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Deltas under Pressure

Food Security and Valuing Water Programme

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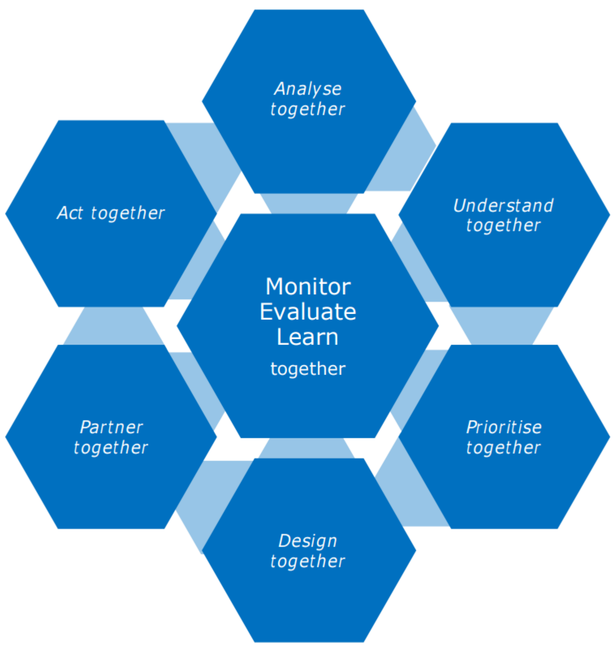
Objectives and methods

Worldwide, deltas are facing challenges to provide people with a safe place to stay and sufficient food. Key question is how to establish viable and feasible transition pathways for sustainable, safe and resilient food systems in deltas.
We look at the Food System and Water-Food-Nexus at the field, farm, regional and national scale in deltas. Together with relevant stakeholders in the food system, an integrated framework has been developed to understand current food systems in deltas under pressure and combined with tools to study implementation of transition pathways in deltas.
The research builds on detailed analysis and collaborative research in two cases in Vietnam and Bangladesh. Specific plant/livestock/water combinations, water/salinity/livestock, and shrimp/mangrove options are studied. This, together with the joint work as a team and with our partners, helps in getting a clear picture of the current and potential futures of specific food systems in deltas and to facilitate transitions.

Results, solutions and contribution to transitions

In 2021, we developed guidelines to facilitate transition pathways in food systems in deltas. These aim to create joint action on changing the food system by asking the question: What should the food system look like in the future, and how can we get there?'



Please scan to get the DUP Guidelines

Elements of the planning process as outlined in the DUP Guidelines

Fieldwork was undertaken, to a limited extent, in Bangladesh (see picture). Focus group discussions in the Tra Vinh province, Vietnam are currently taking place, to explore the perceptions of farmers and further stakeholders about local climate change impact (saline water, weather extreme, floods, droughts, heat waves), about the past situation, and inventorizing the responses to address local changes. A solution for farmers who are experiencing the effects of sea-level rise is shifting from a fresh to a brackish water system.

Other solutions include harvesting fresh water or using crops and livestock that are more tolerant to salinity. The guidelines help stakeholders to better understand solutions in the context of a changing food system. For instance, by establishing that the availability of adequate feeds for livestock, tolerance to biotic stress, access to markets, effects on the natural resource base, and issues of human health regarding the quality of stored water are indeed solutions now and in the future..

Photo: Discussion with stakeholders in Demuria, Khulna, Bangladesh, on water use for dairy production in the delta now and in the future

External partners

- Deltas under Pressure Wageningen teamed up with colleagues from Solidaridad and Khulna University in Bangladesh and from Can Tho and Tra Vinh Universities in Vietnam.
- WUR actively engages with the Delta Alliance, a worldwide knowledge network on deltas (www.delta-alliance.org).

What's next?

- We are working on the Deltas under Pressure narrative to share our research findings and recommendations.
- We will present various scientific papers at the conference Circular@WUR. We also prepare a special issue for the International Journal on Water Governance on 'Water and Food in Deltas' with peer reviewed papers.
- We are planning a video conference with our Vietnamese partners to discuss adaptation to climate change in deltas and follow up with partners in Bangladesh on their next steps for agricultural transition.
- We are actively building synergy with the CGIAR research program 'Mega Deltas in Asia'.
- We explore new areas of collaboration such as salinity-livestock.

Questions for the audience

- How can/are you using the guidelines to facilitate transition pathways in food systems in deltas in your research?
- What is a link to your work?
- How can we work together to further achieve sustainable, safe and resilient food systems in deltas?

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https://www.wur.nl/en/Research-Results/Research-funded-by-the-Ministry-of-LNV/Expertisegebieden/kennisonline/Deltas-under-Pressure-1.htm

Key publication

- Deltas under pressure, guidelines to facilitate transition pathways – Verhagen *et al.* *2022* https://www.wur.nl/en/Publication-details.htm?publicationId=publication-way-353934313238