



# Living Polders

## Revised work plan

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June, 2019 – May, 2021

**LIVING  
POLDERS**

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# Executive summary

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In this summary, we present the main outcomes of the *Living Polders* core team's joint effort to improve its operations fundamentally. More in particular, it contains an overview of the reallocated responsibilities and time commitments that regard (i) sub-project integration and synergies, (ii) stakeholder commitment and research uptake, and (iii) project management. We have implemented the following measures with immediate effect:

## IMPROVEMENTS REGARDING SUB-PROJECT INTEGRATION & SYNERGIES

We fundamentally revised and upgraded our strategy regarding the creation of **integrated project outputs**. As of now, the newly assigned responsibilities with regard to sub-project integration are distributed as follows:

- **Prof. Dr. Jasper Griffioen** takes full responsibility for the *Technical Guidelines* (SP1, PhD Utrecht).
- **Dr. Frank van Laerhoven** takes full responsibility for the *Governance Guidelines* (SP2, PD Utrecht).
- **Prof. Dr. M. Shah Alam Khan** takes full responsibility for SP3 (MSc projects BUET).
- **Prof. Dr. Stefan Dekker** takes full responsibility for the *Tool for inclusive decision-making*

Progress on the development of the three integrated outputs will be communicated to the UDW Steering Committee and the UDW Program Office once every three months, starting in September 2019 (i.e. 3 months after the current report).

- |                          |   |   |
|--------------------------|---|---|
| • <b>September 2019:</b> | Knowledge & Instruments on TRM critical success factors.  | based on (demand-driven) Research & Expert Workshop ( <i>Translating Research into Output</i> ).            |
| • <b>December 2019:</b>  | First co-created scenarios for TRM design based on integrated physical and governance requirements.     | based on further research & Stakeholder Workshops ( <i>co-creation of design</i> ).                         |
| • <b>March 2020:</b>     | Co-creation and evaluation of TRM potential in Khulna Region.   | based on further research, Expert Workshops, and Stakeholder Workshops ( <i>co-creation of knowledge</i> ). |
| • <b>June 2020:</b>      | Adjusted TRM design; critical factors affecting innovation & sustainability transition for TRM polders. | based on further research & Expert Workshops.   |
| • <b>September 2020:</b> | Stakeholder-committed draft Technical and Governance guidelines for TRM potential.                      | based on further research, Expert Workshop, and Stakeholder workshop ( <i>stakeholder empowerment</i> ).    |
| • <b>December 2020:</b>  | Draft rule-base for Decision Support Tool.  | based on further research & Expert Workshops.   |
| • <b>March 2021:</b>     | Adjusted and stakeholder-committed Decision Support Tool (DST).   | based on further research, Expert Workshop, and Stakeholder workshop ( <i>uptake and embedding</i> ).       |
| • <b>June 2021:</b>      | Closing workshop; transfer of guidelines and DST.   | Transferable project outputs: From Output to Outcome.   |



This schedule coincides with the scheduling of project reporting to the Steering Committee of UDW. It also follows the schedule for stakeholders' commitment strategy (see below). Details regarding the content of the trimonthly progress reports can be found, below.

## IMPROVEMENTS REGARDING STAKEHOLDER COMMITMENT & RESEARCH UPTAKE

We critically revised and improved our strategy regarding **stakeholder commitment** and consequently, **research uptake**. As of now, **responsibilities** with regard to stakeholder commitment and research uptake are assigned as follows:

- **Prof. Dr. M. Shah Alam Khan** takes full responsibility for establishing and maintaining contacts with the relevant stakeholder representatives, and for the logistics and the administration of workshop events in Bangladesh; he will be co-responsible for the content of workshop events that regard the discussion and testing of the integrated project outputs.
- **Dr. Atik Islam** is co-responsible for the logistics and the administration of workshop events in Bangladesh; he will be co-responsible for the content of workshop events that regard the discussion and testing of the integrated project outputs.
- **ATM Zakir** of the NGO **Jagroto Jubo Shongho (JJS)** is responsible for engaging with stakeholders and conducting the stakeholder workshops.
- **Prof. Dr. Jasper Griffioen** takes full responsibility for the content of workshop events that regard the co-creation of the *Technical Guidelines*.
- **Dr. Frank van Laerhoven** takes full responsibility for the content of workshop events that regard the co-design of the *Governance Guidelines*.
- **Prof. Dr. Stefan Dekker** takes full responsibility for the content of workshop events that regard the co-design of the *Tool for inclusive decision-making*.

Our strategy to stakeholder commitment gears around the organization of a number of workshops and capacity building events in the Khulna area. We have now agreed on a new **time schedule** for these events that better align with our improved process and strategies<sup>1</sup>:

- |                                  |   |
|----------------------------------|---|
| • <b>July/August, 2019</b>       | Expert <sup>2</sup> Workshop (Netherlands) with Dutch partners: Translating Research into Outputs.                          |
| • <b>September, 2019</b>         | Stakeholder <sup>3</sup> Workshop (Bangladesh): <i>Co-design of Tidal River Management (TRM) practices</i> .                |
| • <b>November/December, 2019</b> | Expert Workshop (Netherlands) with Dutch partners.  |
| • <b>February, 2020</b>          | Stakeholder Workshop (Bangladesh) with local stakeholders: <i>Co-creation of knowledge on different dimensions of TRM</i> . |
| • <b>April/May, 2020</b>         | Expert Workshop (Netherlands) with Dutch partners.  |
| • <b>June/July, 2020</b>         | Stakeholder Workshop (Bangladesh): <i>Stakeholder empowerment</i> .   |
| • <b>September/October, 2020</b> | Expert Workshop (Netherlands) with Dutch partners.  |
| • <b>November/December, 2020</b> | Stakeholder Workshop (Bangladesh): Stakeholder uptake and embedding.  |
| • <b>March/April, 2021</b>       | Expert Workshop (Netherlands) with Dutch partners.  |
| • <b>May, 2021</b>               | Stakeholder Workshop (Bangladesh): Closing Event: Transfer of Project Output: From Output to Outcome.                       |

<sup>1</sup> Details regarding the logic of how all events are interrelated and feed into one another can be derived from figure 4.

<sup>2</sup> TNO, Deltares, Royal Haskoning DHV, Carthago, and Wetterskip Fryslân.

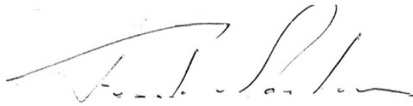
<sup>3</sup> Bangladesh Water Development Board (BWDB); (various types of) polder dwellers' organizations; Local Government Engineering Department (LGED); Other national Agencies & Authorities (Department of Agriculture Extension (DAE); Bangladesh Inland Water Transport Authority (BIWTA); Local government representatives (district, upazilla, union); Knowledge centers in Bangladesh (Institute for Water Modeling (IWM); The Center for Environmental and Geographic Information Services (CEGIS); NGOs (JJS, Ashroy, Uttaran, Tala, Shushilan, BELA).

## IMPROVEMENTS REGARDING PROJECT MANAGEMENT

Effectively immediate, we have overhauled our **project management structure** profoundly. From now on, project management **responsibilities** are allocated as follows:

- **Dr. Frank van Laerhoven** takes full responsibility for the management of (i) internal and (ii) external monitoring of project progress; (iii) communication with NWO, (iv) website maintenance, (v) financial administration, and (vi) data management.
- **Prof. Dr. Hans Middelkoop** takes full responsibility for the management of (i) project communication (with UDW community, scientific community, Institute for Water Modelling (IWM), Delta Alliance, Bangladesh Delta Plan 2100); (ii) monitoring of sub-project integration, and (iii) meetings with stakeholders and (iv) non-academic Dutch consortium partners.
- **Prof. Dr. Frank Biermann** provides professional support that regards report writing.
- Professional support on science communication, financial administration and data management is provided by **Utrecht University experts**.

All these measures are the result of multiple within-project discussion sessions – both plenary and smaller-sized meetings. By signing this document, all project partners express to be fully committed to the implementation of said measures. More details regarding the improvements can be found in the remainder of the report, below.



**Dr. Frank van Laerhoven**  
Project coordinator  
Utrecht University



**Prof. Dr. Hans Middelkoop**  
Project co-coordinator  
Utrecht University




**Prof. Dr. M. Shah Alam Khan**  
Bangladesh coordinator  
BUET



**Dr. Atik Islam**  
Khulna University



**Prof. Dr. Stefan Dekker**  
Utrecht University



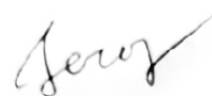
**Dr. Paul Schot**  
Utrecht University



**Prof. Dr. Jasper Griffioen**  
TNO



**Sanchayan Nath, PhD**  
Utrecht University



**Feroz Islam, MSc**  
Utrecht University



**ATM Zakir**  
Jagroto Jubo Shongho (JJS)

# LIVING POLDERS PROJECT

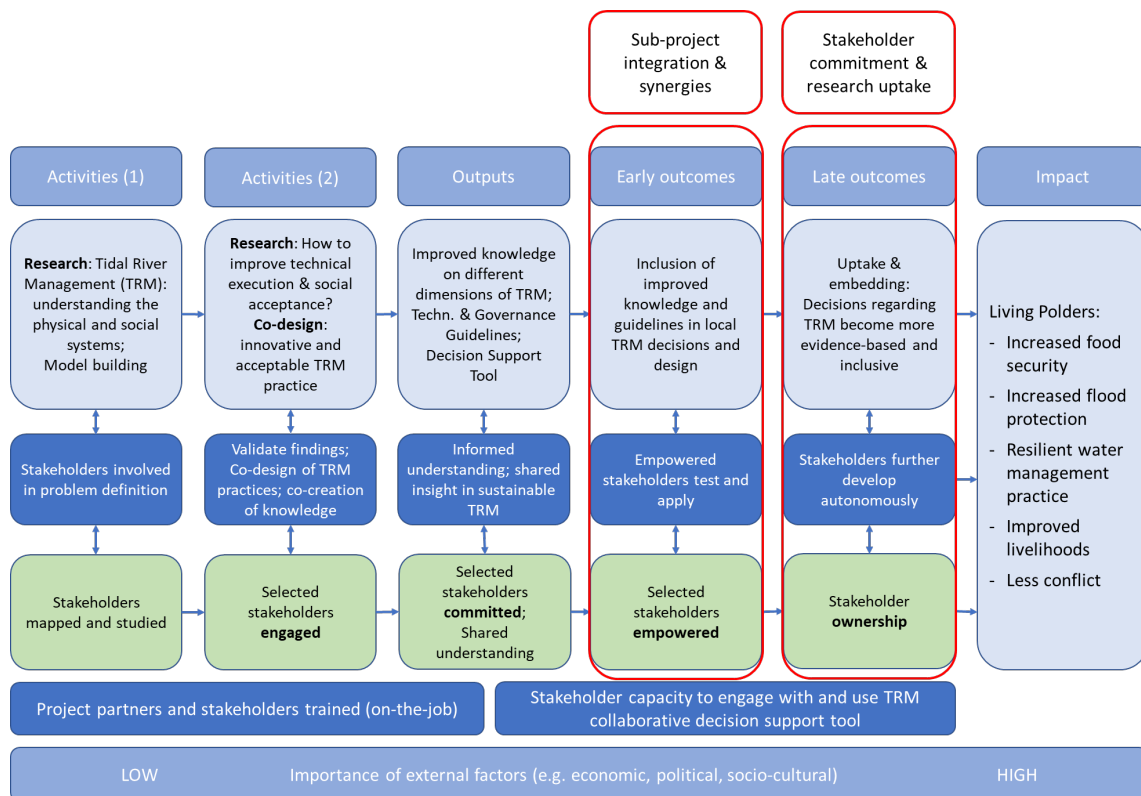
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Stakeholder Meeting 2018

## Introduction

In response to the mid-term review result and based on the input provided in this process by J.J. Kessler of AidEnvironment (The Hague, April 22, 2019), the Living Polders project team has substantially re-defined its project plan on: improving integration of project components, focused stakeholder involvement and co-creation processes, and more explicitly defining the project's impact pathway strategy. Figure 1 shows our pathway to impact, which combines impact pathway types A - more evidence-based decision-making, and C - joint development of technical and social innovations. This exercise led to the clear identification of the specifics that were implemented into a new project plan and schedule of activities for the coming two years.

**FIGURE 1: IMPROVED IMPACT PATHWAY STRATEGY FOR LIVING POLDERS**



Living Polders works towards the improvement of **(i) the technical execution and; (ii) the social acceptance of Tidal River Management (TRM)**. Inclusive decision-making regarding design and implementation of TRM will contribute significantly to solving or mitigating many of its current flaws. Hence, we aim for co-created redesign of TRM practices and the co-created knowledge on what works where, to feed into a participatory, inclusive **(iii) decision support tool** that empowers a broad range of stakeholders and enables them to use TRM for the improvement of polder livelihoods. Whereas a selected group of stakeholders is currently clearly *engaged*, we now must create genuine **stakeholder commitment**. We will accomplish this by means of a significantly intensified and improved strategy aimed at **research uptake**. The current work plan is based on the following acknowledgements:

1. The development of **integrated outputs** (i.e. technical and governance guidelines and a decision support tool) will benefit from more and better **sub-project integration**.
2. The likelihood of actual **research uptake** – i.e. stakeholders feeling and accepting ownership of project outputs – will only increase as a result of a considerably improved strategy that focuses more effectively on **stakeholder commitment**, and on the development and delivery of outputs and outcomes, based on clever and better sub-project integration.
3. The fact that so far, the project has suffered from sub-optimal performance in this regard, is indicative of the fact that an overhaul of **project management** is needed to achieve our stated goals.

In what follows, we will present how we have fundamentally changed and improved our approach to (i) sub-project integration and synergies, (ii) stakeholder commitment & research uptake and (iii) project management. In spite of the rather linear, point-by-point presentation of all these aspects, they are to be seen as related and interdependent.



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# Sub-project integration & synergies

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We here present the improvements that regards **sub-project integration**. It reflects the outcome of a series of joint exercises with all project partners, who are committed to what we here present. We expect this part of the improvement plan to lead to significantly stronger cooperation and interaction, and subsequently, to the timely delivery of highly relevant integrated project outputs.

In this section we consider the **within-project collaboration and coordination** that is necessary to create integrated outputs. Our plan for improvement regarding the inclusion of stakeholders in the co-design and co-creation of integrated outputs is presented in a separate subsequent section.

## PROJECT OUTPUT INTEGRATION

The *outputs* that are mentioned in figure 1 (above), include the following:

- *Technical guidelines* on Tidal River Management (TRM) potential, design and operation schemes.
- *Governance guidelines* on satisfying the institutional boundary conditions for the equitable governance of TRM.
- *Tool for supporting inclusive decision-making* on TRM initiatives and design.

Table 1 presents an improved specification of the character and extent of the way in which these *outputs* are related and integrated (i.e. the cells where rows and columns cross contain a description of the rationale for integration between two outputs)

**TABLE 1: IMPROVED SUB-PROJECT INTEGRATION PLAN**

Integrated outputs	Technical guidelines	Governance guidelines
Governance guidelines	Both at the river and at the polder level, the effects (both positive and negative) of TRM will spatially vary depending on the how it is designed and executed. Hence, stakeholders will be affected (either positively or negatively) differently.  Governance guidelines are based on an understanding of societal and personal costs and benefits (broadly defined) associated with the multiple ways in which	



	TRM can be designed. Technical guidelines must be considerate of how to implement scenarios that align with stakeholder preferences and governance practices.	
Tool for inclusive decision-making	A tool that facilitates the inclusion of a broad range of stakeholders <sup>4</sup> in decisions regarding TRM is based on an understanding of the variation in <i>physical implications</i> of TRM, depending how one decides to implement it.	A tool that facilitates the inclusion of a broad range of stakeholders in decisions regarding TRM is based on an understanding of the variation in <i>social, and subsequently governance implications</i> of TRM, depending how one decides to implement it.

## STRATEGY FOR ACHIEVING SUB-PROJECT INTEGRATION

In order to better manage the production of the **3 integrated outputs** mentioned above (table 1), we first proceeded to critically advance the specification of the type and nature of **collaborations** between the **3 sub-projects** that are necessary to create the integrated outputs. Table 2 reflects how we jointly proceeded to create more clarity with regard to the specifics of these collaborations between sub-projects (i.e. the cells where rows and columns cross contain a description of the rationale for collaboration between two sub-projects)

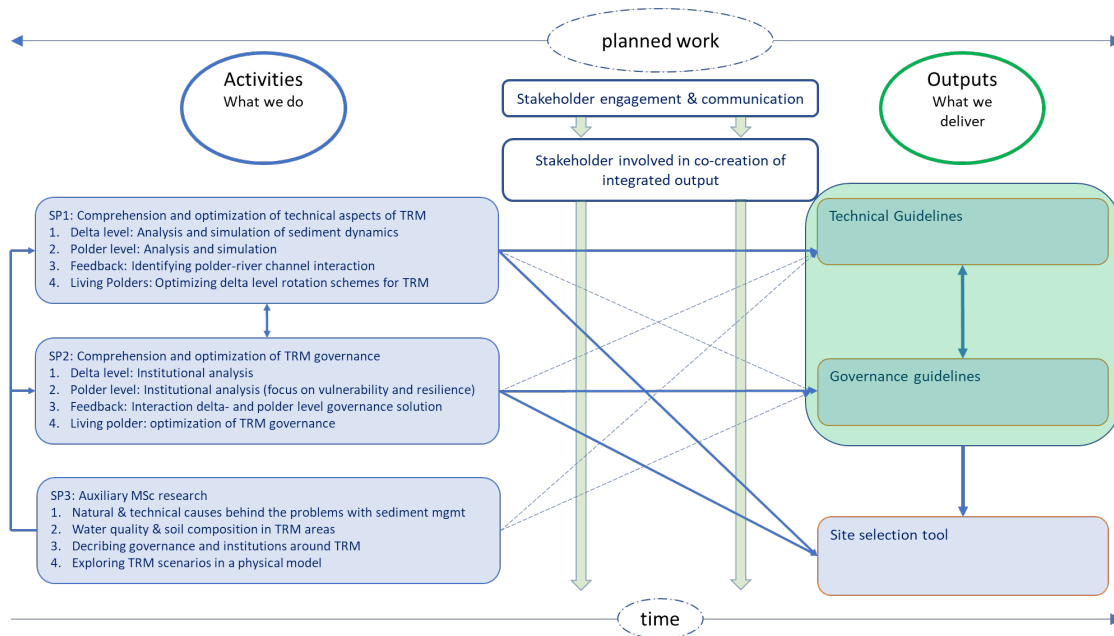
**TABLE 2:** COLLABORATION BETWEEN SUB-PROJECT REGARDING INTEGRATED OUTPUT

Integrated outputs	SP1: Comprehension and optimization of technical aspects of TRM	SP2: Comprehension and optimization of TRM governance
SP2: Comprehension and optimization of TRM governance	<p>For the purpose of development <i>technical guidelines</i> SP2 collaborates with SP1 on governance 'scenarios' (in order to develop scenarios of technical TRM design that realistically align with real and possible governance arrangements).</p> <p>For the purpose of developing <i>governance guidelines</i> SP1 collaborates with SP2 on scenarios of TRM design (to work on governance scenarios that realistically align with physical realities and technical possibilities).</p>	
SP3: Auxiliary MSc research	SP3 complements SP1 by means of (i) analyses that regard water quality, soil composition and soil management, and (ii) sedimentation process and sediment management options.	SP3 complements SP2 by means of providing descriptions of governance and institutions that regard TRM.

<sup>4</sup> Stakeholders are those actors or organizations that (to varying extents, either positively or negatively) affect or are affected by the *problem* (i.e. inundation by high tides, salinity intrusion, cyclonic storms and associated tidal surges) and/or the *solution* (i.e. tidal river management).

From our Theory of Change (ToC) it can also be derived how all **3 sub-projects** contribute to the co-creation our **3 integrated outputs** are linked with a variety of stakeholders. Figure 2 zooms in on the part of our ToC that regards the relation between (research) **activities** and **outputs**.

**FIGURE 2: FROM ACTIVITIES TO OUTPUTS**



Besides stakeholders and researchers, experts play an important role in the creation of our three integrated outputs, as well. Figure 4 (below) shows how representatives from TNO, Deltares, Royal Haskoning DHV, Carthago, and Wetterskip Fryslân with highly relevant skills and experience, help us translating research into outputs. In five consecutive *expert workshops* in the Netherlands they will support us in checking and preparing the materials to be discussed during the stakeholder workshop events in Bangladesh, that follows. The *expert workshops* also serve the purpose of providing researchers with further input for ongoing courses of action.



## ROLES AND RESPONSIBILITIES

Table 3 shows how the main responsibilities with regard to the **supervision** of research, the output-specific **collaboration** between sub-projects, the **coordination** of data and information delivery and the **creation** of the integrated outputs are allocated. The allocation of roles and responsibilities is mutually agreed upon – all those named in the table below are committed to their respective roles and responsibilities.

**TABLE 3: ROLES AND RESPONSIBILITIES REGARDING INTEGRATED OUTPUTS**

Integrated outputs	Main responsibility (name, roles)
Technical guidelines	<b>Prof. Dr. Jasper Griffioen</b> <b>Supervision:</b> Promotor F. Islam (SP1). Lead <b>collaboration</b> with SP2, 33 (see table 2). Lead <b>coordination</b> regarding delivery of data and information of SP2, 3 (see table 3). Lead <b>creation</b> and delivery of <i>Technical Guidelines</i> .
Governance guidelines	<b>Dr. Frank van Laerhoven</b> <b>Supervision:</b> S. Nath (SP2). Lead <b>collaboration</b> with SPs 1 and 3 (see table 2). Lead <b>coordination</b> regarding delivery of data and information of SPs1, 3 (see table 3). Lead <b>creation</b> and delivery of <i>Governance Guidelines</i> .
Tool for inclusive decision-making	<b>Prof. Dr. Stefan Dekker</b> <b>Supervision:</b> Promotor F. Islam (SP1). Lead <b>collaboration</b> between SPs1-3 (see table 2). Lead <b>coordination</b> for integration data and information of SP1-3 (see table 3). Lead <b>creation</b> and delivery of Tool for inclusive decision-making.

## MILESTONES & DELIVERABLES

We are committed to update the Steering Committee on our progress, every 3 months. Our first progress report will be due 3 months after the submission of the current report, hence, it will be shared by mid-September 2019. Progress regarding sub-project integration and synergies will be measured by means of the following timeline and deliverables until the end of the project in May 2021 (see table 4).

**TABLE 4: TIMELINE: MILESTONES & DELIVERABLES**

Reporting date	Scheduled progress and output	External input
<b>Sep. 2019</b>	<ul style="list-style-type: none"> <li>SP1: calibrated numerical hydro-morphological model for TRM physical process in polders; exploration of TRM opportunities across the delta based on physical conditions;</li> <li>SP2: Checklist of factors affecting polder governance in TRM vs non-TRM areas;</li> <li>SP3: Checklist of factors affecting water and soil quality natural and technical causes behind the problems with sediment management.</li> </ul>	<ul style="list-style-type: none"> <li>NL Expert Workshop (<i>Translating Research into Output</i>) (Jul/Aug, 2019)</li> </ul>
<b>Dec. 2019</b>	<ul style="list-style-type: none"> <li>SP1: stakeholder evaluated numerical model for TRM process for selected <i>beels</i> in Khulna region;</li> </ul>	<ul style="list-style-type: none"> <li>BD Stakeholder Workshops</li> </ul>

	<ul style="list-style-type: none"> <li>• SP2: Stakeholder evaluated checklist of factors affecting polder governance in TRM vs non-TRM areas;</li> <li>• SP3: Stakeholder evaluated checklist of factors affecting water and soil quality natural and technical causes behind the problems with sediment management;</li> <li>• <b>Stakeholder workshop report (1) - First co-created scenarios for TRM design based on integrated physical and governance requirements.</b></li> </ul>	<b>(co-creation of design)</b> (Sep, 2019)
<b>Mar. 2020</b>	<ul style="list-style-type: none"> <li>• SP1: Adjusted and stakeholder committed scenarios for TRM design for case areas in Khulna region, model tests and exploration for robustness;</li> <li>• SP2: Stakeholder inputs on checklist of factors affecting innovation and sustainability transition in polders associated with TRM;</li> <li>• SP3: Description of governance and institutions around TRM discussed and validated by stakeholders;</li> <li>• <b>Stakeholder workshop report (2) – Co-creation and evaluation of TRM potential in Khulna Region.</b></li> </ul>	<ul style="list-style-type: none"> <li>• <i>NL Expert Workshops</i> (Nov/Dec, 2019);</li> <li>• <i>BD Stakeholder Workshops</i> <b>(co-creation of knowledge)</b> (Feb, 2020)</li> </ul>
<b>Jun. 2020</b>	<ul style="list-style-type: none"> <li>• SP1: Further adjusted TRM design for case areas in Khulna region, model tests and exploration for robustness;</li> <li>• SP2: Data-derived checklist of factors affecting innovation/ sustainability transition in polders associated with TRM;</li> <li>• SP3: TRM scenarios in a physical model.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>NL Expert Workshops</i> (Apr/May, 2020)</li> </ul>
<b>Sep. 2020</b>	<ul style="list-style-type: none"> <li>• SP1: Draft analysis of hydrological and sediment characteristics across Bangladesh delta – evaluation of physical potential for TRM, discussed and assessed with stakeholders;</li> <li>• SP2: Stakeholder evaluated checklist of factors affecting innovation and sustainability transition in polders associated with TRM;</li> <li>• SP3: TRM scenarios in a physical model discussed and validated by stakeholders;</li> <li>• <b>Stakeholder workshop report (3) - Adjusted and stakeholder committed draft Technical and Governance guidelines for TRM potential based on physical and institutional boundary conditions.</b></li> </ul>	<ul style="list-style-type: none"> <li>• <i>BD Stakeholder workshop</i> <b>(stakeholder empowerment)</b> (Jun/Jul, 2020)</li> </ul>
<b>Dec. 2020</b>	<ul style="list-style-type: none"> <li>• Draft rule-base for Decision Support Tool.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>NL Expert Workshops</i> (Sep/Oct, 2020)</li> </ul>
<b>Mar. 2021</b>	<ul style="list-style-type: none"> <li>• <b>Stakeholder workshop report (4) - Adjusted and stakeholder committed Decision Support Tool.</b></li> </ul>	<ul style="list-style-type: none"> <li>• <i>BD Stakeholder workshop</i> <b>(uptake and embedding)</b> (Nov/Dec, 2020)</li> </ul>
<b>Jun. 2021</b>	<ul style="list-style-type: none"> <li>• Final versions completed and handed over to stakeholders – improvements based on final stakeholder inputs included.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>NL Expert Workshop</i> (Mar/Apr, 2020);</li> <li>• <i>BD Stakeholder workshop</i> <b>(closing event)</b> (May, 2020)</li> </ul>



The project team fundamentally revised its strategy concerning **stakeholder commitment** and consequently, **research uptake**.

What does *Living Polders* work towards to, what changes does it aim for? As can be appreciated from figure 1 (above), we consider the following as our ultimate **late outcome**: *Decisions regarding TRM become more evidence-based and inclusive*. Our approach assumes that when relevant stakeholders become aware of and start using the **integrated project outputs** mentioned above, the **impact** will be that the millions of people living and working in polders in SW Bangladesh will experience increased food security and flood protection, engage in more resilient water management practices, have less conflicts, and ultimately, will improve their livelihoods significantly.

From our Theory of Change (ToC) it can be derived how all **integrated outputs** are linked with a variety of **stakeholders**. Figure 3 zooms in on the part of our ToC that regards the relation between outputs and outcomes.

The diagram illustrates the flow from planned work to intended results and finally to outcomes. It is structured as follows:

- Outputs: What we deliver** (Left side, green circle):
  - Technical Guidelines
  - Governance guidelines
  - Decision support tool
- planned work** (Top left, dashed oval):
  - Stakeholder engagement & communication
  - Stakeholder involved in co-creation of integrated output
- Intended results** (Top right, dashed oval):
  - Polder dwellers (different types of farmers, WMOs, WMAs, sluice gate managers, etc.)
  - Bangladesh Water Development Board (BWDB)
  - Local Government Engineering Department (LGED)
  - Other national Agencies & Authorities (DAE, PWD, BIWTA)
  - Local governments (district, upazilla, union)
  - Knowledge centers in Bangladesh (IWM, CEGIS)
  - NGOs
- Outcomes: Awareness and use of what we deliver** (Right side, orange circle):
  - Awareness and use of what we deliver

A vertical dashed line separates the planned work from the intended results. A horizontal arrow at the bottom indicates the progression over **time**.

The core project team proceeded to determine in much more details which stakeholders need to be engaged, commit themselves, and ultimately take on ownership of the integrated outputs, why (table 5).

**TABLE 5: STAKEHOLDER COMMITMENT: WHO & WHY THEY?**

Stakeholders	Who?	Why they?		
		Technical guidelines	Governance guidelines	Decision support tool
Polder dwellers	Small, medium and marginal Farmers; Fishers; Boatmen; Small businesses; Fish <i>gher</i> cultivators; Wage laborers; Van pullers; Water Management Associations; Gate operators	These stakeholders include major livelihood groups closely dependent on polder governance. Any improvement in technical knowledge or governance will improve their quality of living. Large farmers employ people to cultivate their land and act more as businessmen. Individually owned small <i>ghers</i> are more dependent on good governance, but large <i>ghers</i> act as businesses. In one way or other the guidelines and DST will benefit all.		
Bangladesh Water Development Board (BWDB)	Executive Engineers, Satkhira and Jashore	Their primary interest is development projects related to polders. Some of these projects are directly related to TRM operations, some are indirect such as excavation of peripheral rivers and canals.		
Local Government Engineering Department (LGED)	Executive Engineers, Satkhira and Jashore	Their primary interests is development and maintenance of small-scale water management infrastructure in polder areas. LGED works closely with the local government and local communities for their socio-economic development.		
Other national Agencies & Authorities	DAE <sup>5</sup> – Officials in regional offices and field officers in polder areas.	DAE works at the field level to improve agricultural production and prepare farmers against disasters, drought, insect attacks, etc..		
Local governments (district, upazilla, union)	UP and Upazilla Chairmen in the polder areas	They are the first levels of public representatives and are directly accountable to the local people. They have interests to improve the quality of life in the polders and improved polder governance and water management.		
Knowledge centers in Bangladesh	IWM <sup>6</sup> ; CEGIS <sup>7</sup> ; BUET <sup>8</sup> ; KU <sup>9</sup> ; KUET <sup>10</sup>	These knowledge institutions have research and development interests in polder areas and have shown keen interests to be involved in the process.  Government trusts such as IWM and CEGIS are also involved in the implementation of government projects.		
NGOs	Uttaran, Shushilon, JJS	These NGOs work very closely with the marginalized and disadvantaged people in the polder areas for the improvement of the quality of life.		

<sup>5</sup> Department of Agricultural Extension

<sup>6</sup> Institute of Water Modelling

<sup>7</sup> Center for Environmental and Geographic Information Services

<sup>8</sup> Bangladesh University of Engineering and Technology

<sup>9</sup> Khulna University

<sup>10</sup> Khulna University of Engineering and Technology

## ROLES AND RESPONSIBILITIES

We have proceeded to increase clarity regarding the allocation of roles and responsibilities concerning the implementation of our strategy aimed stakeholder commitment & research uptake (table 6).

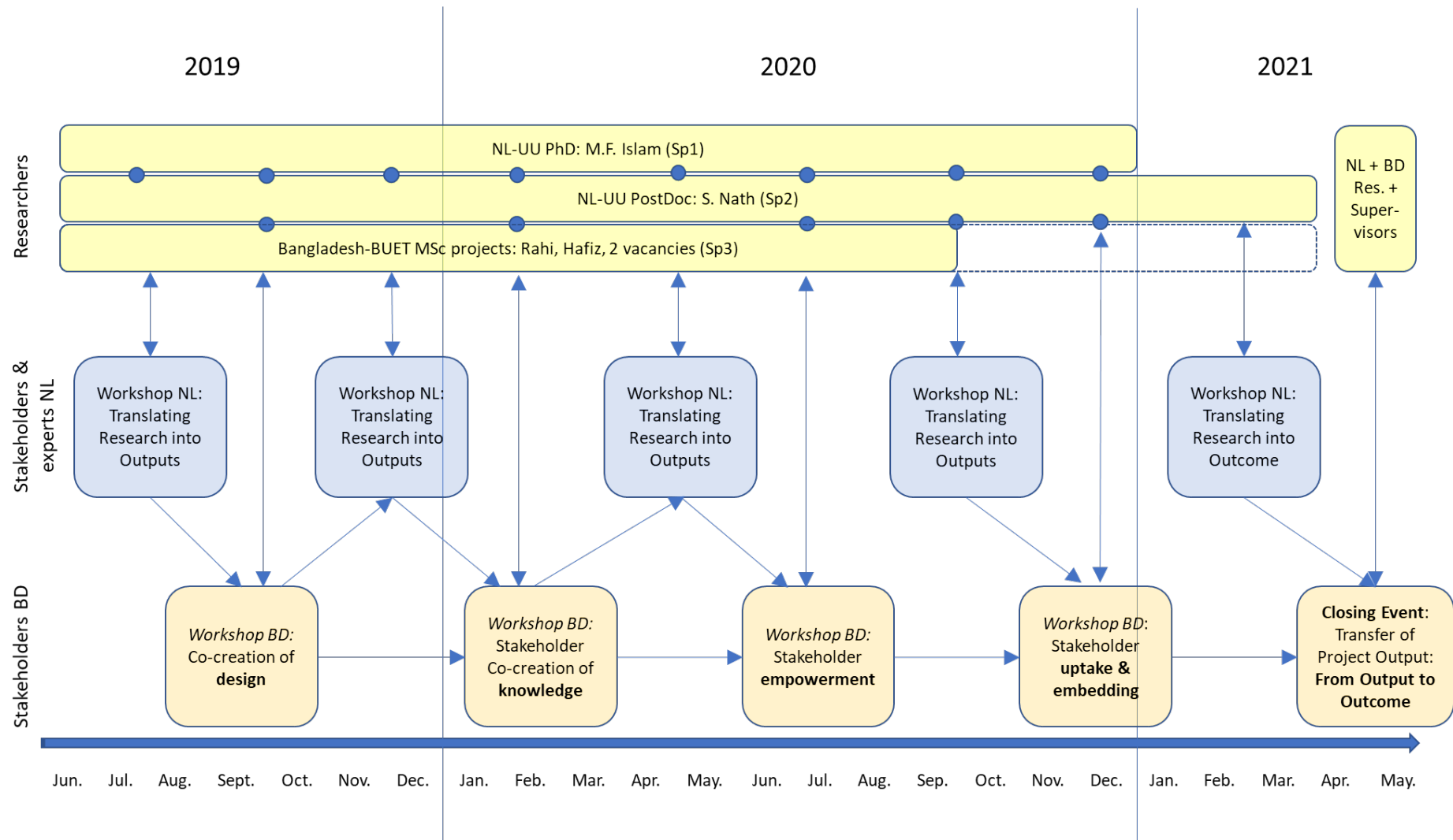
**TABLE 6: ROLES AND RESPONSIBILITIES REGARDING STAKEHOLDER COMMITMENT**

Name	Roles & Responsibilities
<b>Prof. Dr. M. Shah Alam Khan</b>	<p>Final responsibility</p> <ul style="list-style-type: none"> <li>Establishing, maintaining, and extend contacts with the relevant stakeholder representatives.</li> <li>Logistics and administration of workshop events.</li> </ul> <p>Co-responsibility</p> <ul style="list-style-type: none"> <li>Content of workshop events that regard the discussion and testing of the integrated project outputs.</li> </ul>
<b>Dr. Atik Islam</b>	<p>Co-responsibility</p> <ul style="list-style-type: none"> <li>Logistics and administration of workshop events.</li> <li>Content of workshop events that regard the discussion and testing of the integrated project outputs.</li> </ul>
<b>ATM Zakir Hossain (JJS)</b>	<p>Final responsibility</p> <ul style="list-style-type: none"> <li>Conducting the workshop events.</li> </ul>
<b>Prof. Dr. Jasper Griffioen</b>	<p>Final responsibility</p> <ul style="list-style-type: none"> <li>Content of workshop events that regard the discussion and testing of the Technical Guidelines.</li> </ul>
<b>Dr. Frank van Laerhoven</b>	<p>Final responsibility</p> <ul style="list-style-type: none"> <li>Content of workshop events that regard the discussion and testing of the <i>Governance Guidelines</i>.</li> </ul>
<b>Prof. Dr. Stefan Dekker</b>	<p>Final responsibility</p> <ul style="list-style-type: none"> <li>Content of workshop events that regard the discussion and testing of the <i>Tool for inclusive decision-making</i>.</li> </ul>

## MILESTONES & DELIVERABLES

Above, we have mentioned the role of stakeholder engagement in guaranteeing that our research activities are ultimately demand driven. We have also explained how their role in the co-creation of integrated outputs will increase the likelihood of stakeholder commitment to said outputs, which in turn will increase the likelihood of then taking on ownership. Figure 4 provides an overview of the timing and the role of a series of stakeholder workshop events in the co-design of the integrated outputs, and the creation of **stakeholder commitment** and ultimately, **research uptake**.

**FIGURE 4: TIME LINE: THE PROCESS FROM OUPUT TO OUTCOME**







# Project management

In agreement with the observation that so far, project management has not functioned optimally, and in follow up to the request from the Steering Committee to significantly revise the allocation of management tasks and responsibilities, *Living Polders* has appointed a co-coordinator: Hans Middelkoop has taken over a significant part of Frank van Laerhoven's tasks and responsibilities. Frank Biermann will provide professional support to improve the quality of reporting. Professional support with regard to science communication and financial administration will be provided by Utrecht University experts. Table 8 provides the details of how as of now the project is run.

**TABLE 7: REALLOCATION OF PROJECT MANAGEMENT TASKS AND RESPONSIBILITIES**

	Dr. Frank van Laerhoven	Prof. Dr. Hans Middelkoop	Professional support
<b>Monitoring project progress (internal)</b>			
Meetings (staff) (monthly)	Issue agendas and minutes; manage and store meeting outcomes in YODA.		
Meetings (PhD students) (monthly)	Monitor meetings (self-organized by SP researchers); collect minutes and store them in YODA.		
Meetings (all project partners) (every 3 months)	Issue agendas and minutes; manage and store meeting outcomes in YODA.		
<b>Monitoring project progress (external)</b>			

NWO-UDW: annual reports	Organize and lead report writing.		Professional support on report writing (close reading, editing advice) is provided by Prof. Dr. F. Biermann.
NWO-UDW: Final review			
NWO-UDW: monitoring reports (every 3 months)			
NWO-UDW: ISAAC	Collect and upload project output.		
Project communication			
NWO-UDW: day-to-day communication	Timely response to requests from NWO-UDW.		Professional support on science communication using social media, website and other means, is provided GEO Communication & Marketing (T. de Kievith).
Contact and communication with other UDW projects		Initiate and maintain contact with the UDW community (e.g. share project outcomes, request inputs, look for win-wins, etc.).	
Contact and communication with global scientific community		Initiate and maintain contact with the global community (e.g. share project outcomes, request input, etc.).	
Contact with Bangladesh Delta Plan 2100		Initiate, maintain and extend contacts with BDP2100.	
Contact with Institute of Water Modelling (IMW)		Follow up MoU with IMW on data sharing.	
Contact with Delta Alliance		maintain and extend contact with Delta Alliance.	
Contact with Dutch Non-academic partners		Maintain and extend contacts with Deltares, TNO, DHVRH, Carthago, and Wetterskip Friesland.	
Website development & maintenance	Collect, manage and upload content for WordPress website.		
Financial administration			
Transaction controls	(Bi)monthly meetings with financial controller at Utrecht University to keep track of income and expenses.		Profession support on financial administration is provided by UU Financial Controller (A. Boudarra).
Annual transfers to consortium partners	Organize allocation of annual budgets to consortium partners.		
Input to annual & final review reports	Collect and organize budget information for annual & final review reports.		

Monitor co-finance obligations	Monitor co-financers' contributions.		
<b>Data collection, storage and management</b>			
YourData (YODA) management	Collect, store and manage all project output in YODA (e.g. publications (scientific, professional, popular), guidelines, data, etc.).		Professional support on data management is provided by GEO-ICT (V. Brunst).
<b>Sub-project integration</b>			
Monitor progress regarding integrated outputs		Close monitoring progress on integrated outcomes with those responsible (see table 4) (once per month, minimally).	
<b>Stakeholder commitment</b>			
Stakeholder meetings		Close monitoring and coordination of logistics and content of stakeholder events.	
Meetings with Dutch consortium partners		Close monitoring and coordination of logistics and content of the inputs from Deltares, TNO, Wetterskip Friesland, DHVRH, Carthago.	

Frank van Laerhoven will double his time investment in Living Polders from 0.1 to 0.2 FTE. On average, he will spend 0.1 FTE on project management tasks, while 0.1 FTE is spent on remaining project related issues, i.e. his responsibility concerning the guidelines for TRM governance (see section 2, above), and regarding stakeholder commitment (see section 3, above).

On average, Hans Middelkoop will spend 0.05 FTE on project management tasks, while 0.05 FTE is spent on remaining project related issues, i.e. his involvement in the supervision of SP1.

Frank Biermann will spend an average of 4 hours on the close reading and editing of the ten external progress reports that will be due before the end of the project (i.e. 40 hours in total).





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## Conclusion

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We are confident that thanks to the changes described in this report and that regard activities, responsibilities, timelines and deliverables we can achieve the intended project goals. We thank the reviewers, the Steering Committee, and the UDW program office for their support in clearly identifying the project's weak points, and for giving us the opportunity to address these. The entire project team is committed to bringing *Living Polders* to a good end and is looking forward to continuing working on what we all think is an exciting and important project.