WAGENINGEN
UNIVERSITY & RESEARCH

Trade offs and Synergies: case Bangladesh

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Background and objectives

In the context of changing agriculture and food systems it is important to think about the directions and pathways for change, and how to reach a balanced approach, to achieve the sustainable development goals (SDGs). How are developments in water, agriculture and food systems balanced in the case of Bangladesh. Which ways do we use to get information on this?

A meeting with a sharing character was organized on 11 October, and experts from the Department of Agricultural Extension, academics and other professionals were invited. Key-note presentations were given on the topic and the diverse group of experts participated in an animated discussion. The audience provided important feedback on prepared example cases, while at the same time the exchange also provided new insights to all participating. One of the particular aims of the meeting was to discuss trade-offs and synergies and test a visualizing tool for balancing food system pathways.

The meeting is part of the research 'Trade offs and synergies' where, in 2023, research is done on 3 cases in Bangladesh, Ethiopia and Ghana, highlighting different aspects of trade-offs and synergies in the food system, with the objective to learn about a methodology to analyse and visualize trade offs and synergies, together with stakeholders involved.

Programme

3.00 pm Welcome and introduction from DAE, Dr Md Akram Hossain Chowdhury

3.15 pm Presentation: Water, agriculture and food systems in Bangladesh – visualizing trade-offs and synergies, Catharien Terwisscha van Scheltinga, Wageningen University and Research

3.40 pm Reflection and discussion with the audience

4.00 pm Closing, followed by tea and snacks

Outcomes of the discussion

About tool for exploring tradeoff and synergies:

- At national level, such a tool to explore TO&S is useful. However, the estimations and numbers presented need to be supported by published articles, reliable and measured data and surveys.
- The presentation of TO&S among different components is useful for decision makers
- The set of indicators are important and needs to be representative.

About the presented set of indicators on livestock and milk production the audience stressed not being experts on livestock. In general, the tool and the indicators are ok and informative. It was noted that other sources of methane emissions exist, and other than cow-milk, there is also goat, sheep and buffalo milk, and imported milk.

General discussion:

- Agricultural governance in the country needs to be improved. PARTNER programme already starting (WB funding). Technical support is required regarding the assessment of demand, production, water availability and climate change
- An action plan for agriculture in light of delta plan is needed which will include objectives, challenges and projections. Water availability, demand and production in 2050 as well as value chain system need to be investigated. Scenarios of delta needs to be linked with agriculture transformation.
- A framework is required to monitor the progress of delta plan, a tool like this could be useful in that regard.
- How to address the water crisis in the future needs to be explored and governance needs to be part of the plan.

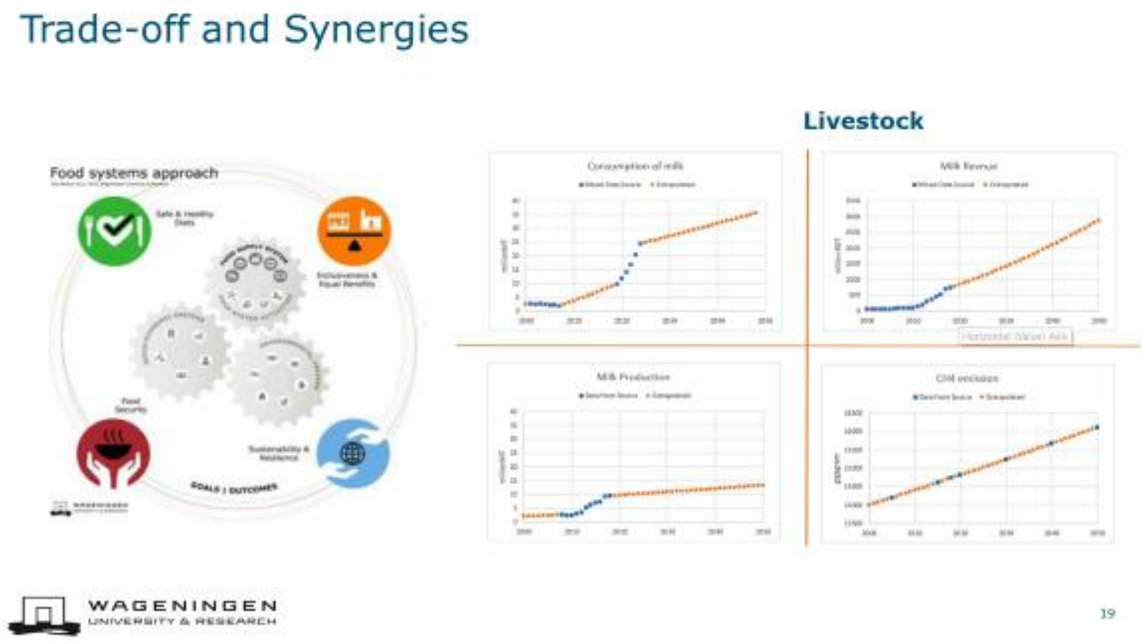
Case Bangladesh : salinity and dairy in southwest BD

In Bangladesh, agriculture is developing rapidly, under influence of growing numbers of people in the cities, increasing GDP (and related dietary change) and other development and climate change related pressures.

The demand for milk is increasing. Increasing numbers of cattle will require fresh water, which, especially in the period April-June is problematic in southwest coastal Bangladesh due to salinity intrusion.

In some places, farmers started to grow fodder. Grass is more salt tolerant than rice and could be a good alternative. Increased number of cattle will provide employment but will also increase methane emissions.

Four different goals related to food security need balancing: 1. food production; 2. safe and nutritious food; 3. livelihoods and reduced inequality; 4. resilience, addressing climate change and biodiversity (van Berkum et al, 2018, in Terwisscha van Scheltinga, 2023).



Trade offs and synergies in livestock development in Bangladesh using food system approach (Terwisscha van Scheltinga and Islam, 2023)

Follow up

This practice brief has been prepared to report back to all stakeholders involved. In 2024, the visualisation tool will be further developed and discussed, using guidelines for formulating transition pathways (Verhagen et al, 2022) for application in Bangladesh and other places.

Part of KB35 Food and Water Security

The team TO&S contributes to the overall programme Food Security and Valuing Water (KB35-103-001. The methods developed, papers published, combined with interaction with strategic agendas on food systems at LNV, FAO and others, and contribute to impact, i.e. tools for more resilient food systems and increased amounts of food from water, while taking other goals into account.

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https://www.wur.nl/en/research-results/research-funded-by-the-ministry-of-lnv/expertisegebieden/kennisonline/deltas-salinity-and-drought-1.htm

References

- Research on Trade Offs and Synergies - https://www.wur.nl/en/research-results/research-funded-by-the-ministry-of-lnv/soorten-onderzoek/kennisonline/tradeoffs-and-synergies-scenarios.htm
- Terwisscha van Scheltinga et al. (2023) Food systems in the Bangladesh Delta: Overview of food systems in Bangladesh with a focus on the coastal south west. https://doi.org/10.18174/580735
- Verhagen et al (2022) Deltas under pressure, guidelines to facilitate transition pathways https://www.wur.nl/en/Publication-details.htm?publicationId=publication-way-353934313238