#### Food Security in Asia Pacific: Key Issues and Challenges

**Framing Presentation for Session 1** 

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### FAO defines food security as..

- That, all people at all times have access to nutritious food that meets dietary needs for a healthy life\*.
  - availability of sufficient quality food through domestic production or imports
  - access to adequate entitlements (such as common resources) for acquiring food
  - utilization of food through diet, water, sanitation, and healthcare to meet all physiological needs
  - stability (access to adequate food at all times, and not risk losing it to sudden or gradual risks (including climate change, economic reasons etc.)



## Half of the food insecure people in the world live in Asia Pacific\*

- <u>More than a billion people</u> in 2021 (460 million severe food insecurity; 586 million—moderate food insecurity).
  - South Asia (40.6 %), Southeast Asia (20.7 %), Oceania (13%) and East Asia (6.2 %).
  - East Asia has the lowest levels of food insecurity and where food insecurity fell below pre-pandemic levels in 2021.
- 23% of the children are stunted in the region (half of the world's total).
- 32.9% of women (15-49 yrs.) had anemia in 2019.
- The average cost of nutritious food is USD 3.98 per person/day.
  - 44.5% of the population in Asia and the Pacific (≈ 1.9 billion) could not afford a healthy diet in 2020 due to the increased cost.



## Climate risks to agriculture and food systems in Asia are escalating and will continue to do so\*

- IPCC predicts that important vulnerability drivers due to climate change will shape agricultural productivity particularly in South, Southeast and Central Asia.
- Examples:
  - Major projected impacts include decline in fisheries, aquaculture, crop production (particularly in South and Southeast Asia), reduction in livestock production in Mongolia and changes in crop, farming systems and crop areas in almost all regions, with negative implications to food security.\*
  - In India, rice production can decrease from 10 to 30%, whereas maize production can decrease from 25 to 70% assuming a range of temperature increase from 1°C to 4°C.\*
  - Rice production in Cambodia can decrease by 45% by 2080 under the high-emissions scenario.
  - Occurrence of pests threatens the top Asian rice-producing countries including China, India, Indonesia, Bangladesh, Vietnam, Thailand, Myanmar, the Philippines and Japan.\*
  - In South Asia, monsoon floods from 2005 to 2015 contributed to a high level of loss in agricultural production with peaks in 2008 and 2015.\*\*
  - In Pakistan, farmers are experiencing a decline in crop yields and increasing incidence of crop diseases because of climate extremes, particularly floods, droughts and heatwaves.\*

#### \*(IPCC, 2022) \*\*(FAO, 2018)

#### Links between food security, climate change, and socio-economic systems



(IPCC, 2019)

#### Agriculture and food system are key responses to climate changelinked implications for global food security

• "Agriculture and the food system are key to global climate change responses. Combining supply-side actions such as efficient production, transport, and processing with demand-side interventions such as modification of food choices, and reduction of food loss and waste, reduces GHG emissions and enhances food system resilience (*high confidence*)."

(IPCC, 2022)

# However, Food is not just a commodity...

- Techno-corporate solutions doubling food production are not the key to food security.
- Food Sovereignty and Food Justice approaches argue for:
  - more control over food production and consumption by people marginalized by mainstream agrifood regimes.
  - equity in decision-making and distribution of resources, rather than processes that merely extract value.

(LaVia Campesina 2009; Gottlieb and Joshi 2010; Cadieux & Slocum 2015).



#### And, climate change is not the only cause of food insecurity...

- Food insecurity (including any crises) results from distribution and markets that create conditions where low-income populations are unable to access enough food.
- Legal resources (such as land, labor, money etc.) + social networks of support → food insecurity among populations (Amartya Sen, 1983)
- Thus, in addition to the bio-physical aspects of climate change, it is important to pay attention to the socio-political-economic decisions, processes, and systems that create vulnerability.

#### Also, social-ecological systems are cascaded across time and space

- Since climate change and globalization are ongoing processes, their overlap may lead to climate impacts of negative and positive kinds, leading to "double exposure" (Leichenko and O'Brien, 2000).
  - Winter drought in 2011 in China's wheat growing region led her to buy it in the international market → doubling of wheat prices → significant impact on Egypt, the world's largest wheat importer → high food and bread prices in Egypt + other pent-up grievances → coincided with the Arab Spring (Sternberg 2012).
  - E.g. agro-industrial modernization in Mexico → benefitted agro-industrialists, capitalist farmers and some peasant households → but excluded small farmers (Kay, 1997 cited in Leichenko and O'Brien, 2000).



Interdependent and linked systems of people and nature nested at local and global scales. (Fischer et al., 2015)

#### Too much intellectual dissonance

<u>Bottom-up:</u> Case studies focus on past and present vulnerabilities.

> <u>Top-down</u> approaches may model climate projections with modelled assements and provide a big picture.

What is the middle path? How can both inform each other? (Conway et al. 2019)

## Too much intellectual dissonance (cont'd)

Resilience Approaches focus on:

• Producing "sufficient and nutritious food in the face of chronic environmental perturbations" (Bullock et al. 2017).

(e.g. increased diversity of crop types in a rotation, biotechnological approaches to crop varieties less suceptible to environmental risks etc.)

#### Critical Approaches focus on:

• Decommodifying food.

• Raising the question of democratic control over land and water by ordinary people as opposed to corporatization of agriculture.

• Probing into deeper issues linked with inequities of food production and food access.

#### Human Security approaches reflect:

- A discursive shift in climate security debates to human security (which is about human dignity and well-being), and thus greater acknowledgement of agrarian struggles vis-à-vis climate (Lamain 2021).
- But implicit assumptions about resource scarcity, managing possible conflicts, overlooking structural processes exacerbating climate change remain (Lamain 2021).

## Too much intellectual dissonance (cont'd)



Source: https://sketchplanations.com/the-blind-and-the-elephant

# What is at stake? Deepening inequities in addition to real concerns about food security

- Land issues are central to food and agriculture.
  - Land-based inequities already exist and should not be deepened through superficial policy measures that take land away from marginalized groups and to capitalistic production systems (Franco and Borras Jr., 2021).
- Urbanization processes are driving changes in agri-food systems across the rural–urban continuum. These changes represent both challenges and opportunities to ensure everyone has access to affordable healthy diets.
- The pressure on renewable water resources from irrigation would remain severe and could even increase slightly in several countries.
  - Urbanization processes are also leading to increasing claims on water resources. In cases of big cities vs. smallholder farmers and upstream populations, the needs of cities are often prioritized considering contribution to GDP by cities. These claims and decisions portend all sorts of issues in the present and near future.

## A Way Forward

- Identifying the elephant in the room—depending on analytical approaches, the same concept may mean different things to different people.
  - Have deeper discussions on analytical foundations shaping research.
  - Bring together academics across analytical divides to think about shared concepts and vocabularies.
  - Develop research projects involving multiple analytical approaches.
- Thinking relationally—not only in terms of top-down or bottom-up but how the two shape each other.
  - Generalized models and big picture theoretical arguments are important but could be nuanced by historical, cultural, and local knowledge in different parts of the world. Similarly, keeping an eye on generalizable insights from case studies may be useful.
- Bringing together academics, activists, and practitioners for mutual teaching and learning to inspire deeper understanding and dialogue.

## **Ongoing research by our Food Security team**

#### • Land (Dr. Kei Kurushima)

- Land security is an essential component of food security, thus entailing a focus on the impact of climate change-induced land conversion on producers.
  - Using mangroves and mountainous areas in the Philippines as a case study, will identify the impacts of climate change on community land rights and the effects of land conversion through pro-climate change policies on these communities. (work in collaboration with Dr. Rose Jane Peras, University of the Philippines Los Baños.)
  - A case study of char land in Bangladesh, where land area fluctuates between wet and dry seasons, and the form of rights is unclear, will be conducted to identify the impact of the combined effects of climate change on pre-existing conflicts. (work in collaboration with Bangabandhu Sheikh Mujibur Rahman Agricultural University)

#### • Water (Dr. Nazia Hussain)

- How urbanization processes (infrastructure and real estate development) are encroaching upon agricultural land, ecosystems, and water resources in peri-urban areas. Traditionally linked with the food system in cities, agriculture in these places is under threat, making people living in these spaces food insecure as well.
  - Case study—Karachi, Pakistan (work in collaboration with Dr. Noman Ahmed, NED University Karachi)
- Distributional conflicts between urban and rural/agricultural areas indicate prioritization of urban over rural/agricultural needs. These processes bear implications for food availability.
  - Karachi, Pakistan
  - Manila, Philippines (work in collaboration with Dr. Carmeli Chaves, SURP University of the Philippines, & Mr. Jude Esguerra, Philippines)

## Thankyou!

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