PARTNERS FOR WATER

Country Update Vietnam

July 2020

Foreword

Dear members of the Vietnam network,

We hereby present the first country update for Vietnam in 2020. In this paper, we start by introducing you to some new faces in the Vietnam Delta team. Thereafter, we take a brief look at the Vietnamese economy and update you on the status of several Partners for Water (PfW) projects, some of which, despite the current Covid-19 crisis, continue to proceed largely as planned while others have been put on hold. Finally, we would like to let you know that we are planning to hold a Vietnam Platform meeting in autumn this year (details will follow at a later stage) and look forward to 'seeing' you virtually or in person on that occasion.

Though we will not elaborate on the topic this time, developments are also happening on Vietnam's Agricultural Transformation front, which is now transitioning into an early implementation phase. Netherlands partners are playing an active role in advising the government and ensuring the first phase of the proposed Agricultural Transformation Plan is strongly embedded in Vietnam's New Rural Development Program, the next phase which runs from 2021-2025. This topic will be expanded on in a following Vietnam country update. We welcome any suggestions on topics for future editions of the Country Update, so please don't hesitate to get in touch.

Stay safe and enjoy the summer,

Simone Sweerts
Project Manager Asia
Netherlands Water Partnership

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1. Covid-19 and beyond

Despite the fact that the Vietnamese economy has been hit hard by the Covid-19 crisis, growth is still positive and expected to reach 5% this year. The first quarter of 2020 showed a substantially lower, yet still positive, 3.8% economic growth (its lowest quarterly growth figure in a decade). This has led the country to recently be hailed as one of the 11 outperformers among emerging economies[1]. Vietnam's Covid response with swift and strict measures, including an effective online and offline propaganda campaign, resulted in Vietnam recording fewer than 400 Covid-19 cases in total and 0 deaths by the end of June. In other words, the country has demonstrated that effective pandemic measures and economic growth *can* go hand in hand and need not be 'either/or'. This has given the reputation of the country's leaders a timely boost but any lasting effects will depend largely on the effectiveness of the announced stimulus package as well as on global economic and consumption recovery.

According to an economic brief written by the Netherlands Embassy in Hanoi, although Dutch businesses have not been spared and logistical issues, travelling restrictions for Dutch experts and changing consumer behaviour remain challenges, there are silver linings. New opportunities are emerging in a number of sectors such as: e-commerce, healthcare, agrifood, logistics, maritime, infrastructure and renewable energy. Furthermore, the country's rising soft power status and alternative investment destination to China is likely to be reinforced. Vietnam also just ratified the EU-Vietnam Free Trade Agreement on 8 June. This creates a good opportunity to further boost Netherlands-Vietnamese relations and the two countries' extensive bilateral agenda in areas including water, climate, agriculture, smart cities and the circular economy.

In the meantime, in the public sector, up to the end of 2021 when the current Partners for Water Programme ends, the Vietnam Delta team will continue to prepare new projects with Vietnam. In September, an online meeting between Vietnamese Deputy Prime Minister Dung or Minister Ha of MONRE and Dutch Minister Van Nieuwenhuizen of the Ministry of Infrastructure and Water Management is likely to be held on the way forward for the bilateral cooperation given the challenges of the pandemic. Another point discussion is possible Vietnamese participation in the Climate Adaptation Summit on 25 January 2021.

[1] https://www.mckinsey.com/featured-insights/asia-pacific/emerging-from-the-pandemic-vietnam-must-position-itself-for-recovery

In the private sector, the Netherlands is the largest EU country investing in Vietnam and is Vietnam's second largest EU trading partner. Against this backdrop, an increasing number of small and medium sized Dutch companies are entering the market with innovative solutions to foster a circular economy and sustainable trade, important issues on Vietnam's agenda.

The numerous challenges that bilateral cooperation brings to both partners means enough work for the Vietnam Delta team members and the Dutch and Vietnamese water sectors. Please contact Robbert Morée or any other member of the Vietnam Delta team should you see special opportunities and wish to seek the assistance of the team to further develop these.

2. Newcomers Vietnam Delta team

This year, 2020, has seen a number of changes in the Vietnam Delta team*. Lies Janssen (NWP) retired from NWP after 20 years and as a member of the Vietnam Delta team. In addition to Robbert Morée (Vietnam Delta Coordinator – Min. I&W), Laurent Umans (NL Embassy, Hanoi), and Robert Proos (RVO), the following new faces have joined the team that meets bi-monthly:

Mr Willem Schoustra:	Agricultural Counsellor Vietnam + Thailand, Netherlands Embassy Hanoi
Ms Simone Sweerts:	Project Manager Asia, Netherlands Water Partnership (NWP)

In addition to the bi-monthly meetings, a larger Vietnam Delta team meeting is held twice a year and includes the following members:

Ms Anke Verheij:	Resident Project Officer Asia/Water Supply expert, VEI (+WaterWorX)
Mr Romano Radjkoemar:	Program Manager, WaterWorX program Vietnam, VEI
Ms Birgitte de Kraker:	Strategic Advisor, Acquisition + Tenders, Waterschap de Dommel
Mr Tjeerd Dijkstra:	Program Coordinator, Blue Dragon Program Vietnam, Waterschap Vechtstromen
Mr Jan van der Molen:	Policy Strategist, Waterschap Vechtstromen

** The Vietnam Delta team comprises the members listed above. It meets regularly to support and shape the bilateral government-to-government dialogues and the funding of a portfolio of contracts awarded to Dutch companies to support the bilateral agenda.*

The Netherlands-Vietnam water cooperation is divided into four programmatic areas.

- Water quantity.
- Water quality.
- Land subsidence.
- Agricultural transformation.

Each programmatic area comprises several projects with some projects spanning more than one programme area. The projects are Netherlands-funded initiatives through development cooperation (such as WaterWorx, DRIVE and Blue Dragon) or through enabling instruments (including Partners for Water). Each project aims to contribute to knowledge development, governance and/or practical

pilots. The Vietnam Delta team is a key player in ensuring that the programmes' structure facilitates linkages between projects and in securing a coherent and integrated portfolio for the Netherlands.

In section 3, we present one of the projects, FAME, that is financed through the Partners for Water programme, one of the key implementation programmes of the NIWA (Netherlands International Water Ambition), which contributes to increasing water safety and security worldwide. The FAME aquifer recharge project falls under the 'water quantity' programme. It is a practical pilot which is working to install an infiltration tube. It has linkages with an upcoming research project that is planning to develop a water retention strategy and a governance project that improves multi-stakeholder arrangements to regulate groundwater use and reduce rates of land subsidence.

3. Project update: Freshwater Availability in the Mekong Delta (FAME)

Freshwater Availability in the Mekong Delta (FAME) was created in late 2018 and is financed by the Government of the Netherlands through the Partners for Water Programme. The multi-stakeholder project pilots shallow Aquifer Storage and Recovery (ASR) systems to increase the fresh groundwater supply at farm level. FAME also advises national partners in Vietnam on how and where to implement ASR systems in Ben Tre and Tra Vinh provinces in the Mekong Delta (Figs. 1 and 2), and is set to run until mid-2021.

This year started as another challenging one for the inhabitants of the Mekong Delta. Higher salinity levels in rivers and canals were found further inland and earlier in the dry season than in past years. This creates problems for agricultural and domestic water users in meeting their fresh water demands. A decrease in crop production was recorded by local media, and queues formed in many communities where villagers were unable to use their primary water source and had to tap groundwater sources to meet their fresh water needs. This is not a long-term sustainable solution as the groundwater resources are rapidly depleting and they are the main driver of land subsidence and groundwater salinisation. Covid-19 also brought programme related challenges as the planned workshops have been postponed until travel restrictions are lifted, and fieldwork was adjusted to adhere to Vietnamese guidelines.

Figure 1. (left) Groundwater well drilling operations, (right) farmers tending their crops in the Mekong Delta.

Initial fieldwork studied the local hydrogeological parameters of three potential field sites in Ben Tre and Tra Vinh province. A pilot site in the province of Ben Tre was subsequently selected (Figure 2). Groundwater levels were shown to have declined by between 96 and 130 cm at the three measurement locations between the end of January and May 2020. This poses potential environmental and agricultural production problems for farmers if water demand increases or precipitation during the wet season decreases.

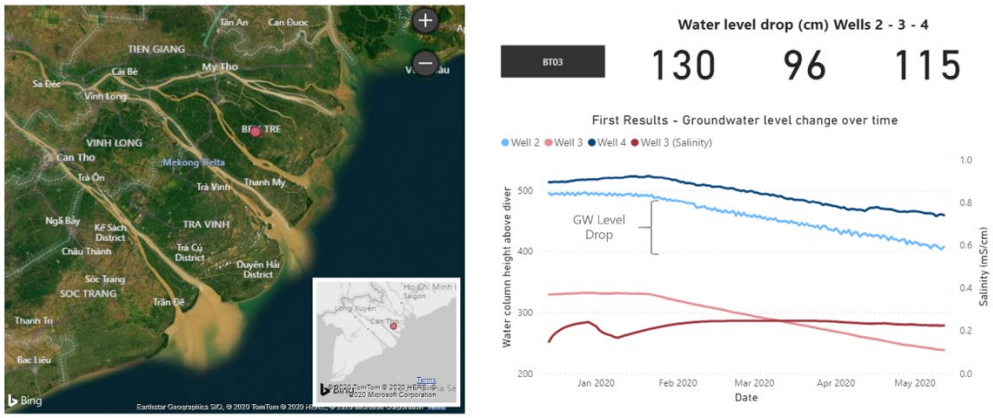

Figure 2. First measurements of water level decline at three monitoring locations during the onset of the dry season from January to May 2020 at the BT03 field site.

In the coming months, the first ASR system consisting of a series of parallel drains buried approximately 1 metre below ground surface will be installed. The system will take clean surface water at the end of the wet season and allow it infiltrate into the shallow aquifer to maintain the groundwater level further into the dry season (Figure 3). The system will be monitored and used only when the surface water source meets water quality standards. To monitor the system, data collection will continue into this upcoming dry season where the effects of the infiltrated water on the local groundwater level can be analysed against past years. Concurrently, our installation methodology will be refined and a second pilot implemented at another location in the fourth quarter of 2020.

The ASR design could be a viable, sustainable solution to maintaining consistent local freshwater availability during times of regional water shortage. If the pilot is successful, it will speed up the knowledge transfer from the Dutch water sector to local water managers, farmers and project partners in the Mekong Delta.

Local project partners: Deltares, Wageningen University & Research (WUR), Nelen & Schuurmans, Royal HaskoningDHV.

Vietnamese partners: Center of Water Management and Climate Change at the Vietnam National University – Ho Chi Min (WACC), Division for Water Resources Planning and Investigation for the South of Vietnam (DWRPIS).

In the section 4, Netherlands start-up company Sensar provides an update on its Vietnam project.

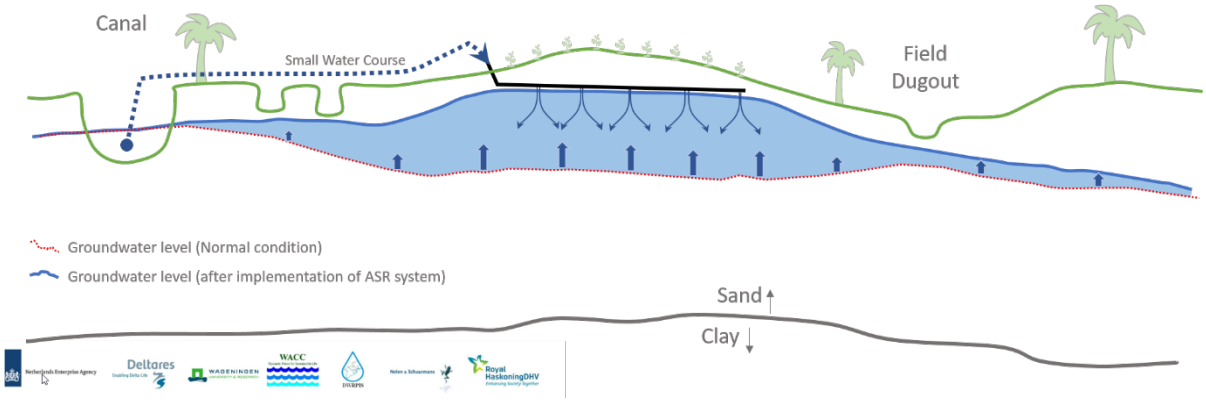

Figure 3. Conceptualisation, placement and effect of a shallow ASR system. Fresh water is pumped from the nearby surface water source via a small water course and infiltrated into a series of underground lateral drains. This will retain a higher water level at least at the start of the dry season and possibly beyond.

4. InSAR-as-a-Service

Last year, Sensar was granted a Partners for Water (PfW) subsidy by RVO to test our service-model in Vietnam. We hope that the model will enable our Vietnamese partners from the Geomatics Center (GC) and Water Management and Climate Center (WACC) to use the InSAR data for the Vietnamese situation.

As two low-lying delta countries, the Netherlands and Vietnam are long-standing partners in the field of water cooperation. The cooperation with Ho Chi Minh City has focused on flood mitigation, urban planning and climate adaptation. Earlier project results clearly showed that Land Subsidence (LS) and a suboptimal urban drainage system are important causes of more frequent flooding in parts of Ho Chi Minh City. LS also damages urban infrastructure like roads, sewage systems and bridges, and in the long-term damages hydraulic infrastructure (riverside embankments, sluices) and could even affect the newly built metro system. Emphasis is placed on making the Mekong Delta more resilient to the impacts of climate change. Recent studies by Dutch researchers show that high rates of LS will make the sinking delta even more vulnerable to flooding which will affect the livelihoods of its people. With the detrimental effects of Land Subsidence already visible on the streets and floods becoming more frequent and widespread, the authorities and infrastructure operators have to act to monitor and manage its effects. It is essential to collect field data and monitor critical infrastructure in order to take effective counter measures.

Measuring the subsidence can be done from space by employing a technique called InSAR. Sensar supplies high quality client oriented InSAR data. Our innovative approach allows the source data to be efficiently processed without struggling with complex software, data storage and computing power. Sensar has developed its own InSAR processing software and tailored products to obtain high quality, efficiency and save costs.

Our service has made InSAR data more accessible, reduced processing time and improved user-friendliness. As a trial, we have processed 60 satellite images of Ho Chi Minh City. The results show a stable city centre, but significant subsidence in the outer edges of the city with velocities of 8 cm per year. This is significantly more than sea level rise, which is estimated to be about 1-2 mm per year. Given the elevation of the area, the subsidence is likely to lead to more and heavier floods over time. Our colleagues at WACC are currently using the data to predict the future flood risks. The next steps

are to further validate this approach with another dataset over the Mekong Delta and to get in touch with regional stakeholders as soon as Covid-19 allows.

The PfW subsidy allows us to demonstrate our capabilities and service model abroad. The assistance from the Embassy is very helpful in finding new contacts and stakeholders. Stay tuned!

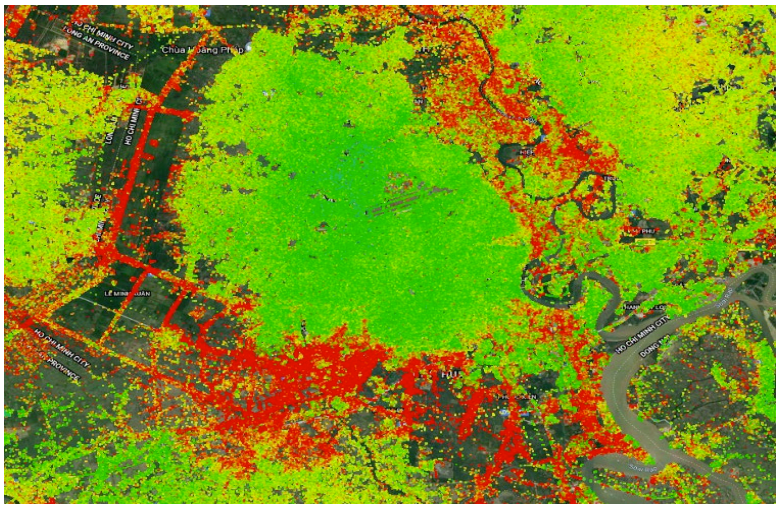

Figure 4: Overview of the observed land subsidence in Ho Chi Minh City. Green shows a stable situation, but the red parts are subsiding by more than 2 cm a year.

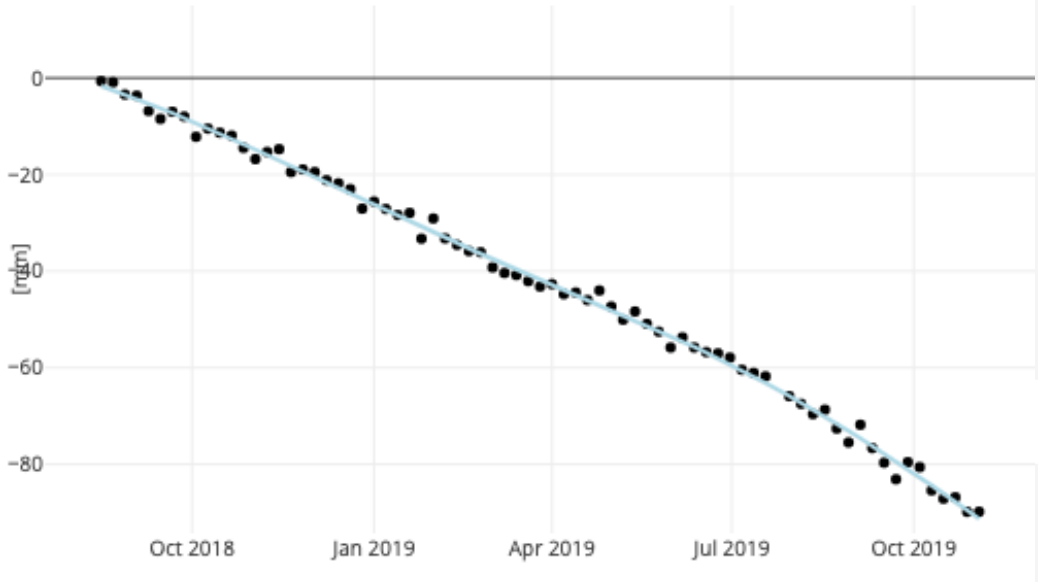

Figure 5: This location shows a strong, linear subsidence at almost 10 cm in 1.5 years.

5. Online survey EU-Vietnam Free Trade Agreement

The Vietnam Embassy Trade Office in the Netherlands (on behalf of the Ministry of Industry and Trade of Vietnam (MOIT)) has just launched an online survey on the EU-Vietnam Free Trade Agreement which will come into effect on 8 August.

Please click on this link to start the survey: https://www.research.net/r/Vietnam_EVFTA_research
The survey is multi-sectoral but includes the water and maritime sector as a strategic focus area, and as such, NWP is helping to disseminate this information.

All participants completing this 10-minute survey will receive a copy of the EVFTA research report based on the survey output and will gain access to a free of charge EVFTA-Webinar on 9 September 2020.
Additional background information on the types of organisations this survey is targeting and the purpose of the survey can be found on the first page of the survey link.

6. Events calendar

We plan to hold a Vietnam Platform Meeting in the autumn of this year. We will keep you posted once details are available.

Vietwater 2020 in Ho Chi Minh 11-13 November 2020

Singapore International Water Week 2020 has been cancelled. The next SIWW will be 20-24 **June 2021.**

The UN Climate Summit in Glasgow was scheduled for 9-20 November 2020 and will be postponed until further notice.

The Climate Adaptation Summit of the Global Commission on Adaptation has been rescheduled from 22 October 2020 to 25 January 2021 (most likely as a hybrid event).

For more information or suggestions for the next Vietnam Country Update , please contact Simone Sweerts, Project Manager Asia: +31 *70 304* 3700, s.sweerts@nwp.nl.

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The country update is published by NWP as part of the Partners for Water Programme.