

Climate Resilience for Communities (CRMC) in Krapyak Subdistrict, North Pekalongan District, Pekalongan City



2024



Mercy Corps Indonesia

The Climate Resilience
Measurement for
Communities (CRMC)

CONTENTS

CONTENTS	i
TABLES	ii
FIGURES	iii
CHAPTER I Brief Description of CRMC	1
1.1 Background	1
1.2 Definition, Objectives, and Benefits of CRMC	1
CHAPTER II Overview of Krapyak Subdistrict and the Community	3
2.1 Krapyak Subdistrict	3
2.1.1 Administration Context	3
2.1.2 Physical, Environmental, and Disaster Context	4
2.1.3 Demographic Context	5
2.1.4 Socio-Cultural	6
2.1.5 Economics	7
2.1.6 Infrastructure Context	7
2.2 Krapyak Community	8
CHAPTER III Collecting Field Data Process	9
3.1 Climate Resilience Measurement for Communities (CRMC) Tools Training for IKUPI	9
3.2 Study Setup	10
3.3 Enumerator Training and Simulation	10
3.4 Community Group Review Process, Sample Size Determination, Key Informant Interview and Focus Group Discussion Designs	11
3.4.1 Sample Size Determination and Detailed Map	12
3.4.2 Key Informant Interview Designs	12
3.4.3 Focus Group Discussion Designs	12
3.5 Permit Process and Field Observation	12
3.6 Data Collection	13
3.6.1 Household Surveys	13
3.6.2 Key Informant Interviews	13
3.6.3 Focus Group Discussions	15
3.6.4 Secondary Data	20
3.7 Grading Process	20
CHAPTER IV Interpreting Grading Results	22
4.1 GAID Perspectives on Resilience Sources	26
4.1.1 Profil of Respondents Disaggregated by GAID	26
4.1.2 Interrelation between GAID and Certain Resilience Sources	28
4.2 Identifying the SO-WN of Community Resilience Sources	34
4.3 Grouping Intervention Priority	41
CHAPTER V Potential Intervention	44
5.1 Priority 1	53
5.2 Priority 2	55
5.3 Priority 3	57
Appendix 1: A Comprehensive Commentary to CRMC Tools	58
Appendix 2: Translation of Household Surveys Questions in Bahasa Indonesia	64
Appendix 3: Translation of Key Informant Interview Question in Bahasa Indonesia	75
Appendix 4: Translation of Focus Group Discussion Question in Bahasa Indonesia	86

TABLES

Table II.1 Physical Environment Conditions of Krapyak.....	4
Table II.2 Land Use of Krapyak	4
Table II.3 Vulnerability Condition of Krapyak	5
Table II.4 Demographic Context of Krapyak.....	5
Table II.5 Education Level in Krapyak	6
Table II.6 Institutions in Krapyak	6
Table II.7 Social Security Condition in Krapyak.....	6
Table II.8 Occupations in Krapyak	7
Table II.9 Infrastructure Condition in Krapyak	7
Table III.1 Flood Sources of Resilience	9
Table III.2 Enumerator Assignments on the CRMC Application	11
Table III.3 Key Informant Interview Participants of Krapyak Community	13
Table III.4 FGD Participants of Krapyak Community	15
Table III.5 Focus Group Discussion Dynamics of Krapyak Community	17
Table IV.1 CRMC Grading Scale	22
Table IV.2 Details of CRMC Grading Results	24
Table IV.3 Respondents by Gender	27
Table IV.4 Numbers of Female-Headed Households in Krapyak.....	27
Table IV.5 Respondent by Age.....	27
Table IV.6 Household Members Identify as a Minority or Marginalized Groups	28
Table IV.7 Household Members with Disabilities	28
Table IV.8 GAID-Specific Resilience Sources	28
Table IV.9 Measures Taken to Keep Property and Assets Safe	31
Table IV.10 Relevance and Identification of Resilience Sources	34
Table IV.11 SO-WN Analysis of Resilience Sources in Different Lenses	40
Table IV.12 Description of Intervention Priority Score	42
Table IV.13 Grouping Proposed Intervention Priorities	42
Table V.1 Comparison of Intervention Before and After Pre-Feasibility Study	45
Table V.2 Priority 1 of Krapyak Community Interventions	53
Table V.3 Priority 2 of Krapyak Community Interventions	55
Table V.4 Priority 3 of Krapyak Community Interventions	57

FIGURES

Figure II.1 Administrative Map of Krapyak	3
Figure II.2 Neighborhood Environment of Krapyak Community	8
Figure III.1 Enumerator Training and Simulation	11
Figure III.2 Krapyak Community Detailed Map	12
Figure III.3 Krapyak Community Grading Process	21
Figure IV.1 Grading Score of Five Capitals Krapyak Community	23
Figure IV.2 Distribution of A to D Grade of Five Capitals Lenses	24
Figure IV.3 Household Member Got Hungry in the Past 4 Weeks	30
Figure IV.4 Knowledge of Areas Most Affected by Flooding	30
Figure IV.5 Safe Access to Health Services during Disaster	31

CHAPTER I

Brief Description of CRMC

1.1 Background

The Zurich Flood Resilience Alliance ('the Alliance') is a cross-sector collaboration between Zurich Insurance Group, NGOs, and academia. Zurich Insurance Group works with the humanitarian and civil society organizations Concern Worldwide, the International Federation of the Red Cross and Red Crescent Societies (IFRC), Mercy Corps, Plan International, and Practical Action, as well as research partners the International Institute for Applied Systems and Analysis (IIASA), the London School of Economics, and the Institute for Social and Environmental Transition-International (ISET). The Alliance was originally launched in 2013 with the goal of shifting focus from flood response and recovery to pre-event risk reduction. Since 2013, the Zurich Flood Resilience Alliance has successfully been developing and implementing the Flood Resilience Measurement for Communities (FRMC) process, which has been used in over 400 communities globally. In 2020, Alliance members decided to explore the possibility of updating the FRMC and adding new hazards to the framework, and in 2021 a team of Alliance members and other experts developed the content and functionality of the CRMC.

The CRMC is the next evolution of the FRMC, meeting the increasing demand to measure resilience to multiple hazards in order to accelerate climate-change adaptation. The CRMC currently covers flood and heatwave hazards but can be extended to other climate-related hazards. The Z Zurich Foundation's Climate Change Adaptation Program is piloting this in several communities, including the Krapyak community in Pekalongan City.

CRMC is piloted through the Z Zurich Climate Resilience Alliance (ZCRA) Foundation. In early 2024, the ZCRA program entered its third phase. Mercy Corps Indonesia is currently conducting a CRMC assessment as a basis for program implementation in the third phase and drawing lessons learned from the second phase. This profiling and strategy development activity is a collaboration between IKUPI (Inisiatif Kota untuk Perubahan Iklim) and Mercy Corps Indonesia which will take place in stages in May 2024 – May 2025.

1.2 Definition, Objectives, and Benefits of CRMC

The Climate Resilience Measurement for Communities (CRMC) is a framework for measuring community resilience to climate-related hazards, with an associated process and tool for implementing the framework in practice. The CRMC has been designed using a systems-based approach. The CRMC framework is holistic and integrated, and also facilitates the exploration of the interconnections between results. The framework consists of ex-ante indicators or 'sources of resilience' measured in normal/non-disaster times and post-event variables measured after a disaster event occurs. The CRMC is based on the Flood Resilience Measurement for Communities (FRMC) originally developed by the Zurich Flood Resilience Alliance. It includes an approach for testing and empirically validating the framework, and a technology-based data-gathering and evaluation tool for measuring and assessing community resilience to certain climate-related hazards such as heatwaves and floods. The tool is a practical 'hybrid' software application consists of online web-based platform for setting up the process and analyzing results and a smartphone- or tablet-based app that can be used offline in the field for data collection.

CRMC focuses on the community level, where climate change impacts are most damaging, and where much action on improving resilience needs to be taken. Also, many humanitarian

and civil society organizations (including our Alliance members) primarily work at the community level. In CRMC, a 'community' could be defined geographically (perhaps in rural contexts) or by administrative boundaries (which may work in more urban situations). However, no single community will 'feel' like another and there may be cultural aspects to consider too. As a result, we have concluded that, in reality, a community largely defines itself. No matter how the community is defined, the study must be inclusive for all members including diverse genders, ages, and abilities, as well as for ethnic and cultural groups.

It is important to note that measurement at the community level can support decision-making and advocacy at higher levels. Furthermore, community resilience measurement can be an input for programs and initiatives in the community. The CRMC has been designed with more urban perspectives, such as density (population, buildings, infrastructure, etc.), diversity (of actors, infrastructure, and space), and dynamics (population growth, industry, commerce, etc.).

CHAPTER II

Overview of Krapyak Subdistrict and the Community

2.1 Krapyak Subdistrict

2.1.1 Administration Context

Krapyak Subdistrict is one of the administrative areas within the North Pekalongan District of Pekalongan City, Central Java Province. This subdistrict was established on January 1, 2015, according to Pekalongan City Regional Regulation Number 8 of 2013, as a merger of two sub-districts, namely Krapyak Lor and Krapyak Kidul. The subdistrict covers an area of 378,618 hectares, and is divided into 20 RW (community units) and 10 RT (neighborhood units), with the following boundaries:

North : Java Sea
South : Klego Subdistrict, East Pekalongan District
West : Panjang Wetan Subdistrict, North Pekalongan District
East : Degayu Subdistrict, North Pekalongan District

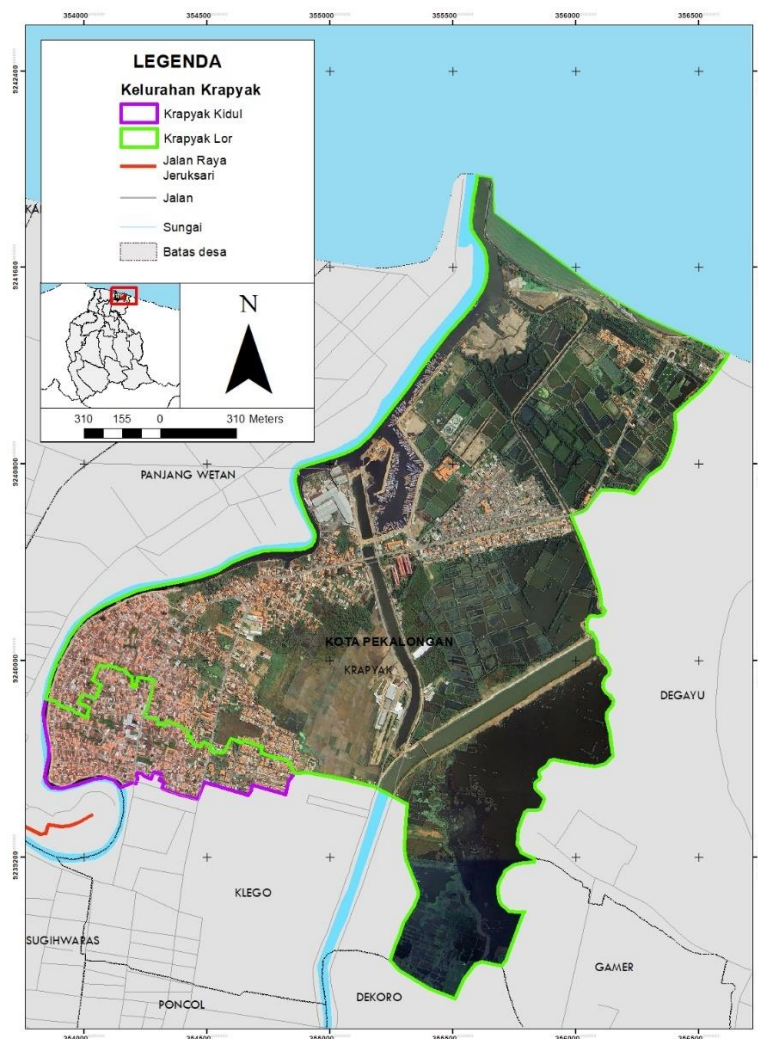


Figure II.1 Administrative Map of Krapyak
Source: SAS Planet Satellite Imagery Processed (2024)

2.1.2 Physical, Environmental, and Disaster Context

- Physical Environment

According to the 2022 data from the Central Java Public Works Water Resource and Spatial Planning (Pusdatu Jawa Tengah), the following is several aspects of the physical environment conditions of Krapyak Subdistrict:

Table II.1 Physical Environment Conditions of Krapyak

No	Physical Environment Conditions	Description	Area (Ha)	Percentage
1	Hydrology	Productive aquifers with extensive distribution	259,22	70,46%
2		Brackish areas	108,68	29,54%
3	Soil Type	Hydromorphic alluvial	367,9	100%
4	Land Suitability	Cultivation area	367,9	100%
5	Rainfall	1750-2250 mm/year	367,9	100%
6	Slope	0-8%	367,9	100%
7	Water Catchment Area	-	0	0%

Source: Pusdatu Jawa Tengah (2022)

Krapyak Subdistrict has a hydrological condition dominated by productive aquifers with an extensive distribution of 70,46%. This relatively high figure indicates that the soil layers in Krapyak Subdistrict contain water and can provide a significant amount of water for use through wells or springs. The role of aquifers for human life and ecosystems is to maintain a stable and reliable water supply. In addition, approximately 29,54% of Krapyak Subdistrict consists of brackish areas or water areas formed from a mixture of fresh and seawater. Furthermore, the soil type in Krapyak Subdistrict is entirely hydromorphic alluvial, formed from marine and terrestrial sediments, and is considered fertile. However, the plants suitable for this soil type are those that can grow well in water-saturated or flooded conditions. This soil condition aligns with the land suitability in Krapyak Subdistrict, which is entirely part of a cultivation area to support local community activities. In terms of rainfall, Krapyak Subdistrict falls within the low to medium range, with 1750-2250 mm/year. Additionally, the subdistrict is classified as a flat area with a slope of 0-8%. Lastly, Krapyak Subdistrict does not have any water infiltration areas, indicating no limitations for building development.

- Land Use

Table II.2 Land Use of Krapyak

No	Description	Area (Ha)	Percentage
1	Residential	73,34	19,93%
2	Paddy Fields	172,89	46,99%
3	Brackish Water Ponds	86,87	23,61%
4	River	17,99	4,89%
5	Industrial	16,82	57%
6	Plantation	0	0%
7	Grasslands	0	0%
8	Drylands	0	0%

Source: Pusdatu Jawa Tengah (2022)

Paddy fields are the dominant type of land use at 46,99% in Krapyak Subdistrict, based on land use data reported by Pusdataru Central Java in 2022. Brackish water ponds account for 23,61%, making it the second largest land use in the subdistrict, followed by 19,93% residential land use.

- Disasters

Table II.3 Vulnerability Condition of Krapyak

No.	Vulnerability Component	Index
1	Sensitivity	2,89
2	Exposure	3,65
3	Capacity	2,74
Vulnerability Score		3,85

Source: Climate Risk and Impact Assessment of Kupang Watershed (2022)

The Climate Risk and Impact Assessment in Kupang River Basins by Mercy Corps Indonesia (2022) shows that in 2020, Krapyak Subdistrict became one of the areas with very high flood hazard level. However, based on the 2021-2035 projection, Krapyak Subdistrict is at risk of experiencing an increase in flood hazards, making the majority of its area fall into the very high category. At the same time, from the vulnerability component perspective, the sensitivity level of Krapyak Subdistrict in 2035 is categorized as low, despite the very high exposure level. Therefore, the vulnerability level of Krapyak Subdistrict from 2020 to 2035 remains in the high category. Additionally, the flood risk level in Krapyak Subdistrict is projected to increase from the low-very high category to the very high category.

2.1.3 Demographic Context

Table II.4 Demographic Context of Krapyak

Category	Sum of People
Male	9335
Female	9030
Age 0-15 Years	4359
Age 15-65 Years	12809
Age >65 Years	1197
Total Population	18365
Number of Households	5959 KK

Source: Krapyak Subdistrict Monograph (2024)

According to the Krapyak Subdistrict Monographic Data of 2024, the population of Krapyak Subdistrict is 18.365 people, comprising 5959 households. The sex ratio of Krapyak Subdistrict is 103,38, indicating that the population is approximately equal. Regarding age group categories, 70% of the population is of productive age, while the remaining 30% is of non-productive age.

- Education

Table II.5 Education Level in Krapyak

No	Education Level	Number of People
1	Kindergarten	1966
2	Elementary School	4229
3	Junior High School	3155
4	Senior High School	3973
5	Diploma (D1-D3)	327
6	Bachelor's Degree (S1)	820
7	Master's Degree (S2)	43

Source: Krapyak Subdistrict Monograph (2024)

Regarding educational backgrounds, the majority of the population in Krapyak Subdistrict (29,14%) has completed elementary school. This is followed by 27,38% of the population having completed the senior high school level and 21,74% of the population has graduated from the junior high school. Additionally, Krapyak Subdistrict has a total of 8.2% of its residents with education levels above high school, ranging from D1 (Diploma 1) to Master's Degree (S2).

2.1.4 Socio-Cultural

- Institutional

Table II.6 Institutions in Krapyak

No	Organizations	Board of Managers	Sum of Member
1	Community Empowerment Agency (LPM)	13	13
2	Community Self-Reliance Agency (BKM)	23	13
3	Family Welfare Movement (PKK)	30	60
4	Youth Organization (Karang Taruna)	24	N/A

Source: Krapyak Subdistrict Monograph (2024)

The institutions in Krapyak Subdistrict are diverse enough to illustrate the socio-cultural conditions in the subdistrict. Family Empowerment and Welfare (PKK), which stands as the institution with the most members, followed by Youth Organization (Karang Taruna), Community Self-Reliance Agency (BKM), and Community Empowerment Agency (LPM) as active organizations in the Krapyak Subdistrict.

- Social Security

Table II.7 Social Security Condition in Krapyak

No	Security Type	Quantity	Unit
1	Community Protection Units (Linmas)	71	Person
2	Neighborhood Security Posts	33	Unit
3	Disaster Monitoring Posts	1	Unit

Source: Krapyak Subdistrict Monograph (2024)

Krapyak Subdistrict has a Community Protection Unit (Linmas) that is tasked with protecting the community from disturbances caused by disasters, as well as efforts to carry out tasks to assist in disaster management. In addition, there are 33 units of

neighborhood security posts and 1 units of natural disaster posts available in Krapyak Subdistrict, demonstrating a commitment to safeguarding local order and security.

2.1.5 Economics

Table II.8 Occupations in Krapyak

No	Occupation		Number of People
1	Employees	Civil Servant	175
2		TNI/POLRI	18
3		Private	4478
4	Entrepreneurs		4
5	Mechanics/Teachers/Lecturers		5
6	Agricultural Laborers		6
7	Retirees		7
8	Fishermen/Fish Farmers (Fisheries)		8
9	Scavengers		9
10	Service Sectors		10
11	Unemployed		11

Source: Krapyak Subdistrict Monograph (2024)

The private sector employees are the dominant occupation in Krapyak Subdistrict, making up 54.66% of the workforce. The next largest segment is entrepreneurs, capturing 23.32% of the employment. Other professions in the subdistrict include fishermen/fish farmers, mechanics/teachers/lecturers, civil servants, military/police (TNI/POLRI), retirees, service sector workers, and agricultural laborers. However, there is still 5.41% of the population that is unemployed in Krapyak Subdistrict.

2.1.6 Infrastructure Context

Table II.9 Infrastructure Condition in Krapyak

No	Facilities		Quantity
1	Government	Subdistrict Office	1
2	Health Services	Community Health Center (Puskesmas)	1
3		Community-Based Health Efforts (UKBM: Posyandu, Polindes)	23
4	Education	Local Library	1
5		Early Childhood Education (PAUD)	15
6		Kindergarten	9
7		Elementary School	10
8		Junior High School	3
9		Senior High School	1
10	Peribadatan	Mosques	13
11		Prayer House (Musholah)	36
12	Recreation	Sport Fields	5

Source: Krapyak Subdistrict Monograph (2024)

Krapyak Subdistrict has 1 subdistrict office located on the main road of Krpyak Subdistrict to support government activities. As for supporting health services, Krpyak Subdistrict has 1 community health center (puskesmas) with 23 UKBM (Community- Based Health Efforts) in the form of posyandu and polindes. Furthermore, the local community can access education services through the local library, as well as various levels of education ranging from early childhood educations (PAUD), kindergartens (TK), elementary schools (SD), junior high schools (SMP), to senior high schools (SMA) available in Krpyak Subdistrict. In terms of religious needs, Krpyak Subdistrict has 13 mosques and 36 prayer houses (musholah) distributed in community settlements. There are also 5 sports fields available to meet the recreational needs of the local community.

2.2 Krpyak Community

Krpyak community is located in RW (community unit) 10 and 19, where it is considered a densely populated residential area with a diverse population. For the residents living in the northern part, in RW 19, the majority are employed in fisheries sectors, such as fishermen, boat craftsmen, fishing equipment craftsmen, shrimp and milkfish farmers, and fish traders. Geographically, RW 19 is directly adjacent to the sea. Therefore, the presence of mangrove vegetation and sea dikes support the security of the local environment by protecting against tidal flooding (rob). However, sanitation is a notable issue in RW 19, where inadequate drainage necessitates the use of pumps as supporting facilities. This issue can pose a risk of disease outbreaks. Moreover, the nearest public facilities are accessible only via a single road which can significantly delay access in emergency situations and risk complete isolation.

In contrast to the conditions in RW19, RW 10 has a better physical environment. This primarily due to the presence of more formal and organized residential complexes in RW 10. The main road access in RW 10 is also more easily reachable by the local community. The majority of the community in RW 10 is employed as office employees. This community is also actively involved in maintaining their environment through regular communal works and the availability of designated personnel for waste collection.



Figure II.2 Neighborhood Environment of Krpyak Community

Source: Photo by IKUPI (2024)

CHAPTER III

Collecting Field Data Process

3.1 Climate Resilience Measurement for Communities (CRMC) Tools Training

On 17 November 2024, the IKUPI team participated in the Training of Trainers (TOT) conducted by MCI to help understand the key concepts and principles of the Climate Resilience Measurement for Communities using the CRMC Apps, and to assign roles and responsibilities for the entire data collection process. The training was delivered by David Nash, a representative of the Z Zurich Foundation, who was joined by the IKUPI team, Mercy Corps Indonesia, Mercy Corps Nepal, and the Regional Program and Advocacy Manager of the Zurich Climate Resilience Alliance. The training topics consisted of an overview of CRMC including its update from FRMC, key concepts and principles of CRMC, 5C-4R framework as the basis of CRMC framework, assessment of sources of resilience, and introduction to CRMC tools with simulations.

The training covered 76 indicators or sources of combined heat wave and flood resilience, of which 52 indicators or sources of flood resilience and 50 indicators or sources of heat wave resilience. As agreed during the training, 52 indicators or sources of flood resilience were used in the resilience measurement conducted in coastal Pekalongan. These indicators are listed below:

Table III.1 Flood Sources of Resilience

No	Five Capitals	Indicators/ Sources of Resilience
1	Human	Secondary school attendance
2		Food availability
3		First aid knowledge
4		Awareness of need for climate change action
5		Awareness of climate change risk
6		Awareness of how nature mitigates risk
7		Hazard exposure awareness
8		Evacuation and safety knowledge
9		Unsafe water awareness
10	Social	Mutual support
11		Social inclusiveness of disaster risk management
12		Community safety
13		Local leadership
14		Disaster response personnel
15		Healthcare accessibility
16		Trust in local authorities
17		Intra-community equity
18		Inter-community equity
19		Risk reduction planning
20		Response planning
21		Family violence and response planning
22		Stakeholder engagement in risk management

No	Five Capitals	Indicators/ Sources of Resilience
23	Physical	Risk mapping
24		Disaster impact data collection and use
25		Energy supply continuity
26		Transportation system continuity
27		Communications system continuity
28		Early warning
29		Continuity of education
30		Emergency infrastructure and supplies
31		Continuity of healthcare during disaster
32		Forecasting
33		Household protection and adaptation
34		Availability of clean, safe water
35		Waste management and risk
36		Large scale flood protection
37	Natural	Tree cover
38		Permeable surfaces
39		Land use planning
40		Resource Management
41		Land/water interface health
42		Ecological management for disaster risk reduction
43	Financial	Household access to discretionary funds
44		Community financial health
45		Local government financial capacity
46		Public infrastructure maintenance budget
47		Climate change adaptation planning and investment
48		Business continuity
49		Household income continuity
50		Risk reduction investments
51		Disaster insurance
52		Disaster recovery budget

Source: Website-Based CRMC Application (2024)

3.2 Study Setup

The study setup was prepared from May to July 2024. The IKUPI team translated the 12 modules, questions, and all components of the CRMC application to run in Bahasa Indonesia for both the website and mobile versions. The IKUPI team then submitted the translations to Mercy Corps Indonesia for review and to ensure that the questions were adapted to the local context without losing the focus of the questions. Mercy Corps Indonesia did the editing, which took about a month. Based on the translated modules, the IKUPI team then developed CRMC training tools in Bahasa Indonesia.

3.3 Enumerator Training and Simulation

On 24-26 September 2024, IKUPI and Mercy Corps Indonesia conducted a training for enumerators. The IKUPI team conducted the training to provide briefings on data collection,

information gathering, introduction to the concepts and principles of CRMC, and practice using the CRMC mobile application in the demo version. The enumerators downloaded the CRMC application from Playstore and Appstore and chose the demo version. Enumerators did simulation by role-playing with the Mercy Corps Indonesia team which would assist in the data collection process. This simulation included a discussion regarding issues that are likely to happen during a household survey. This activity ensures enumerators have the same understanding and agreement on the survey procedures according to the protocol.



Figure III.1 Enumerator Training and Simulation

Source: Photo by IKUPI (2024)

After this series of training, the enumerators's email would be registered and assigned to the CRMC application. There were eight enumerators in total. Four enumerators were assigned to the Krapyak community. The following is the distribution:

Table III.2 Enumerator Assignments on the CRMC Application

No	Krapyak Community
1	MercyCorpsIndonesiaFieldWorker02
2	MercyCorpsIndonesiaFieldWorker04
3	MercyCorpsIndonesiaFieldWorker05
4	MercyCorpsIndonesiaFieldWorker08

Source: Website-Based CRMC Application (2024)

3.4 Determine Community, Sample Size and Data Collection Designs

The selection of the study area as the basis of the community has been done since the preparation of the Participatory Land Use Plan document in Pekalongan, which is a collaboration between Earthworm Foundation Indonesia and Mercy Corps Indonesia. Therefore, it did not take long to define the community. This stage was also done during the enumerator training and simulation. The sample size was set smaller than the sub-district scale, i.e. RW, and the community was defined as the area most affected by the flood. The sample was calculated with a margin of error of 1%. Household sampling was done using systematic random sampling (SRS). This means that each population has an equal chance of being sampled. A detailed map showing transect lines and sample point locations was systematically visualized using Google Earth. Systematization was done by calculating the distance between house sample points by dividing the total population by the sample size, taking into account the average family size. This map served as a reference for enumerators working in the field.

3.4.1 Sample Size Determination and Detailed Map

The Krapyak community is located in RW 10 and 19. The total number of households in this community is 475 with an average family size of four persons. After calibration, the resulting sample size was 115 samples. The interval or distance between houses is 2-3 houses per sample point. The following is a detailed map of the Krapyak community:

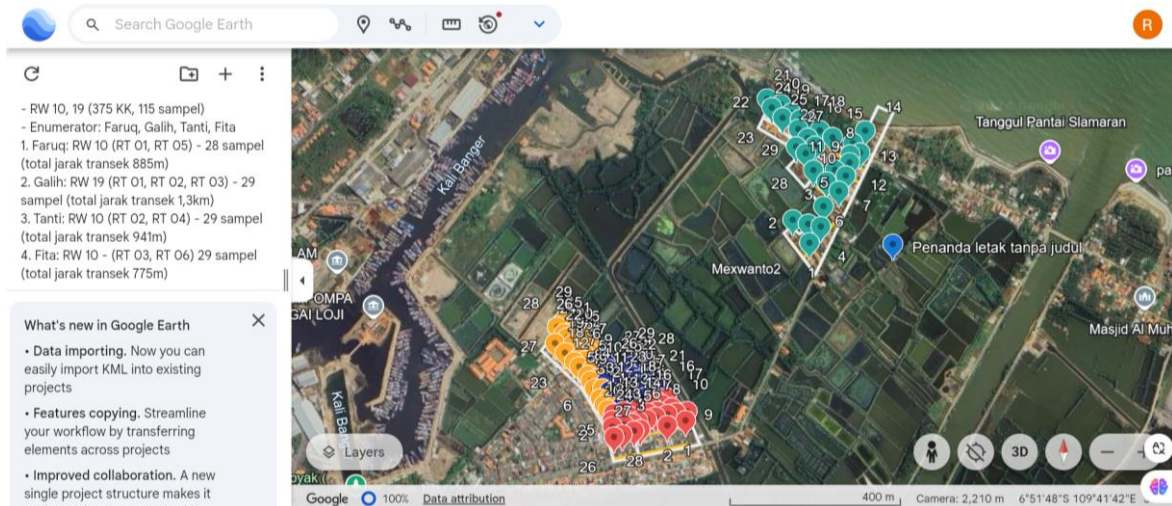


Figure III.2 Krapyak Community Detailed Map
Source: Data Visualized Using Google Earth (2024)

3.4.2 Key Informant Interview Design

- Participant: Community leader, Community health worker, Community council member, Local response services, Headteacher, Local business person, officials related to Women/gender official, Development/Planning official, DRR/CC official, Health official, and Public works official.
- Expected findings: the macro and micro context of the community in relation to the five capitals of each community.
- Method: interview
- Time allocation: 30 minutes-1 hour

3.4.3 Focus Group Discussion Design

- Participants: Civil Protection group, Youth group, Council of elders, Savings group, Community council, Local government committee, Religious council, Local NGO/CBO, Womens group, Society, Community productive users group, and Community planning committee.
- Expected outcome: each group will provide information related to the five capitals according to the questions provided.
- Method: Focus Group Discussion
- Time allocation: 5-6 hours

3.5 Permit Process and Field Observation

In the first week of October 2024, Mercy Corps Indonesia and IKUPI visited Krapyak community on the coast of Pekalongan City. This activity also met and approached the

community leader as well as neighborhood leaders as a form of request to observe and collect data in the area. Field observations were conducted to identify environmental conditions such as settlement type, land use, flood severity, and human interaction with the coast. In addition, the team reviewed detailed maps showing transect lines and sampling points to facilitate data collection. Field observations were also used to ensure that sampling points were not empty houses or non-residential buildings.

3.6 Data Collection

Data collection through household surveys, key informant interviews, focus group discussions and secondary data was carried out according to the schedule from October 07 to November 05, 2024, with details as follows:

3.6.1 Household Surveys

The total number of respondents in Krapyak community was 115. Household data collection was conducted in the form of interviews between enumerators and household respondents. The survey was conducted during four days from October 7 to 10, 2024. There were refusals from certain households but that was the right of the respondents. Enumerators can immediately look for other respondents around the house. There are other obstacles such as in RW 10, where the majority of the respondents are employees who work during the enumerator's working hours, which are 09.00-17.00. This made it difficult for enumerators to find respondents during the day and had to work overtime to meet the daily target. There were many questions that were repeated, but in a scattered order. The use of terms that are not yet commonplace also makes it difficult for enumerators to explain them to respondents.

3.6.2 Key Informant Interviews

The Krapyak community had a total of 11 key informants. The key informant interviews were conducted from October 16 to 17, 2024. These key informants represent stakeholders from the sub-district to the district level. The key informant interviews provided in-depth insights from those with specific knowledge of the Krapyak community. Below is the list of the key informants:

Table III.3 Key Informant Interview Participants of Krapyak Community

No	Key Informants	Represented by:
1	Community leader	• Name: Banar • Gender: Male • Position: Head of Krapyak Sub-district • Year of experience(s): 4 years
2	Community health worker	• Name: Dian • Gender: Female • Position: head of Puskesmas Krapyak (Community Health Center) • Year of experience(s): 3 years
3	Community council member	• Name: Naili Iza • Gender: Female • Position: Secretary of BKM (Community Self-Supporting Board)

No	Key Informants	Represented by:
		Year of experience(s): 24 years
4	Local response services	- Name: Ibnu Hajar - Gender: Male - Position: member of KSB (Disaster Unit Group) - Year of experience(s): <1 year
5	Headteacher	- Name: Agus Riyanto - Gender: Male - Position: teacher at SMPN 09 Pekalongan - Year of experience(s): 1 year
6	Local Business Person	- Name: Munif - Gender: Male - Position: Business owner of Bangun Rejo Slamaran Store (building materials store) - Year of experience(s): 15 years
7	Women/Gender Official	- Name: Puji Winarti - Gender: Female - Position: Head of Agency at DPMPPA - Year of experience(s): 1 year
8	Development/ Planning Official	- Name: Diah - Gender: Female - Position: Staff of Economy, Natural Resources, Infrastructure, and Regional Sector at Bappeda - Year of experience(s): 8 years
9	DRR/CC Official	- Name: Syaifuddin - Gender: Male - Position: Disaster Analyst at BPBD - Year of experience(s): 4 years
10	Health Official	- Name: Slamet Budiyo - Gender: Male - Position: Head of Health Services at Dinas Kesehatan - Year of experience(s): 8 years
11	Public Works Official	- Name: Khaerudin - Gender: Male - Position: General Secretary at DPUPR - Year of experience(s): 14 years

Source: Discussion Outcomes from IKUPI & Mercy Corps Indonesia & Website-Based CRMC Application (2024)

There were no significant challenges in conducting the key informant interviews. However, the questions available for the key informant interviews kept the interviews short, and interviewers had to improvise to delve deeper into community-related information based on their respective areas of expertise. For example, the questions for the health office were only about 2-3 questions. This is not worth the effort and time spent by both the department

head and the enumerator to collect the data. All key informant interview participants cooperated well in the interview sessions.

3.6.3 Focus Group Discussions

A series of Focus Group Discussions (FGDs) were conducted by IKUPI and Mercy Corps Indonesia on November 4-5, 2002. On the first day, the FGD sessions were reserved for representatives of the local community in Krapyak, while on the second day, the FGD participants were representatives of the local government, namely the Pekalongan City government and the Central Java provincial government. The separation of the sessions between local community and government representatives was made because IKUPI and Mercy Corps Indonesia agreed that the government representatives needed to invite representatives from each of the relevant technical offices according to the area of the questions asked. Both FGD sessions were led by two facilitators from IKUPI, supported by two co-facilitators from IKUPI and four MCI staff members in each focus group. The following is an overview of the FGD conditions for the Krapyak community:

- FGD Participants

Table III.4 FGD Participants of Krapyak Community

No	Catagory	FGD Participants	Details
1	Local government committee	Government of Central Java Province and Pekalongan City	Central Java Meteorological, Climatological, and Geophysical Agency (BMKG Stasiun Klimatologi Jawa Tengah)
			Regional Development Planning Agency (BAPPEDA Kota Pekalongan)
			Disaster Management Agency (BPBD Kota Pekalongan)
			Public Works and Housing Agency (DPUPR Kota Pekalongan)
			Environment Agency (DLH Kota Pekalongan)
			Women Empowerment and Child Protection Agency (DPMPPA Kota Pekalongan)
			Marine and Fisheries Agency (Dinas Kelautan dan Perikanan Kota Pekalongan)
			Food Security and Agriculture Agency (Dinas Ketahanan Pangan dan Pertanian Kota Pekalongan)
2	Religious council	Representative from NU (Nahdatul Ulama) Organization of Krapyak Kidul Branch	
3	Civil Protection group	Civil Protection Unit & Firefighter (absent, the vote has been delegated to BPBD – a disaster management agency at the regional level)	
4	Community council	BKM (Community Self-Relience Board) Sukses Ikhlas Krapyak	
5	Savings group	There is no savings group in Krapyak, the vote is represented by all participants	

No	Catagory	FGD Participants	Details
6	Society	People with disabilities representative	
7	Youth group	Youth group (Karang Taruna)	
8	Council of elders	Elders' representative	
9	Local NGO/CBO	MASJALI Community (Environmental Community Group)	
		KSB (Disaster Unit Group) Krapyak	
10	Community planning committee	Head of Krapyak	
		RW (community units) 10 representative	
		RW (community units) 19 representative	
11	Women's group	Family Welfare and Empowerment Group (TPPKK Krapyak)	
12	Community productive users' group	Fish Cultivator Group (POKDAKAN Dwi Mina Makmur)	
		Fish Cultivator Group (POKDAKAN Mina Mulya)	
		Batik Business Group	

Source: Discussion Outcomes from IKUPI & Mercy Corps Indonesia & Website-Based CRMC Application (2024)

- Discussion Dynamics

Table III.5 Focus Group Discussion Dynamics of Krapyak Community

No	Group	General observations during the discussion
1	Local government committee	Local governments committee represented by disaster-related agencies are very representative. These agencies had been established prior to the FGD and were active in their fields. In the discussions, representatives were generally active with opinions and views that tended to be similar. The whole community can be represented through the discussion and the discussion adequately captures all views. Men spoke more in the discussions although there were female representatives present, but they were passive.
2	Religious council	The Religious council present were very representative. The religious groups had been formed before the FGDs and were active in their fields. In the discussion, the representatives did not have much say but participated in all questions. The whole community was represented through the discussion and the discussion adequately captured all views. Males spoke more in the discussion because the representatives were males.
3	Civil protection group	The Civil Protection group, Satpol PP, did not attend the FGD and was represented by BPBD Pekalongan City, so the representatives were only somewhat representative. In the discussion, some communities were still represented and sufficiently captured all views. BPBD was also active in representing the viewpoints of affected communities. The representatives present were already established before the FGD and are active in their fields. Male spoke more in the discussion because the representative was Male.
4	Community council	The community council is very representative. The community councils have been formed before the FGD and are active in their fields. In the discussion, the representatives actively participated and knew a lot about the context. Most communities were represented and the discussion adequately captured all views with Males speaking more in the discussion as the representatives were Males.
5	Savings group	The Savings group was not present and was represented by all participants who attended the FGD, making it very unrepresentative. The arisan group was gathered for the purpose of the FGD. In the discussion, the representativeness of views and communities cannot be known. Males spoke more in the discussion because the representatives were predominantly male.
6	Society	The Society present were somewhat unrepresentative. They were gathered for the purpose of FGDs. In the discussion, representatives from disability were quite passive in the beginning and needed to adjust to actively participate. Some communities were represented through the discussions and one or a few views dominated with Females speaking more in the discussions as the representatives were predominantly Female.
7	Youth group	The youth group present was very representative. The youth groups had been formed prior to the FGDs and were active in their fields. In the discussion, the representatives knew a lot about the context and

No	Group	General observations during the discussion
		participated actively. The whole community could be represented through the discussion and the discussion adequately captured all views with Male speaking more in the discussion as the representatives were Male.
8	Council of elders	The Council of elders present were the managers of the elderly posyandu and were somewhat unrepresentative. The elderly group was only gathered for the purpose of the FGD. In the discussion, part of the community could be represented through the discussion and one or a few views dominated with Female speaking more in the discussion as the representatives were Female.
9	Local NGO/CBO	The business groups present were very representative. The business groups had been formed prior to the FGD and were active in their fields. In the discussion, the representatives present from KSB were very active in participating and MASJALI pretty much responded based on the community's views. Most of the community could be represented through the discussion and the discussion adequately captured all views with Male speaking more in the discussion because the representative present was Male.
10	Community planning committee	The Community planning committee present was very representative. The Community planning committee had been established prior to the FGD and is active in its field. In the discussion, the lurah representative tended to give views from the government side, the head of RW 10 was quite active, and the head of RW 19 was less active. The whole community could be represented through the discussion and the discussion adequately captured all views. Males spoke more in the discussion because the representatives present were males.
11	Women's group	The Women's group present were very representative. The Women's group had been established prior to the FGD and were active in their fields. During the discussion, they were quite active in giving their views and answering questions. The entire community was represented through the discussion and the discussion captured all views. This group also exclusively represented women.
12	Community productive users' group	The Community productive users' group present were somewhat representative. The business groups had been formed before the FGD and were active in their fields. In the discussion, it participated in answering all questions but was not very active. The whole community was represented through the discussion and one or a few views dominated with Males speaking more in the discussion because the representatives were Males.

Source: FGD Organized for Krapyak Community (2024)

- Lessons learn Focus Group Discussion facilitation:

- In general, there were no significant obstacles during the two-day FGD. The FGD participants were generally able to follow the discussion and express their opinions based on the topics discussed. However, the disability group was quite passive at the beginning but was able to follow the discussion afterwards, although it seemed that the disability group was more comfortable communicating through written media than speaking directly.

- In relation to the set of questions and answers provided by the CRMC system, there were several sentences of questions from the topics discussed that needed emphasis to ensure the understanding of the FGD participants in accordance with the direction of the discussion. In addition, there were also some answers that were not accommodated by the options presented by the system. The closed answer options caused a little confusion among FGD participants in answering because their opinions were limited by the existing answer options.
- IKUPI applied some adjustments to the FGD questions (e.g. combining similar questions, rearranging the order of questions, grouping questions according to FGD participants, etc.) without changing the substance of the questions. These adjustments were made because the FGD questions were designed based on themes so that if the questions were delivered directly to the participants according to the CRMC application, the questions that arose would be repetitive. This was done to make the FGD more effective and to make the process of entering the FGD discussion results easier.
- It is important to remind participants to represent the voice of the group, not their personal voice.
- For community groups that seek to invite people with disabilities, there are two options that can answer the problem of biased answers, the first is to invite institutions/communities engaged in disability issues and/or still invite people with disabilities but carry out additional stages, namely triangulation with family members of people with disabilities or by observation.

3.6.4 Secondary Data

IKUPI and Mercy Corps Indonesia used secondary data sources as one of the methods of collecting baseline data, which can then be used as a reference for collecting end line data.

- *Google Earth* Satellite Imagery
- The 2022 Dataset from Central Java Public Works Water Resource and Spatial Planning (Pusdataru)
- The 2024 Document of Pekalongan City's Regional Action Plan for Climate Change Adaptation (RAD API)
- Participatory Land Use Planning (PLUP) Document of Krapyak Subdistrict
- Disaster Risk Assessment Document of Pekalongan City Disaster Management Board (BPBD)
- The 2022 Climate Risk and Impact Assessment in Kupang River Basins
- North Pekalongan District in Figures 2019-2023
- Summary of Pekalongan City's Revenue and Expenditure Budget (APBD) by Group and Type of Income, Expenditures, and Financing for the 2024 Budget Year
- Local mass media coverage

3.7 Grading Process

Grading activity was conducted by Mercy Corps Indonesia team, which consisted of four people, and the IKUPI team, which consisted of three people: Rukuh Setiadi, Rayhan Chansa Chaidir, and Purnomo Dwi Sasongko. The grading activity was also attended by Ms. Diah (Pekalongan City Development and Planning Agency) as the representative of the local government, also Mr. Banar (Hhead of Krapyak Subdistrict) and Mr. Ibnu Hajar (member of KSB) as the representative of local community. The grading result was reviewed by Rangi Laksiya Wengi, as the ZCRA MCI Program Consultant. Grading activity was held on November 13, 2024, at Hotel Santika Pekalongan.

The grading considered joint discussions, including reflection on the framework of the CRMC tool, consistency of information from the various data sources collected, emphasis on the most reliable and trusted information, whether selecting information from household surveys, key informant interview, focus group discussions, secondary data, or new information agreed upon during the grading process. Reviewing all information and including opinions from each grading participant was always done for every question. Additionally, recalling the data collection process could strengthen the confidence level in choosing a value. For instance, information obtained during the FGD process that supports answers from household surveys will lead the grading to align with the household survey responses.

During the grading process, sometimes the information displayed as a result of data collection were not sufficient to determine the grade, so that the team had to look for additional information to better determine the grade and increase the confidence level. This additional information had been recorded in the rationale box. In addition, there are several notes in the grading process, such as descriptions of answers that appear in each grading answer but are not found in all data collection methods. Some answer choices which do not reflect the community's condition but still require one of the answer options to be selected. This reduces the team's confidence in answering such questions. Therefore, the team selected "No" for the

question box "Are you confident in the assessment of this source?" and the reasons for the lack of confidence are outlined in the comments box.

There are also cases where the answers from household surveys, key informant interviews, FGD, and secondary data cannot address the grading, making the rationale box very useful for accommodating such questions. During the grading process, answers are also manually recorded, then re-entered and final checks are done the following day. This is because the rationale box and comments must be in English. The findings of the grading can be seen in the next chapter.

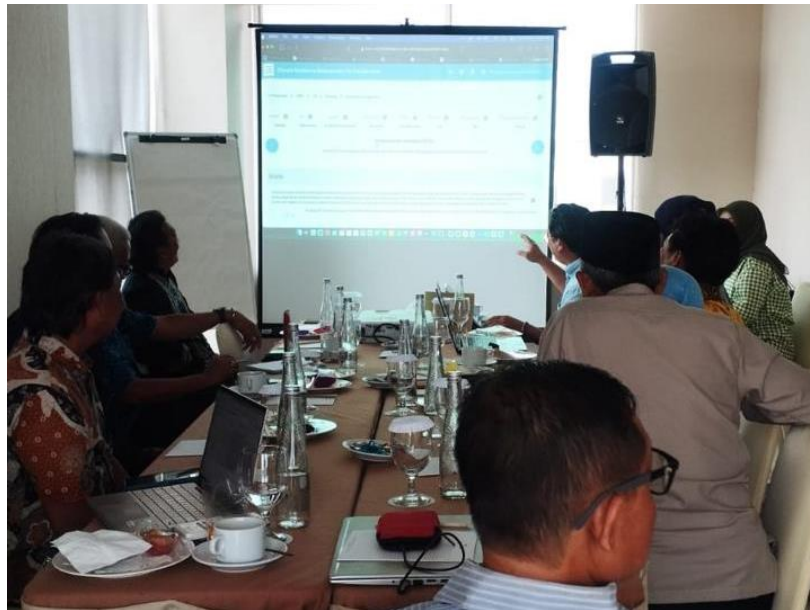


Figure III.3 Krapyak Community Grading Process
Source: Photo by Mercy Corps Indonesia (2024)

CHAPTER IV

Interpreting Grading Results

The CRMC is a decision-support tool, which means it provides one set of inputs into the wider process of designing resilience-building interventions and development work. The CRMC results can be viewed in the data cockpit, accessed on the Website-Based CRMC Application when the grading process is set to a completed status. When the grading process has been completed, the application will show a "results" menu on the screen. The results page will show the overall score of the selected hazards in the community, in this case, the Krapyak community has a flood hazard. Scores are sorted based on certain lenses such as the five capitals (5C), resilience index, community context, disaster risk management cycle, politics, 4R, 7 themes, and based on GAID (Gender, Age, Inequality, Disability). The data cockpit displays a visualization of the results obtained with various graphs sorted and also displays the same lenses as in the "results" window. As this research is a T0 or baseline study, the cockpit data only displays the T0 study. Community studies can be presented in aggregate or disaggregated data. For example, comparing the Krapyak community with other communities or only showing one of them.

Table IV.1 CRMC Grading Scale

Grade	Definitions
A	Best practice for managing the risk
B	Good industry standard, no immediate need for improvement
C	Deficiencies, room for improvement
D	Significantly below good standard, potential for imminent loss

Source: CRMC Project and Study Set Up, Data Collection, and Grading Document (2023)

The table above shows the level rating scale used in the CRMC tool. The CRMC tool assesses each source of resilience on an A-D letter scale. A indicates the best and D indicates the worst. Not all A's are strengths and not all D's are weaknesses. Questions that are not relevant to the community will automatically receive a bad grade. Therefore, there is a need for context and understanding regarding the community, not only seen from the lens of the five capitals, but there are many lenses that help in the analysis stage such as the community context lens, plan management cycle, 4R or 4 resilience, 7 themes, city resilience index, and so forth. The lenses in this CRMC tool refer to sources of resilience from five capitals with a total of 52 indicators. The assessment process that has been carried out provides the following information.

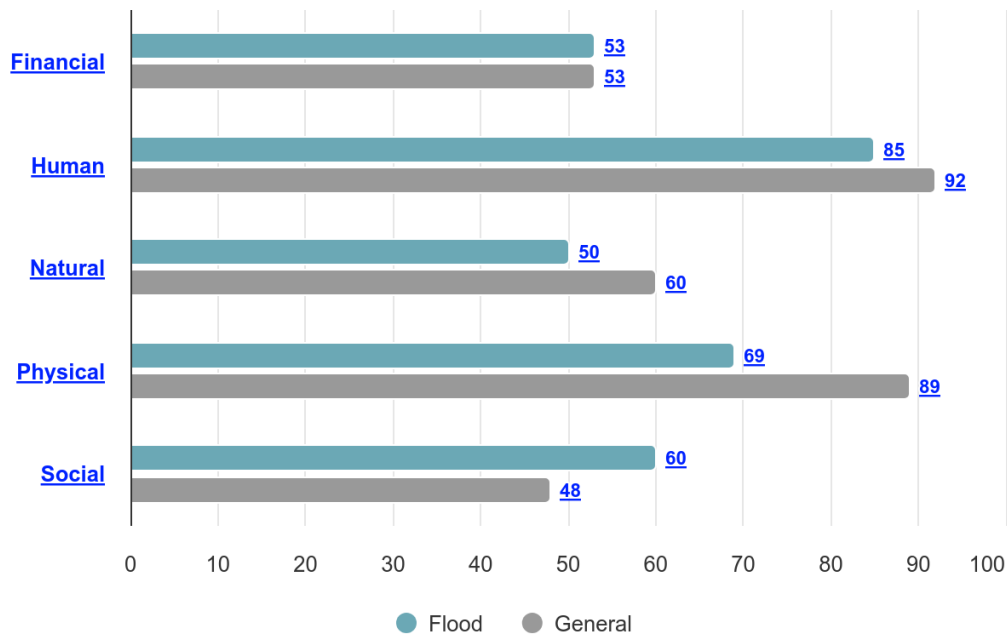


Figure IV.1 Grading Score of Five Capitals Krapyak Community
Source: Website-Based CRMC Application (2024)

The graph above shows the assessment scores of financial, human, natural, physical, and social capital differentiated from flood-specific hazards and general hazards. The high scores obtained were (1) human capital with a score of 85 for specific flood hazards and a score of 92 for general hazards. Followed by (2) physical capital of 69 for specific flood hazards and a score of 89 for general hazards, (3) natural capital of 50 for specific flood hazards and 60 for general hazards, (4) social capital of 60 for specific flood hazards and 48 for general hazards, and the lowest comes from (5) financial capital with scores of 53 for flood specific and general hazards respectively. Overall, human capital is related to the knowledge, education, skills and health inherent in the people in the Krapyak community.

High exposure to flooding for decades, informally, forms community capacity so that the community capital score is the highest. Financial capital relates to the level, variety and diversity of sources of income and access to finance. This can be seen from the government's financial condition and the household level in the community. From the government's perspective, the budget can be said to be sufficient to meet infrastructure needs. On the other hand, from the results of the household survey, the community considered themselves to be in the poor group, even though the head of Krapyak Sub-district stated that the welfare of the people in the Krapyak community are relatively good. The existence of this contradiction is a consideration when formulating interventions.

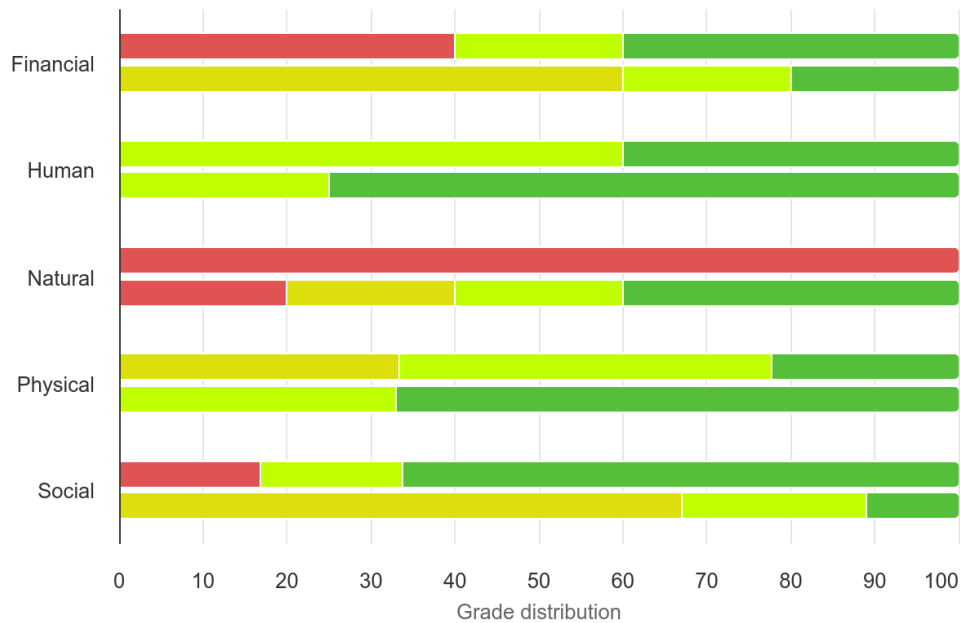


Figure IV.2 Distribution of A to D Grade of Five Capitals Lenses

Source: Website-Based CRMC Application (2024)

The bar diagram above shows the results of assessing the sources of resilience of the five capitals of the Krapyak community. The top bar in each capital shows flood-specific hazard resilience sources, while the bottom bar represents general resilience sources. Red indicates Grade D, yellow indicates Grade C, light green indicates Grade B, and dark green indicates Grade A. The X axis shows the proportion of each value in percent (%) while the Y axis shows the five capital components.

For the flood-specific hazard, (1) financial capital gets 40% of the Grade D, 20% of the Grade C, and 40% of the Grade A. (2) Human capital consists of 60% of the Grade B and 40% of the Grade A. (3) All (100%) natural capital consists of Grade D. (4) Physical capital gets 33% of the Grade C, 44% of the Grade B, and 22% of the Grade A. Finally, (5) social capital consists of 17% of the Grade D, 17% of the Grade B, and 67% of the Grade A.

For general (generic) hazards, (1) financial capital gets 60% of the Grade C, 20% of the Grade B, and 20% of the Grade A. (2) Human capital gets 25% of the Grade B and 75% of the Grade A. (3) Capital nature consists of 20% the Grade D, 20% of the Grade C, 20% of the Grade B, and 40% of the Grade A. (4) Physical capital consists of 33% the Grade B and 67% of the Grade C. (5) Capital social consists of 67% of the Grade C, 22% of the Grade B, and 11% of the Grade A. For more details, below is a breakdown of the values of each source of resilience for the five capitals from the graph above:

Table IV.2 Details of CRMC Grading Results

No	Code	Resilience Sources	Hazard	Grade
1	H01	Secondary school attendance	GENERIC	A
2	H02	Food availability	GENERIC	C
3	H03	First aid knowledge	GENERIC	A
4	H04	Awareness of need for climate change action	GENERIC	B
5	H05	Awareness of climate change risk	FLOOD	B
6	H06	Awareness of how nature mitigates risk	FLOOD	A

No	Code	Resilience Sources	Hazard	Grade
7	H07	Hazard exposure awareness	FLOOD	A
8	H09	Evacuation and safety knowledge	FLOOD	C
9	H10	Unsafe water awareness	FLOOD	C
10	S01	Mutual support	GENERIC	B
11	S02	Social inclusiveness of disaster risk management	GENERIC	C
12	S03	Community safety	GENERIC	B
13	S04	Local leadership	GENERIC	C
14	S05	Disaster response personnel	GENERIC	A
15	S06	Healthcare accessibility	GENERIC	B
16	S07	Trust in local authorities	GENERIC	C
17	S08	Intra-community equity	GENERIC	C
18	S09	Inter-community equity	GENERIC	D
19	S10	Risk reduction planning	FLOOD	A
20	S11	Response planning	FLOOD	B
21	S12	Family violence and response planning	FLOOD	D
22	S13	Stakeholder engagement in risk management	FLOOD	B
23	S14	Risk mapping	FLOOD	B
24	S15	Disaster impact data collection and use	FLOOD	A
25	P01	Energy supply continuity	GENERIC	A
26	P02	Transportation system continuity	GENERIC	C
27	P03	Communications system continuity	GENERIC	A
28	P04	Early warning	FLOOD	C
29	P05	Continuity of education	FLOOD	C
30	P06	Emergency infrastructure and supplies	FLOOD	C
31	P07	Continuity of healthcare during disaster	FLOOD	A
32	P08	Forecasting	FLOOD	B
33	P09	Household protection and adaptation	FLOOD	A
34	P10	Availability of clean, safe water	FLOOD	B
35	P11	Waste management and risk	FLOOD	D
36	P12	Large scale flood protection	FLOOD	C
37	N01	Tree cover	GENERIC	D
38	N02	Permeable surfaces	GENERIC	D
39	N03	Land use planning	GENERIC	A
40	N04	Resource Management	GENERIC	C
41	N05	Land/water interface health	GENERIC	C
42	N06	Ecological management for disaster risk reduction	FLOOD	D
43	F01	Household access to discretionary funds	GENERIC	D
44	F02	Community financial health	GENERIC	C
45	F03	Local government financial capacity	GENERIC	B
46	F04	Public infrastructure maintenance budget	GENERIC	C
47	F05	Climate change adaptation planning and investment	GENERIC	A
48	F06	Business continuity	FLOOD	C
49	F07	Household income continuity	FLOOD	D
50	F08	Risk reduction investments	FLOOD	A
51	F09	Disaster insurance	FLOOD	D

No	Code	Resilience Sources	Hazard	Grade
52	F10	Disaster recovery budget	FLOOD	A

Source: Website-Based CRMC Application (2024)

Description:

- H: *Human*
- S: *Social*
- P: *Physical*
- N: *Natural*
- F: *Financial*

The table above shows the assessment results of 52 indicators or sources of resilience based on the lens of five capitals, namely human, social, physical, natural and financial capital. The number of indicators is determined by the selected hazard. If you choose flood, the indicator increases like that. These indicators are general and specific flood hazards with a value range ranging from A-D. A grade means good practice and a D means it is further below standard. After seeing the results above, it is necessary to analyze and understand further the strengths and weaknesses of the community based on the hazard resilience that has been measured through this CRMC tool. The analysis stage consists of identifying, prioritizing, and providing the most likely plan for intervention needs.

First, (1) identify the strengths and weaknesses of the community's sources of resilience. Second, (2) prioritize (priorities 1, 2, 3, and so on) which sources of resilience need to be focused on. Finally, (3) plan intervention needs by mapping sources of resilience that can be used to increase low scores to higher ones. It should be remembered that CRMC is one source of information that can be considered when deciding on an intervention, the most important thing is consideration of priority programs and ongoing development vision and mission, repeated experiences that occur in the community, risks, availability of funds, experts, and so on.

4.1 GAID Perspectives on Resilience Sources

GAID or Gender, Age, Inequity, Disability (gender, age, injustice, disability) influences disaster risk. Therefore, interventions that consider GAID elements are needed to achieve good resilience programs related to climate hazards. This stage includes looking at the profile of GAID in the community and analyzing the linkage of GAID to certain sources of resilience. This is done to enhance or improve interventions based on GAID. GAID data provides an opportunity to minimize marginalization of vulnerable groups, such as elderly women or children with disabilities. Interventions need to consider the needs of different groups of people to create resilience interventions that are gender specific, sensitive to age, inequality, disability and empower vulnerable groups. Power dynamics, ethnicity, religion, etc. can provide additional information regarding consideration of GAID-based programs and to identify gaps between community groups.

4.1.1 Profile of Respondents Disaggregated by GAID

The GAID profile consists of the context of gender, age, injustice and disability inherent in Krapyak community respondents. The main respondent to see the profile of the Jeruksari

community is through collecting household surveys. The following is the GAID profile of the Krapyak community:

- Gender Context

Data collection is not limited to one particular gender but is based on conditions in the field when conducting household surveys. It can be seen below that the majority of respondents are women. This happened because the majority of those who answered the question were housewives. This is in line with data that the majority of people work outdoors and semi indoors at 23% each. In addition, the majority of family heads are men (73%). It is assumed that the majority of those working are men so that the majority at home are housewives or women.

Table IV.3 Respondents by Gender

Gender	Numbers	Percentage
Female	79	69%
Male	36	31%
Total	115	100%

Source: Household Surveys Data Processed (2024)

Table IV.4 Numbers of Female-Headed Households in Krapyak

Female-Headed Households	Numbers	Percentage
Yes	31	27%
No	84	73%
Total	115	100%

Source: Household Surveys Data Processed (2024)

In this case, the head of the family is not only seen from the presence or absence of a husband in the household, but also based on the largest income. Regarding gender, the majority of respondents' family heads are men, 73%. This causes the survey results to be mostly represented by women or housewives. The majority of women's voices are considered good for capturing women's perceptions and understanding and increasing gender equality.

- Age Context

The age categories at CRMC for respondents are 18-30 years, 31-65 years, and over 65 years. Disaggregation based on age is important to understand the gap in understanding flood risk, especially at vulnerable ages such as the elderly. Apart from that, programming targets are more precise to cover the gaps that occur. In this age range of respondents there is no age range for children and teenagers. Based on the survey results, the majority of respondents were in the productive group or 31-65 years old. There were quite a lot of elderly people, namely 24 people, when conducting the household survey. This is because many retired residents live in RW 10. The 18-30 year age group is the smallest age group with 9 people. There are differences in the age groupings in the CRMC tool and the Indonesian Central Statistics Agency.

Table IV.5 Respondent by Age

Age	Numbers	Percentage
Age of 18-30	9	8%
Age of 31-65	82	71%
More than 65	24	21%

Age	Numbers	Percentage
Total	115	100%

Source: Household Surveys Data Processed (2024)

- Inequity Context

These inequities include whether households identify as a minority or marginalized group. There are still some in the Krapyak community who declare themselves to be a minority group. Respondents who declared themselves to be minorities were respondents from religious and ethnic minorities.

Table IV.6 Household Members Identify as a Minority or Marginalized Groups

Identify as Minority	Numbers	Percentage
Yes	4	3%
No	108	94%
I don't know	3	3%
It's better not to say	0	0%
Total	115	100%

Source: Household Surveys Data Processed (2024)

- Disabilities

People with disabilities who are asked about in this CRMC tool are deaf or have serious hearing difficulties, blind or have difficulty seeing, cognitive impairments, and physical disabilities that interfere with daily mobility. There are also people with multiple or more disabilities, such as those who are deaf and mute. This question is asked to identify the number of people with disabilities in the household. People with disabilities often experience discrimination and are left behind in their communities, such as having difficulty getting jobs, health services and education. There are 10% or 12 individuals in the family who have one or more types of disabilities.

Table IV.7 Household Members with Disabilities

Household Members with Disabilities	Numbers	Percentage
No	103	90%
Yes, one or more	12	10%
Total	115	100%

Source: Household Surveys Data Processed (2024)

4.1.2 Interrelation between GAID and Certain Resilience Sources

Data based on GAID is inclusive for all community groups. It is said to be inclusive if it includes everyone, ensures that there are no biases and vulnerable groups are excluded, and returns the results of this process to society to empower and articulate the needs of all groups more clearly. CRMC provides 19 of 52 GAID-specific indicators or sources of resilience. The following is a disaggregation of resilience sources based on GAID.

Table IV.8 GAID-Specific Resilience Sources

No	Code	Resilience Sources	Grade
1	H01	Secondary school attendance	A
2	H02	Food availability	A

3	H07	Hazard exposure awareness	A
4	P07	Continuity of healthcare during disaster	A
5	P09	Household protection and adaptation	A
6	S06	Healthcare accessibility	A
7	S11	Response planning	A
8	S14	Risk mapping	A
9	H03	First aid knowledge	B
10	H09	Evacuation and safety knowledge	B
11	H10	Unsafe water awareness	B
12	P06	Emergency infrastructure and supplies	B
13	S03	Community safety	B
14	S13	Stakeholder engagement in risk management	B
15	S02	Social inclusiveness of disaster risk management	C
16	S07	Trust in local authorities	C
17	S08	Intra-community equity	C
18	S09	Inter-community equity	C
19	S12	Family violence and response planning	D

Source: Website-Based CRMC Application (2024)

GAID specific sources of resilience include human, physical, social capital only. In the assessment, the majority of GAID-specific resilience sources were graded as A, followed by B and C. There was only one grade D, namely family violence and emergency response planning.

- Best Practices of GAID-Specific Resilience Resource

1. School Attendance

In general, in Indonesia, there is no discrimination in school attendance based on gender, so it is an A grade or is good practice in the context of education in Indonesia. Based on the results of interviews with the principal of SMPN 09 Pekalongan City, 45% were female students and 55% were male students.

2. Food availability

This source of resilience discusses the community's food adequacy under normal conditions. The question asked was whether in the last four weeks, family members had slept hungry. Based on the data below, both gender and age tend to give similar answers, namely 701-76% do not experience hunger. At least 24% felt hungry in the last four weeks. The results of this survey are quite contradictory in that the sub-district authority stated that community welfare is considered to be good and assistance is provided regularly so that the hunger conditions here are considered not in line with data from the Krapyak sub-district government.

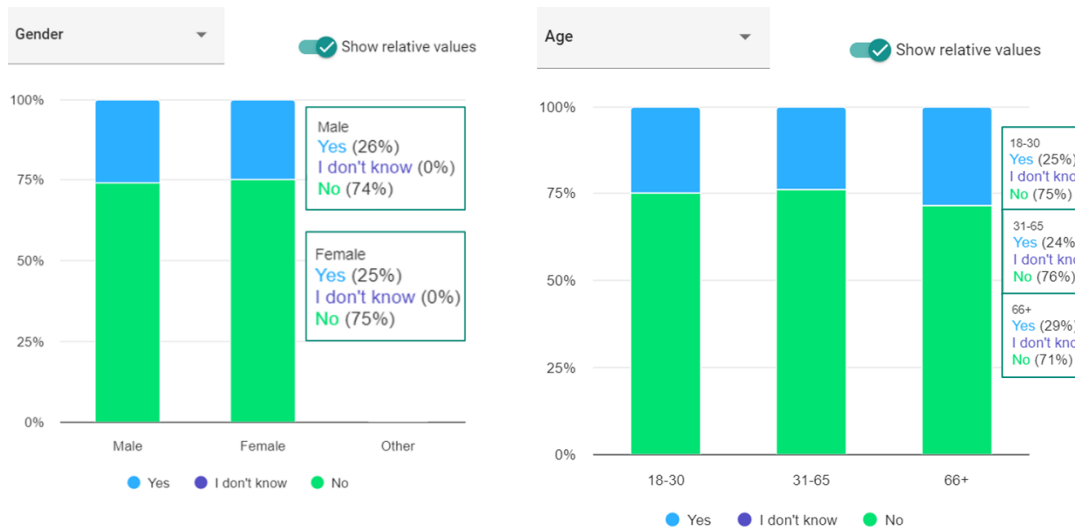


Figure IV.3 Household Member Got Hungry in the Past 4 Weeks
Source: Website-Based CRMC Application (2024)

3. Hazard Exposure Awareness

This resilience source asks which areas are most likely to be affected by flooding. It can be seen that respondents' knowledge regarding which areas were most affected by flooding between men and women is quite equal, namely 87% for men and 92% for women. In this source of resilience, women's knowledge is superior to men's. Based on age group, the answers of respondents aged 31-65 years and over 65 years also showed similarities in knowledge, namely in the range of 91-92% knowing which areas were heavily affected by flooding. In contrast to the 18-30 year age group, only 76% of this age group know which areas are most affected by flooding.

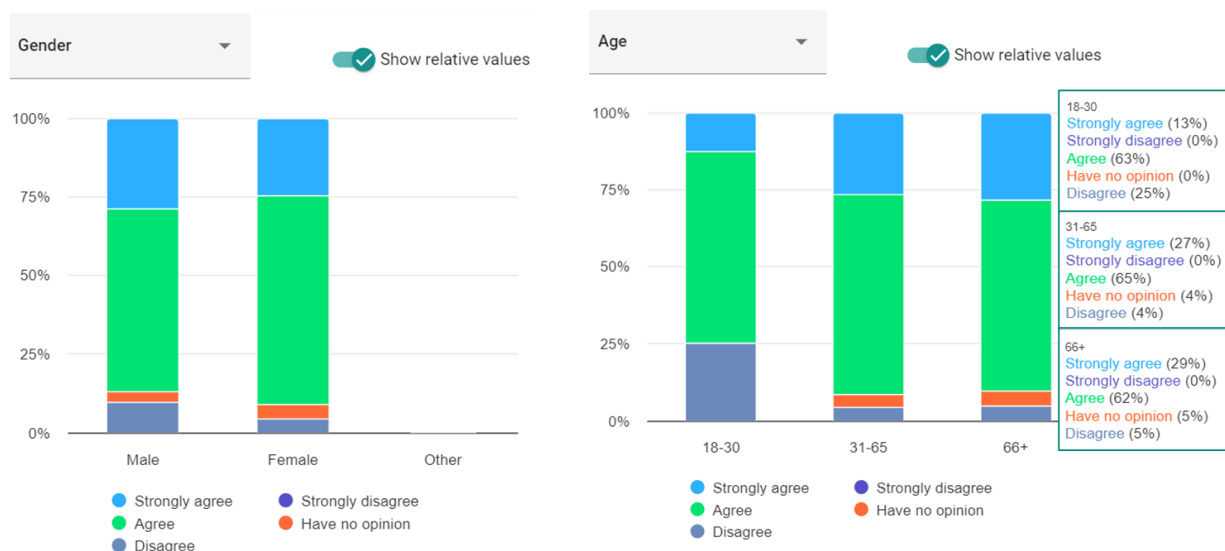


Figure IV.4 Knowledge of Areas Most Affected by Flooding
Source: Website-Based CRMC Application (2024)

4. Continuity of Healthcare during Disaster

This source of resilience aims to determine safe access to health services during floods. Men and women both answered that 72% could access health services during a flood. There were still respondents based on gender who could not access health services during the flood, 19% for men and 14% for women. If divided by age group, the majority of the age group is at least

63% able to access safe health services during floods. The majority of people can access health care during floods because when a disaster occurs, the health team will be on standby at a certain point, usually at the sub-district office, to provide health services. It is not uncommon for health services to use the "pick up the ball" method.

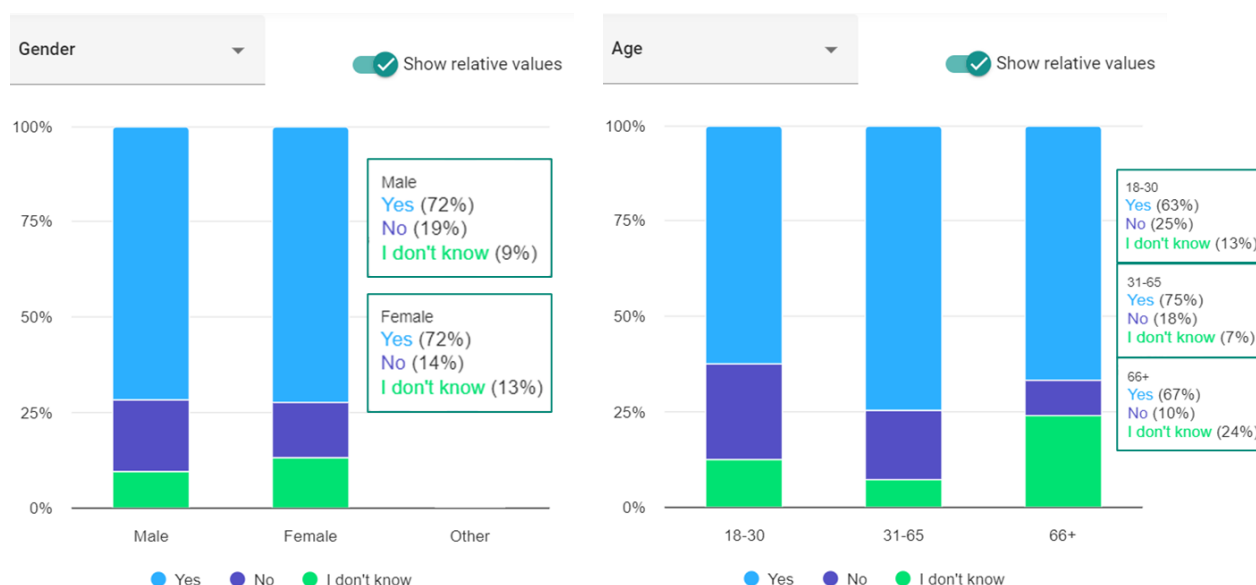


Figure IV.5 Safe Access to Health Services during Disaster

Source: Website-Based CRMC Application (2024)

5. Household Protection and Adaptation

The following are actions to protect property and assets carried out by households. The actions below can be selected more than once by respondents. The author does not see any specific GAID aspects carried out in the act of safeguarding property and assets either by gender or by age group. This is because the scale of protection is at the household level. All the protection carried out can protect all family members and help maintain the safety of family members from the dangers of flooding.

Table IV.9 Measures Taken to Keep Property and Assets Safe

No	Measurements	Percentage
1	Flood barrier or sand bags	29%
2	Wall around house	16%
3	Raised house	39%
4	Raised floors inside house	65%
5	Raised plinth/doorway	30%
6	Divert flood water around house (e.g. diversion channel, berms or similar)	15%
7	Use upper floor for storage	3%
8	Flood proofed building	8%
9	Flood proofed storage/contents	2%
10	Built or upgraded to latest building code	0%
11	Protected, waterproof or moved critical systems like wiring or mechanical systems	22%

Source: Website-Based CRMC Application (2024)

6. Healthcare Accessibility

This source of resilience measures how well the health care system adapts to the social, cultural, and physical needs of the community in normal times. The source of this resilience was asked through a Focus Group Discussion (FGD) with participants from the security unit represented by BPBD (supposedly Satpol PP but unable to attend), community council represented by BKM, elderly representatives, disability representatives, and PKK. Judging from the composition of the FGD participants, of the five representative participants, three of them were women. FGD participants in this specific GAID resilience resource are representative of the gender aspect. This source of resilience asks two things, the first is the reach of safe health services and barriers to accessing health services.

Health service coverage, all participants answered that health services can be reached safely for the entire community. Regarding barriers to accessing health services, almost all FGD participants answered that no one experienced barriers to accessing health, except for the community council (BKM) which answered that most or not all groups did not experience barriers in accessing health. The PKK group stated that the Krapyak Community Health Center was good in its health services, especially for vulnerable groups such as children, pregnant women, the elderly and people with disabilities. There is no discrimination in the service. Disabled participants also confirmed the statement from the PKK group, the disability representative said that all health facilities in Krapyak could meet their needs, such as ease of treatment and fast service.

7. Response Planning

This resource is to measure whether there is a flood emergency response plan for this community that includes a targeted plan to meet the needs of all groups including vulnerable groups. In addition to measuring whether the plan is tested regularly by involving key stakeholders. This question was answered through the Focus Group Discussion (FGD) method, key informant interviews and secondary data. FGD participants were represented by the community council (BKM), sub-district government, business groups, elderly representatives, local communities (KSB and MASJALI), local government, disability representatives, PKK, and youth organizations. The composition of participants has accommodated gender aspects (PKK representatives), age (youth youth groups and the elderly), and disability aspects (disability representatives). Meanwhile, key informant interviews were represented by BPBD and KSB.

In the Focus Group Discussion, almost all participants answered that there was a flood emergency response plan for the Krapyak community, only representatives of disabilities had no opinion or did not know about this question. This illustrates the condition that dissemination of information related to flood emergency response plans in the Krapyak community does not reach disability groups. However, to a follow-up question regarding whether the plan covered the needs of all community groups, all participants answered that it had been met for all community groups. All FGD participants also agreed that the plan was tested and updated regularly.

Based on key informant interviews, there are contradictory answers to all questions. BPBD answered that there was a flood emergency response plan in this community while KSB answered that there was no. Likewise for questions the plans are targeted to meet the specific needs of all social groups, and the plans are tested and updated regularly. This indicates that the plan actually exists but the dissemination of information has not reached the community level.

8. Risk Mapping

This resilience resource measures whether flood risk mapping has been carried out and whether the results are used in flood risk planning and management actions. The method for answering this source of resilience is key informant interviews and secondary data. Key informant interviews were asked to members of the community council, village head, BPBD, and BAPPEDA. The Krapyak Village flood risk map has been produced by BPBD and includes vulnerability components. BAPPEDA uses the map in development planning and BPBD uses the map in risk management actions. If there is a vulnerability component, then the GAID aspect is included in the mapping.

- Below Standard GAID-Specific Resilience Sources

1. Family Violence and Response Planning

So far, there is no flood emergency response plan that includes preventing domestic violence in Indonesia, including Pekalongan City, neither from the BPBD nor from the Pekalongan City DPMPPA is there a plan related to protection against family violence that is linked to emergency response planning. However, BPBD personnel have received socialization or training related to preventing domestic violence at disaster evacuation posts.

4.2 Identifying the SO-WN of Community Resilience Sources

This stage analyzes the strengths-opportunities (SO) and weaknesses-needs (WN) of all the lenses being assessed. Later, each source of resilience will be reviewed from various lenses and identified according to the strength (SO) or weakness (WN) of the source of resilience. Before going into the SO-WN matrix of various lenses, the table below shows the relevance of sources of resilience in the community as well as the identification of SO-WN from the lens of five capitals consisting of 52 sources of resilience. From the results of observations, it was found that the source of resilience with a value of A is a source of strength (S) and not all Grade B, C and D are weaknesses (W). The following is the explanation.

Table IV.10 Relevance and Identification of Resilience Sources

No	Code	Resilience Sources	Grade	Contextual Relevance	SO-WN	Description
1	H01	Secondary school attendance	A	Yes	S	Minimum attendance of 90% in a year and 100% student participation rate.
2	H02	Food availability	A	Yes	O	Based on information from the Krapyak head, the Krapyak community has good welfare and can meet its basic needs. However, the results of a household survey stated that 25% of people experienced hunger. There are contradictions between data from the sub-district government and the results of household surveys.
3	H04	Awareness of need for climate change action	A	Yes	S	High awareness of the need for action on climate change due to prolonged exposure to floods.
4	H06	Awareness of how nature mitigates risk	A	Yes	S	The community understands the importance of a healthy natural environment to reduce the risk of flooding.
5	H07	Hazard exposure awareness	A	Yes	S	The flooding affected most of the Krapyak area, with the northern area (RW 19) is generally the most affected one.
6	S06	Healthcare accessibility	A	Yes	S	Access to the Krapyak health center (Puskesmas) can be disrupted if there is a major flood, but health services do not stop and continue to operate. Health posts are also provided around flood locations.
7	S10	Risk reduction planning	A	Yes	S	City BPBD has a contingency plan, sub-district level risk map, and Destana.

No	Code	Resilience Sources	Grade	Contextual Relevance	SO-WN	Description
8	S11	Response planning	A	Yes	S	Utilizing the role of KSB and the Destana network when a disaster occurs. The close access of the Krapyak community to the center of Pekalongan City makes it easier to mobilize logistics and resources.
9	S14	Risk mapping	A	Yes	S	There is a risk mapping at sub-district level issued by BPBD.
10	S15	Disaster impact data collection and use	A	Yes	S	BPBD collects a post-event data recap, the data utilized by relevant agencies and informed to the mass media.
11	P01	Energy supply continuity	A	Yes	S	Floods do not affect the energy supplies (electricity, fuel, LPG, etc.).
12	P03	Communications system continuity	A	Yes	S	Flooding does not affect the quality of communication networks.
13	P07	Continuity of healthcare during disaster	A	Yes	S	Health services respond quickly with sufficient equipment for first aid and emergencies. Health workers are standing by at the disaster monitoring post and adopting the "going door-to-door" method (direct outreach to flood-affected residential area).
14	P09	Household protection and adaptation	A	Yes	S	Almost all houses in the Krapyak community have raised floors, doors, and windows, and some have raised roofs. Raising the roof costs more than landfilling (raising the floor).
15	N03	Land use planning	A	Yes	S	The distribution of land use allocation is outlined in the Spatial Plan (RTRW).
16	N05	Land/water interface health	A	Yes	S	There is a lot of flood adaptation and aberration containment infrastructure around the coast. Apart from that, there are mangrove forests around.
17	F05	Climate change adaptation planning and investment	A	Yes	S	Budget tagging is in the RAD API (Regional Action Plan for Climate Change Adaptation).
18	F06	Business continuity	A	Yes	S	The majority of people are white collar so their income is not disrupted if a disaster occurs.
19	F08	Risk reduction investments	A	Yes	S	Budget tagging is in the RAD API (Regional Action Plan for Climate Change Adaptation).
20	H03	First aid knowledge	B	No	-	There is no first aid training held by BPBD and the Health Service. However, the experience of frequent flooding can increase a community's capacity to deal with flooding, even without formal training. However, health workers are standing by

No	Code	Resilience Sources	Grade	Contextual Relevance	SO-WN	Description
						at the disaster monitoring post and adopting the "going door-to-door" method (direct outreach to flood-affected residential area).
21	H05	Awareness of climate change risk	B	Yes	O	High awareness of climate change risks due to prolonged exposure to floods.
22	H09	Evacuation and safety knowledge	B	Yes	O	The community knows how to evacuate, but they choose not to and instead prefer staying in their homes.
23	H10	Unsafe water awareness	B	Yes	N	Groundwater tends to taste salty at this time and becomes increasingly contaminated during flooding. Drinking water uses gallon water. PDAM provides water when a disaster occurs at a certain location.
24	S01	Mutual support	B	Yes	O	There is a feeling of wanting to help others when a disaster occurs.
25	S03	Community safety	B	Yes	S	There is minimal crime but the public remains alert.
26	S13	Stakeholder engagement in risk management	B	Yes	O	Almost all stakeholders are involved but it is not optimal.
27	P02	Transportation system continuity	B	No	-	There is no public transportation in the Krapyak area. There is only one road access to RW 19. If the road is flooded, you can use a boat.
28	P04	Early warning	B	Yes	O	Early warnings can be accessed from the internet, WhatsApp Group and WhatsApp Channel. The majority of people have received early warning information, but less than 50% (43%).
29	P06	Emergency infrastructure and supplies	B	Yes	O	The rubber boat is in good condition and can be used in an emergency.
30	P11	Waste management and risk	B	Yes	N	The community knows that rubbish makes flooding worse, there have been mutual cooperation activities but plastic rubbish is still piling up in settlements and on the banks of the Lodji River.
31	P12	Large scale flood protection	B	Yes	W	People's homes are not protected from flooding. People will put valuable items on boards or in high positions. The water pump in Krapyak is not cleaned regularly.

No	Code	Resilience Sources	Grade	Contextual Relevance	SO-WN	Description
32	N04	Resource Management	B	Yes	O	There are outreach activities carried out by DKP and Dinperpa for communities who rely on nature as a source of livelihood (fish ponds, fishermen and agriculture). Natural resources are in mostly good condition.
33	F03	Local government financial capacity	B	Yes	N	The budget is sufficient, but prioritization is needed.
34	F10	Disaster recovery budget	B	Yes	N	Utilizing spontaneous funding sources from CSR, BAZNAS, NGOs (collected during a disaster).
35	S02	Social inclusiveness of disaster risk management	C	Yes	W	Only a few community groups are involved in decision-making related to disaster risk management.
36	S04	Local leadership	C	Yes	W	Some people in this community believe the Krapyak officials is still unfair or favors certain groups or neighborhoods.
37	S05	Disaster response personnel	C	Yes	W	There are no incentives (financial and little training) for KSB members.
38	S07	Trust in local authorities	C	Yes	N	There is no integration between district and city development along the Pekalongan coast.
39	S08	Intra-community equity	C	No	-	There is no difference in employment and educational opportunities in the Krapyak community
40	S09	Inter-community equity	C	No	-	There is no difference in employment and educational opportunities between the Krapyak community and other surrounding areas.
41	P05	Continuity of education	C	Yes	W	The learning process is disrupted depending on the severity of the flood. Online learning is a non-interactive setting, with teachers only assigning tasks with no engagement in actual teaching activities.
42	P08	Forecasting	C	Yes	W	Information is always disseminated by BKMKG a maximum of 1-3 hours before bad weather but does not reach the public. Aquaculture business groups and batik entrepreneurs do not receive flood forecast information.
43	P10	Availability of clean, safe water	C	Yes	W	Clean water is generally not significantly disturbed although it can be contaminated by flooding. People have no choice to continue using flooded sanitation facilities.

No	Code	Resilience Sources	Grade	Contextual Relevance	SO-WN	Description
44	N02	Permeable surfaces	C	Yes	W	Some land surfaces are permeable, such as in mangrove forest areas. However, there are more built-up areas in this community such as settlements and there is minimal vegetation other than mangroves. Mangrove land is also decreasing because the Sheet Pile construction requires clearing the Mangrove forest.
45	F01	Household access to discretionary funds	C	Yes	W	The community in RW 10 is quite prosperous with the majority working as employees, while the community in RW 19 who work in the informal sector tend to have no savings.
46	F02	Community financial health	C	Yes	W	There is an imbalance in economic conditions between the RW 10 and RW 19 communities.
47	F04	Public infrastructure maintenance budget	C	Yes	N	Krapyak is a priority in disaster allocation in Pekalongan City. There is a need to increase the infrastructure budget ratio to avoid backlogs and delays in infrastructure development or maintenance.
48	S12	Family violence and response planning	D	No	-	The issue of domestic violence has not yet been incorporated into emergency response planning in Indonesia.
49	N01	Tree cover	D	Yes	W	Mangrove forests are few, namely less than 15% of the area of Krapyak.
50	N06	Ecological management for disaster risk reduction	D	No	-	This is not relevant to this community, as a coastal area. The context of this resilience source is located in highland regions.
51	F07	Household income continuity	D	Yes	W	49% of household respondents were disturbed or unable to work when a flood occurred. Either because access to the workplace is cut off or sources of livelihood that depend on nature such as ponds and fishermen cannot work when floods occur.
52	F09	Disaster insurance	D	No	-	People in RW 10 have the possibility of having life or health insurance because their economic level is better than RW 19. People in RW 19 tend to have low to moderate incomes so disaster insurance is not a priority in the Krapyak Community.

Source: Analysis by IKUPI (2024)

There are seven sources of resilience that are not relevant for the Krapyak community, namely, Knowledge of first aid (H03), Sustainability of the transportation system (P02), Intra-community justice (S08), Inter-community justice (S09), Family violence and emergency response planning

(S12), Ecological management for disaster risk reduction (N06), and Disaster insurance (F09). All sources of resilience with Grade A are opportunities (O) or strengths (S). In contrast to sources of resilience which have Grade B and C, they have a varied distribution starting from opportunities (O), needs (N), and weaknesses (W). So, from the SO-WN mapping of the five capitals, it can be reduced to a SO-WN matrix of resilience sources from various lenses consisting of the five capital lenses themselves, community context, disaster management cycle, 4R, 7 themes, city resilience index, and specific GAID. The following is the explanation.

Table IV.11 SO-WN Analysis of Resilience Sources in Different Lenses

SO/WN	Five Modals	Community Context	DRM Cycle	Resilience – 4Rs	7 Theme	City Resilience Index	GAID-Specific
Strengths/ Opportunities	Strengths: 1. Human (Grade A: H01, H04, H06, H07) 2. Social (Grade A: S06, S10, S11, S14, S15) 3. Physical (Grade A: P01, P03, P07, P09) 4. Natural (Grade A: N03, N05) 5. Financial (Grade A: F05, F06, F08) Opportunities: 1. Human (Grade A: H02; Grade B: H05, H09) 2. Social (Grade B: S01, S03, S13) 3. Physical (Grade B: P04, P06) 4. Natural (Grade B: N04)	1. Enabling Environment 2. Community Level	1. Prospective Risk Reduction 2. Preparedness 3. Response 4. Recovery 5. Corrective Risk Reduction	1. Resourcefulness 2. Robustness 3. Rapidity 4. Redundancy	1. Assets 2. Life and Health 3. Natural Environment 4. Livelihoods 5. Social Norms 6. Lifelines 7. Governance	1. Redundant 2. Flexible 3. Integrated 4. Inclusive 5. Reflective 6. Resourceful	The majority does not consider GAID.

SO/WN	Five Modals	Community Context	DRM Cycle	Resilience – 4Rs	7 Theme	City Resilience Index	GAID-Specific
Kebutuhan/ Weaknesses	Needs: 1. Human (Grade B: H10) 2. Social (Grade C: S07) 3. Physical (Grade B: P11) 4. Financial (Grade B: F03, F10; Grade C: F04) Weaknesses: 1. Social (Grade C: S02, S04, S05) 2. Physical (Grade B: P12; Grade C: P05, P08, P10) 3. Natural (Grade C: N02; Grade D: N01) 4. Financial (Grade C: F01, F02, F07)	Enabling Environment	1. Prospective Risk Reduction 2. Preparedness 3. Response	1. Resourcefulness 2. Robustness 3. Rapidity	1. Assets 2. Life and Health 3. Livelihoods 4. Social Norms 5. Governance	1. Flexible 2. Inclusive	The majority does not consider GAID.

Source: Analysis by IKUPI (2024)

4.3 Grouping Intervention Priority

Intervention prioritization is carried out by eliminating sources of resilience that are already strong (S) and sources of resilience that are not relevant to the community. Intervention priorities only focus on sources of resilience that can be added or strengthened (W and O), and their level value improved or increased (N). Priorities are divided into three classes, namely priority 1, priority 2, and priority 3. Priority 1 means increasingly prioritized. Priority analysis is the accumulation of scores from the lens of the five capitals; community context, and the disaster management cycle only. The five-modal lens using a Likert scale (5 classes) will be explained below, the community context is given a score of 5 for the community level, meaning it shows a very big impact on the community, and a score of 4 shows a quite big impact on the community. The disaster management cycle lens prioritizes the initial stage with the highest value (5) and the last stage of the cycle has a value of 1. The following is a description of each lens score description.

Table IV.12 Description of Intervention Priority Score

Score	Contextual Impact of Resilience Sources	Community Context	DRM Cycle
5	It has a huge impact and affects many people.	Community level	Prospective Risk Reduction
4	It has a significant impact and affects many people.	Enabling environment	Preparedness
3	Approximately 50% impacted the community.		Response
2	Minimum impact to the community.		Recovery
1	Negligible impact to the community.		Corrective Risk Reduction

Source: Analysis by IKUPI (2024)

After eliminating strengths and irrelevance sources to the Krapyak community, the total score for the three lenses was obtained. The greater the total score indicates the higher the priority in establishing interventions. The highest total score is 14 and the lowest is 9, so we get priority 1 with a total score range of 13-14, priority 2 with a total score range of 11-12 and priority 3 with a total score range of 9-10. So, the following priorities are obtained:

Table IV.13 Grouping Proposed Intervention Priorities

No	Code	Resilience Sources	Community Context	DRM Cycle	Total Score	Priority
1	S02	Social inclusiveness of disaster risk management	Community level	Prospective Risk Reduction	14	Priority 1
2	H05	Awareness of climate change risk	Community level	Prospective Risk Reduction	14	Priority 1
3	S13	Stakeholder engagement in risk management	Community level	Preparedness	14	Priority 1
4	S04	Local leadership	Community level	Preparedness	14	Priority 1
5	N04	Resource Management	Enabling environment	Prospective Risk Reduction	13	Priority 1
6	P08	Forecasting	Enabling environment	Preparedness	13	Priority 1
7	F02	Community financial health	Community level	Preparedness	13	Priority 1
8	F04	Public infrastructure maintenance budget	Enabling environment	Prospective Risk Reduction	13	Priority 1
9	F07	Household income continuity	Community level	Preparedness	13	Priority 1
10	H09	Evacuation and safety knowledge	Community level	Preparedness	12	Priority 2
11	P06	Emergency infrastructure and supplies	Enabling environment	Preparedness	12	Priority 2
12	S07	Trust in local authorities	Community level	Response	12	Priority 2

No	Code	Resilience Sources	Community Context	DRM Cycle	Total Score	Priority
13	F01	Household access to discretionary funds	Community level	Response	12	Priority 2
14	H10	Unsafe water awareness	Community level	Response	11	Priority 2
15	S01	Mutual support	Community level	Response	11	Priority 2
16	P04	Early warning	Enabling environment	Preparedness	11	Priority 2
17	P11	Waste management and risk	Enabling environment	Response	11	Priority 2
18	F03	Local government financial capacity	Enabling environment	Preparedness	11	Priority 2
19	H02	Food availability	Enabling environment	Response	10	Priority 3
20	P12	Large scale flood protection	Enabling environment	Corrective Risk Reduction	10	Priority 3
21	S05	Disaster response personnel	Enabling environment	Recovery	10	Priority 3
22	P05	Continuity of education	Enabling environment	Recovery	10	Priority 3
23	P10	Availability of clean, safe water	Enabling environment	Response	10	Priority 3
24	N01	Tree cover	Enabling environment	Corrective Risk Reduction	10	Priority 3
25	F10	Disaster recovery budget	Enabling environment	Recovery	9	Priority 3
26	N02	Permeable surfaces	Enabling environment	Corrective Risk Reduction	9	Priority 3

Source: Analysis by IKUPI (2024)

This priority is obtained purely from the CRMC process using a scoring method in determining prioritization. These initial priorities are used as a reference in compiling interventions and then a pre-feasibility study will be carried out according to resource availability, costs, time, technological capabilities, expertise, relevance to the ZCRA program being and/or being run by Mercy Corps Indonesia. The discussion regarding this alignment will be continued in the next chapter.

CHAPTER V

Potential Intervention

This section outlines a set of activities or interventions to build community resilience to climate change. Interventions can take the form of infrastructure, tools, technology, methods or approaches, or systems. Interventions can relate to other sources of resilience, more than one theme or other capital. The results of the assessment can be used to explore and identify sources of resilience or themes which have the greatest resilience needs and opportunities that can be intervened. This is done by looking at strong and weak areas, interactions between sources of resilience, and opportunities to overcome problems of concern in the Krapyak community. Not all strengths are opportunities and not all weaknesses need intervention. There are sources of resilience that are not relevant in the Krapyak community, such as one source of natural resilience, namely regarding ecological management for disaster risk reduction. In addition, slope management is no longer relevant in this community because the study area is a coastal which has no a significant slope.

Interventions are arranged based on priority sources of resilience through the CRMC review process. Priorities and interventions based on this CRMC study are in columns 2 and 3 (Table V.1). Then a pre-feasibility study was carried out with the Mercy Corps Indonesia team which was carried out on December 19 2024. This agenda was carried out to align interventions based on the CRMC study with the ZCR program. In this stage, new priorities and interventions appear in columns 4 and 5 in Table V.1. The new priority is to seek interventions that can be followed up by MercyCorps Indonesia and other actors. Other actors make it possible to follow up on interventions that are both relevant and irrelevant to the ZCRA program but important for the community context. Table V.1 below compares interventions based on the CRMC study and interventions after alignment to the pre-feasibility study, as follows.

Table V.1 Comparison of Intervention Before and After Pre-Feasibility Study

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
1	Priority 1	Routine regeneration of KSB and Destana memberships as a form of information exchange within the community (S02)	Priority 2	Routine regeneration of KSB and Destana memberships as a form of information exchange within the community (S02)
2	Priority 1	Conducting training of trainers for KSB and Destana in collaboration with external parties such as NGOs, CSR initiatives, and relevant disaster management authorities (H05)	Priority 2	Conducting training of trainers for KSB and Destana in collaboration with external parties such as NGOs, CSR initiatives, and relevant disaster management authorities (H05)
3	Priority 1	Conducting participatory mapping involving all community groups to identify flood hazards and evacuation routes (H05)	Priority 1	Conducting participatory mapping involving all community groups to identify flood hazards and evacuation routes (H05)
4			Priority 1	Socialization/training on disaster adaptation efforts (training related to resource mobilization, PLUP, cultivation, CIS) (H05)
5	Priority 1	Strengthening KSB by involving members from all segments of the community, including vulnerable groups, youth, women, business actors, religious organizations, and others (S13)	Priority 2	Strengthening KSB by involving members from all segments of the community, including vulnerable groups, youth, women, business actors, religious organizations, and others (S13)
6	Priority 1	Integrating the KSB organization with Destana (S13)	Priority 1	Encouraging synergy between KSB organizations and Destana (S13)
7	Priority 1	Developing a contingency plan at the subdistrict level (S13)	Priority 1	Developing a contingency plan at the subdistrict level (S13)
8	Priority 1	Facilitating the integration between KSB, Destana, and other environmental and disaster management organizations (S04)	Priority 1	Encouraging synergy between KSB, Destana, and other environmental and disaster-focused groups (S04)
9	Priority 1	Allocating the Local Government Budget (APBD) at the subdistrict level for disaster reduction programs, including the procurement of logistics,	Priority 1	Allocating community self-help funds for social and environmental programs (S04)

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
		infrastructure, and equipment maintenance (S04)		
10	Priority 1	Ensuring transparency in the management of the Local Government Budget (APBD) at the sub-district level and the distribution of aid to the community (S04)	Priority 1	Transparency in the management and distribution of community aid (S04)
11	Priority 1	Procurement of wave-breaking infrastructure (Tetrapods) along Slamaran Beach (N04)	Not feasible	Procurement of wave-breaking infrastructure (Tetrapods) along Slamaran Beach (N04)
12	Priority 1	River sediment dredging (N04)	Priority 3	Kupang River sediment dredging (N04)
13	Priority 1	The procurement of simple waste filtration equipment in collaboration with academics, CSR initiatives, NGOs, and others (N04)	Priority 2	The procurement of simple waste filtration equipment in collaboration with academics, CSR initiatives, NGOs, and others (N04)
14	Priority 1	Periodic mangrove planting with intensive monitoring during the first 3 months (N04)	Priority 2	Periodic mangrove planting at feasible locations, with intensive monitoring during the first 3 months (N04)
15			Priority 1	Recommending the building of seawater storage ponds to provide seawater for brackish aquaculture (N04)
16	Priority 1	Developing a warning system that sends emergency messages to the public via SMS (P08)	-	-
17	-	-	Priority 1	Building the Climate Information System, a participatory monitoring system allows communities to report the condition of their area directly or online to the local authorities (P08)
18	Priority 1	Installing real-time digital information boards monitored directly by BMKG in specific areas (P08)	Priority 1	Installing real-time digital information boards monitored by community representative team, supported by experts. A development of Climate Information System initiated by Mercy Corps Indonesia (P08)

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
19	Priority 1	Establishment of community savings group (Arisan Urugan) (F02)	Priority 2	Savings group establishment as a contingency fund solution for households affected by floods, such as raising the house floor, etc. (F02)
20			Priority 1	Strengthening access to financial institutions/capital (F02)
21	Priority 1	Leveraging effective and low-cost Nature-Based Solutions (F04)	Priority 2	Leveraging effective and low-cost Nature-Based Solutions (F04)
22	Priority 1	Diversifying livelihoods with seasonal jobs (for example, boat rentals during floods) (F07)	Priority 1	Diversifying livelihoods with seasonal jobs (for example, milk process training). (F07)
23	Priority 1	Enhancing community skills and access to technology-based economic opportunities (freelance, online shop, and content creations) (F07)	Priority 1	Enhancing community skills and access to technology-based economic opportunities (freelance, online shop, and content creations) (F07)
24	Priority 1	Procurement of pond water monitoring technology (temperature, pH, salinity, etc.) to improve milkfish production (F07)	Priority 1	Procurement of pond water monitoring technology (temperature, pH, salinity, etc.) to improve milkfish production (F07)
25	Priority 1	Local product branding (F07)	Priority 1	Local product branding executed by Moya Bahari Perdana (F07)
26			Priority 1	Processing various fishery products (such as pressure-cooked milkfish, frozen food, crackers, shrimp paste, etc.), including packaging (F07)
27			Priority 1	Initiating the marketing of fishery products capable of reaching the global market (pressure-cooked milkfish) (F07)
28			Priority 1	Collaboration to strengthen the supply chain of affordable and high-quality fish feed that is accessible to fish farmers (KJA and fry cultivation) (F07)
29	Priority 2	Regularly disseminating information in the form of videos or posters about the benefits of evacuation, evacuation mechanisms, and visualizations of	Priority 2	Regularly disseminating information in the form of videos or posters about the benefits of evacuation, evacuation mechanisms, and

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
		shelters and their facilities through WhatsApp groups (H09)		visualizations of shelters and their facilities through WhatsApp groups (H09)
30	Priority 2	Improvement of facilities in shelters (clean water and sanitation, food, proper bedding, and special room for pregnant women, the elderly, people with disabilities, and children) (H09)	-	-
31	Priority 2	Improving accessibility of evacuation routes to assembly points (H09)	-	-
32	Priority 2	Utilizing KSB and Destana members to maintain emergency equipment and flood mitigation infrastructure (P06)	Priority 2	Utilizing KSB and Destana members to maintain emergency equipment and flood mitigation infrastructure (P06)
33	Priority 2	Identifying the availability of functioning emergency equipment (P06)	Priority 2	Identifying the availability of functioning emergency equipment (P06)
34			Priority 2	Improvement of facilities in shelters (clean water and sanitation, food, proper bedding, and special room for pregnant women, the elderly, people with disabilities, and children) (P06)
35			Priority 2	Improving accessibility of evacuation routes to assembly points (P06)
36	Priority 2	Developing collaboration between city, regency, and provincial governments in addressing tidal flooding (S07)	Priority 1	Developing collaboration between city, regency, and provincial governments and related actors in Policy Dialogue Strategic Alliance in addressing tidal flooding (S07)
37	Priority 2	Integrating infrastructure development between the regency and city along the Pekalongan coastline (S07)	Priority 1	Develop recommendation for integration of infrastructure development between the regency and city along the Pekalongan coastline through the Integrated Coastal Zone Management development (S07)
38	Priority 2	Developing a flood risk management model using a pentahelix approach (S07)	Priority 1	Developing a flood risk management model using a pentahelix approach with support and collaboration from key actors alliance in Policy Dialogue. (S07)

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
39	Priority 2	Implementing a cross-subsidies scheme (higher-income members contribute more than lower-income members) in the community savings group systems (F01)	Priority 2	Implementing a cross-subsidies scheme (higher-income members contribute more than lower-income members) in the community savings group systems (F01)
40	Priority 2	Procurement of Community Water Supply (Pamsimas) (H10)	-	-
41			Priority 2	Education on the use of alternative water sources (rainwater harvesting) for non-drinkable water needs (H10)
42	Priority 2	Procurement of public WASH facilitation (H10)	Priority 2	Procurement of public WASH facilitation (H10)
43	Priority 2	Conducting regular community forum (S01)	Priority 1	Conducting regular community forum (Musrembang), particularly to advocate the integration of RL programs into community activities (S01)
44	Priority 2	Training KSB members and sub-district officials in disseminating information to the community, including through door-to-door communication, using loudspeakers, and WhatsApp groups (P04)	Priority 2	Training KSB members and sub-district officials in disseminating information to the community, including through door-to-door communication, using loudspeakers, and WhatsApp groups (P04)
45	Priority 2	Socializing the use of early warning data at the community level, especially for fishing and fish farming groups (P04)	Priority 2	Socializing the use of early warning data at the community level, especially for fishing and fish farming groups (P04)
46	Priority 2	Basics of home composting training (P11)	Priority 2	Basics of home composting training (P11)
47	Priority 2	Reactivation of gotong royong (community member doing volunteer work) activities and beach clean-up efforts (P11)	Priority 2	Reactivation of gotong royong (community member doing volunteer work) activities and beach clean-up efforts (P11)
48	Priority 2	Providing incentives to community groups driving environmental management (P11)	Priority 2	Providing incentives to community groups driving environmental management (P11)
49			Priority 2	Socialization and training on waste management (P11)

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
50			Priority 2	Waste Treatment Plant (TPST) optimization TPST (P11)
51	Priority 2	Actively submitting and receiving program proposals to and from national and international organizations or donors (F03)	Priority 1	Actively assisting local stakeholders in submitting and receiving program proposals to and from national and international institutions or donors, through collaborative efforts between Mercy Corps Indonesia and relevant strategic collaborators, including government and NGOs with aligned visions (F03)
52	Priority 2	Utilizing APBD at the sub-district level effectively to enhance financing for sustainable and environmentally friendly flood infrastructure (F03)	Priority 1	Encouraging the effective use of CSR funds and other donors to enhance financing for sustainable and environmentally friendly flood infrastructure (F03)
53	Priority 3	-	Priority 2	Urban farming (KRPL) for vegetables and fish (LTP) (H02)
54	Priority 3	Routine maintenance of flood infrastructure (P12)	Priority 2	Routine maintenance of flood infrastructure (P12)
55			Priority 2	River normalization and drainage systems improvement (P12)
56			Priority 2	Procurement of pump stations for the central area of Krapyak (P12)
57			Priority 2	Elevate roads and bridges above flood level in certain area impacted to floods (P12)
58	Priority 3	Integration of KSB and Destana (S05)	Priority 1	Encouraging synergy between KSB and Destana (S05)
59	Priority 3	Optimizing online platforms for e-learning (P05)	Priority 3	Optimizing online platforms for e-learning (P05)
60	Priority 3	Conducting teaching and learning in shelters (P05)	Priority 3	Conducting teaching and learning in shelters (P05)
61	Priority 3	Providing additional clean water supply at certain places during floods (P10)	Priority 3	Providing additional clean water supply at certain places during floods (P10)
62	Priority 3	Routine maintenance of the water piping network (P10)	Priority 3	Routine maintenance of the water piping network (P10)

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
63	Priority 3	Installation of emergency or portable water filtration systems at shelter (P10)	Priority 3	Installation of emergency or portable water filtration systems at shelter (P10)
64	Priority 3	Educating the community to store water in sealed containers during disasters to prevent water contamination (P10)	Priority 2	Educating the community to store water in sealed containers during disasters to prevent water contamination (integrating with PLUP activities) (P10)
65	Priority 3	Providing portable toilets at certain places or shelter (P10)	Priority 3	Providing portable toilets at certain places or shelter (P10)
66	Priority 3	Soil quality rehabilitation with associative mangrove plants (e.g., Ketapang, Sea Pine, Legundi, Sea Hibiscus, and others) (N01)	Priority 2	Soil quality rehabilitation with associative mangrove plants (e.g., Ketapang, Sea Pine, Legundi, Sea Hibiscus, and others) (review of the PLUP and LPTP to be executed) (N01)
67	Priority 3	Community training on sustainable land use practices (N01)	Priority 2	Community training on sustainable land use practices (N01)
68	Priority 3	Restriction on mangrove deforestation or land conversion (N01)	Priority 3	Restriction on mangrove deforestation or land conversion (N01)
69	Priority 3	Socialization of the use of natural pesticides in agricultural land (N01)	Priority 2	Socialization of the use of natural pesticides in agricultural land (review of the PLUP and LPTP to be executed) (N01)
70			Priority 3	Reforestation in residential areas along riverbanks and main roads (N01)
71	Priority 3	Simplification of the bureaucratic process for disbursing emergency funds (F10)	-	-
72			Priority 3	Optimization of disaster response and aid distribution scheme (F10)
73	Priority 3	Coastal rehabilitation and sustainable coastal land use management (N02)	Priority 1	Recommendations for the coastal area management scheme and sustainable coastal land use (N02)
74	Priority 3	Planting various types of vegetation in residential areas, embankments, and agricultural land (N02)	Priority 2	Reforestation in residential areas along riverbanks and main roads (LPTP) (N02)
75	Priority 3	Normalization of drainage and river systems (N02)	Not feasible	Normalization of drainage and river systems (N02)
76	Priority 3	Application of bamboo and wood roads in coastal area (N02)	Not feasible	Application of bamboo and wood roads in coastal area (N02)

No	Proposed Priority	Proposed Intervention	Priority after Pre-Feasibility Alignment	Interventions after Pre-Feasibility Alignment
77	Priority 3	Reforestation of mangrove deforestation around the sheet pile area (N02)	Not feasible	Reforestation of mangrove deforestation around the sheet pile area (N02)

Source: Pre-Feasibility Study Outcomes (2024)

Color Coding Description:

-  Relevant, important, and aligned with ToC, Logframe, and ZCRA strategy
-  Relevant, Important, but not aligned with ToC, Logframe and ZCRA strategy
-  Not relevant to ZCRA, but important for the area (community/village level), potential followed up by other actors
-  Not relevant to ZCRA and community context

5.1 Priority 1

The table below represents priority 1 for Krapyak community intervention.

Table V.2 Priority 1 of Krapyak Community Interventions

No	Intervention	Resilience Sources	Program Executor
1	Conducting participatory mapping involving all community groups to identify flood hazards and evacuation routes (H05)	Awareness of climate change risk	Other actors
2	Socialization/training on disaster adaptation efforts (training related to resource mobilization, PLUP, cultivation, CIS) (H05)	Awareness of climate change risk	Mercy Coprs Indonesia
3	Encouraging synergy between KSB organizations and Destana (S13)	Stakeholder engagement in risk management	Other actors
4	Developing a contingency plan at the subdistrict level (S13)	Stakeholder engagement in risk management	Other actors
5	Encouraging synergy between KSB, Destana, and other environmental and disaster-focused groups (S04)	Local leadership	Other actors
6	Allocating community self-help funds for social and environmental programs (S04)	Local leadership	Other actors
7	Transparency in the management and distribution of community aid (S04)	Local leadership	Other actors
8	Recommending the building of seawater storage ponds to provide seawater for brackish aquaculture (N04)	Resource Management	Mercy Coprs Indonesia
9	Building the Climate Information System, a participatory monitoring system allows communities to report the condition of their area directly or online to the local authorities (P08)	Forecasting	Mercy Coprs Indonesia
10	Installing real-time digital information boards monitored by community representative team, supported by experts. A development of Climate Information System initiated by Mercy Corps Indonesia (P08)	Forecasting	Mercy Coprs Indonesia
11	Strengthening access to financial institutions/capital (F02)	Community financial health	Mercy Coprs Indonesia
12	Diversifying livelihoods with seasonal jobs (for example, milk process training). (F07)	Household income continuity	Mercy Coprs Indonesia
13	Enhancing community skills and access to technology-based economic opportunities (freelance, online shop, and content creations) (F07)	Household income continuity	Mercy Coprs Indonesia
14	Procurement of pond water monitoring technology (temperature, pH, salinity, etc.) to improve milkfish production (F07)	Household income continuity	Other actors

No	Intervention	Resilience Sources	Program Executor
15	Local product branding executed by Moya Bahari Perdana (F07)	Household income continuity	Mercy Coprs Indonesia
16	Processing various fishery products (such as pressure-cooked milkfish, frozen food, crackers, shrimp paste, etc.), including packaging (F07)	Household income continuity	Mercy Coprs Indonesia
17	Initiating the marketing of fishery products capable of reaching the global market (pressure-cooked milkfish) (F07)	Household income continuity	Mercy Coprs Indonesia
18	Collaboration to strengthen the supply chain of affordable and high-quality fish feed that is accessible to fish farmers (KJA and fry cultivation) (F07)	Household income continuity	Mercy Coprs Indonesia
19	Developing collaboration between city, regency, and provincial governments and related actors in Policy Dialogue Strategic Alliance in addressing tidal flooding (S07)	Trust in local authorities	Mercy Coprs Indonesia
20	Develop recommendation for integration of infrastructure development between the regency and city along the Pekalongan coastline through the Integrated Coastal Zone Management development (S07)	Trust in local authorities	Mercy Coprs Indonesia
21	Developing a flood risk management model using a pentahelix approach with support and collaboration from key actors alliance in Policy Dialogue. (S07)	Trust in local authorities	Mercy Coprs Indonesia
22	Conducting regular community forum (Musrembang), particularly to advocate the integration of RL programs into community activities (S01)	Mutual support	Mercy Coprs Indonesia
23	Actively assisting local stakeholders in submitting and receiving program proposals to and from national and international institutions or donors, through collaborative efforts between Mercy Corps Indonesia and relevant strategic collaborators, including government and NGOs with aligned visions (F03)	Local government financial capacity	Other actors
24	Encouraging the effective use of CSR funds and other donors to enhance financing for sustainable and environmentally friendly flood infrastructure (F03)	Local government financial capacity	Other actors
25	Encouraging synergy between KSB and Destana (S05)	Disaster response personnel	Mercy Coprs Indonesia
26	Recommendations for the coastal area management scheme and sustainable coastal land use (N02)	Permeable surfaces	Mercy Coprs Indonesia

Source: Pre-Feasibility Study Outcomes (2024)

5.2 Priority 2

The table below represents priority 2 for Krapyak community intervention.

Table V.3 Priority 2 of Krapyak Community Interventions

No	Intervention	Resilience Sources	Program Executor
1	Routine regeneration of KSB and Destana memberships as a form of information exchange within the community (S02)	Social inclusiveness of disaster risk management	Other actors
2	Conducting training of trainers for KSB and Destana in collaboration with external parties such as NGOs, CSR initiatives, and relevant disaster management authorities (H05)	Awareness of climate change risk	Other actors
3	Strengthening KSB by involving members from all segments of the community, including vulnerable groups, youth, women, business actors, religious organizations, and others (S13)	Stakeholder engagement in risk management	Other actors
4	The procurement of simple waste filtration equipment in collaboration with academics, CSR initiatives, NGOs, and others (N04)	Resource management	Other actors
5	Periodic mangrove planting at feasible locations, with intensive monitoring during the first 3 months (N04)	Resource management	Other actors
6	Savings group establishment as a contingency fund solution for households affected by floods, such as raising the house floor, etc. (F02)	Community financial health	Other actors
7	Leveraging effective and low-cost Nature-Based Solutions (F04)	Public infrastructure maintenance budget	Other actors
8	Regularly disseminating information in the form of videos or posters about the benefits of evacuation, evacuation mechanisms, and visualizations of shelters and their facilities through WhatsApp groups (H09)	Evacuation and safety knowledge	Other actors
9	Utilizing KSB and Destana members to maintain emergency equipment and flood mitigation infrastructure (P06)	Emergency infrastructure and supplies	Other actors
10	Identifying the availability of functioning emergency equipment (P06)	Emergency infrastructure and supplies	Other actors
11	Improvement of facilities in shelters (clean water and sanitation, food, proper bedding, and special room for pregnant women, the elderly, people with disabilities, and children) (P06)	Emergency infrastructure and supplies	Other actors
12	Improving accessibility of evacuation routes to assembly points (P06)	Emergency infrastructure and supplies	Other actors
13	Implementing a cross-subsidies scheme (higher-income members contribute	Household access to discretionary funds	Other actors

No	Intervention	Resilience Sources	Program Executor
	more than lower-income members) in the community savings group systems (F01)		
14	Education on the use of alternative water sources (rainwater harvesting) for non-drinkable water needs (H10)	Unsafe water awareness	Other actors
15	Procurement of public WASH fasilitation (H10)	Unsafe water awareness	Other actors
16	Training KSB members and sub-district officials in disseminating information to the community, including through door-to-door communication, using loudspeakers, and WhatsApp groups (P04)	Early warning	Other actors
17	Socializing the use of early warning data at the community level, especially for fishing and fish farming groups (P04)	Early warning	Other actors
18	Basics of home composting training (P11)	Waste management and risk	Other actors
19	Reactivation of gotong royong (community member doing volunteer work) activities and beach clean-up efforts (P11)	Waste management and risk	Other actors
20	Providing incentives to community groups driving environmental management (P11)	Waste management and risk	Other actors
21	Socialization and training on waste management (P11)	Waste management and risk	Other actors
22	Waste Treatment Plant (TPST) optimalization TPST (P11)	Waste management and risk	Other actors
23	Urban farming (KRPL) for vegetables and fish (LPTP) (H02)	Food availability	Other actors
24	Routine maintenance of flood infrastructure (P12)	Large scale flood protection	Other actors
25	River normalization and drainage systems improvement (P12)	Large scale flood protection	Other actors
26	Procurement of pump stations for the central area of Krapyak (P12)	Large scale flood protection	Other actors
27	Elevate roads and bridges above flood level in certain area impacted to floods (P12)	Large scale flood protection	Other actors
28	Educating the community to store water in sealed containers during disasters to prevent water contamination (integrating with PLUP activites) (P10)	Availability of clean, safe water	Other actors
29	Soil quality rehabilitation with associative mangrove plants (e.g., Ketapang, Sea Pine, Legundi, Sea Hibiscus, and others) (review of the PLUP and LPTP to be executed) (N01)	Tree cover	Other actors
30	Community training on sustainable land use practices (N01)	Tree cover	Other actors

No	Intervention	Resilience Sources	Program Executor
31	Socialization of the use of natural pesticides in agricultural land (review of the PLUP and LPTP to be executed) (N01)	Tree cover	Other actors
32	Reforestation in residential areas along riverbanks and main roads (LPTP) (N02)	Permeable surfaces	Other actors

Source: Pre-Feasibility Study Outcomes (2024)

5.3 Priority 3

The table below represents priority 3 for Krapyak community intervention.

Table V.4 Priority 3 of Krapyak Community Interventions

No	Intervention	Resilience Sources	Program Executor
1	Kupang River sediment dredging (N04)	Resource management	Other actors
2	Optimizing online platforms for e-learning (P05)	Continuity of education	Other actors
3	Conducting teaching and learning in shelters (P05)	Continuity of education	Other actors
4	Providing additional clean water supply at certain places during floods (P10)	Availability of clean, safe water	Other actors
5	Routine maintenance of the water piping network (P10)	Availability of clean, safe water	Other actors
6	Installation of emergency or portable water filtration systems at shelter (P10)	Availability of clean, safe water	Other actors
7	Providing portable toilets at certain places or shelter (P10)	Availability of clean, safe water	Other actors
8	Restriction on mangrove deforestation or land conversion (N01)	Tree cover	Other actors
9	Reforestation in residential areas along riverbanks and main roads (N01)	Tree cover	Other actors
10	Optimization of disaster response and aid distribution scheme (F10)	Disaster recovery budget	Other actors

Source: Pre-Feasibility Study Outcomes (2024)

Appendix 1: A Comprehensive Commentary to CRMC Tools

Climate Resilience Measurement for Communities: A Commentary

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This brief note aims to highlight some of the potentials and weaknesses of implementing the Climate Resilience Measurement Tool for Communities (CRMC). This brief note refers to the implementation of CRMC in Pekalongan, Central Java, Indonesia.

The Climate Resilience Measurement Tool for Communities has proven effective in guiding climate hazard resilience analysis. This tool is useful for organizing analysis output and producing a resilience score for each community, which can be viewed through seven lenses, namely five capitals, community context, disaster risk management cycle, 4 resilience (4R), 7 themes, city resilience index, and specific GAID. CRMC results are also visualized per lens and can be compared with other communities, this information is useful for the community for decision making.

Our team found the five-modal lens score the most useful of these tools. Information from this lens helps analysts to have a holistic view of sectors that require immediate attention. In addition, the description of sources of resilience can provide general clarification regarding the selection of interventions. Interventions are not limited to weaknesses alone, but opportunities that can be improved as well. This means that not only D grades or most of the C grades, but also B grades have the potential to be prioritized in intervention. Apart from the five capital lens, the 4R lens and the disaster risk management cycle need to be shared with the community because they provide information that reflects the current condition of community resilience and in particular the disaster risk management cycle can provide an idea of which cycle or stage this community has weaknesses or strengths. . This can be a trigger for society to take collective action. Despite some of its advantages, we also found some inherent disadvantages of this tool. The following are the shortcomings we encountered:

- Overview for CRMC Tools

1. The list of questions is disordered.

Explanation: The household survey questions, key informant interviews, and FGDs are not in sequence so that respondents feel they have answered the same questions before but it turns out these are similar questions but the questions are far apart. This is because the system in the application displays a list of questions per general hazard and then to specific floods, starting from *Household questions, Assets (Generic), Governance (Generic), Life and Health (Generic), Lifelines (Generic), Natural Environment (Generic), Social Norms (Generic), Assets (Flood), Life and Health (Flood), Lifelines (Flood), Livelihoods (Flood), dan Natural Environment (Flood)*.

Suggestion: It would be better to group the list of questions by category, for example Assets (Generic) and Assets (Flood) are grouped together or close together because the questions that appear will be similar.

Expected condition	Before completing the data collection method stage, there is information regarding the number of questions that will be generated using each method.
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3. The list of Key Informant Interview and FGD questions does not provide space for obtaining in-depth information.

Explanation: This tool provides questions in the form of closed questions so that it does not allow respondents to explore the answers. The "Additional Comments" box helps to provide additional information but not when, with closed questions, the enumerator only sticks to the answer chosen by the respondent without asking the reasons behind choosing that answer.

Suggestion: There are no suggestions for applications. Enumerators need to be reminded to explore the answers chosen by respondents before going into the field to ensure all the required information is captured.

4. Difficulties in understanding the language used.

Explanation: The use of translated sentences is difficult to understand. This not only makes things difficult for the team, but also for respondents or sources. The team was also unsure about changing sentences when the translation process became easier to understand for fear of changing the context of the question. As a result, enumerators and even resource persons experienced misunderstandings in interpreting a question. Apart from that, there are questions whose context is not appropriate to community conditions. An example is "How many households in the community have income or wealth above the national median income?". Indonesia itself does not use national median income data.

Suggestion:

No	Translated questions	Suggested improvement
Household Surveys		
1	Is anyone in this household: deaf or have serious difficulty hearing ; blind or have serious difficulty seeing even when wearing glasses ; cognitively impaired or have serious difficulty concentrating, remembering, or making decisions ; disabled or have serious difficulty walking or climbing stairs ?	Is anyone in this household: deaf, blind, cognitively impaired, or physically disabled?
2	Local leaders in this community act in the best interests of the whole community rather than only some groups	Village/subdistrict
3	The local government in this community is trustworthy.	Village/subdistrict
4	This community is financially supported by government to the same extent as in other neighboring communities.	Contextual according to community scale. In this case the surrounding neighborhood.
5	Children in this community have equal educational opportunities with children in other neighboring communities.	Contextual according to community scale. In this case the surrounding neighborhood.

No	Translated questions	Suggested improvement
6	People in this community have equal employment opportunities with people in other neighboring communities .	Contextual according to community scale. In this case the surrounding neighborhood.
Focus Group Discussion		
7	The flood risk reduction plan includes both prospective and corrective risk reduction .	There is a brief explanation regarding the definition of Prospective Risk Reduction and corrective questions.
8	Are the community and its communal assets protected through a combination of structural and non-structural flood protection measures?	There is a brief explanation regarding of structural and non-structural flood protection in the question.
9	Are flood forecasts generated for this area ?	Clarify that this area is at the district/city or village/sub-district level.
Key Informant Interviews		
10	Has a flood risk map been developed for this community in the last five years?	Village level (if the community is village/neighborhood scale)/
11	Is there a system in place for collecting data on direct and indirect flood impacts in this community ?	Village level (if the community is village/neighborhood scale)/
12	Do flood risk reduction investments equitably benefit all residents, both within this community and as compared with other communities ?	Village level (if the community is village/neighborhood scale)/

5. List of questions are not translated after downloading.

Explanation: once all the data is collected, the data can be downloaded for analysis. Specific to "Method ID 12432", all translated questions in Bahasa Indonesia that have been inputted during setting up study stage remain in English.

Suggestion: save automatically the translation inputted on each questions, not only at the end of the input process.

- Overview CRMC tool for grading process

No	Code	Resilience Sources	Commentary	Explanation
1	P05	Continuity of education	The answer choices are very rigid, complicated, and not suitable for the community	Answer choice (in Jeruksari and Krapyak Community): C. Education is significantly impacted. School buildings are impacted by floods and can continue some but not all services OR (Only some children in the community will be able to reach their school safely

No	Code	Resilience Sources	Commentary	Explanation
				AND Interruption to schooling for students who can't reach school safely will last longer than a week). Actual condition: Learning process affects significantly depends on the severity of the flood events.
2	N05	Land/water interface health	Options do not reflect the study area condition.	Answer choice (in Jeruksari and Krapyak Community): C. River and stream banks are not protected from adjacent development or cultivation. Small streams may be diverted or channelized into concrete drains OR Natural wetlands are rarely preserved or valued OR Coastal sites are relatively unprotected. Actual condition: The river is protected by a concrete embankment.
3	P09	Household protection and adaptation	There is no "not done yet" option. Answer choices force respondents and the grading team to answer the available measurements offered.	Answer choice (in Jeruksari and Krapyak Community): A. More than 80% of households have taken at least some type of protective measure to address flood risk. Actual condition: There are people who do not take action to overcome the risk of flooding.
4	P10	Availability of clean, safe water	Vulnerable groups are not asked about during the household surveys but those appear as an option during grading.	Answer choice (in Krapyak Community): C. The clean water supply is damaged and only partially operational (e.g. water needs to be treated for an extended time or other water sources are required) OR Sanitation systems are damaged and only partially operational OR

No	Code	Resilience Sources	Commentary	Explanation
				Flooding impacts the water supply or sanitation system for many community members. Actual condition: Options A and B related to vulnerable groups so when grading we chose C which is most representing the condition in Krapyak.
5	P11	Waste management and risk	The grading options do not match the data collected.	Answer choice (in Krapyak Community): B. Waste causes or intensifies some flood problems (e.g. by clogging drains). Actual condition: Household survey result 32% respondents chose "waste causes or intensifies some flood problems", 27% respondents chose "waste causes significant flood problems" 30% "waste causes major flood problems". Grading team found it difficult to choose the grade cause of almost equal answers.

We acknowledge the strength of this CRMC tool in the household questionnaire section. Other types of data collection such as key informants and focus groups are designed to complement household data. Unfortunately, this type of data is only converted from household type questionnaires. We found a number of open-ended questions for key informant interviews that required specific, closed-ended answers. Overall, CRMC is effective in assisting researchers in communicating resilience to policymakers and the public. There are only minor discrepancies or errors. We recommend simplifying the choice of questions both at the data collection stage and during the assessment.

Appendix 2: Translation of Household Surveys Questions in Bahasa Indonesia

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
1	(Generic) : Context	Di antara kelompok usia berikut, Anda termasuk yang mana: 18-30, 31-65, atau lebih dari 65 tahun?	18-30 tahun / 31-65 tahun / Lebih dari 65 tahun
2		Apa jenis kelamin Anda?	Perempuan / Laki-laki / Lainnya
3		Apakah ini rumah tangga yang dikepalai perempuan?	Ya / Tidak / Lebih baik tidak mengatakan
4		Berapa lama anggota rumah tangga tersebut tinggal di komunitas ini?	Setidaknya satu anggota rumah tangga dewasa memiliki riwayat keluarga yang panjang di sini (yaitu beberapa generasi telah tinggal di komunitas tersebut) / Setidaknya satu anggota rumah tangga dewasa lahir di komunitas tersebut / Anggota rumah tangga pindah ke sini lebih dari 20 tahun yang lalu / Anggota rumah tangga pindah ke sini antara 5 dan 20 tahun yang lalu / Anggota rumah tangga pindah ke sini kurang dari 5 tahun yang lalu / Saya tidak tahu
5		Apa tingkat pendidikan tertinggi yang pernah Anda selesaikan?	Tidak pernah bersekolah / Pernah bersekolah di sekolah dasar, namun tidak tamat / Selesai sekolah dasar / Menghadiri pendidikan menengah, tetapi tidak menyelesaikannya / Menyelesaikan pendidikan menengah / Perguruan tinggi atau pelatihan / Sertifikat atau gelar kejuruan / Gelar universitas
6		Apakah ada orang di rumah ini yang: tuli atau mengalami kesulitan mendengar yang serius; buta atau mengalami kesulitan melihat meskipun memakai kacamata; gangguan kognitif atau mengalami kesulitan serius dalam berkonsentrasi, mengingat, atau	Ya untuk satu atau lebih / Tidak untuk semua / Saya tidak tahu / Lebih baik tidak mengatakan

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
		mengambil keputusan; cacat atau mengalami kesulitan serius dalam berjalan atau menaiki tangga?	
7		Apakah ada orang dalam rumah tangga ini yang mengidentifikasi diri sebagai anggota dari satu atau lebih kelompok minoritas atau terpinggirkan, seperti minoritas etnis, agama, ras, LGBTQI+?	Ya / Tidak / Saya tidak tahu / Lebih baik tidak mengatakan
8		Silakan sebutkan kelompok minoritas atau terpinggirkan manakah yang berlaku untuk orang di dalam rumah tangga ini? Silakan centang semua opsi yang berlaku	Etnis / Keagamaan / Rasial / LGBTQI+ / Lainnya / Tidak ada / Lebih baik tidak mengatakan
9		Berapa pendapatan tahunan rata-rata rumah tangga tersebut?	
10		Apa sumber pendapatan terbesar rumah tangga ini?	Upah untuk pekerjaan yang sebagian besar dilakukan di luar ruangan (buruh tani, konstruksi, pertamanan, dll.) / Upah untuk pekerjaan semi-indoor (supir, buruh pabrik, buruh gudang) / Upah untuk pekerjaan yang sebagian besar di dalam ruangan (desk-job, pemerintahan, dll.) / Kiriman uang / Pembayaran kesejahteraan sosial dari pemerintah / Dukungan dari keluarga, gereja, atau LSM / Pendapatan dari aset seperti properti (sewa) atau investasi lainnya / Pensiun / Sumber pendapatan lainnya / Tidak ada sumber pendapatan / Saya tidak tahu
11		Berapa banyak orang yang tinggal di rumah ini pada sebagian besar waktunya?	
12		Bisakah semua orang di rumah yang berusia di atas 12 tahun membaca dan menulis?	Ya, semua orang bisa membaca dan menulis / Sebagian besar anggota rumah tangga dapat membaca dan menulis / Setidaknya satu orang di rumah bisa membaca dan menulis /

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
			Setidaknya satu orang di rumah bisa membaca / Tidak seorang pun di rumah bisa membaca atau menulis / Lainnya / Lebih baik tidak mengatakan
13		Apakah anggota rumah tangga ini fasih dalam bahasa utama yang digunakan oleh pemerintah daerah?	Ya, semua orang fasih / Sebagian besar anggota rumah tangga fasih / Sebagian besar anggota rumah tangga cukup menguasai bahasa utama untuk berkomunikasi / Beberapa atau hanya satu anggota rumah tangga cukup menguasai bahasa utama untuk berkomunikasi / Tak seorang pun di rumah tangga ini cukup menguasai bahasa utama yang digunakan pemerintah setempat untuk berkomunikasi / Saya tidak tahu / Lebih baik tidak mengatakan
14		Siapa pemilik tempat tinggal ini?	Tempat tinggal dimiliki oleh seseorang yang tinggal di sini / Tempat tinggal disewa oleh seseorang yang tinggal di sini / Orang-orang yang tinggal di sini hidup bebas sewa dengan izin dari pemiliknya / Orang-orang yang tinggal di sini menghuni tempat tinggal ini tanpa izin dari pemiliknya / Lainnya / Saya tidak tahu
15	(Flood): Context	Selama Anda tinggal di sini, dalam 10 tahun terakhir berapa kali anggota rumah tangga mengalami kerusakan harta benda akibat banjir?	
16		Bayangkan banjir terparah yang pernah Anda alami selama tinggal di sini selama 10 tahun terakhir, berapa lama waktu yang Anda perlukan untuk pulih secara finansial (misalnya akibat perbaikan gedung atau hilangnya pendapatan)?	Saya belum pernah terkena dampak banjir di komunitas ini / Kurang dari satu bulan / Kurang dari tiga bulan / Kurang dari satu tahun / Lebih dari satu tahun / Saya tidak tahu

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
17	(Generic): Assets	Jika Anda tiba-tiba mengalami kebutuhan keuangan, apakah Anda memiliki tabungan yang cukup untuk menutupi pengeluaran selama seminggu?	Ya / Tidak / Saya tidak tahu
18	(Generic): Governance	Pemimpin daerah di komunitas ini bertindak demi kepentingan terbaik seluruh komunitas dan bukan hanya kepentingan kelompok tertentu. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan ini?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
19	(Generic): Life and Health	Dalam 4 minggu terakhir, pernahkah Anda atau seseorang di rumah Anda tidur dalam keadaan lapar karena tidak memiliki cukup makanan untuk dimakan?	Ya / Tidak / Saya tidak tahu
20		Apakah ada orang dewasa di rumah tangga ini yang menerima pelatihan pertolongan pertama dalam 5 tahun terakhir?	Ya / Tidak / Saya tidak tahu
21		Saya khawatir menjadi korban kejahatan di daerah saya. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
22	(Generic): Lifelines	Sistem komunikasi apa yang dapat Anda akses? Silakan centang semua opsi yang berlaku.	Telepon seluler / Telepon rumah/kantor (non-seluler) / Internet / Televisi / Radio / Tetangga ke Tetangga / Radio 2 arah / Lainnya / Tidak ada sistem komunikasi
23		Apakah sistem komunikasi tersebut dapat diandalkan, termasuk selama dan setelah kejadian ekstrem?	Ya, sistem komunikasi sangat andal / Sistem komunikasi secara umum tetap berfungsi atau pulih dengan cepat / Sistem komunikasi hanya cukup dapat diandalkan / Sistem komunikasi

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
			sangat tidak dapat diandalkan / Tidak ada sistem komunikasi yang berfungsi / Saya tidak tahu
24	(Generic): Natural Environment	Komunitas saya harus mengambil tindakan lebih besar untuk mengurangi risiko perubahan iklim. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
25	(Generic): Social Norms	Orang-orang dalam komunitas ini umumnya berusaha untuk saling membantu dan dapat mengandalkan satu sama lain untuk membantu mereka pada saat dibutuhkan. Misalnya, jika Anda terserang flu dan harus terbaring di tempat tidur selama beberapa hari, akan ada orang yang dapat Anda andalkan untuk membantu Anda melakukan tugas-tugas dasar rumah tangga dan mendapatkan makanan. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
26		Polisi di komunitas ini dapat dipercaya. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
27		Pemerintah daerah di komunitas ini dapat dipercaya.	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
		Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	
28		Layanan darurat di komunitas ini dapat dipercaya. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
29		Orang-orang yang bekerja di komunitas ini dibayar secara adil. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
30		Semua anak di komunitas ini mempunyai kesempatan pendidikan yang sama. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
31		Semua orang diperlakukan secara adil ketika melamar pekerjaan di komunitas ini. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
32		Komunitas ini mendapat dukungan finansial yang sama dari pemerintah seperti komunitas tetangga lainnya.	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
		Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	
33		Anak-anak di komunitas ini mempunyai kesempatan pendidikan yang sama dengan anak-anak di komunitas tetangga lainnya. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
34		Orang-orang di komunitas ini mempunyai kesempatan kerja yang setara dengan orang-orang di komunitas tetangga lainnya. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
35		Saya tahu daerah mana di komunitas yang kemungkinan besar akan terkena banjir. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
36	(Flood): Assets	Tindakan apa yang telah Anda ambil di sekitar rumah Anda untuk menjaga properti dan aset Anda aman dari air banjir? Silakan centang semua opsi yang berlaku.	Penghalang banjir atau karung pasir / Dinding di sekitar rumah / Rumah yang ditinggikan / Lantai yang ditinggikan di dalam rumah / Alas/pintu yang ditinggikan / Mengalihkan air banjir di sekitar rumah (misalnya saluran pengalihan, tanggul atau sejenisnya) / Menggunakan lantai atas untuk penyimpanan / Bangunan tahan

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
			banjir / Penyimpanan/harta benda anti banjir / Dibangun atau ditingkatkan ke kode bangunan terbaru / Melindungi, membuat tahan air atau memindahkan sistem penting seperti sistem kabel atau mekanis
37		Apakah rumah Anda berada di dataran banjir atau pernah mengalami banjir sebelumnya?	Ya / Tidak / Saya tidak tahu
38		Apakah Anda memiliki asuransi banjir?	Ya / Tidak / Saya tidak tahu
39	(Flood): Life and Health	Saya tahu kapan harus mengevakuasi diri saya dan anggota rumah tangga saya dengan aman saat banjir. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
40		Saya tahu cara mengevakuasi diri saya dan anggota rumah tangga saya dengan aman saat terjadi banjir. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
41		Saya tahu tindakan yang benar yang harus diambil untuk melindungi diri saya dan rumah tangga saya dari air yang tidak aman setelah banjir. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
42		Jika Anda membutuhkan layanan kesehatan saat terjadi banjir, dapatkah Anda mengaksesnya dengan aman?	Ya / Tidak / Saya tidak tahu

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
43	(Flood): Lifelines	Apakah ada peringatan dini banjir yang disebarluaskan oleh pemerintah, dinas terkait cuaca, atau sumber terpercaya lainnya?	Ya / Tidak / Peringatan dini banjir tidak tersedia di komunitas ini / Saya tidak tahu
44		Jika Anda menerima peringatan dini banjir, apakah Anda dapat menggunakan peringatan tersebut untuk mengambil tindakan perlindungan atau pencegahan? Silakan centang semua opsi yang berlaku.	Ya / Agak / Tidak, peringatan datang terlambat untuk membuatnya berguna / Tidak, peringatan tidak tersedia dalam bahasa saya / Tidak, peringatan membingungkan dan Saya tidak tahu apa yang harus saya lakukan ketika menerimanya / Saya tidak berharap menerima peringatan / Lainnya / Saya tidak tahu
45		Apakah pasokan air bersih Anda terdampak banjir?	Pasokan air tetap berfungsi dan air dapat digunakan dengan aman tanpa pengolahan / Pasokan air sedikit rusak atau terganggu, namun tetap berfungsi atau cepat pulih / Pasokan air rusak sedang atau hanya beroperasi sebagian / Tidak ada pasokan air bersih / Pasokan air mati total / Lainnya / Saya tidak tahu
46		Apakah sistem sanitasi Anda terkena dampak banjir?	Sistem sanitasi tidak rusak dan dapat terus digunakan / Sistem sanitasi terkena dampaknya, namun tetap dapat digunakan / Sistem sanitasi rusak dan hanya dapat digunakan sebagian / Sistem sanitasi gagal/rusak total / Tidak ada sistem sanitasi / Lainnya / Saya tidak tahu
47		Apakah sampah memperburuk banjir?	Tidak, sampah tidak menyebabkan atau memperparah masalah banjir / Ya, sampah menyebabkan atau memperburuk beberapa masalah banjir / Ya, sampah menyebabkan

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
			masalah banjir yang signifikan / Ya, sampah menyebabkan masalah banjir besar
48	(Flood): Livelihoods	Perubahan iklim meningkatkan risiko banjir dan akan terus berlanjut di masa depan. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju
49		Bagaimana dampak banjir terhadap sekolah-sekolah di komunitas ini?	Sekolah tidak banjir / Sekolah terkena banjir dalam skala kecil sehingga tidak berdampak signifikan terhadap sekolah / Sekolah terkena dampak sedang dan dapat melanjutkan beberapa layanan, namun tidak semua layanan / Sekolah terkena banjir secara signifikan / Sekolah tidak terkena banjir, namun digunakan sebagai tempat perlindungan banjir atau sejenisnya yang mengganggu kegiatan sekolah / Tidak ada sekolah untuk komunitas kami / Saya tidak tahu
50		Jika banjir, apakah anak-anak Anda dapat sampai ke sekolah dengan aman?	Kami bisa sampai di sekolah dengan aman / Kami mungkin mengalami masalah dalam mencapai sekolah / Kami tidak akan bisa sampai ke sekolah / Kami tidak memiliki akses ke sekolah meskipun tidak terjadi banjir / Saya tidak punya anak usia sekolah / Saya tidak tahu
51		Jika sekolah rusak, tidak dapat diakses, digunakan sebagai tempat berlindung/mengungsi, atau tidak tersedia, apa yang akan terjadi pada kegiatan sekolah bagi anak-anak di rumah tangga ini?	Sekolah tidak terkena dampaknya / Ada rencana alternatif yang memungkinkan guru dan anak sekolah bertemu di tempat sementara yang aman / Gangguan apa pun akan berlangsung

No	Tema	Pertanyaan yang didiskusikan	Pilihan Jawaban
			kurang dari seminggu dan tidak akan berdampak signifikan pada kegiatan sekolah / Gangguan akan berlangsung lebih dari seminggu dan akan berdampak signifikan pada kegiatan sekolah / Tidak ada rencana alternatif untuk melanjutkan kegiatan sekolah / Tidak ada sekolah yang tersedia untuk komunitas ini / Saya tidak tahu
52		Jika terjadi banjir, apakah Anda dapat tetap bekerja dan/atau mempertahankan penghasilan?	Ya, pekerjaan atau penghasilan saya tidak terganggu ketika terjadi banjir / Ya, saya mempunyai sumber penghasilan alternatif atau pekerjaan alternatif yang bisa saya lakukan saat banjir / Tidak, pekerjaan dan penghasilan saya terganggu sampai banjir berakhir / Tidak, pekerjaan dan penghasilan saya akan terganggu tanpa batas waktu / Lainnya / Saya tidak tahu
53	(Flood): Narutal Environment	Lingkungan alam yang sehat mengurangi risiko banjir. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju

Appendix 3: Translation of Key Informant Interview Question in Bahasa Indonesia

No	Tema	Pertanyaan yang didiskusikan	Key Informant (Stakeholders)	Pilihan Jawaban
1	(Generic): Context	Di antara kelompok usia berikut, manakah yang sesuai untuk Anda: 12-17, 18-30, 31-65, atau lebih dari 65 tahun?	• Community leader • Community council member • Community health worker • Local response services • Headteacher • Local business person • Women gender official • Development/planning official • DRR/CC official • Health official • Public works official	12-17 tahun / 18-30 tahun / 31-65 tahun / Lebih dari 65 tahun
2		Apa posisi atau peran Anda?		
3		Berapa tahun Anda mempunyai pengalaman dengan komunitas ini, baik dengan tinggal di sini atau bekerja dengan komunitas ini?		
4		Apa jenis kelamin Anda?		Perempuan / Laki-laki / Lainnya
5	(Generic): Assets	Berapa banyak rumah tangga di komunitas yang memiliki pendapatan atau kekayaan di atas garis kemiskinan nasional?	• Community council member	Hampir semuanya / Sebagian besar / Beberapa, sedikit atau tidak ada sama sekali / Saya tidak tahu
6		Berapa banyak rumah tangga di komunitas yang mempunyai pendapatan atau kekayaan di atas pendapatan median nasional?	• Community council member	Sebagian besar / Sekitar setengah / Sedikit atau tidak ada sama sekali / Saya tidak tahu
7	(Generic): Governance	Bisakah pemerintah daerah mengumpulkan uangnya sendiri?	• Community council member • Development/planning official	Ya, mereka memungut pajak daerah, mengenakan biaya untuk pemberian layanan, dan/atau dapat meminjam uang atau menerbitkan utang / Agak; mereka memiliki sejumlah pendanaan daerah selain pendanaan dari tingkat pemerintahan yang lebih tinggi /

				Tidak, mereka hanya memperoleh pendanaan dari tingkat pemerintahan yang lebih tinggi / Lainnya / Saya tidak tahu
8		Apakah pemerintah daerah mengelola keuangannya secara transparan dan akuntabel?	• Community council member • Development/planning official	Ya, keuangan pemerintah daerah dikelola secara transparan dan pengambil keputusan bertanggung jawab kepada komunitas / Agak; keuangan pemerintah daerah sebagian besar transparan dan pengambil keputusan sebagian besar akuntabel / Tidak, keuangan pemerintah daerah tidak transparan dan/atau pengambil keputusan tidak bertanggung jawab kepada komunitas / Lainnya / Saya tidak tahu
9		Siapa saja di komunitas yang terlibat dalam tanggap darurat (misalnya staf yang digaji, relawan)?	• DRR/CC official • Local response services	
10		Seberapa baik kebutuhan personel tanggap darurat bencana saat ini dipenuhi melalui pelatihan, sumber daya, dan dukungan lainnya?	• DRR/CC official • Local response services	Kebutuhan mereka terpenuhi dengan baik / Kebutuhan mereka sedikit banyak terpenuhi / Kebutuhan mereka tidak terpenuhi sama sekali
11		Manajer risiko secara aktif merencanakan bagaimana kebutuhan personel tanggap darurat bencana di	• DRR/CC official • Local response services	Sangat setuju / Setuju / Tidak punya pendapat / Tidak setuju / Sangat tidak setuju

		masa depan akan berubah akibat perubahan iklim. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?		
12	(Generic): Lifelines	Apakah pasokan bahan bakar tetap berkelanjutan selama kejadian ekstrem?	• Community council member • Community leader	Ya, komunitas telah sepenuhnya melindungi sumber pasokan bahan bakar / Akses terhadap bahan bakar sedikit terkena dampaknya, namun komunitas dapat melanjutkan kehidupan sehari-hari dengan gangguan yang terbatas / Akses bahan bakar sangat terkena dampaknya, sehingga menyebabkan gangguan selama beberapa hari / Tidak, pasokan bahan bakar tidak mencukupi dan/atau sangat tidak dapat diandalkan bahkan dalam kondisi normal / Lainnya / Saya tidak tahu
13		Apakah sistem pembangkit energi tetap beroperasi selama dan setelah kejadian ekstrem?	• Community council member • Community leader	Ya, sistem pembangkit energi tetap beroperasi / Sistem pembangkit energi sedikit terkena dampaknya, namun mampu tetap beroperasi dengan gangguan yang terbatas / Sistem pembangkit energi sangat terkena dampaknya, sehingga menyebabkan gangguan selama beberapa hari / Sistem pembangkit

				energi sangat tidak dapat diandalkan bahkan dalam kondisi normal / Lainnya / Saya tidak tahu
14		Apakah sistem energi siap menghadapi kejadian yang lebih ekstrem di masa depan?	• Community council member • Community leader	Ya / Mungkin / Tidak / Saya tidak tahu
15		Akankah komunitas tetap memiliki aksesibilitas, baik akses dan layanan darurat, maupun kelancaran fungsi pekerjaan, akses ke pasar, dan pemenuhan kebutuhan sehari-hari selama kejadian ekstrem?	• Community council member • Community leader • Public works official	Ya, semua wilayah komunitas tetap dapat diakses / Semua wilayah komunitas tetap dapat diakses untuk akses dan layanan darurat, namun di beberapa wilayah fungsi/kegiatan sehari-hari mungkin terganggu selama beberapa hari / Sebagian besar wilayah komunitas masih dapat diakses untuk akses dan layanan darurat, namun peralatan/kendaraan khusus mungkin diperlukan (perahu, kendaraan 4x4, dll.) / Jalur transportasi komunitas terkena dampak serius selama dan setelah bencana, yang mengakibatkan dampak serius terhadap kehidupan, kesehatan, atau ekonomi / Tidak ada sistem transportasi yang berfungsi / Saya tidak tahu
16		Dapatkah pengguna sistem transportasi umum menggunakan sistem transportasi	• Community council member • Community leader	Pengguna dapat menggunakan sistem transportasi umum dengan

		umum dengan aman dalam cuaca apa pun dan apakah sistem transportasi umum akan terus berjalan sesuai jadwal dan tidak membuat pengguna terlantar?	• Public works official	aman dalam cuaca apa pun / Pengguna dapat menggunakan sistem transportasi umum dengan aman di sebagian besar cuaca, namun saat terjadi peristiwa ekstrem akan terjadi gangguan dan/atau pengendara mungkin terkena cuaca berbahaya untuk sementara waktu. / Sistem transportasi umum menjadi sangat terganggu, sehingga membuat pengguna terpapar cuaca berbahaya dan/atau pengguna yang terdampar / Tidak ada sistem transportasi umum / Saya tidak tahu
17		Sistem komunikasi apa yang dapat diakses oleh anggota komunitas? Silakan centang semua opsi yang berlaku.	• Community council member • Community leader • DRR/CC official • Local response services	Telepon selular / Telepon rumah/kantor (non-seluler) / Internet / Televisi / Radio / Tetangga ke Tetangga / Radio 2 arah / Lainnya / Tidak ada sistem komunikasi / Saya tidak tahu
18		Apakah sistem komunikasi tersebut dapat diandalkan, termasuk selama dan setelah kejadian ekstrem?	• Community council member • Community leader • DRR/CC official • Local response services	Ya, sistem komunikasi sangat andal / Sistem komunikasi secara umum tetap berfungsi atau pulih dengan cepat / Sistem komunikasi hanya cukup dapat diandalkan / Sistem komunikasi sangat tidak dapat diandalkan / Tidak ada

				sistem komunikasi yang berfungsi / Saya tidak tahu
19		Apakah ada anggaran tahunan khusus untuk pemeliharaan infrastruktur publik?	• Community council member • Development/planning official	Ya / Tidak / Saya tidak tahu
20		Apakah anggaran cukup untuk memenuhi kebutuhan pemeliharaan?	• Community council member • Development/planning official	Ya, infrastruktur terpelihara dengan baik / Tidak, ada backlog pemeliharaan dan/atau kerusakan infrastruktur saat kejadian ekstrem / Saya tidak tahu
21		Apakah infrastruktur publik di komunitas ini dipelihara secara rutin dan dengan standar yang sama seperti infrastruktur di komunitas sekitar?	• Community council member • Development/planning official	Ya / Tidak / Saya tidak tahu
22	(Generic): Livelihoods	Berapa persentase anak perempuan di komunitas yang bersekolah secara rutin?	• Headteacher	
23		Berapa persentase anak laki-laki di komunitas yang bersekolah secara rutin?	• Headteacher	
24	(Generic): Life and Health	Berapa persentase orang dewasa di komunitas yang telah menerima pelatihan pertolongan pertama dalam 5 tahun terakhir?	• Health official • Local response services	
25	(Generic): Natural Environment	Apakah sungai dan tepi sungai secara proaktif dilindungi dengan vegetasi, infrastruktur hijau/ramah lingkungan, dan/atau rekayasa struktur penguat dan tanggul?	• Community council member	Ya / Sebagian besar / Sebagian besar tidak / Tidak / Tidak relevan untuk komunitas ini / Saya tidak tahu
26		Apakah lahan basah alami dilindungi dari kegiatan budidaya atau	• Community council member	Ya / Sebagian besar / Sebagian besar tidak / Tidak / Tidak relevan

		pembangunan dan ditingkatkan dengan rekayasa atau pengelolaan lahan basah?		untuk komunitas ini / Saya tidak tahu
27		Apakah komunitas pesisir terlindungi dari gelombang badai dengan adanya bukit pasir, lahan basah, hutan bakau yang lebat, terumbu karang lepas pantai, atau melalui tanggul, tembok penahan, atau struktur bangunan yang dibangun dengan baik dan terawat?	• Community council member	Ya / Sebagian besar / Sebagian besar tidak / Tidak / Tidak relevan untuk komunitas ini / Saya tidak tahu
28		Apakah perubahan iklim (dan kenaikan permukaan air laut jika relevan) dipertimbangkan secara aktif dalam pengelolaan area batas daratan-perairan?	• Community council member	Ya / Sebagian besar / Sebagian besar tidak / Tidak / Tidak relevan untuk komunitas ini / Saya tidak tahu
29	(Flood): Governance	Apakah peta risiko banjir telah dikembangkan untuk komunitas ini dalam lima tahun terakhir?	• Community council member • Community leader • DRR/CC official • Development/planning official	Ya / Tidak / Saya tidak tahu
30		Apakah pemetaan risiko banjir mencakup komponen kerentanan?	• Community council member • Community leader • DRR/CC official • Development/planning official	Ya / Tidak / Saya tidak tahu
31		Apakah peta risiko banjir digunakan dalam perencanaan dan tindakan manajemen risiko?	• Community council member • Community leader • DRR/CC official • Development/planning official	Ya / Tidak / Saya tidak tahu
32		Apakah ada rencana pengurangan risiko banjir untuk komunitas ini?	• DRR/CC official • Local response services	Ya / Tidak / Saya tidak tahu

33		Apakah rencana tersebut mencakup Prospective Risk Reduction dan korektif?	• DRR/CC official • Local response services	Ya / Tidak / Saya tidak tahu
34		Apakah rencana pengurangan risiko banjir ditinjau dan diperbarui secara berkala?	• DRR/CC official • Local response services	Ya / Tidak / Saya tidak tahu
35		Apakah ada sistem untuk mengumpulkan data mengenai dampak langsung dan tidak langsung dari banjir pada komunitas ini?	• Community council member • Development/planning official	Ya / Tidak / Saya tidak tahu
36		Apakah data ini banyak digunakan oleh pemangku kepentingan dan dinas utama untuk meningkatkan manajemen risiko banjir?	• Community council member • Development/planning official	Ya / Tidak / Saya tidak tahu
37		Apakah proyeksi iklim masa depan dan data layanan iklim banyak digunakan dalam pengambilan keputusan?	• Community council member • Development/planning official	Ya / Tidak / Saya tidak tahu
38		Apakah ada sumber pendanaan untuk mendukung pemulihan komunitas? Silakan centang semua opsi yang berlaku.	• Community council member • DRR/CC official • Development/planning official	Ya, ada anggaran pemerintah khusus untuk pemulihan banjir / Memang benar, terdapat pendanaan pemulihan banjir yang dapat diandalkan dari sumber-sumber non-pemerintah / Di masa lalu, komunitas kami menerima dana, namun dana tersebut hanya menutupi sebagian kebutuhan kami / Tidak, tidak ada anggaran khusus untuk pemulihan banjir / Lainnya / Saya tidak tahu

39		Apakah pendanaan yang tersedia mudah diakses dan diterima dengan cepat sehingga dapat digunakan?	• Community council member • DRR/CC official • Development/planning official	Pendanaan pemulihan mudah diakses dan tiba dengan cepat / Pendanaan sulit diakses tetapi tiba dengan cepat / Pendanaan mudah diakses tetapi lambat sampainya / Pendanaan tidak mungkin diakses atau tiba dengan terlambat sehingga tidak dapat digunakan / Tidak ada dana yang tersedia / Lainnya / Saya tidak tahu
40	(Flood): Life and Health	Apakah ada rencana untuk keberlangsungan layanan kesehatan saat banjir? Silakan centang semua opsi yang berlaku.	• Community council member • Community health worker • Health official	Ada rencana kontijensi untuk manajemen staf / Ada keberlangsungan rencana operasional / Ada keberlangsungan rencana perawatan untuk pasien / Ada daya cadangan untuk seluruh fasilitas / Terdapat daya cadangan yang terbatas untuk layanan-layanan penting, namun sebagian besar bangunan tidak akan mempunyai aliran listrik / Tidak ada daya cadangan / Tidak ada rencana untuk keberlangsungan layanan / Lainnya / Saya tidak tahu
41		Akankah fasilitas kesehatan tetap dapat diakses dengan aman ketika terjadi banjir?	• Community council member • Community health worker • Health official	Fasilitas layanan kesehatan akan tetap dapat diakses oleh semua orang, termasuk mereka yang menggunakan transportasi umum atau berjalan kaki / Fasilitas layanan kesehatan akan sulit diakses secara aman oleh

				sebagian kecil komunitas / Fasilitas layanan kesehatan akan sulit atau berbahaya untuk diakses oleh sebagian besar komunitas / Tidak ada fasilitas kesehatan yang tersedia untuk komunitas ini / Lainnya / Saya tidak tahu
42		Apakah rencana tanggap darurat banjir mencakup pencegahan kekerasan dalam keluarga?	• DRR/CC official • Local response services • Women/gender official	Ya / Tidak / Saya tidak tahu
43		Sejauh mana personel tanggap darurat bencana telah dilatih dalam perlindungan kekerasan dalam keluarga?	• DRR/CC official • Local response services • Women/gender official	Seluruh atau sebagian besar personel tanggap darurat bencana telah menerima pelatihan / Beberapa personel tanggap darurat bencana telah mendapatkan pelatihan / Hanya sedikit personel tanggap darurat bencana telah menerima pelatihan / Sangat sedikit atau bahkan tidak ada personel tanggap darurat bencana yang menerima pelatihan
44	(Flood): Lifelines	Apakah ada anggaran pengurangan risiko khusus dari mekanisme pendanaan lain yang secara aktif digunakan untuk melaksanakan prioritas pengurangan risiko banjir? Silakan centang semua opsi yang berlaku.	• Community council member • DRR/CC official • Development/planning official	Ya, ada anggaran tahunan pemerintah yang khusus / Ya, ada pendanaan khusus dari sumber non-pemerintah / Ada pendanaan, tapi tidak teratur atau tidak dapat diprediksi / Tidak ada anggaran pengurangan risiko / Bukan dari salah satu di atas / Saya tidak tahu
45		Apakah investasi pengurangan risiko banjir memberikan manfaat yang adil	• Community council member • DRR/CC official	Ya / Investasi agak tidak adil / Investasi sangat tidak adil / Tidak

		bagi seluruh penduduk, baik dalam komunitas ini maupun dibandingkan dengan komunitas lain?	• Development/planning official	ada anggaran pengurangan risiko / Lainnya / Saya tidak tahu
46		Apakah ada rencana tanggap darurat banjir untuk komunitas ini?	• DRR/CC official • Local response service	Ya / Tidak / Saya tidak tahu
47		Apakah rencana tanggap darurat banjir mempunyai rencana yang ditargetkan untuk memenuhi kebutuhan spesifik semua kelompok sosial termasuk semua kelompok rentan?	• DRR/CC official • Local response service	Ya / Tidak / Saya tidak tahu
48		Apakah rencana tersebut diuji dan diperbarui secara berkala dengan melibatkan semua organisasi yang berpartisipasi?	• DRR/CC official • Local response service	Ya / Tidak / Saya tidak tahu
49		Kira-kira berapa persentase pelaku usaha atau pemberi kerja di komunitas yang mempunyai rencana untuk meminimalkan kerugian dan tetap menjalankan usahanya jika terjadi banjir?	• Local business person	Lebih dari 80% / 50% - 80% / 20% - 50% / Kurang dari 20% / Saya tidak tahu
50	(Flood): Livelihoods	Sumber pembiayaan apa yang dimiliki dunia usaha ketika terjadi banjir? Silakan centang semua opsi yang berlaku	• Local business person	Asuransi banjir / Asuransi keberlangsungan usaha / Jalur kredit terbuka atau pinjaman yang telah disetujui sebelumnya dengan lembaga keuangan / Tabungan darurat / Lainnya / Bukan dari salah satu di atas / Saya tidak tahu

Appendix 4: Translation of Focus Group Discussion Question in Bahasa Indonesia

No	Tema	Pertanyaan yang didiskusikan	Peserta FGD (Stakeholders)	Catatan
1	(Generic) : Governance	Siapa kelompok sosial utama, termasuk kelompok rentan dan terpinggirkan, dalam komunitas ini?	- Local government committee - Community council - Council of elders - Local NGO/CBO - Religious council - Society - Womens group - Youth group	- BPBD: Krapyak masuk dalam 75% wilayah terdampak dari seluruh Kota Pekalongan. - Society: disabilitas sulit beraktivitas dan bekerja.
2		Berapa banyak dari kelompok sosial tersebut, termasuk kelompok rentan dan terpinggirkan, yang mempunyai atau memberi masukan aktif dalam pengambilan keputusan mengenai manajemen risiko bencana?	- Local government committee - Community council - Council of elders - Local NGO/CBO - Religious council - Society - Womens group - Youth group	- DLH: jumlah yang dapat terwakili dan suaranya dapat diteruskan itu terbatas. - BPBD: yang disebutkan DLH terjadi dalam rencana pembangunan. - DPUPR: mereka perlu dilibatkan hingga tahap realisasi. - Community council & council of elders: lansia cenderung tidak dibutuhkan dalam kegiatan lapangab, kebanyakan pemuda karena membutuhkan tenaga yang kuat. Lansia dibutuhkan pemikirannya. - Society: sebagian disabilitas kurang diperhatikan penanganannya, misalnya butuh pertolongan untuk bisa berusaha melindungi diri sendiri.
3		Apakah ada proses perencanaan penggunaan lahan yang jelas dan transparan?	- Local government committee - Community council	Local government committee: contohnya untuk infrastruktur jalan dan saluran itu sudah

			• Community planning committee • Community productive users group Local NGO/CBO	teralisasi dan sistem beli tanah dengan BKK (Bank Kredit Kecamatan) • Local NGO/CBO: tergantung jenis lahannya, misal HGB dialihfungsikan ke fasilitas umum pasti melalui transparansi. • Community planning committee: contohnya peruntukan perdagangan biasanya sebelum dibangun meminta persetujuan dahulu.
4		Apakah Anda setuju bahwa perencanaan penggunaan lahan didasarkan pada peta bahaya dan risiko?	• Local government committee • Community council • Community planning committee • Community productive users group • Local NGO/CBO	• KSB: tidak punya pendapat karena tidak ada pemberitahuan dari siapapun terkait larangan pembangunan di kawasan mana. Membutuhkan peran pemerintah untuk memberikan peringatan, himbauan terkait wilayah yang berisiko/berbahaya. • Community planning committee: masyarakat sudah tahu sendiri daerah yang rawan sehingga mereka meninggikan bangunannya sendiri.
5		Apakah Anda setuju bahwa perencanaan penggunaan lahan didasarkan pada proyeksi perubahan iklim dan bagaimana perubahan iklim dapat mengubah lanskap risiko?	• Local government committee • Community council • Community planning committee • Community productive users group • Local NGO/CBO	• DKPP: contohnya ada wilayah terendam sekarang bisa dibudidaya jadi wilayah yang kuning dapat dihijaukan. • PUPR& BPBD: RTRW disesuaikan dengan eksisting, pendapat masyarakat bisa berubah-ubah. Kajian RTRW sekarang sudah berbasis kajian risiko bencana (RAD API).

				• BMKG: banjir tidak hanya dari laut, perubahan cuaca juga berisiko. Meskipun sudah ditanggul untuk mencegah banjir dari kali dan laut, perlu dikaji apakah wilayah dapat menampung air yang tidak bisa kembali ke laut karena terhalang tanggul. • Community council: masyarakat sudah diimbau oleh pemerintah adanya penurunan muka tanah tetapi masyarakat tidak mau pindah karena lebih memilih untuk menanggung risiko. • Community planning committee: bukan masyarakat yang tidak taat, tetapi pemerintah memang memberikan 2 opsi yaitu relokasi atau penanggulangan dengan tanggul dan masyarakat lebih memilih untuk ditanggulangi.
6		Apakah sumber daya alam dipelihara sedemikian rupa sehingga bermanfaat bagi seluruh komunitas? silakan centang semua opsi yang berlaku.	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Society • Womens group • Youth Group	• DKPP: ada kelompok tani tergabung dalam komunitas UFPI yang bertugas untuk menjaga kelestarian lingkungan dan mereka beraktivitas di RW 12 dan rusunawa Krapyak. • Community productive users group: sebelum adanya penanggulangan banjir, pengairan tambak lancar. Akan tetapi, setelah ada tanggul jadi sulit karena jalur airnya tertutup sehingga mengandalkan air hujan

				dan sistem bergantian. Lubang air yang diberikan pemerintah kurang mencukupi.
7		Apakah sumber daya alam dalam kondisi baik dan dikelola secara berkelanjutan?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Society • Womens group • Youth Group	• Community council: sungai Lodji tercemar limbah batik, bendungan bergerak dan saluran sepucung banyak eceng gondok. • Youth group: berbicara tentang Kali Lodji, pencemaran akibat limbah batik dikarenakan pengrajin batik belum mengetahui cara mengelola limbah. Eceng gondok perlu ditangani tidak hanya dimusnahkan, tetapi bisa dikreasikan atau dimanfaatkan. • KSB: sekarang Kali Lodji fungsinya sudah berubah karena adanya polutan, biota air pun mati. • Community planning committee: sebagian besar dikelola dengan baik. Sebagian kecil yaitu sumber daya air yang memang sulit untuk tambak, saat ini kering. Debit air yang masuk tambak sedikit karena adanya tanggul.
8		Apakah pemerintah mengetahui perkiraan perubahan iklim di masa depan?	Local government committee	
9		Apakah pemerintah mempunyai rencana untuk beradaptasi terhadap perubahan iklim?	Local government committee	
10		Apakah pemerintah mempunyai anggaran untuk menindaklanjuti	Local government committee	

		rencana adaptasi perubahan iklim tersebut?		
11		Apakah pemerintah meninjau rencana investasi modal untuk memastikan bahwa perubahan iklim telah ditangani secara memuaskan?	Local government committee	BPBD: ditinjau sudah, tetapi tingkat kepuasan bersifat relatif.
12	(Flood) Governance	Terdapat rencana pengurangan risiko banjir yang tepat untuk komunitas ini. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	- Local government committee - Community council - Community planning committee - Community productive users group - Council of elders - Local NGO/CBO - Womens group - Youth Group	- Local government committee: kalau pernyataannya setuju. Namun realitanya ada keterbatasan anggaran, tanggul yang ada berisiko tidak berkelanjutan sehingga land subsidence belum tertangani dengan baik. - KSB: penanggulangan dapat dilakukan dengan normalisasi drainase. - MASJALI: perlu kreativitas dari generasi sekarang untuk menjaga kebersihan sungai (kali), diharapkan kali bisa kembali diperuntukkan untuk wisata sehingga menjadi mata pencaharian masyarakat.
13		Rencana pengurangan risiko banjir mencakup Prospective Risk Reduction dan korektif. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	- Local government committee - Community council - Community planning committee - Community productive users group - Council of elders - Local NGO/CBO - Womens group - Youth Group	

14	Rencana pengurangan risiko banjir ditinjau dan diperbarui secara berkala. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Savings group • Womens group • Youth Group	• Youth group: perlu dievaluasi berkala • KSB: ada rencana tetapi tidak ada realisasi. • MASJALI: masalah pompa yang tidak bertahan lama/terkendala bahkan sebelum digunakan, ini langsung ada perbaikan. • Community planning committee: selalu ada perbaikan dari rencana-rencana pemerintah. Pemeliharaan yang sulit karena warga agak sulit dalam hal tersebut. Ada sikap masyarakat yang tidak bertanggung jawab, kerja bakti pun sulit.
15	Siapa saja pemangku kepentingan kunci yang harus dilibatkan dalam perencanaan dan tindakan manajemen risiko banjir untuk komunitas ini?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Religious council • Savings group • Society • Womens group • Youth Group	• Society: pemda memiliki otoritas dalam merencanakan manajemen risiko bencana.
16	Berapa banyak dari pemangku kepentingan kunci yang terlibat secara aktif dalam perencanaan dan tindakan manajemen risiko banjir?	• Local government committee • Community council • Community planning committee	

			• Community productive users group • Council of elders • Local NGO/CBO • Religious council • Savings group • Society • Womens group • Youth Group	
17	(Generic) : Life and Health	Apakah layanan kesehatan tersedia dalam jangkauan fisik yang aman bagi komunitas ini?	• Civil protection group • Community council • Council of elders • Society • Womens group	
18		Beberapa kelompok komunitas mungkin mengalami hambatan dalam mengakses layanan kesehatan karena kondisi keuangan, sosial, budaya atau fisik mereka. Apakah sistem layanan kesehatan memenuhi kebutuhan semua kelompok komunitas, terutama kelompok rentan atau terpinggirkan, untuk menjamin akses?	• Civil protection group • Community council • Council of elders • Society • Womens group	• Society: semua fasilitas kebutuhan sudah terpenuhi. Misalnya kebutuhan berobat ada yang membantu, fasilitas kursi roda, dan pelayanannya juga cepat. • Womens group: Puskesmas Kranyak sudah bagus dalam pelayanan (anak-anak, ibu hamil, lansia, dan disabilitas). Tidak ada pilih-pilih, semua dilayani dengan baik.
19	(Flood) : Life and Health	Untuk mendukung tanggap darurat banjir, evakuasi dan Pencarian & Penyelamatan, manakah dari hal-hal berikut yang dimiliki oleh komunitas? Pilih semua yang berlaku. Silakan centang semua opsi yang berlaku.	• Local government committee • Community council • Community planning committee • Council of elders • Local NGO/CBO • Society	• KSB: tidak memiliki HT. • Community planning committee: dapur umum sebagai aktivitas penunjang untuk tempat pengungsian, truk dan alat berat belum ada. HT ada punya pribadi,

			• Womens group • Youth Group	tetapi kelurahan dan KSB belum punya.
20		Apakah Anda yakin bahwa peralatan darurat banjir berada dalam kondisi yang baik, diuji secara rutin, dan akan berfungsi dengan baik?	• Local government committee • Community council • Community planning committee • Council of elders • Local NGO/CBO • Society • Womens group • Youth Group	• Youth group: pernah diuji coba dan aman. • Community planning committee: beberapa peralatan milik Karang Taruna hanya disimpan belum diuji, perlu adanya pemeliharaan. Rute evakuasi sudah tidak jelas di mana tempat evakuasinya.
21		Apakah semua kelompok di komunitas mampu mengakses infrastruktur dan peralatan darurat?	• Local government committee • Community council • Community planning committee • Council of elders • Local NGO/CBO • Society • Womens group • Youth Group	
22	(Flood) : Assets	Apakah komunitas dan aset-aset komunalnya dilindungi melalui kombinasi tindakan perlindungan banjir struktural dan non-struktural?	• Local government committee • Community council • Community planning committee • Community productive users group • Local NGO/CBO • Society	• Community council: asset berupa kapal fiber untuk komunitas. • Community planning committee: asset yang dimiliki berupa posyandu dan lapangan letaknya terpencil, tidak ada tindakan yang bisa dilakukan juga.
23		Apakah tindakan perlindungan terhadap banjir dapat diandalkan, dipelihara secara rutin, dan tidak menimbulkan risiko baru?	• Local government committee • Community council • Community planning committee	• Community council: Ada permasalahan dana untuk perawatan pompa.

			• Community productive users group • Local NGO/CBO • Society	• KSB: harusnya ada alat atau perlengkapan diletakkan di tempat yang terlindungi (aman).
24		Apakah perencanaan perlindungan di masa depan secara aktif mempertimbangkan potensi dampak perubahan iklim?	• Local government committee • Community council • Community planning committee • Community productive users group • Local NGO/CBO • Society	• DPUPR, BPBD, & DKPP: ada pengembangan vegetasi mangrove.
25	(Flood) : Lifelines	Ada rencana tanggap darurat banjir yang tepat untuk komunitas ini. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Savings group • Society • Womens group • Youth Group	• BPBD: tanggap darurat masih kurang koordinasi. • Community council: apabila ada yang mau mengungsi saat banjir, ada pihak yang langsung turun tangan
26		Rencana tanggap darurat banjir mencakup rencana yang ditargetkan untuk memenuhi kebutuhan spesifik semua kelompok sosial termasuk semua kelompok rentan. Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Savings group • Society	• BPBD: kebutuhan spesifik belum pasti karena kenyataan di lapangan difokuskan untuk pangan. • DPUPR: partisipasi pihak eksternal dalam memberi bantuan sudah aktif.

			• Womens group • Youth Group	
27		Rencananya diuji dan diperbarui secara berkala dengan melibatkan semua organisasi yang berpartisipasi? Apakah Anda sangat setuju, setuju, tidak punya pendapat, tidak setuju, atau sangat tidak setuju dengan pernyataan tersebut?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Savings group • Society • Womens group • Youth Group	• DKPP: tidak semua organisasi bisa terlibat, hanya yg melibatkan kebencanaan saja. • DLH: masyarakat terdampak perlu dilibatkan agar lebih tepat sasaran. • BPBD: kelurahan pun wajib membuat rencana tanggap bencana yang melibatkan pemerintah, swasta, dan masyarakat yang diperbaharui secara berkala. Contohnya Kelurahan Tanggap Bencana yang ada di Kelurahan Krapyak.
28		Apakah anggota komunitas menerima peringatan dini banjir dari pemerintah, dinas terkait cuaca atau sumber terpercaya lainnya?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Religious council • Society • Womens group • Youth Group	• BPBD: mereka langsung memberikan informasi ke BPBD. • Youth group: lansia kurang update, warga sibuk bekerja, jarang aktif di masyarakat, keterbatasan dalam kepemilikan hp dan atau kuota internet.
29		Jika anggota komunitas menerima peringatan dini banjir, apakah mereka dapat menggunakan peringatan tersebut untuk mengambil tindakan perlindungan atau pencegahan?	• Local government committee • Community council • Community planning committee • Community productive users group	• BMKG: informasi yang beredar di luar kendali bmkg karena di luar jangkauan mereka, solusinya masyarakat bisa mendownload aplikasi bmkg yang lebih cepat dan akurat.

		Silakan centang semua opsi yang berlaku.	• Council of elders • Local NGO/CBO • Religious council • Society • Womens group • Youth Group	• BPBD: Selain itu, lurah seharusnya menjembatani informasi tersebut karena mereka tergabung dalam grup bencana yang memuat semua lurah se Pekalongan. • Society: pemberitahuan terlambat.
30	(Flood) : Livelihoods	Apakah prakiraan banjir dibuat untuk wilayah ini?	• Local government committee • Community council • Community productive users group	• Community council: pernah melihat peta bahaya banjir skala umum Jawa Tengah, Krapyak tidak ada.
31		Apakah informasi prakiraan cuaca disampaikan kepada pihak berwenang secara tepat waktu untuk disebarluaskan dan memberikan peringatan darurat?	• Local government committee • Community council • Community productive users group	• BPBD: BMKG selalu memberikan peringatan gelombang tinggi pasang surut 1 minggu sampai 1 bulan sebelumnya dan selalu update. Ada prakiraan musim 1 bulan sebelumnya. • BMKG: peringatan dini banjir rob belum ada tetapi bmkng selalu mengeluarkan prakiraan berbasis dampak dari cuaca ekstrem biasanya peringatan dini cuaca ada update 3 jam sebelumnya.
32		Apakah informasi prakiraan dikomunikasikan dengan cara yang dapat dipahami dan digunakan oleh pihak berwenang?	• Local government committee • Community council • Community productive users group	
33	(Flood) : Natural Environment	Apakah lahan miring (dengan kelerengan) dipelihara atau dilindungi sedemikian rupa sehingga mengurangi limpasan air, erosi dan tanah longsor?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders	• Local government committee & community council: tidak ada lahan miring (kawasan pesisir)

			• Local NGO/CBO • Society • Womens group • Youth Group	
34		Apakah saluran air dan fitur drainase alami lainnya dilestarikan secara aktif, dan dilengkapi dengan area retensi air hujan dan kanal buatan sehingga banjir dapat dicegah bahkan ketika terjadi badai ekstrem?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Society • Womens group • Youth Group	• Community council: aliran sungai ada bendungan gerak (ditutup), tetapi sungai masih dilestarikan alami.
35		Apakah infrastruktur ramah lingkungan dan/atau solusi berbasis alam digunakan secara aktif untuk mengatasi manajemen risiko banjir?	• Local government committee • Community council • Community planning committee • Community productive users group • Council of elders • Local NGO/CBO • Society • Womens group • Youth Group	• Youth group: bergantung dengan tanggul beton. Tidak ada solusi berbasis alam. Rawa-rawa di Krapyak banyak diuruk untuk dijadikan kavling perumahan. • Council of elders: tidak secara aktif karena banjir tidak terus meneruh, hanya terkadang. • KSB: kadang-kadang digunakan, tidak menentu. • Community planning committee: di kawasan tambak ada ditanami mangrove.