

Land and water - delta under pressure

50 year friendship NL Bangladesh – continuous learning together

30 June 2022

Catharien Terwisscha van Scheltinga





- 100 year WUR celebrations: in Wageningen we had a session on 23 June on delta's, where Catharien presented about Bangladesh; while in Dhaka 30 Alumni gathered, including a tree plantation of HE Mrs Leoni Cuelenaere and Professor Dr Kamal Uddin Ahamed, Vice-Chancellor, Sher-e-Bangla Agricultural University (picture left).
- Catharien presented on the Bangladesh Delta in a session of the World Wide Alumni Day in Wageningen, organized by the Network Land & Water and the VWI/Women engineers network of Wageningen (picture right).
- DeltaCap:** approval of BDP2100 gave a boost to our work in this project! We worked on the further needs assessment, prepared jointly a training calendar (www.deltacapproject.net) and further a document on gender in delta management, and followed this up with interviews with women delta professionals.
- Together with Prof Umme Kulsum Navera of BUET, we also conducted a training session with and for Max Foundation on "Introduction to Scenario Based Longer Term Planning".
- Upon discussion with all the stakeholders, we finalized the draft National Climate Vulnerability Assessment (NCVA) together with the Ministry of Environment, Forest and Climate Change and GIZ.
- Kousik Ahmed, Technical Assistant Participate in exchange Workshop of "Lessons for resilient flood risk management from comparing the Netherlands and Bangladesh 10-18 February 2018 @ Dordrecht, Netherlands" (picture left)

PhDs in 2018 @Wageningen University

- Tapos Kumar Acharjee, Changes in water requirements of dry season rice under climate change. Quantifying recent & future changes and developing adaptation strategies in Northwest Bangladesh (picture left)
- Peerzadi Rumana Hossain, Impacts of climate change on coastal ecosystems of Bangladesh
- Mahmuda Mutahara, Turning the Tide? The role of Participation and Learning in Strengthening Tidal River Management in the Bangladesh Delta
- Debasish Kundu, Technological innovations for societal change: Arsenic mitigation technologies for safe drinking water in rural Bangladesh
- Lavlu Mozumdar, Entrepreneurship against the tide : business performance of women entrepreneurs in a constrained environment : a survey in Bangladesh
- Kizar Ahmed Sumon, Effects of insecticides on aquatic ecosystems in Bangladesh

Papers in 2018

- Adaptive delta management: a comparison between the Netherlands and Bangladesh Delta Program; Zevenbergen, Chris ; Khan, Shah Alam ; Alphen, Jos van; Terwisscha van Scheltinga, Catharien ; Veerbeek, William (2018); International Journal of River Basin Management 16 (3). - p. 1 - 7.
- Ahmed, F., E. Moors, M. S. A. Khan, J. Warner and C. T. van Scheltinga (2018b). "Tipping points in adaptation to urban flooding under climate change and urban growth: the case of the Dhaka megacity." Land Use Policy 79: 496-506.

Finally, the Bangladesh Delta Plan 2100 was approved on 4 September 2018. We'll contribute to the support to implementation project. The WaterApps project is making important progress in Khulna area. We are excited to start a new applied research project 'Joint Collaboration Programme for Bangladesh' in which we'll work together with IWM, CEGIS, and Deltares. The inception workshop will take place early in 2019. Looking forward to work together!



Season's Greetings
Best wishes for
2019!

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JOINT COOPERATION PROGRAMME



Papers in 2019

- Rethinking sediments, tidal rivers and delta livelihoods: tidal river management as a strategic innovation in Bangladesh, Chris Seljger, Dilip Kumar Datta, Wim Douven, Gerardo van Halbeema, Malik Fida Khan, Water Policy (2019) 21 (1): 108-126. <https://doi.org/10.2166/wp.2018.212>
- Shifting planting date of Boro rice as a climate change adaptation strategy to reduce water use. Tapos K Acharjee, G van Halbeema, F Ludwig, P Hellaggers, Agricultural systems, Elsevier, Vol. 168, Jan 2019, pp 131-143

Finally, during 2019 Kousik found a new job and Sonia replaced him at WUR POD.

- DeltaCap: we facilitated the plenary session on knowledge and capacity development for implementation of Bangladesh Delta Plan 2100 at the International Conference on Water and Flood Management (picture). We launched an Online Training on BDP and the BDP Knowledge Portal!
- Prof Ton Holtink visited Bangladesh related to his prestigious VICI research on sediment in deltas, strengthening collaboration with IWM, CEGIS and KU.
- Delta Forum: UIU initiated the Delta Forum as a platform to share knowledge related to BDP. WUR actively supports this, 2 WUR students helped in preparing the initial communication (website, flyer).
- WUR-PSTU OKP collaboration on Climate Smart Agriculture started this year
- FAO-WUR started, in which we contribute to (interactive) mapping of the Food Systems of Greater Dhaka
- Water as Leverage: we actively contributed to the CDR-led Khulna case
- Delta Alliance: we facilitated a very successful visit of Kim van Nieuwaal, Director of DA, to Bangladesh. We developed Bangladesh Delta Bulletin and piloted 3 issues in 2019, with success! Further we set-up an inspiring and successful Delta 2 Delta Peer Learning Exchange visit between Bangladesh and Egypt, related to information services
- The WaterApps project organized its final workshop in November
- The inception and launching workshops were held of our new applied research project 'Joint Collaboration Programme Bangladesh-the Netherlands' in which we work together with IWM, CEGIS, and Deltares - We work on making a knowledge app for BDP2100, polders of the Future, assist the meta-mood-team to take an innovative

communication and work on getting an answer for the question whether there will be enough food in 2050 and whether there will be water to produce it, taking climate change & changing food habits into account.

- We started working together with Solidarity on **food systems in deltas**
- Kazi Kabir defended his PhD 'Feeding fish or pond'
- Md Shah Nawaz Choudhury defended his PhD 'Ecological engineering with oysters for coastal resilience'

We look forward to continue working together with you in 2020 !



BDP Knowledge App (ACP BD 14)

Season's Greetings

Best wishes for 2020!

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WAGENINGEN
UNIVERSITY & RESEARCH

WUR Director Bram de Vos visits Bangladesh, 16-19 June 2019

Longer term development automatically brings the need for solutions. The Joint Cooperation Programme Bangladesh the Netherlands is supporting with applied research to support the implementation of the Bangladesh Delta Plan. IWM, CEGIS, Deltares and Wageningen University & Research signed a cooperation agreement, supported by the Embassy of the Kingdom of the Netherlands.



'In deltas, water and food play an important role and are under pressure. We are looking to find answers together'

Bram de Vos, opening speech

Besides attending the Signature Event of the JCP, Dr Bram de Vos attended a sharing meeting of Delta Forum regarding the development of an app to access information in the Bangladesh Delta Plan.

He met with Prof Shamsul Alam, Senior Secretary of the Planning Commission, leading the team on the Bangladesh Delta Plan, as well as students of WUR, currently doing internship with Prof Hamidul Huq, besides visiting the WUR Project Office in Dhaka



Further information:
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In 2020, Wageningen University and Research (WUR), worked on various activities in Bangladesh to explore the potential of nature to improve the quality of life. Just some highlights of what we contributed to...



2020 was a memorable year. The whole world had to change the way it is working, due to the covid-19 corona pandemic.



- In the Joint Cooperation Programme, we contributed to a successful first annual meeting in February, including to various sessions on delta knowledge in the international Conference on Sustainable Development, ICSD4, organized by UIU. We enjoyed meeting face to face! Quite soon after that, in March, all took up the challenge of working online. In the course of the year, we managed successfully to organize SWAP-WOFOST training, for better understanding of the water demands in agriculture, taking climate change and salinity into account. We also worked on the Polders of the Future project, and found ways together with our partners to collect further data, and further we ensured the regular supply of news through the JCP Facebook channel and with the JCP newsletters (www.jcpbd.nl). The research 'Deltas under Pressure' further developed new ways to work together with Solidaridad and Khulna University. Also an innovative way to discuss Bangladesh Food Future was found, in which based on interaction, gaps and questions were discussed.
- In the project DeltaCap, WUR organized, together with BUET, an online training for academic staff, on the use of the newly developed academic course on adaptive delta management.
- We actively contributed to the Bangladesh Delta Bulletin (deltabulletin@gmail.com)

Season's Greetings
Best wishes for 2021!



PhDs from Bangladesh at WUR that graduated in 2020

- Naznin Nahar - Co-designing integrated pest and disease management strategies in eggplant production in Bangladesh
- Most Zannatun Nahar Mukta - Understanding interactions and relationships in pest management innovation processes in Bangladesh

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Please note that as from 1 January 2021, the Wageningen project office in Dhaka will be located at CEGIS. Looking forward to our continued cooperation!

Highlights of reports and papers, published in 2020

- Social networking in a digital and mobile world: the case of environmentally-related migration in Bangladesh. Boas, I., Jun 2020, In : Journal of Ethnic and Migration Studies. 46, 7, p. 1330-1347
- Non-decisions are also decisions: power interplay between Bangladesh and India over the Brahmaputra River. S. Vij, et.al. Aug 2020, In : Water International. 45, 4, p. 254-274
- Prioritization of adaptation measures for improved agricultural water management in Northwest Bangladesh. T.K. Acharjee, et.al. Sep 2020, In : Climatic Change.
- Selection of mangrove species for shrimp based silvo-aquaculture in the coastal areas of Bangladesh. K.S. Rahman et al. Oct 2020, In : Journal of Coastal Conservation. 24, 5, 59.
- Role of information in farmers' response to weather and water related stresses in the lower Bengal Delta, Bangladesh. U. Kumar, et al. Aug 2020, In : Sustainability (Switzerland). 12, 16, 6598.
- Strategizing Bangladesh Food Futures. <https://ednet.wur.nl/532070>

<https://research.wur.nl/en/projects/deltas-under-pressure-10-35-001-001>



WAGENINGEN
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The mission of Wageningen University and Research is 'to explore the potential of nature to improve the quality of life.' Our knowledge supports governments, the trade and industry sector and civil society in facing their challenges. We achieve synergy by combining education with fundamental and applied research.

In 2021, Wageningen University and Research (WUR), worked on various activities in Bangladesh. Amongst others, we contributed to -



- **NEW OFFICE LOCATION:** In January, 2021, Wageningen University and Research Project Office Dhaka (WUR POD) shifted from being hosted at the Institute of Water Modeling (IWM) to the Centre for Environmental and Geographic Information Services (CEGIS). The new office is now in CEGIS at Gulshan-1, Dhaka. You are most welcome to visit us here!
- **DeltaCap** organized an online closing session with partners and external advisors on 31 March 2021. Collaboration between the various partners has been key in this project, as well as flexibility and an innovative approach. (<https://deltacapproject.net/>)
- In its 'Deltas under Pressure' research, WUR is developing integrated guidelines for, a.o. **agricultural transformation**. For practical support, we work side by side with Solidaridad, Khulna University, Uttaran, and others.
- **Delta Bulletin:** this quarterly newsletter contains short messages, news and announcements, with the objective to share knowledge and experience related to adaptive delta management and the implementation of the Bangladesh Delta Plan. Initiated by Delta Alliance, the Delta Bulletin Editorial group actively cooperates with JCP, Delta Forum, UDW-Planning Toolkit. For subscriptions and contributions, mail to deltabulletin@gmail.com
- The **Joint Cooperation Program Bangladesh-the Netherlands**, shortly JCP, organized and participated several webinars and meeting, related to its **applied research**. For instance, JCP participated this year in 1st GOBESHONA Global Conference, organized a double session during ICWF8 on 'Fit for purpose modelling', and a webinar on IPCC's Sixth Assessment Report. Further, research progress of **SWAP-WOFOST** modelling were shared, reflecting on the water demand for future in Bangladesh. The beta version of the new **BDP-app** is available from Google Play Store, and a training was arranged for the JCP team on Scientific Writing. For more information: www.icpbd.nl
- With support of WUR, Patuakhali Science and Technology University (PSTU) formulated its Gender Policy for the Agricultural Faculty. Shortly a new department on **Climate Smart Agriculture** will start at PSTU.
- Lotte Roosendaal of WUR came to Bangladesh to support the **Food Systems Dhaka Programme**, jointly implemented with FAO.
- Dr Uthpal Kumar successfully defended his PhD thesis on Bridging Science and Society: Tailor-made hydro climatic **information service with farmers** in Lower Bengal Delta, Bangladesh.

Season's Greetings!
Best wishes for



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Project Office Dhaka



The Dhaka Food System Project

Support for modelling, planning and improving Dhaka's food system –

Highlights output area 1 – Dynamic model

1.3 – Interactive GIS Map

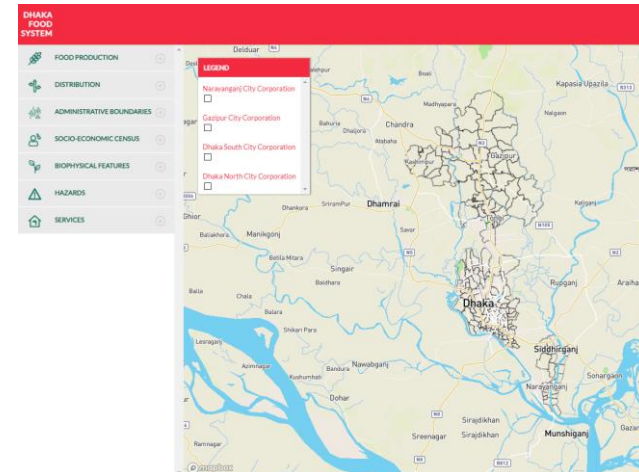
Interactive GIS (url) to visualize and analyse the food system and locations of bottlenecks, e.g. waste flows, service area wet markets and identify opportunities for improvements

Webpage with:

- Homepage (overview, objective)
- Interactive map viewer (dictionary of maps)
- Narratives - compelling stories to illustrate insights

<http://dhakafoodsystems.wenr.wur.nl/app/>

- The Dhaka Food Systems Project has 3 parts:
1. Develop interactive models for Dhaka's food system
 2. Development of a strategic food agenda for Dhaka for 2041
 3. Interventions

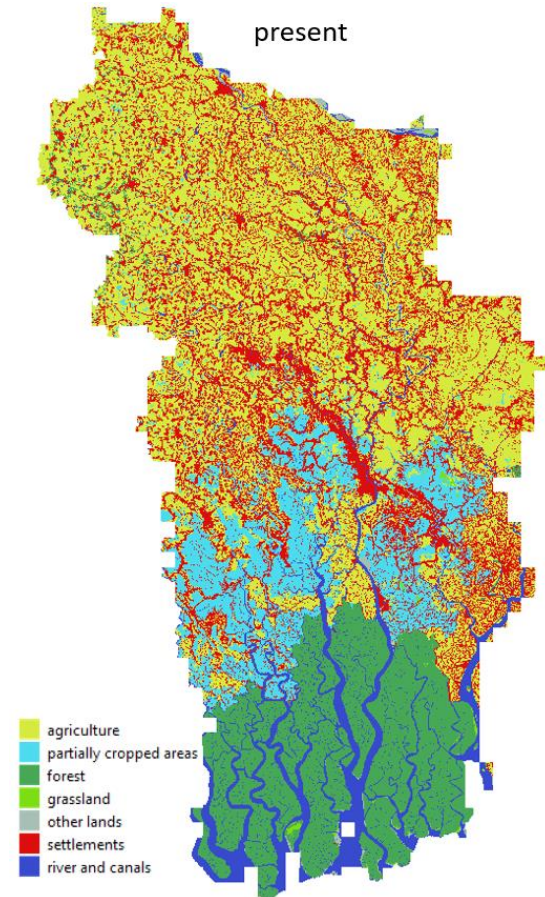


Land Use Change Knowledge (LUCK)

Land use change

Current and future

iClue model



Information for Impact

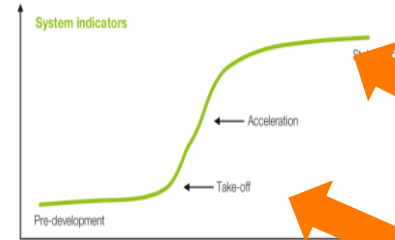
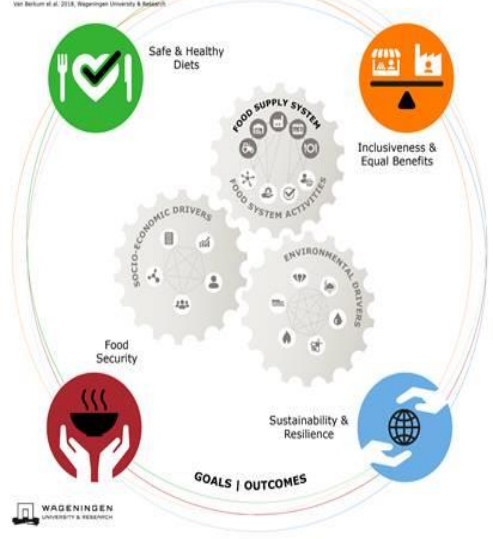
- Information on the Bangladesh Delta Plan 2100 in your pocket
- <https://play.google.com/store/apps/details?id=com.cegis.deltaplan2100>
- www.jcpbd.nl



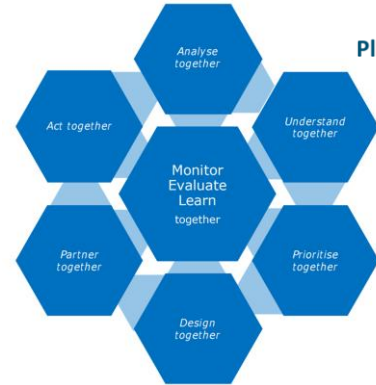
Food system transitions in deltas under pressure

Introduction

Food systems approach



What?
How?
Who?



Please scan to get the DUP Guidelines



Elements of the planning process as outlined in the DUP Guidelines

Delta under pressure

- Food system transformations in deltas under pressure. For participation in the special issue – mail to Catharien.Terwisscha@wur.nl
- More information:
<https://www.wur.nl/en/Research-Results/Research-funded-by-the-Ministry-of-LNV/Expertisegebieden/kennisonline/Deltas-under-Pressure-1.htm>



Visit of Minister Razzaque to Wageningen



Round table agribusiness, 29 Jan 2022

Embassy of Bangladesh to the Netherlands

WAGENINGEN UNIVERSITY & RESEARCH

Virtual Roundtable on
Bangladesh Agriculture: looking into the Future

25 January 2022 | 1000-1200 hrs   1500-1700 hrs

Get Registered Here



<https://bit.ly/32UrwJC>

In the past five decades, Bangladesh agriculture has made great strides. Looking into the next decade(s), the government, farmers, entrepreneurs in Bangladesh face certain challenges to tackle. Yet, there are also opportunities to tap with knowledge - technology- innovation based solutions.

This Dialogue is to understand some of the key aspects: how Bangladeshi farms, farmers, entrepreneurs may approach the next decade and even beyond.

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BDP2100 Conference

**Bangladesh Delta Plan 2100 International Conference:
'Issues and Challenges of Implementation'**

Chief Guest:
Sheikh Hasina, MP
Hon'ble Prime Minister
Government of the People's Republic of Bangladesh

General Economics Division (GED)
Bangladesh Planning Commission
and
Embassy of the Kingdom of the Netherlands in Bangladesh

Venue: Pan Pacific Sonargaon Dhaka
Date: 26 & 27 May 2022



Bangladesh Delta Plan 2100

Approved September 2018

WUR involvement

- Lead BDP Preparatory Study, 2011-2012
- BDP2100 formulation process: Climate change baseline, vision, scenario, strategy development

<https://www.youtube.com/watch?v=ufuiYymo1M8>

BDP2100 Conference



Agricultural transformation break out
 Organized by FAO and WUR
 Keynote Prof Dr Louise Fresco
 Key points: balanced systematic approach, need for collaboration & integrated knowledge, and joint action

1. Future Food Export	<ol style="list-style-type: none"> 1. Domestic market 2. Farm to table 3. Making farming attractive
2. Climate Smart and Resilient agriculture	<ol style="list-style-type: none"> 1. New production methods 2. Youth leadership 3. Systematic and balanced approach
3. Coordination and Alignment	<ol style="list-style-type: none"> 1. Identification 2. Better coordination and alignment 3. Awareness about and preparing for the future

Journey continues

Friendship means listening

Working together

Learning together

আমরা একসাথে কাজ করি

Thank you!

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