World Food Day
Global Challenges and the ‘NextGen’
OR
The future ain’t what it used to be
But first, ACIAR’s niche remains...

An independent agency in the Foreign Affairs portfolio.

Mandate: to amplify the impact of Australia’s outstanding capabilities in agricultural science by brokering and funding agricultural research-for-development partnerships in East Asia, Pacific, South Asia and East & Southern Africa for the benefit of partner countries and Australia.
Victoria is substantially engaged in this effort...

Nine Victorian research agencies leading 18 projects and partnering with an additional 10 projects worth $20 million in 13 countries.

**One example: University of Melbourne and Dairy in Pakistan**

Pakistan is the world’s third largest dairy producer. Eight million families with herds of less than five animals producing an average of 4 litres a day.

Research on nutrition, health and management is delivering **large gains in milk productivity and calf survival** and helping develop a new beef industry.

Critical to this was outcome novel ways to fully engage women farmers in the research.
If the future ain’t what it used to be, what’s different?

Urbanisation, population growth, rapidly changing economies
RATIO OF RURAL TO URBAN POPULATION FOR SMALL CITIES, LARGER CITIES AND RURAL HINTERLANDS, GLOBALLY AND BY REGION

Source: FAO 2017  The state of Food Security and Nutrition in the World
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Leading to rapidly changing food issues and demand
From Promise to Impact. Ending malnutrition by 2030. (IFPRI 2016)

**Out of a world population of 7 billion**
- **About 2 billion** people suffer from micronutrient malnutrition
- **Nearly 800 million** people suffer from calorie deficiency

**Out of 5 billion adults worldwide**
- **Nearly 2 billion** are overweight or obese
- **One in 12** has type 2 diabetes

**Out of 667 million children under age 5 worldwide**
- **159 million** under age 5 are too short for their age (stunted)
- **50 million** do not weigh enough for their height (wasted)
- **41 million** are overweight
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Climate change
Food prices rise and social unrest rises

Red dashed vertical lines correspond to beginning dates of “food riots” and protests associated with overall death toll reported in parentheses

Source: FAO 2017  The state of Food Security and Nutrition in the World
Will climate change make us go hungry by 2050?

New meta-analysis highlights that a significant increase in investment, policy and institutional support to agricultural adaptation can limit the challenge of climate change to food production till the 2050s.
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Climate change

Partner countries are more diverse
Indonesia today ...

16th-largest economy in the world
45 million members of the consuming class
53% of the population in cities producing 74% of GDP
55 million skilled workers in the Indonesian economy
$0.5 trillion market opportunity in consumer services, agriculture and fisheries, resources, and education

... and in 2030

7th-largest economy in the world
135 million members of the consuming class
71% of the population in cities producing 86% of GDP
113 million skilled workers needed
$1.8 trillion market opportunity in consumer services, agriculture and fisheries, resources, and education

Source: McKinsey 2012 The Archipelago economy – Unleashing Indonesia's potential
GNI per capita, Atlas method (current US$)

Data from World Bank   Last updated: Jul 6, 2018
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Partner countries are more diverse and more confident
Figure 5. Top purpose of assistance now and in 5-10 years

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Partner countries are more diverse and confident

Commercial private sector is engaging with smallholders in transformational ways
There are many reasons for optimism...

...that need to be tempered with scientific scepticism

For examples, see https://reachout.ациар.gov.au/
Pacific Week of Agriculture, Oct 19

- Increased **vulnerability to shocks**
- Uncertain impact of **climate change**
- Rapid rise in **food insecurity** and **NCDs**

**But we have...**

- Skilled, experienced, committed researchers with...
- Ideas, technologies, opportunities and management systems working in ...
  - Established research partnerships that have...
  - Delivered substantial impacts in the past
Where will future food increases come from?...

1/3 Breeding
1/3 Agronomy
1/3 Policy – PPP

(Braun and Kropf, TropAg 2017)
Erin Pope from the Eastern Wheatbelt in Western Australia

Erin spent time in Ethiopia in 2016 looking at how basic mechanisation could improve the efficiency of smallholder farmers.

https://raidnetwork.crawfordfund.org
Thank you

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