



Welang River Basin Flood Management and Master Plan

Final Report-Appendix IV Stakeholder engagement

Netherlands Enterprise Agency-Partners for Water
Water Resource Department of East Java Provincial Government

10 December 2021

STAKEHOLDER ENGAGEMENT AND INCLUSIVE DEVELOPMENT

The Welang River Basin Flood Management and Master Plan project is developed in close cooperation between Water Resource Department of the East Java Provincial Government and the Netherlands Ministry of Infrastructure and Water Management. The project is implemented under the Partners for Water Program, a program managed by the Netherlands Enterprise Agency (RVO), part of the Netherlands Ministry of Economic Affairs and Climate.

The Welang project supports the water management department of East Java Province in developing management strategies for both the entire watershed and for urgent issues. The project is subdivided in five tasks, three of them leading to tangible deliverables: a baseline study, an Integrated River Basin Management Plan (IRBMP) and implementation plans for two high-priority problems. The two remaining tasks focus on interactive community involvement and training and capacity building.

This report is part of Task D, Stakeholder Engagement and Inclusive Development, and presents the stakeholder engagement process and activities of the Welang project and is prepared under the coordination of The Water Agency with contributions from Wetlands International.

Main Deliverable	Sub-deliverable	Status
A Road Map that ensures inclusive policy development including stakeholder involvement and engagement, communication etc. during this project and after.	A presentation in a functional manner of how non-government stakeholders can contribute to solving issues.	This road map is interpreted as a practical planning tool for stakeholder engagement.
	Communication planning for stakeholders based on quadrant on A2.	See above.
The Road Map will include the sub-deliverables mentioned in the next column.	Methodology for stakeholder engagement platform (workshops, forum group discussions, interview) as a part of the larger road map.	See above.
	An eco-systems services-based mapping and description of potential approaches and solutions to address priority issues.	The stakeholders have been mapped and the results are included in the Baseline Study.
The Road Map will be updated mid-term.	Two actionable proposals to address priority issues by non-government stakeholder involvement.	The road map has been updated after the selection of the two priority projects.

1 Introduction

The development of Welang River *Integrated River Basin Management Plan* is underpinned by a process through which river basin stakeholders - institutions, companies, organisations and people – are engaged with its creation and execution. As it is a process, it is not a project task that is completed as the outcome of a specified number of activities: stakeholders already have relationships with the river and with each other and those relationships will keep developing after this project.

In that sense, the discrete timeframe during which the IRBMP is being developed, is a phase in this ongoing process and therefore we talk about a stakeholder engagement “roadmap” rather than a “plan” as the stakeholder engagement work we do intervenes into an existing process that we aim to enhance and strengthen for the future.

In this report, we describe our objectives for stakeholder engagement (Chapter 2), the stakeholder engagement roadmap, its activities, and main findings (Chapters 3) and conclusion with recommendations (Chapter 4).

2 Stakeholder Engagement Objectives

The main aim of stakeholder engagement process is to increase participation and contribution of both governmental and non-government stakeholders in solving the issues. The project has set the following objectives for stakeholder engagement:

1. Build capacity with DPU-SDA to design and execute a stakeholder engagement strategy. This includes training of DPU-SDA staff, involving DPU-SDA staff in practical stakeholder engagement activities and sharing of applicable methodologies and tools.
2. Initiate a process of stakeholder engagement for Welang River that can be used by DPU-SDA to continue engagement of stakeholders as intervention projects are being developed in coming years.
3. Promote inclusivity as part stakeholder engagement activities, aiming for “all voices” to contribute to the creation of the IRBMP, including those stakeholder groups that may be under-represented, marginalised or vulnerable.

3 Stakeholder Engagement Roadmap

The Stakeholder Engagement Roadmap (SER) describes the interconnected activities during this project aimed at realising the stated objectives. In Figure 3.1, a schematic overview of the main roadmap activities is presented and how these align with the main phases of the Welang Master Plan project.

It should be noted that from the project perspective, the staff of DPU-SDA are considered internal stakeholders and all other stakeholder holders (institutions, companies, communities, etc) are considered external stakeholders. The result of the activities under the roadmap can also be seen through the development and process of other tasks.



WELANG MASTER PLAN



STAKEHOLDER ENGAGEMENT ROADMAP

A. EJP CAPACITY BUILDING

A.1 Stakeholder
Engagement Planning

A.2 Stakeholder
Engagement Training

A.3 Stakeholder Engagement - Field Work

B. STAKEHOLDER ENGAGEMENT

B.1 Stakeholder Identification & Mapping

B.2 Stakeholder Consultation

C. INCLUSIVE DEVELOPMENT

C.1 Youth Engagement

C.2 Community
Consultation Training

C.3 Consultation Vulnerable
and Marginalised Groups

Figure 3.1 Schematic overview of the main roadmap activities

Activity	Description	Objective	Target Group	Connected Activities	Tools
A. EJP Capacity Building					
A.1 Stakeholder Engagement Planning	Meeting with DPU-SDA staff to discuss the overall stakeholder engagement plan, explain the process of stakeholder identification and mapping and agree on activities.	Set the stage with DPU-SDA, training on stakeholder mapping.	DPU-SDA staff (Task Force)	B.1 Stakeholder Identification and Mapping C.2 Community Consultation Training	- Stakeholder Engagement Process - Stakeholder Mapping Process
A.2 Stakeholder Engagement Training	Formal 4-week training as part of the <i>River Basin Management Academy (RBMA)</i> on key stakeholder engagement concepts, approaches and tools – including practical assignments and guest lectures from Indonesian and international experts.	Training on key theoretical concepts and application of these in practice.	DPU-SDA staff	All	- River Basin Management Academy online courses
A.3 Stakeholder Engagement Field Work	DPU-SDA staff joining selected stakeholder engagement field activities focused on river users, such as communities and businesses.	EJP staff gaining practical stakeholder engagement experience.	DPU-SDA staff (Task Force)	B.2 Stakeholder Consultation C.3 Consultation Vulnerable and Marginalised Groups	- Meeting with TKPSDA - Workshops
B. Stakeholder Engagement					
B.1 Stakeholder Identification and Mapping	All activities related to identifying, learning, and analysing about stakeholders related to Welang River.	Develop a comprehensive stakeholder mapping and prioritisation.	DPU-SDA staff, Welang Consortium	All	- Desk research - Internal consultation with DPU - Feld visits - Interviews - Kumu mapping tool
B.2 Stakeholder Consultation	All activities aimed at learning from stakeholders about their interests related to Welang River.	1. Understanding social economy profile in the intervention areas. 2. Assess potential project opportunities and impacts on vulnerable stakeholders and mitigation option. 3. Build a good communication between the provincial government and local community.	Community, Local NGOs, relevant government agencies including planning agency, forestry, environmental, agriculture, disaster management agencies, and TKPSDA members for Welang River Basin.	A.3 Stakeholder Engagement - Field Work B.1 Stakeholder Identification and Mapping C.3 Consultation Vulnerable and Marginalised Groups	- In-depth interview - FGD - Workshop

C. Inclusive Development					
C.1 Youth Development	Organisation of the Indonesia Healthy Rivers Challenge 2020, a competition for young local talents to develop their own original ideas for the sustainable development of Welang River.	1. Engage participants with the bilateral collaboration (MoU Water) and educating them about the importance of sustainable river management. 2. Generate innovative ideas and solutions for the Welang River that can provide inspiration and input for the Master Plan.	University students and young professionals from across Indonesia.	B.1 Stakeholder Identification and Mapping	- Competition - Capacity-building program - Field visits
C.2 Community Consultation Training	Training module as part of the <i>River Basin Management Academy (RMBA)</i> on community engagement, including guest lectures with best practices from Indonesia and abroad.	Train the DPU-SDA staff to plan and execute stakeholder engagement, identify potential conflicts, and practice conflict resolution strategies	DPU-SDA staff (Task Force)	B.1 Stakeholder Identification and Mapping	- Online courses - In-depth interviews - Field visits - Field surveys - Forum group discussions
C.3 Consultation vulnerable and marginalised groups	Consultation with representatives of vulnerable and marginalised groups in the Welang River basin.	Assess potential project opportunities and impacts on vulnerable stakeholders and mitigation option	Location visited in priority #1: Sukorejo, Tambakrejo, Sidogiri (Pesantren) Village's location visited in priority #2: Watuagung, Karangrejo, Glagah sari, Sukorejo (Lemahbang and Sukorejo Village), Sengon Agung, Pager. Addition village in the upstream: Dayurejo, Kecamatan Prigen For priority area: Area hilir: Semare dan Kraton Area tengah: Desa Dhompo Area hulu: Ngembal, Tuttur, Cowekillage's	A.3 Stakeholder Engagement - Field Work B.1 Stakeholder Identification and Mapping B.2 Stakeholder Consultation	In-depth interviews

In the following section, the Roadmap activities are described in more detail. The numbering of the sections refers to the Roadmap (see image and reference table above).

A. EJP Capacity Strengthening

Capacity building and strengthening aims to better involve and equip the DPU-SDA staff, especially the Welang Task Force (formed in December 2020 to assist the Consortium) on the activities under Welang Master Plan.

There are three activities under the internal capacity building:

A.1 Stakeholder Engagement Planning

Through the youth engagement activity (Indonesia Healthy Rivers Challenge 2020), the Consortium is benefited with the preliminary identification of the stakeholders in East Java Province. Together with DPU-SDA, who knows first-hand about these institutions, their roles and functions, and the local context around Welang River, we plan the most effective ways to engage with stakeholders, evaluate, consult, and do a follow-up process. During this process, we noticed the support and commitment of DPU-SDA in providing local contacts and context, is key to open the door of communication with other government agencies and to help building the relationship.

A.2 Stakeholder Engagement Training

As part of the knowledge transfer and learning by doing, a training program within Task E is developed to provide a picture of what stakeholder are, why we engage with them, and how to properly execute the engagement. During the training program in Task E, the participants were asked to plan a stakeholder engagement in priority intervention areas: determining who to be engaged and involved, how, when, and determine the purpose of the engagement. A total of 4 lectures were conducted on stakeholder engagement (mapping, analysis, strategy, and practise), for more please refer to ANNEX 1.

Table 3.1 Stakeholder engagement toolbox

Matrix		Approach	Techniques
Level of Influence	High	Collaborate Dialogue Consult	Workshop, Focus Group, Partnership, Steering Committee, Advisory Board, Joint Research, Joint Campaigns (e.g., Awareness, Education), Participatory Implementation, etc.
	Low	Message Advocate	Survey, Questionnaire, Report, Town Hall Meeting, Mass Email or Newsletter, Social Media Outreach, Conference, etc.
		Monitor	Marketing Campaign, Social Media Tracking, Online/Offline Monitoring and Measuring, Market Intelligence/Research, etc.
Level of Interest			

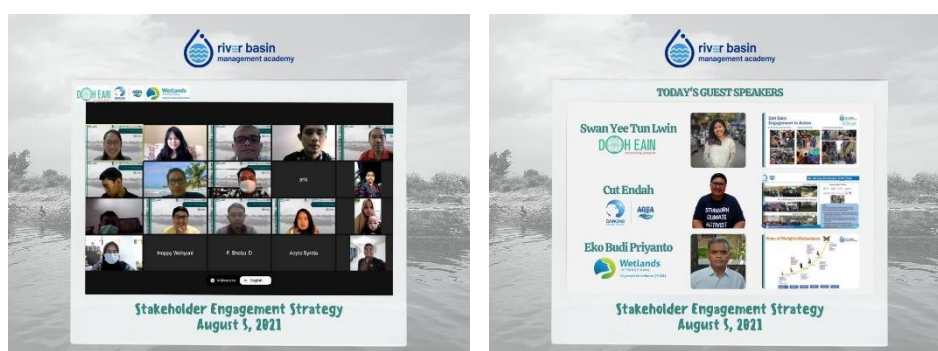


Figure 3.2 Stakeholder engagement lectures and training

A.3 Stakeholder Engagement - Field Work

Following the activity on A.2, the DPU-SDA staff, especially the Task Force is encouraged to join the numerous field visits and in-depth stakeholder engagement under activity B.2 during the second half of the Master Plan. This field work will train the Task Force to observe, experience, and execute inclusive stakeholder engagement together with the Consortium or by themselves.

B. Stakeholder Engagement

Stakeholder engagement process aims to build a collective action and mutual decision making between stakeholders to gain ownership of each stakeholder in project implementation, and to support other tasks, especially of Task B and Task C. The project managed to conduct several activities elaborated below.

B.1 Stakeholder Identification and Mapping

Stakeholder identification has been started from the beginning of project implementation and become the part of understanding existing condition in Welang River. The first inception meeting and introduction of the Welang Master Plan was held in Pasuruan and Surabaya at the beginning of December 2020. These meetings enabled the Consortium team to map out the strategic government agencies within the Welang River administrative areas: Kabupaten Malang, Kabupaten Pasuruan, and Kota Pasuruan.

Based on these meetings, the three administrative areas stated their support for the Master Plan. DPU-SDA also made a serious commitment by involving their young staff and established a Task Force to assist the Consortium with the day-to-day activity in executing the Master Plan.



Figure 3.3 Inception meetings in Pasuruan and Surabaya, December 2020

The project managed to identify and divided in to 2 types of stakeholders; socio-economic and institutional stakeholder, as elaborated in report Task A, Chapter 3.3 and 4.2. Using Kumu as the visualisation tool, we mapped out all institutional and socio-economic stakeholders we came across during the Masterplan. The Kumu map is available for access on this link: <https://tinyurl.com/WelangMasterplanStakeholder>.

Following the Masterplan progress, the list keeps growing and we have been in touch with 88 stakeholders, a mix of governments in the provincial level and kabupaten/kota levels, private companies, NGOs/organisations, academia, and most importantly, the local people along and around the Welang River itself (for full list, please refer to ANNEX 2).

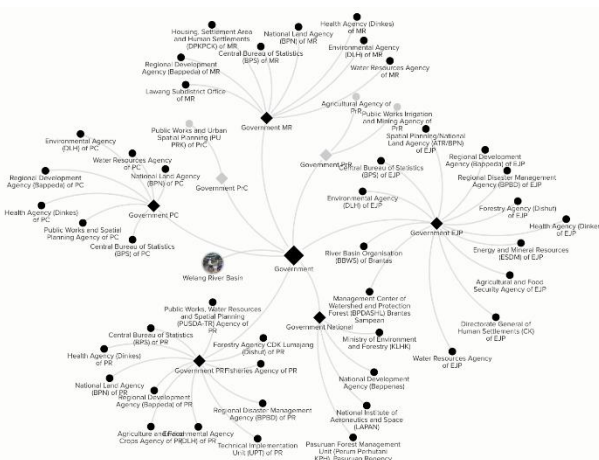


Figure 3.4 Institutional stakeholders

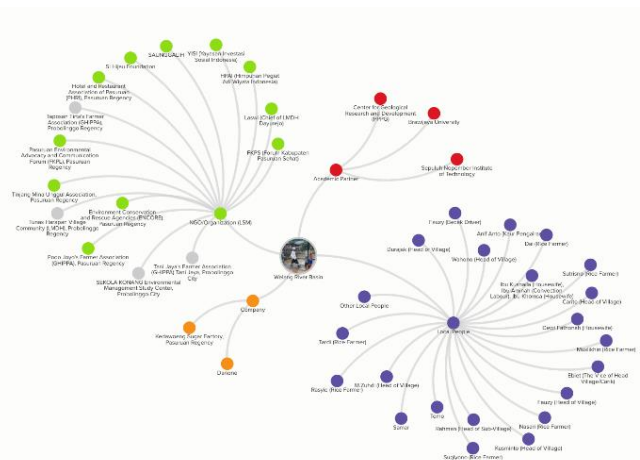


Figure 3.5 Socio-economic stakeholders

The institutional stakeholders are mapped into influence vs. interest matrix as below. This matrix is then used to determine the best stakeholder engagement method.

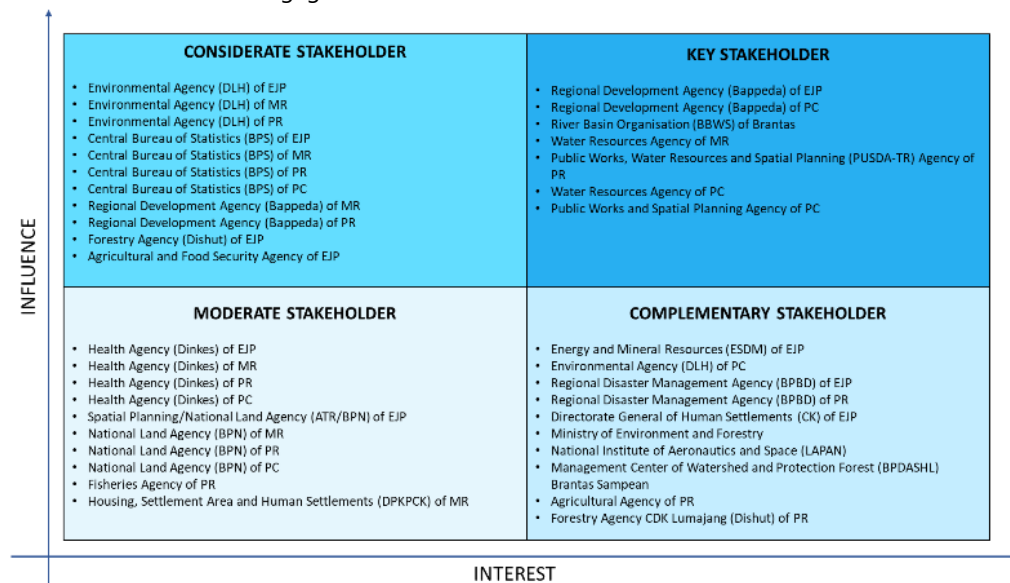


Figure 3.6 The stakeholder perception mapping

TKPSDA stakeholder identification and mapping to support Task B

TKPSDA members (for more elaboration, please refer to report Task A, Chapter 4.2) are categorised as institutional stakeholders, but included as the members are also private company and NGO/Organization (LSM); this makes the TKPSDA as a powerful tool and platform for Integrated River Basin Management Plan's discussion (for the process of IRBMP, please refer to report Task B).

TKPSDA members work in river basin for both Welang Rejoso, but under the IRBMP within the Master Plan, we are focussing on TKPSDA members that are located or tasked for Welang river basin only.

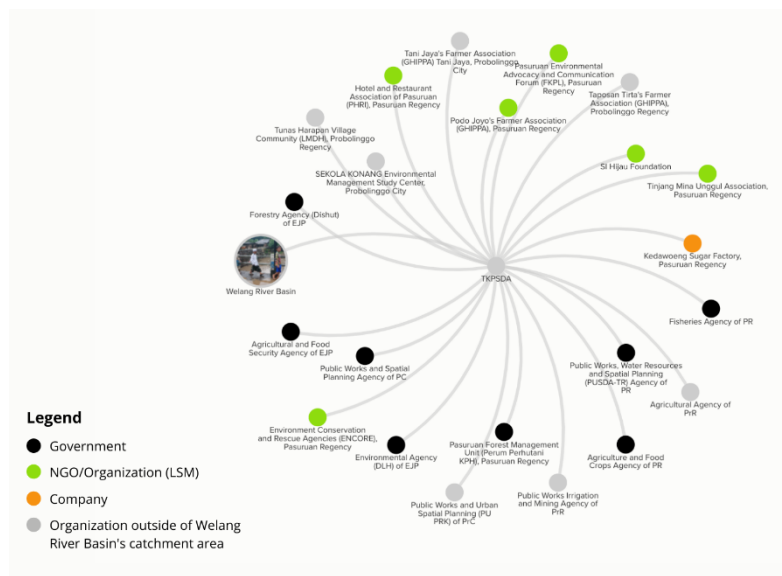


Figure 3.7 TKPSA members (2018-2023)

Ecosystem service-based stakeholder identification and mapping to support Task C

In Task D, the project further mapped the influence and interest of both institutional and socioeconomic stakeholder. Ecosystem based stakeholder mapping is used to analyse the socio-economic stakeholder that mostly from non-governmental sectors such as community, corporation, and non-governmental organisation (please refer to ANNEX 3).

Based on ecosystem-based mapping, it shows that community and corporation in mid and downstream areas have high dependency to the river. However, they have limited influence to ensure the normal function river, particularly for the community who lives in downstream areas.

No	River Function/Role	Upstream	Mid stream	DownStream	Interest	Mid stream community , down stream community (Low influence, high interest)--> Inform completely, Monitor closely	
1	Tourism						
2	Irrigation						
3	Drink water						
4	Daily needs (washing, bath)						
5	Transportation						
6	flood prevention						
7	Sediment pool						
8	micro hydro /electricity						
9	Ponds/Aquaculture						
10	floating net/ aquaculture					Influence	

Figure 3.8 Ecosystem based stakeholder mapping and interest-influence stakeholder mapping

B.2 Stakeholder Consultation

Based on the stakeholder mapping activity and parallel with the Baseline Study (Task A), we developed communication plan focusing to consult stakeholders on the two priority intervention areas.

Development of communication plan and methods

Communication plan developed as the reference in stakeholder engagement implementation. The method of engagement can be in the form of consultation, participation, collaboration and empowerment; depend on type of stakeholder, and phase of project. For institutional stakeholder, the project uses different method of communication including interview, FGD, and workshop (see ANNEX 4), both directly (live) or virtually (online).



Figure 3.9 institutional stakeholder engagement

For TKPSDA members, there were two meetings formally and several informal consultations to date. The selected manner of engagement was done in workshop and FGD, with the aim to inform and generate input on the developed IRBMP. For socioeconomic stakeholder, the project uses observation and in-depth interview with selected stakeholder representative to dig more information in the field. Probing questions are being used to elaborate the perspective of the community. Please see ANNEX 5 for stakeholder engagement timeline/schedule.

In-depth stakeholder engagement activity

As the phase of project only covered the planning phase, the engagement activities limited to stakeholder consultation. Consultation was conducted for three project components, including understanding risk, understanding institutional framework, and assessment for the flood management measures. For institutional stakeholder total 17 engagement activities (interview, FGD and workshop) have been conducted (please refer to ANNEX 6 for full engagement activities and timeline). Aside of what already explain in Task A, several highlights obtained from institutional stakeholders are:

1. The importance to further explore the essential role of Welang river, main productive sector.
2. Several existing programs for further alignment including agroforestry demo plot, field school (sekolah lapang), destana (desa tangguh bencana), and river conservation movement including millennial farmers, maskali (masyarakat sayang kali), adus kali, waste bank program.

3. Several new proposed programs including conservation village (combine agroforestry with other water and land conservation measures perennial and fruits plants, bamboo, retaining dam, infiltration well, retention/ water reservoir) and other flood control measures (long storage, retention basin and retention pond).

For socio-economic stakeholder, total four field visits have been conducted with approximately 29 people interviewed from 13 villages: 1 upstream, 8 midstream, 4 downstream. Several villages were also visited for observation purposes, those villages are: Sidogiri, Ngembal, Cowek, and Tukur. Please refer to ANNEX 7 for field visit reports and ANNEX 8 for the interviewed local people). Several highlights from the interviews are:

1. Community confirmed on initial hypotheses on land conversion along the watershed, including conversion of forest to non-forest activities. They confirm that landslide and drought risks are increased.
2. Community confirmed that most of community engaged in agricultural sector, but agricultural income is very low mainly in the mid and downstream area who get impacted by flood and toll road development, lack of agricultural innovation.
3. Regarding flood control measures several inputs are including:
 - a. River widening in the northern part of proposed location
 - b. For dredging need to consider the PGN pipes
 - c. Compensation needed
 - d. Sediment for public infrastructure
 - e. Regreening/fruit plants activities
 - f. Road access
 - g. Water reservoir/retention
 - h. Waste management
 - i. Lowering conversion rate: capacity strengthening, demo plot, conservation village, alternative sustainable livelihood
 - j. Increasing community participation in the process of planning and implementation.

Incorporating feedback (actionable proposal and multi-criteria analysis)

The feedback was incorporated into the priority measure designing process. A multi-criteria analysis, including the findings from stakeholder consultation process being considered in the selection of priority measures. In addition, two actionable proposals are formulated based on consultation with the community, firstly related to regreening activities and secondly related to building movement on waste management. Please refer to ANNEX 9 for the concept note.

Reporting back/final consultation

The final consultation conducted on closing workshop.

C. Inclusive Development

To realise inclusivity in the Welang Master Plan, a series of inclusive development was conducted to involve youth, DPU-SDA staff, vulnerable and marginalised groups. Further elaboration on these activities are mentioned below.

C.1 Youth Development

The Indonesia Healthy Rivers Challenge 2020 was organised as the first activity under the proposed MoU Water in East Java Province. This program aimed to engage 30 university students and young professionals (half of the participants were local to East Java Province.) to contribute their original ideas in solving the flooding issues in the Welang River. The program resulted in five mini out-of-the-box master plans with the concept of integrated river basin management that could also serve as inspirations for the Consortium.



Figure 3.10 Indonesia Healthy Rivers Challenge 2020

C.2 Community Consultation Training

River Basin Management Academy (RBMA) is a tailor-made training program with participants from DPU-SDA and its UPTs (technical implementation units under DPU-SDA). For stakeholder engagement, a set of trainings consists of basic knowledge of stakeholder engagement, the toolbox on different kind of engagement, and discussion round with experts and practitioners from private sector and NGOs were held to exchange knowledge, learn the dynamics of stakeholders, and plan a community consultation activity.

Ideally, a field work is encouraged to be executed also by the DPU-SDA staff, especially the Task Force, in order to understand and comprehend more on the complex issues when engaging with stakeholders, aligning interests, dealing with conflicts, and selecting the method of engagement. This, however, did not happen due to the constraints of time availability of the Task Force, as well with Covid-19 travel and meeting restrictions.

C.3 Consultation Vulnerable and Marginalised Groups

Consultation to vulnerable and marginalised group conducted to further assessed the perspectives of vulnerable and marginalised group including urban poor, agricultural workers, women, elderly, and disabled people.



Figure 3.11 Consultation with vulnerable and marginalised groups

The project managed to conduct to interview with 12 marginalised people mainly in impacted areas (downstream and midstream). Several highlights obtained from the interview areas are:

1. In downstream and midstream areas, marginalised people mostly work as agricultural workers, factory labour, and street vendors. Most of agricultural worker also loss their job when the farm being flooded. Paddy field now reduce their cultivation period from 3 times a year to 1-2 times a year, depending on location. Some of them looking for shell to earn additional income.
2. Elevating building/houses become the easiest way to deal with regular flood, however, most of marginalised groups could not be able to do this. This inability trigger to more complicated problem such as rapid spread of diseases among the children and elderly (skin disease, diarrhoea). Women also get more burden related to lack of clean water access and poor sanitation facilities post flood events. Some road access also blocked made a bigger challenge to most vulnerable people (pregnant women, elderly, and disabled people) to be rescued.
3. Community has no option except to keep live in this area due to lack of resource, and their dependency on existing livelihood. Massive relocation will require high amount of resource and a follow up activity for capacity strengthening and creating alternative livelihood.

4 Conclusion and Recommendations for DPU-SDA

It needs to be noted that Master Plan refers to the DAS Welang flood master plan, while IRBMP relates to Pola-Rencana PSDA. Through our observation, activities, and involvement in this Master Plan, we elaborate and advise on these points as opportunities for DPU-SDA in realising the Master Plan through stakeholder engagement:

1. DPU-SDA has a good, supportive relationship with other agencies within the province, kabupaten, and kota level, especially on technical aspects. Close coordination with BAPPEDA and Dinas Tata Ruang / spatial agency (province, kabupaten, and kota) needs to be continued to identify existing programs and integrate them with the Master Plan.
2. There was a lack of active participation of stakeholders invited in the workshops, primarily due to their limited authority for the decision-making process in representing their organisation. Several stakeholders also sent a different person to each workshop, without any proper information handover among themselves. In addition, the involvement of the central government (PUPR, Kemendagri) is still limited. These factors then hinder the process of concluding the workshop results and support certain actions. It is important to note the involvement of these stakeholders is crucial, but more is their active participation in discussions.
3. Government hierarchy in Indonesia is still relatively top-down; therefore, BAPPEDA has a strategic role for taking the Master Plan further, as they are the agency that could coordinate and align the programs and planning within other agencies. Another good coordination is also noticed when there is mutual urgency to start a dialogue; identifying and driving this urgent agenda is how DPU-SDA can further bring Welang Master Plan into the discussion table by aligning interests with other agencies.
4. In relationships with the local communities, NGOs, people living next to the river and areas of conflict, communication can still be improved from both sides. It is important to include and involve local communities through more site visits and dialogue with them to minimise conflict on existing (on observation, there is a clash between the local community and the contractor hired by DPU-SDA) and future works along the river by DPU-SDA. Records of interactions, especially with local people, should be shared within the institution to better equip other DPU-SDA staff on the interests and characters of the stakeholders. This will then translate into a better or already tested method of engagement.
5. As the organisational changes within DPU-SDA (staff being promoted, reassigned, left for education purposes, etc.) is quite fast, it is important and can be beneficial to have several people, such as those within the Task Force, that can continue the knowledge transfer and guide the newly assigned staff to continue with the follow-up projects. However, during the span of the project, the Task Force active participation is still limited (primarily are due to time limitations, Covid and working shifts, language barrier, interests, other responsibilities in their respective department). More bottom-up opportunities need to be offered so that the young staff can voluntarily be involved in the project.
6. The interaction of private sectors throughout the Master Plan is not explored, as water projects are usually deemed government work in Indonesia. Reflecting on the Baseline Report and causes of flooding, more private sectors could and should be involved in upstream interventions. DPU-SDA can also collaborate with private sectors to develop field control measures that align with developing a potential sustainable, productive sector along the watershed.
7. A deeper and more inclusive stakeholder engagement should be developed and promoted to prevent conflict and rejection on the ground. Positive, constructive dialogue to meet the demand/interest of all involved stakeholders in the middle can be a win-win solution accepted by all; this can promote a good synergy and collaboration with the local community.
8. Forum DAS, TKPSDA, and TKPRD consist of members from all elements (mix of government and non-governmental stakeholders), which can be a powerful forum to promote the Integrated River Basin Management Plan (IRBMP) and secure the commitment to realise the needed interventions. Because of its authority and following the regulation, BAPPEDA is appointed as the head of TKPSDA. However, TKPSDA Welang-Rejoso has not yet realised their power and influence in recognising IRBMP; they cannot conduct IRBMP dialogue precisely as a unit. A capacity building by exchanging practices and knowledge from Dutch institutions (Dutch waterboards) on IRBMP might strengthen TKSPDA and its position in the coming years.
9. Dialogue with TKPSDA had started since the middle of the project; they are well-informed, supportive, positive, and have received the Welang IRBMP as part of the Welang-Rejoso IRBMP and will merge Rejoso IRBMP with Welang's later. DPU-SDA needs to keep the momentum and interest of TKPSDA members to start a dialogue next year and make the interventions approved and supported by TKPSDA.
10. Stakeholder engagement is a continuous process, but the progress might be limited to the Master Plan duration. DPU-SDA staff, especially those in the Task Force, through a series of training and involvement in the project, have been equipped to continue the process and to collaborate with more strategic partners in realising the interventions.

ANNEX 1

List of lectures on stakeholder engagement

Date	Topic	File name	Format
21 July 2021	Stakeholder Engagement	(21072021) Lecture 1 - Stakeholder Engagement	PowerPoint Presentation (PPTX)
29 July 2021	Stakeholder Mapping and Analysis	(29072021) Lecture 2 - Stakeholder Mapping and Analysis	PowerPoint Presentation (PPTX)
5 August 2021	Stakeholder Engagement Strategy	(05082021) Lecture 3 - Stakeholder Engagement Strategy	PowerPoint Presentation (PPTX)
12 August 2021	Planning & Implementing Stakeholder Engagement in Practice	(12082021) Lecture 4 - Planning & Implementing Stakeholder Engagement in Practice	PowerPoint Presentation (PPTX)

ANNEX 2

List of engaged stakeholders

Level	Institution	Notes
Academic Partner	Sepuluh Nopember Institute of Technology	
Academic Partner	Center for Geological Research and Development (PPPG)	
Academic Partner	Brawijaya University	
Company	Kedawoeng Sugar Factory, Pasuruan Regency	Member of TKPSDA
Company	Danone	
Government East Java Province (EJP)	Energy and Mineral Resources (ESDM) of EJP	
Government EJP	Regional Disaster Management Agency (BPBD) of EJP	
Government EJP	Regional Development Agency (Bappeda) of EJP	
Government EJP	Health Agency (Dinkes) of EJP	
Government EJP	Agricultural and Food Security Agency of EJP	Member of TKPSDA
Government EJP	Water Resources Agency of EJP	
Government EJP	Forestry Agency (Dishut) of EJP	Member of TKPSDA
Government EJP	Spatial Planning/National Land Agency (ATR/BPN) of EJP	
Government EJP	Management Center of Watershed and Protection Forest (BPDASHL) Brantas Sampean	
Government EJP	Directorate General of Human Settlements (CK) of EJP	
Government EJP	Central Bureau of Statistics (BPS) of EJP	
Government EJP	Environmental Agency (DLH) of EJP	Member of TKPSDA
Government EJP	River Basin Organisation (BBWS) of Brantas	
Government Malang Regency (MR)	Housing, Settlement Area and Human Settlements (DPKPCK) of MR	
Government MR	Water Resources Agency of MR	
Government MR	National Land Agency (BPN) of MR	
Government MR	Lawang Subdistrict Office of MR	
Government MR	Central Bureau of Statistics (BPS) of MR	
Government MR	Environmental Agency (DLH) of MR	
Government MR	Regional Development Agency (Bappeda) of MR	
Government MR	Health Agency (Dinkes) of MR	
Government National	National Development Agency (Bappenas)	
Government National	National Institute of Aeronautics and Space (LAPAN)	
Government National	Pasuruan Forest Management Unit (Perum Perhutani KPH), Pasuruan Regency	Member of TKPSDA
Government National	Ministry of Environment and Forestry (KLHK)	
Government Pasuruan City (PC)	National Land Agency (BPN) of PC	
Government PC	Central Bureau of Statistics (BPS) of PC	
Government PC	Water Resources Agency of PC	

Level	Institution	Notes
Government PC	Regional Development Agency (Bappeda) of PC	
Government PC	Health Agency (Dinkes) of PC	
Government PC	Environmental Agency (DLH) of PC	
Government PC	Public Works and Spatial Planning Agency of PC	Member of TKPSDA
Government Pasuruan Regency (PR)	Agriculture and Food Crops Agency of PR	Member of TKPSDA
Government PR	Fisheries Agency of PR	Member of TKPSDA
Government PR	Forestry Agency CDK Lumajang (Dishut) of PR	
Government PR	National Land Agency (BPN) of PR	
Government PR	Regional Disaster Management Agency (BPBD) of PR	
Government PR	Regional Development Agency (Bappeda) of PR	
Government PR	Technical Implementation Unit (UPT) of PR	
Government PR	Environmental Agency (DLH) of PR	
Government PR	Public Works, Water Resources and Spatial Planning (PUSDA-TR) Agency of PR	Member of TKPSDA
Government PR	Health Agency (Dinkes) of PR	
Government PR	Central Bureau of Statistics (BPS) of PR	
Government Probolinggo City (PrC)	Public Works and Urban Spatial Planning (PU PRK) of PrC	Member of TKPSDA
Government Probolinggo Regency (PrR)	Public Works Irrigation and Mining Agency of PrR	Member of TKPSDA
Government PrR	Agricultural Agency of PrR	Member of TKPSDA
Local People	Tomo	
Local People	Samar	
Local People	Dewi Fathonah (Housewife)	
Local People	Sutrisno (Rice Farmer)	
Local People	Muslikhin (Rice Farmer)	
Local People	Rasyid (Rice Farmer)	
Local People	Sugiyono (Rice Farmer)	
Local People	Tardi (Rice Farmer)	
Local People	Ibu Kusnaila (Housewife), Ibu Aminah (Convection Labour), Ibu Khomsa (Housewife)	
Local People	Fauzy (Becak Driver)	
Local People	Nasari (Rice Farmer)	
Local People	Dai (Rice Farmer)	
Local People	Other Local People (7 people)	
Local People	Kusminto (Head of Village)	
Local People	Fauzy (Head of Village)	
Local People	Anif Anto (Kaur Pengairan)	
Local People	Durajak (Head of Village)	
Local People	Wahono (Head of Village)	
Local People	Carito (Head of Village)	

Level	Institution	Notes
Local People	M.Zuhdi (Head of Village)	
Local People	Rahman (Head of Sub-Village)	
Local People	Ebiet (The Vice of Head Village/Carik)	
NGO/Organization (LSM)	SAUNGGALIH	
NGO/Organization (LSM)	Pasuruan Environmental Advocacy and Communication Forum (FKPL), Pasuruan Regency	Member of TKPSDA
NGO/Organization (LSM)	FKPS (Forum Kabupaten Pasuruan Sehat)	
NGO/Organization (LSM)	Podo Joyo's Farmer Association (GHIPPA), Pasuruan Regency	Member of TKPSDA
NGO/Organization (LSM)	Tani Jaya's Farmer Association (GHIPPA) Tani Jaya, Probolinggo City	Member of TKPSDA
NGO/Organization (LSM)	Hotel and Restaurant Association of Pasuruan (PHRI), Pasuruan Regency	Member of TKPSDA
NGO/Organization (LSM)	Tunas Harapan Village Community (LMDH), Probolinggo Regency	Member of TKPSDA
NGO/Organization (LSM)	SI Hijau Foundation	Member of TKPSDA
NGO/Organization (LSM)	YISI (Yayasan Investasi Sosial Indonesia)	
NGO/Organization (LSM)	Tinjang Mina Unggul Association, Pasuruan Regency	Member of TKPSDA
NGO/Organization (LSM)	HPAI (Himpunan Pegiat Adi Wiyata Indonesia)	
NGO/Organization (LSM)	Taposan Tirta's Farmer Association (GHIPPA), Probolinggo Regency	Member of TKPSDA
NGO/Organization (LSM)	Environment Conservation and Rescue Agencies (ENCORE), Pasuruan Regency	Member of TKPSDA
NGO/Organization (LSM)	SEKOLA KONANG Environmental Management Study Center, Probolinggo City	Member of TKPSDA
NGO/Organization (LSM)	Laswi (Chief of LMDH Dayurejo)	

ANNEX 3

Ecosystem-based stakeholder mapping framework

Topic	Data points
Community provisioning	Name, contact information, occupation, where they live
	Connection to the river (e.g. role as user, manager, others)
	River function (how they use the water, e.g. for washing, irrigation, toilet, etc.)
	Stakeholders on the river (from upstream to downstream, people, local social communities, NGOs, etc.) and their role
	Activities/actions they do for the river (this is for local community/NGOs)
Economic activity	Source of income (in specific relating to PR1 & PR2)
	Activity (e.g. agricultural, disposal, tourism, transport goods, brickmaking, etc.)
	Agricultural timeline (how many times to plant/harvest in a year, duration of those activities, etc.)
	Products from the activity (what, how much)
	Activity that cause conflict with local regulation
	Other potential sources of income from locals
Problem (flooding or others) identification	History of flooding or other disasters
	Main problems caused by flooding
	Causes of flooding
	Mitigation efforts locally
	Potential measures from their view
	Disaster impact (material and immaterial loss)
	River mitigating impact of flood or drought (e.g. draining runoff, water from other sources)
	Regulations on the disasters
Topic	Data points
Land tenure	History of the land tenure and use
	Conflict (if any)
	Land ownership status
Level of community dependence on forests	How far is the community from forest
	Who managed the forest (upstream)
	How is the permit for locals to utilise the forest's natural resources
	History of land use change
Type of vegetation	Type of natural vegetation around each location
	The plant function (greenery, plantation crops, agricultural crops)
	Reason to plant certain vegetation and the history
	Willingness/readiness to shift vegetation type
Local views (socio-cultural)	Traditional/religious/spiritual practices use of the river
	Willingness to support government's program, how
	Possibility to implement measures (barriers, opportunities, challenges)
	People to be involved if a measure is implemented

ANNEX 4

Workshops minutes of meetings

Workshop / Date	Report by	File name	Format
Workshop 2 16-17 December 2020	Carrina Lim	MoM of Workshop 2	Word Document (DOCX)
Workshop 3 15 April 2021	Carrina Lim	MoM of Workshop 3	Word Document (DOCX)
Workshop 4 11 May 2021	Carrina Lim	MoM of Workshop 4	Word Document (DOCX)
Workshop 5 30 July 2021	Weningtyas Kismorodati	MoM of Workshop 5	Word Document (DOCX)
Workshop 6 22 September 2021	Weningtyas Kismorodati	MoM of Workshop 6	Word Document (DOCX)
Workshop 7 27 October 2021	Weningtyas Kismorodati	MoM of Workshop 7	Word Document (DOCX)
Workshop 7b 18 November 2021	Weningtyas Kismorodati	MoM of Workshop 7b	Word Document (DOCX)
Workshop 8 1 December 2021	Weningtyas Kismorodati	MoM of Workshop 8	Word Document (DOCX)
Workshop 9 15 December 2021	Weningtyas Kismorodati	MoM of Workshop 9	To be filled

ANNEX 5

Stakeholder engagement timeline

Activity	August				September					October				November				December				January 2022			
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	1	2	3	4
Consultation with Task Force and UPT																									
On the IRBMP Matrix, the Task Force and UPT Pasuruan are filling in on the measures done/on-going/canceled/delayed in Welang River Basin																									
The feedback will be updated with existing condition (regulation, policies, condition in the field)																									
Consultation with EJP																									
Discuss with EJP on the proposed new IRBMP																									
Public consultation with TKPSDA																									
Discussion with TKPSDA members from Welang River Basin, feedback and adjustment on the proposed new IRBMP																									
New IRBMP on Welang River Basin is communicated to all stakeholders																									
Further discussion with TKPSDA																									
Discuss with TKPSDA members for further recommendations																									
Agencies to include the recommendations as programs																									

- Welang Consortium Task B
- Welang Consortium Task D
- DPU-SDA

Activity	August				September					October				November				December				January 2022			
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	1	2	3	4
Priority topics																									
Task C team to determine the priority topics and locations (boundary areas)																									
Stakeholder mapping																									
Mapping stakeholders and determining key stakeholders based on socio-economic condition and relationship to Welang River																									
Stakeholder consultation																									
Coordinate with Task C on updated model																									
Interview with key stakeholder (authorities, community leaders), feed to Task C																									
Coordinate with Task C on updated interventions																									
Surveys, dialogue with local (farmers) communities on understanding context, feed to Task C																									
Coordinate with Task C and EJP on preferred interventions																									
Meeting with stakeholders on their feedback and preferred interventions, feed to Task C																									
Coordinate with Task C on visualisation and EJP's approval																									
Final socialisation on priority topic design to stakeholders																									
Stakeholder involvement																									
Community involvement during project implementation																									
Evaluation on SHE																									

 Welang Consortium Task C
 Welang Consortium Task D
 DPU-SDA

ANNEX 6

Engagement activities and timeline

Activity	Date	Topic	Location	Key result / activity
Youth engagement	November 2020 - March 2021	Indonesia Healthy Rivers Challenge 2020	Pasuruan, online	1. Youth engagement for students and young professionals in East Java (30 selected youth participants and 20 local and international institutions) 2. Site visit to Welang river 3. Mini integrated masterplans as inspirations for the Consortium
W1	1-2 December 2020	Kick-off	Pasuruan	1. Kick-off meeting to introduce the Welang Masterplan (attended by approximately 60 people from local governments) 2. Initial contacts with key stakeholders
W2	16-17 December 2020	Project introduction	Surabaya, online	1. Plan and consult with several key stakeholders (invited 23 local governments) 2. Discussion of the goal of the Masterplan 3. Forming of Welang Task Force (9 members from DPU and UPT)
Data collection	January-July 2021	Introduction to institutions and data collection	Surabaya, Pasuruan, online	1. Introduction of the Consortium 2. Develop a relationship with institutions (30 institutions) 3. Gain support from key stakeholders 4. Communicate regularly on progress 5. Consult to build further contacts for SHE
Training program	March 2021-2022	Training program for DPU young staff	Online	1. Tailor-made curriculum based on masterplan progress and DPU staff's needs (32 participants) 2. Weekly training program and learning-by-doing activities
TKPSDA meeting	12 April 2021	Intoductory meeting with TKPSDA	Pasuruan, online	1. Introduction of TKPSDA members (24 members) 2. Problems in Welang river 3. The role of TKPSDA in river basin
W3	15 April 2021	Task A: about, progress, input on the progress	Online	1. Inform the institutions and agencies involved in Welang river basin on Consortium's progress (attended by 42 people/institutions) 2. Stakeholders' input on causes of flooding in Welang 3. Verify information with the stakeholders 4. Plan field visits
Field visit	21-30 April 2021	Field visit	Pasuruan, Surabaya	1. Formal meeting with key stakeholders from government, NGOs, locals (met with 22 people/institutions) 2. Flooding problem identification and solution suggestions 3. Fact check on the field and primary data collection through dialogue
W4	11 May 2021	Task B: process and related documents Task C: process, criteria, and gather input	Online	1. Agreed IRBMP format, input, and suggestions (invited 15 people from DPU and Task Force) 2. Discuss and select priority project ideas
Consultation	May-June 2021	Consultation with stakeholders based on previous workshops	Online	1. Programs, budget, planning from the stakeholders (consulted with 10 stakeholders from government, NGOs, and private sector) 2. Understanding institutional context, opportunity, and challenges

Activity	Date	Topic	Location	Key result / activity
				3. Data collection 4. Verify information with stakeholders 5. Working relationships between stakeholders and DPU
Disucussion with Task Force	22 July 2021	Presenting of the progress from consortium team, ie ecology data, stakeholder income	Online	Gain input from Task Force and Pak Fauzy (PUSDA Jatim)
W5	30 July 2021	Baseline Report on biophysical, socio-economic and institutional system and Integrated River Basin Management Plan of Welang Watershed	Online	1. Report of biophysical, socio economic, and institutional system by consortium team to the stakeholder in national, provincial, regency, private sector, and NGO 2. Report of water management plan 3. Gain input from all stakeholders
SHE meeting	August-December 2021	Stakeholder engagement strategy	Online	1. Discuss and coordinate with Task Force on SHE strategy, process, and progress 2. Timeline and executable plans for Task B and Task C
Field visit for stakeholder enagement	6-15 September 2021	Identify community provisioning, economic activity, problem especially on flooding, identification of land tenure, type of vegetation and local views on socio cultural	Pasuruan, Surabaya	1. Get a good understanding about the social economy group in the intervention area, land tenure, farming calendar, possibility to change the commodity, etc. 2. Assess potential project opportunities and impacts on vulnerable stakeholders and mitigation option -> focus on proposed intervention (regreening/reforestation, agroforestry, demo plot, terracing, something related to BwN) 3. Build a good communication between the provincial government and local community: to elaborate the important value of flood protection in priority area
Strategy meeting	8 September 2021	Strategy meeting with DPU and UPT Pasuruan	Surabaya	1. IRBMP discussion with Task Force 2. Output of IRBMP and what will be incorporated into the planning 3. Top ten problems in intervention areas 4. Strategy thinking process and discussion
W6	22 September 2021	Presentation of modelling result and stakeholder engagement activity	Online	1. Present and gain input on modelling result of Task C 2. Report of stakeholder engagement activity from the field
Field visit for priority measures and stakeholder engagement	21-28 October 2021	Gain a better understanding of the social, economic and environmental character, also conduct an assessment of the proposed measures at the site level	Pasuruan	1. The project has an overview from the site level regarding the conditions and situations that are currently happening both socially, economically, and environmentally 2. Obtain in-depth information and an overview of the opportunities for the proposed measure to reduce flood risk in the Welang watershed from the perspective of stakeholders 3. The formation of good synergy between stakeholders, do that the handling for disaster risk reduction in the Welang watershed can run well
Progress Meeting with DPU-SDA and NETICS	22 October 2021	Discuss the latest SOBEK modelling for Kraton and Sumber Pinang, also	Online	1. Update and discuss the progress of modelling 2. Gain input from EJP and NETICS on sediment reuse

Activity	Date	Topic	Location	Key result / activity
		discuss with NETICS regarding the sediment reuse		
W7	27 October 2021	Present the action plan strategy and explanation of IRBMP	Online	1. Present the action plan 2. Gain input for RPSDA Matrix from the stakeholders invited
W7b	18 November 2021	Updating progress of Master Plan Welang to BBWS	Online	1. Present the updated progress result to BBWS 2. Gain input from BBWS and EJP
Meeting with TKPSDA	23 November 2021	Inform the updated result of IRBMP	Online	Inform the updated document of IRBMP to TKPSDA members and other stakeholders in EJP. Several members of TKPSDA and agencies consulted their concerns to the Welang Consortium that was represented by Ibu Heni (Task B).
W8	1 December 2021	Presenting on modelling study and business case (Task C) also ground water study	Online	1. Present the result of modelling study and business case 2. Present the ground water study 3. Gain input from ESDM and EJP
W9 (Final Workshop)	15 December 2021	Final workshop	Online and offline	

ANNEX 7

Field visit reports

Date	Report by	File name	Format
20-21 April 2021	Bastien van Veen	Field Visit Report by Bastien van Veen (20-21 April 2021)	Word Document (DOCX)
26-30 April 2021	Rangga Rishar and Carrina Lim	Field Visit Report by Rangga Rishar and Carrina Lim (26-30 April 2021)	Word Document (DOCX)
6-14 September 2021	Weningtyas Kismorodati	Field Visit Report by Weningtyas Kismorodati (6-14 September 2021)	PowerPoint Presentation (PPTX)
21-28 October 2021	Weningtyas Kismorodati	Field Visit Report by Weningtyas Kismorodati (21-28 October 2021)	PowerPoint Presentation (PPTX)

ANNEX 8

List of interviewed local people

No	Date	Name	Sex	Village	Position	Occupation
1	6 September 2021	Dewi Fathonah	Female	Tambakrejo	Midstream	Housewife
2	7 September 2021	Sutrisno	Male	Lemahbang	Midstream	Rice Farmer
3	7 September 2021	Muslikhin	Male	Lemahbang	Midstream	Rice farmer
4	9 September 2021	Kusminto	Male	Watuagung	Midstream	Village Government
5	9 September 2021	Fauzi	Male	Karangrejo	Midstream	Village Government
6	9 September 2021	Rasyid	Male	Glagahsari	Midstream	Rice Farmer
7	9 September 2021	Sugiyono	Male	Glagahsari	Midstream	Rice farmer
8	10 September 2021	Anif Anto	Male	Sengon Agung	Midstream	Village Government
9	10 September 2021	Durajak	Male	Pager	Midstream	Village Government
10	10 September 2021	Tardi	Male	Pager	Midstream	Rice Farmer
11	12 September 2021	Wahono	Male	Dayurejo	Upstream	Village Government
12	12 September 2021	Laswi	Male	Dayurejo	Upstream	Forest Farmer
13	12 September 2021	Carito	Male	Sukorejo	Midstream	Village Government
14	13 September 2021	M.Zuhdi	Male	Sukorejo	Downstream	Village Government
15	13 September 2021	Kusnaila	Female	Sukorejo	Downstream	Housewife
16	13 September 2021	Aminah	Female	Sukorejo	Downstream	Labour convection
17	13 September 2021	Khomsa	Female	Sukorejo	Downstream	Housewife
18	13 September 2021	Fauzy	Male	Sukorejo	Downstream	Rice Farmer
19	13 September 2021	Nasari	Male	Sukorejo	Downstream	Rice farmer
20	13 September 2021	Rahman	Male	Sukorejo	Downstream	Village Government
21	14 September 2021	Ebiet	Male	Tambakrejo	Downstream	Village Government
22	14 September 2021	Dai	Male	Tambakrejo	Downstream	Rice Farmer
23	22 October 2021	Ahmad Baedowi	Male	Kraton	Downstream	Rice Farmer
24	22 October 2021	Bagus	Male	Kraton	Downstream	Village Government
25	23 October 2021	Ali	Male	Kraton	Downstream	Rice Farmer
26	23 October 2021	Toib	Male	Kraton	Downstream	Village Government
27	23 October 2021	Mashuri	Male	Kraton	Downstream	Fish Farmer
28	23 October 2021	Pak Inggi	Male	Dhompoo	Midstream	Village Government
29	28 October 2021	Cholis	Male	Tidu	Downstream	Village Government

ANNEX 9

Two actionable proposals

PROPOSAL 1: REHABILITATION OF THE WELANG WATERSHED THROUGH REGREENING

One of the factors that led to the recent flooding in East Java is the coverage of water catchment areas in the upstream areas which have been converted from forests to vegetable farming areas or settlements. This is recognized by the community, the village government and the related OPD. In several field survey activities in the Welang watershed from downstream to upstream, the majority of the proposals obtained were reforestation activities packaged in the form of agroforestry. Likewise in the middle and downstream areas because of the need for groundwater and river water conservation areas. The planted stands do not only function ecologically, but also economically for the people who live in the vicinity. The community can also be given education about the importance of protecting the upstream to downstream areas. In more detail, the activity plan is as follows:

Activities (what)	Location (Where)	Parties involved (who)	Time (When)	Steps required (How)
Reforestation (leading to agroforestry) so that the community can also be educated about the importance of maintaining ecosystems in the upstream to downstream areas.	Upstream area of the Welang watershed (Tutur, Ngembal, Purwodadi, Cowek, Gerbo). In the middle area (midstream), especially in the area around water sources (Sub-districts of Purwosari, Dhompo, Tidu, Sukorejo). Downstream areas are mainly on the banks of rivers (Kraton, Semare, Pulokerto). The suggested location is still tentative and requires a more in-depth study.	Bappeda, Forestry Service, DLH, DAS Forum, Green SI, Perhutani, KBR Purwodadi/LIPI, Village Government (involvement of local village organizations/LMDH, Destana, Karang Taruna etc.), Local communities	August, September 2022 (before the rainy season)	Activities are carried out in the upstream to downstream locations of the Welang watershed by involving several local agencies and institutions that have reforestation programs. The recommended plants are local plants that are able to bind the soil and conserve water. Selection of plant species that are deemed appropriate can involve the role of KBR/LIPI and Forestry CDK. The involvement of local communities through village organizations is expected to be able to encourage community participation efforts in conserving the upstream-downstream areas as well as controlling the plants. One of the efforts that can be done to maintain the stand is by making biopores at several points around the plant to recharge groundwater so that the stands do not lack water in the growth process. Biopores can also be carried out in residential areas upstream to downstream to maintain water. In addition to local plants (ficus species, Lo, bamboo), various types of plants can be diversified or combined with productive plants (fruits) that are annual/perennial. These various types of plants can be planted in zoning according to their function.

Several things that need to be considered in this activity are that the time it takes for plant seeds to grow large is quite long, at least 3 to 5 years, in addition, the community will tend to maintain plants that are considered economically productive. So it takes a full and very strong commitment to be able to bind the community to maintain and monitor the planted plants. One solution that can be offered is the compensation for environmental services to the community to maintain the stands. This effort is almost the same as that of the DAS Forum so far.

PROPOSAL 2: ADUS KALI, PASURUAN DISTRICT PROGRAM TO PRESERVE RIVER ECOLOGY

The Adus Kali program is a program to maintain river ecology with full emphasis on educating the younger generation to consider rivers as part of the future that cannot be separated from their lives in the future. This program received considerable support from the Regent of Pasuruan but was constrained by funding in its implementation. The Adus Kali program includes:

1. *Jogo Kali* (Learn and protect the river): Activities to identify and enrich data on river conditions. This program is a kind of digitization for updating river conditions which can be monitored by anyone at any time.
2. *Jegur Kali* (do with the river): One of the efforts is the River School, activities to monitor river water quality, 'bodywork' (spring conservation and river cleaning), river tourism and cultural arts
3. *Jogo bencana* (river disaster management): 'Defending' (sustainable disaster management) in order to strengthen Destana, 'Dibina' (Disaster Education), and 'Prince' (Care for disaster volunteers).

Activities (what)	Location (Where)	Parties involved (who)	Time (When)	Steps required (How)
Adus Kali' Program	Upstream to downstream areas. The choice of location is prioritized for the people who live around the watershed.	Kominfo, Bappeda, ESDM, KBR/LIPI, Forestry CDK, Agriculture Service, DLH, DKP, BPBD, FKPS Tourism Office, Watershed Forum, Green SI, Village Government (Village Organization), local community	2022	More targeting to public education, especially the younger generation. Local agencies and NGOs can be involved in accordance with their tupoksi. Like OPD-OPD can play a role in facilitating Field Schools according to their main duties and functions to include material on river ecology, waste and the environment in general, DAS Forum, FKPS and Green SI can become facilitators for river ecology education. Kominfo can make efforts to support the need for digitalization related to updating river conditions that are easy to access.

The thing that needs to be considered for the above activities is the need for personnel who will be involved for assistance, so that it requires full commitment from relevant stakeholders for assistance efforts.