. Enhancing **human nutrition** and reducing risks to human health.

In supporting these development objectives, we will ensure that our research programs pay particular attention to improving:

4. Gender equity and empowerment of **women and girls**;
5. More **inclusive agrifood and forestry market chains**, engaging the private sector where possible;
6. **Scientific and policy capability** within our partner countries.

The Global Research Alliance (GRA) on Agricultural Greenhouse Gases

- **2009**: GRA initiated by New Zealand at Copenhagen COP15, with 28 member countries
- **2010**: 1st Senior Officials Meeting in Wellington to develop the structure of the Research Groups and establish the New Zealand-based Secretariat
- **2011**: Ministerial Summit in Rome to endorse the Charter, and first GRA Council meeting Chaired by New Zealand
- **2015**: first GRA Strategic Plan (adopted 2016), Special Representative approved
- **2021**: GRA currently 64 member countries and 24 Partner organisations
- administratively lean, independent multilateral (no treaty etc)
- each member funds its own participation
- enables robust exchange of ideas among scientists, and between scientists and policy-makers
- international vehicle for building technical capacity within member countries and globally

Australian GRA contributions

- vice-Chair of the GRA Council in 2019, and take over the chair role from Indonesia **tomorrow**, at the 2021 Council Meeting, hosted by ACIAR in Canberra webcast 23-25 March
- Chaired the working group developing the second GRA Strategic Plan (adopted tomorrow hopefully)
- We co-Chair the GRA Integrative Research Group (IRG), with Canada and France, and Australian scientists have played active roles in the Livestock and Cropping research groups
- Our priorities as Chair include:
  - getting greater engagement with Pacific island countries
  - developing synergies between mitigation research and adaptation research
  - improving linkages with the CGIAR, especially the new OneCGIAR research portfolio
- ACIAR partnering with NZ Ministry of Primary Industries in **co-funding**:
  - collaborations with Fiji, Vietnam, Indonesia and Kenya to improve inventories to support and finance mitigation (linked to work by the Greenhouse Gas Measurement Institute)
  - analysis of the potential for livestock data to serve multiple purposes – can data collected in production projects also be integrated into emissions inventories and reporting?
- Funded the Mullion Group to develop a streamlined data management system linked to Moja Global open-source software for Tier 2 & 3 reporting – developed for Kenya initially
- ACIAR partnering with IDRC Canada to host an Independent Dialogue (under the UN Food Systems Summit) on new joint Food Loss Research Program

Opportunities

- Australian technologies and methodologies for quantifying, measuring and reducing emissions on-farm are relevant in many other countries
- This can be a significant element of positioning Australia in global markets
- There remain very significant research challenges:
  - effective GHG mitigation options that are profitable and workable for farmers;
  - limited technical capacity at national institutional levels to implement robust national inventory systems for accountability and impact assessment;
  - limited access to measurements and databases to develop the required country specific greenhouse gas emission factors, algorithms and activity data; and
  - inadequate Monitoring, Reporting and Verification (MRV) systems to ensure compliance of greenhouse gas measurements in developing and reporting official inventories.
- Credible MRV is fundamental for designing and implementing effective Nationally Determined Contributions under the Paris Agreement

- Nutrition and climate change are the meta challenges for agriculture, and ag and food systems research, this century
- Effective responses will demand innovative partnerships and new coalitions at all levels, across many sectors
- The GRA is a practical multilateral whose time has come

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