

Endline and Final Evaluation

Resilient Environment through Active DRR Initiatives (READI) Program



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Acknowledgments

Migunani evaluation team would like to especially thank Mercy Corps Indonesia team and Mercy Corps Padang, Meulaboh, Bengkulu, Nias, and Mentawai for providing all the necessary support and facilitating the evaluation process. We would also like to express our gratitude to schools' staff, communities and government officials in Sumatra for their willingness to participate in group discussions and interviews during the field research.

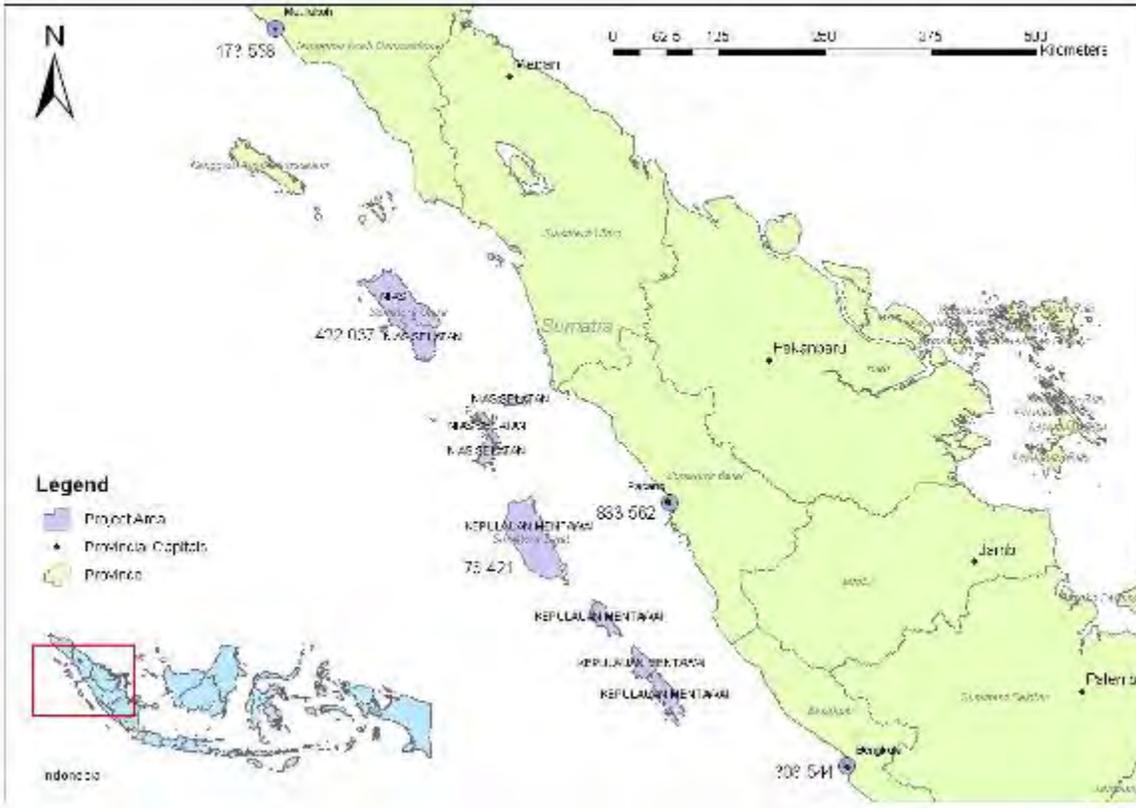
Yogyakarta, Januari 2015

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Map of READI Target Areas



List of Terms and Abbreviations

	Indonesian	English
BNPB	Badan Nasional Penanggulangan Bencana	National Disaster Management Body
BPBD	Badan Penanggulangan Bencana Daerah	District Disaster Management Body
BR	Membangun Ketahanan	Building Resilience
CAP	Rencana Aksi Komunitas	Community Action Plan
CBDRR	Pengurangan Risiko Bencana Berbasis Masyarakat	Community Based Disaster Risk Reduction
CBCCA	Adaptasi Perubahan Iklim Berbasis Masyarakat	Community Based Climate Change Adaptation
CC	Perubahan Iklim	Climate Change
CCA	Adaptasi Perubahan Iklim	Climate Change Adaptation
CO	Pengorganisasian masyarakat	Community Organiser
CP	Rencana Kontijensi	Contingency Plan
CSO	Lembaga Swadaya Masyarakat	Civil Society Organization
DM	Penanggulangan Bencana	Disaster Management
DRR	Pengurangan Risiko Bencana	Disaster Risk Reduction
EWS	Sistem Peringatan Dini	Early Warning System
IEC	Komunikasi, edukasi, dan informasi	Information, Education, and Communication
KSB	Kelompok Siaga Bencana	Village Disaster Preparedness Team
MEL	Pembelajaran, evaluasi dan monitoring	Monitoring, Evaluation, and Learning
PERDA	Peraturan Daerah	local regulation
PCVA	Pengkajian kerentanan dan kapasitas secara partisipatif	Participatory Capacity and Vulnerability Assessment
SBDRR	Pengurangan Risiko Bencana Berbasis sekolah	School Based Disaster Risk Reduction
SKPD	Satuan Kerja Perangkat Daerah	District Sectoral Offices
SOP	Standar Prosedur Operasional	Standard Operating Procedure
VDRRF	Forum PRB Desa	Village Disaster Risk Reduction Forum
VPT	Tim Biaga Bencana	Village Preparedness Team
WCC	<i>Cahaya Perempuan</i>	Women's Crisis Centre

Table of Contents

Acknowledgments	3
Map of Readi Target Areas	4
List of Terms and Abbreviations.....	5
List of Tables.....	8
List of Figures	9
List of Feature Box.....	9
Executive Summary.....	10
Chapter 1. Background and Objective.....	12
1.1. Background	12
1.2. The project.....	14
1.3. Scope of Endline Study	15
Chapter 2. Methodology	17
2.1. Review of Documentation and Secondary Sources	18
2.2. Quantitative Methodology	19
2.2.1 Community Survey.....	19
2.2.2BPBD Survey.....	21
2.2. Qualitative Methodology.....	21
2.2.1 Qualitative Data Collection	22
2.3. Data Entry and Data Analysis.....	23
2.3.1. Data Entry.....	23
2.3.2. Data Analysis.....	24
2.4. Data Collection	25
2.4.1. Enumerators Training	25
2.4.2. Enumerators Briefing	25
2.4.3. Technical Preparation.....	25
Chapter 3. Results and Analysis	26
3.1. Conceptual and Framework for Community Resilience	26
3.2. Project Achievement Summary	27
3.1.1. Knowledge and skill on DRR	30
3.1.3. Disaster Preparadness and Response	39
3.1.3.1. Evacuation Maps	39
3.1.4. Temporary Shelter	47
3.1.5. The Early warning System	53

3.1.5. Emergency Information System (Emergency Masts).....	57
3.1.7. Dedicated AM/FM Emergency Radio Channel.....	58
3.1.8. Partnership	61
3.2.1. Governance	65
4. Main Findings	71
4.1. Relevance	72
4.2. Effectiveness	76
4.3. Efficient.....	78
4.4. Impact.....	80
4.5. Sustainability	84
4.6. Ownership.....	85
4.7. Coverage	86
4.8. Gender	87
4.9.Coordination	87
Chapter 5. Conclusions and Recommendations	88
Chapter 6. Stakeholders’ Perception about Mercy Corps through READI project.....	90
6.1. On Accountability.....	91
6.2. Working towards gender sensitivity and inclusion principles.....	92
6.3. Stakeholders’ perception capacity building by Mercy Corps.....	94
6.4. Stakeholders’ perception on how Mercy Corps work with Civil Society.....	96
6.5. Stakeholders’ perception on how Mercy Corps advocating Government.....	99

List of Table

Table 1. Summary of the Project.....	14
Table 2. Quantitative study components.....	19
Table 3. Quantitative respondents.....	19
Table 4. Respondent of Community Survey per district.....	20
Table 5. Respondent of BPBD survey.....	21
Table 6. Distribution of BPBD survey per district.....	21
Table 7. Informants of FGD in districts.....	22
Table 8. Informant of Interview.....	22
Table 9. Theme in Community Resilience.....	27
Table 10. Summary Table – Progress on Key Indicators.....	28
Table 11. Community attended in the DRR Meetings.....	30
Table 12. Community attended discussions and meeting on DRR per district.....	31
Table 13. Discussions in the Community.....	31
Table 14. Discussion and Meeting Topics on DRR.....	32
Table 15. Respondent attended training on DRR.....	33
Table 16. Respondent attended training on DRR per area.....	34
Table 17. Respondent joined the simulation.....	38
Table 18. Respondent participated in evacuation map development.....	40
Table 19. Respondent participation in developing evacuation maps.....	40
Table 20. Respondents recognize evacuation maps.....	41
Table 21. Respondents recognize the evacuation maps per district.....	41
Table 22. Availability of evacuation route or signs.....	41
Table 23. Availability of evacuation route or signs per district.....	42
Table 24. Socialization of evacuation maps.....	43
Table 25. Condition of evacuation route.....	44
Table 26. Community understanding on evacuation route.....	45
Table 27. Priority on the evacuation.....	46
Table 28. Temporary Evacuation Shelters in five districts.....	47
Table 29. Temporary Evacuation Shelter.....	50
Table 30. Distance between house and vertical shelter building.....	51
Table 31. Distance between house and vertical shelter per district.....	51
Table 32. Time needed to reach vertical shelter.....	52
Table 33. Vertical shelter applied gender and inclusive principle per district.....	52
Table 34. Availability of planning to manage and take care of vertical shelter.....	53
Table 46. Program Strategy Alignment with global, regional and OFDA DRR Priorities.....	75
Table 50. Respondents of Perception Survey.....	90
Table 51. Stakeholders' perception on Accountability.....	91

List of Figures

Figure 1.SundaMegathrust.....	13
Figure 2: Key Research Questions.....	17
Figure 3. Data Triangulation Techniques.....	24
Figure 4 BNPB/BMKG assessment.....	72

List of Feature Box

Feature Box 1. Straight Road and Right.....	37
Feature Box 2. Grand Zuri Vertical Shelter.....	49
Feature Box 3. Now I Know.....	82

Executive Summary

Since 2008, Mercy Corps has worked in Sumatra to improve Disaster Risk Reduction (DRR) in the local communities. The READI project was developed to capitalize on various local DRR projects and build on the groundwork laid by Mercy Corps' previous and current DRR programs in the West Sumatra province. The program was developed to connect these programs with existing DRR forums and to leverage and compliment the DRR messaging of other programs with key stakeholders and local actors.

The overall objective of the research was to assess the program's effectiveness to build DRR capacity and enhance the resilience of vulnerable urban coastal populations in Sumatra with the hope that the learning from the program will feed into future interventions and aid decision-makers at governmental and non-governmental levels.

The methodology proposed for this research encompasses *a mix of quantitative and qualitative research* which includes an initial desk review of the main documents and relevant literature on the topic, a *community survey*, followed by the use of qualitative and participatory research tools such as *Focus Group Discussions (FDG) and interviews with key stakeholders* in the field (e.g. community groups, village leaders, government officials, CSOs), as well as *participant observation*.

Below is a list of the overall key findings of the program:

Key Findings

Relevance

Besides meeting the needs of community, the READI program was aligned with international agreements and priorities on DRR. The READI program fits into OFDA's mandate with interventions that contribute to saving lives, alleviating suffering, and reducing the economic impact of future disasters by building local capacity for disaster management, increasing risk and mitigation awareness, and improving warning systems. Capacity building to BPBD activity was also an answer to the complexity in Indonesian bureaucracy in providing training to improve human resources in BPBD.

Effectiveness

READI resulted in increased awareness of the community and strengthened the capacity of the government. It has also encouraged the development of identification and establishment of preparedness infrastructure and procedures which benefited all stakeholders. However, almost all areas noted about the short duration of the program implementation. Eight to ten months of program implementation was not enough to build stronger preparedness mechanism within the community and BPBD. FGD with community and BPBD in Bengkulu noted that community improvement was in the level of changing paradigms, but not yet in behavior. They have produced several DRR planning documents but it has not yet been endorsed.

Efficient

READI Program has noted remarkable outputs in terms of indicator fulfillment. It has achieved the target beyond expectation and delivered in a timely and cost effective manner as the result was doubled from the planned. The capacity building for BPBD has surpassed the target number. However, a note on the quality after the training needs to be considered. The project also contributed to the development of DRR policy and regulation. Four local authorities developed disaster preparedness systems in the program; Bengkulu, Aceh Barat, Nias, and Gunungsitoli.

Impact

The READI program brought some changes to community life. Some of the KSBs said that the READI program brought more knowledge and skill to the community to be better prepare for disasters. KSB also socialized knowledge on how to survive and where to assemble, and conducted earthquake and tsunami simulations. In addition, the community who received direct training from Mercy Corps was able to transfer it to other communities nearby. The transfer process was another opportunity for sustained DRR initiatives in the community. Although implemented during a short period, READI encouraged women to participate in the process of DRR stock taking. The program also contributed to building community self confidence in taking part in DRR initiatives. The program successfully encouraged the community to independently take the initiative to strengthen the community with preparedness and response activity.

Sustainability

Most respondents had the opinion that the village planning did not yet included DRR. It was still a challenge for the community to include DRR initiative as a priority and part of the village development planning. Despite the challenge to include DRR initiatives as part of the village development planning, the communities are making efforts to independently continue the initiative on a small scale. Overall, as the program focused on the development and building of the community disaster response and preparedness and had a short duration of implementation, sustainability on DRR initiative should be the next priority to work on.

Ownership

The READI project prepared and encouraged the community to be more independent in building community resilience towards disaster. Although some areas mentioned that the program has a short duration to build their confidence to continue and take over the responsibility, some community initiatives emerged to keep continuing activities.

Coverage

The summary result or output of the project shows that the project has reached the coverage target beyond expectation. The capacity building activities reached 172% of the target and also with other achievement which shows the project extended its coverage beyond what has originally planned.

Gender

The quantitative study mentioned that about 41% of the discussions within the community were attended by female participants. The qualitative study also noted that female participation in discussions resulted in more gender sensitive decisions. The decisions in the community considered the needs of certain groups including women. They admitted that women have different needs and were able to contribute more in the disaster preparedness and response activity.

Coordination

Mercy Corps successfully bridged the linkage between private sector actors and government to support KSB. It was challenging for KSB to communicate openly with other stakeholders, even with the government. However, the project has provided opportunity for stakeholders to build partnership and support longer collaboration between parties.

Chapter 1. Background and Objective

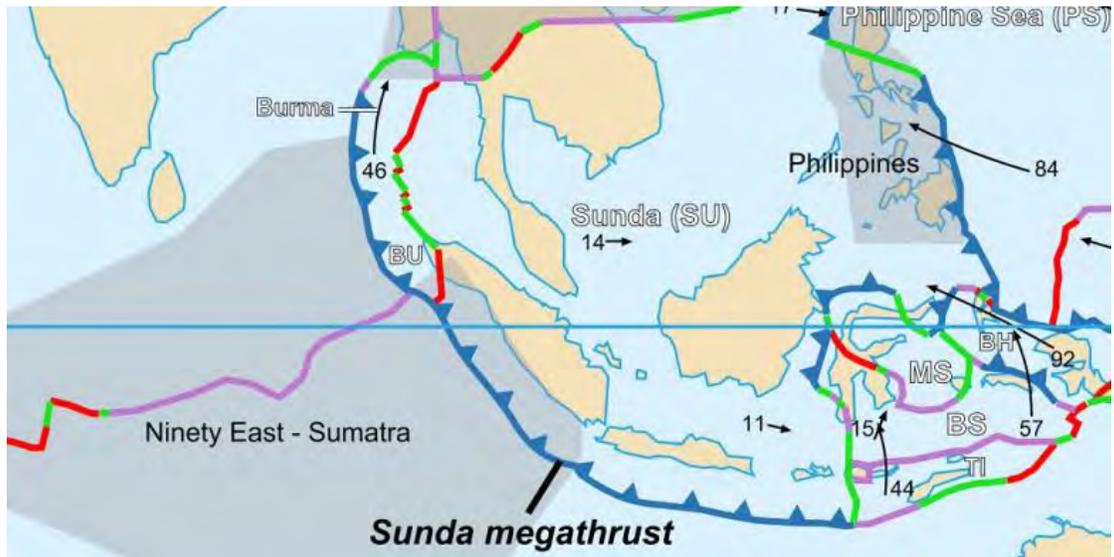
1.1. Background

Indonesia is known as a disaster prone area. The National Disaster Management Body in Indonesia has published risks maps for every province in Indonesia which provided information on several hazards such as earthquakes, tsunamis, volcanoes, landslides, flooding, droughts, and storm surges, etc. The effects of climate change are exacerbating many of these perennial hazards: changes in rainfall patterns are affecting food security and drinking water; storms are becoming more severe; sea level rise is putting lives and livelihoods at risk in coastal communities. The history of disaster in Indonesia has taught lessons to the community to be well prepared. Global experience has shown that the most cost-effective and life-saving initiatives are community-driven and supported by a government commitment to prioritize disaster preparedness.

Sumatra' west coast is located in a high risk area for earthquakes and tsunamis as well as flooding and landslides. The west coast of Sumatra is situated beside the Sunda Trench (megathrust). The so-called Sunda megathrust is a subduction zone that generated the devastating earthquake and tsunami in December 2004, killing over 240,000 people in 13 countries around the Indian Ocean. In the following years, destructive earthquakes and tsunamis hit Sumatra harder than any other place on earth in terms of frequency and consistency of magnitude. Experts say it is just a matter of time before the next large earthquake and tsunami strike. The 11 April 2012, a magnitude 8.6 earthquake that hit Sumatra was a "strike-slip" event, experts say; the largest of its kind ever recorded¹.

¹Indonesia quake a record, risks for Aceh grow. Reuters, 12 April 2012.
<http://www.reuters.com/article/2012/04/13/us-asia-quake-risks-idUSBRE83C00D20120413>

Figure 1. Sunda Megathrust



While this type of earthquake is less likely to generate a tsunami, the April 11 event and powerful aftershocks increased the overall pressure on the boundaries of Aceh's tectonic plate. Moreover, according to studies after the 2004 tsunami, only half the stress on the plate was relieved on that occasion and there is now fear that the latest movement on a different area of the fault line may have accelerated the next large disaster.

Currently, to strengthen the community capacity, the government has launched a Mentawai Megathrust direx as one of the efforts for disaster preparedness and planning. Despite the broad awareness of hazard threats and the positive steps taken by the Government of Indonesia (GoI) in promoting disaster management as a national priority and enshrining it in Disaster Management Law no. 24/2007, there are many vulnerable communities with no basic preparedness measures in place. Local governments, although required by the Disaster Management Law to institute specialized agencies as part of decentralization policies, are largely lacking in the training, capacity, and equipment necessary to address disaster risk reduction needs. This creates a gap between what is written in national government policies on disaster management and what is actually implemented at the provincial, district, and local levels. For Indonesia to effectively face these challenges, a comprehensive national policy approach must be integrated with local, context-driven initiatives rooted in communities and their governments with active private sector and civil society partnerships. Mercy Corps identified challenges on the implementation of disaster management at the local level, such as lack of awareness, capacity, communication protocols and infrastructure. Following the 2004 tsunami in Aceh and the 2009 earthquake in West Sumatra, many organizations were involved in mapping evacuation routes in cities. However, many of the resulting products reflect an outdated, generic approach: there are no maps informing people of the most direct/accessible evacuation routes (including the recently developed vertical shelters) and most of the drawings are rendered at citywide

scale, making them nearly unusable for local communities, especially by those individuals with a lower level of literacy. ²

1.2. The project

Since 2004, the GoI has endeavored to establish a network of Disaster Management Agencies throughout its territory, prioritizing areas at high risk. However, despite the significant effort, much work remains. With renewed commitment from officials at the national and sub-national level, and increasingly demanding communities, the project aims to exploit the momentum for action created by these forces. Moreover, the 11 April 2012 earthquake off the coast of North Sumatra created a renewed sense of urgency to address outstanding DRR issues, pressuring national and local authorities to open the discussion on how to better prepare ahead of the next disaster.

The intervention addresses key components of DRR planning, as identified through needs analysis and outlined in the Technical Description section. It focuses on information and awareness at the sub-national level, but goes beyond it by addressing the gap between authorities and communities, providing simple and easy to maintain communication infrastructure and protocols to be integrated into local DRR planning.

Mercy Corps has been working extensively since 2008 in the DRR area in Sumatra. The READI project was developed upon the capitalization of various DRR projects in Sumatra. The proposed activities of the READI program will build upon the groundwork laid in Mercy Corps' previous DRR programs as well as the current programs in West Sumatra province, to connect with existing DRR forums, and to leverage and compliment the DRR messaging of other programs with key stakeholders and local actors.

Table 1. Summary of the Project

Goal	To build DRR capacity and enhance resilience of vulnerable urban coastal populations in Sumatra.
Beneficiary Numbers	<ul style="list-style-type: none"> Total Number of Individuals Affected in the Targeted Area: 1,679,289 (all population) Total Number of Beneficiaries Targeted: 1,814,122 (100%) Estimated cost per beneficiary: \$ 0.54
Objective 1	<p>Government officials and vulnerable communities in the target areas have increased knowledge of hazard risks plus mitigation measures and the skills to apply DRR models, as well as improved access to functional emergency information infrastructure.</p> <ul style="list-style-type: none"> Dollar Amount: USD \$ 991,516
Geographic Areas	<p>To provide relevant assistance to the communities living along Sumatra's west coast, Mercy Corps will work in the most populous coastal cities of Sumatra as well as the isolated communities of Mentawai and Nias Islands. Meulaboh (182,565 population), Nias</p>

²Adapted from READI Proposal by Mercy Corps

	(258,759 population), Padang (847,567 population), Mentawai (77,078 population) and Bengkulu (313,320 population).
<i>OFDA Indicators</i>	<i>Program Impact Indicators</i>
<ul style="list-style-type: none"> • Number of people trained in disaster preparedness, mitigation, and management; • Number and percent of beneficiaries retaining disaster preparedness, mitigation, and management knowledge two months after training; • Number of hazard risk reduction plans, policies or curriculum developed 	<ul style="list-style-type: none"> • Number of people with access to improved Emergency Warning Systems for earthquake and tsunami throughout the target areas of Sumatra • Number of potential vertical shelters identified • Number of people with access to evacuation routes and certified vertical shelters • Number of people participating in simulations • Number of people within broadcast range of the AM/FM radio frequency to receive hazard information broadcasts • Number of local authorities adopting disaster preparedness systems developed in this program
<i>Partners</i>	<i>Mentawai: Ready, Bengkulu : WCC, Nias: L-Samaeri, Meulaboh: YPS, Padang: JemariSakato</i>

The tools and methodologies used in the inclusive, multi-stakeholder approaches implemented in ACCCRN and API was integrated into the READI program with opportunities for sharing information and learning between the projects.³This program included capacity building and training for both community members and local government officials in preparedness measures as well as operation and maintenance of the emergency information system. The program is composed of DRR awareness, preparedness, and infrastructure. Please see the technical design for details. Mercy Corps worked with potential host communities to reduce the impact of a sudden influx of IDPs in case of a disaster. An awareness campaign introduced households to the risks and responsibilities – as well as best practices – of becoming a host family. Throughout the program special emphasis was placed upon the linkages between Mercy Corps, the Government of Indonesia, and communities. Building upon existing relationships, Mercy Corps supported the local government and its agencies to develop or strengthen their policies, plans and guidelines for effective DRR programming.

1.3. Scope of Endline Study

Indonesia’s exposure to natural hazards is quite alarming and the occurrences of natural disasters are frequent. Earthquakes, tsunamis, volcanoes, landslides, floods, droughts, and storms all resulted in damage to society and the economy. The impact of climate change is exacerbating the annual dangers: changing rainfall patterns are affecting food security and water, more severe storms, rising sea levels resulting in lives and livelihoods of vulnerable coastal communities. Global experience has shown that the most cost effective and safe

³Adapted from READI Proposal by Mercy Corps

rescue comes from the initiative, which encouraged and supported by the government's commitment to disaster preparedness priorities.

Since 2004, the Indonesian government has tried to build a network throughout the agency on disaster management in the region, with priority given to high-risk areas. However, despite significant efforts made, there is still much work to be done. With a new commitment at national and regional level, and the increasing public demand, this program aims to capitalize on the momentum of these efforts. In addition, in the latest years, there was a new urgency to address the issue of disaster risk reduction, forcing the national and local authorities to open a discussion of how to better prepare for future disasters.

Mercy Corps Indonesia is actively seeking innovative ways to help the people of Nias, Mentawai, Meulaboh, Padang, and Bengkulu in improving resilience and to cope with natural disaster preparedness. "Resilient Environment through Active DRR Initiatives" (READI) Program addresses the needs of the communities in the high prone disaster areas to build the capacity of households, communities, and institutions to reduce any possible impact of natural disasters; as well as their capacity to take immediate action when disasters occur.

The purpose of the READI program is to contribute to the safety of life, reduce suffering, and reduce the economic impact of disasters in the future by building local capacity in disaster management, increase awareness of the risks and mitigation, and improve early warning systems. In particular, activities include:

- Awareness and active involvement
- Develop evacuation maps
- Increased capacity
- Identification of shelters,
- Improved emergency information system (early warning towers)
- Radio broadcast disaster information and early warning
- Partnerships with government, private sector, and the public

The main purpose of the research is to assess the stage of resilience towards natural disasters in five high-risk areas in Sumatera Indonesia, namely, Padang, Bengkulu, Meulaboh, Nias, and Mentawai districts. The findings of the research proposed within the scope of the consultancy will serve to assess the resilience of several high-disaster-risk districts in Indonesia.

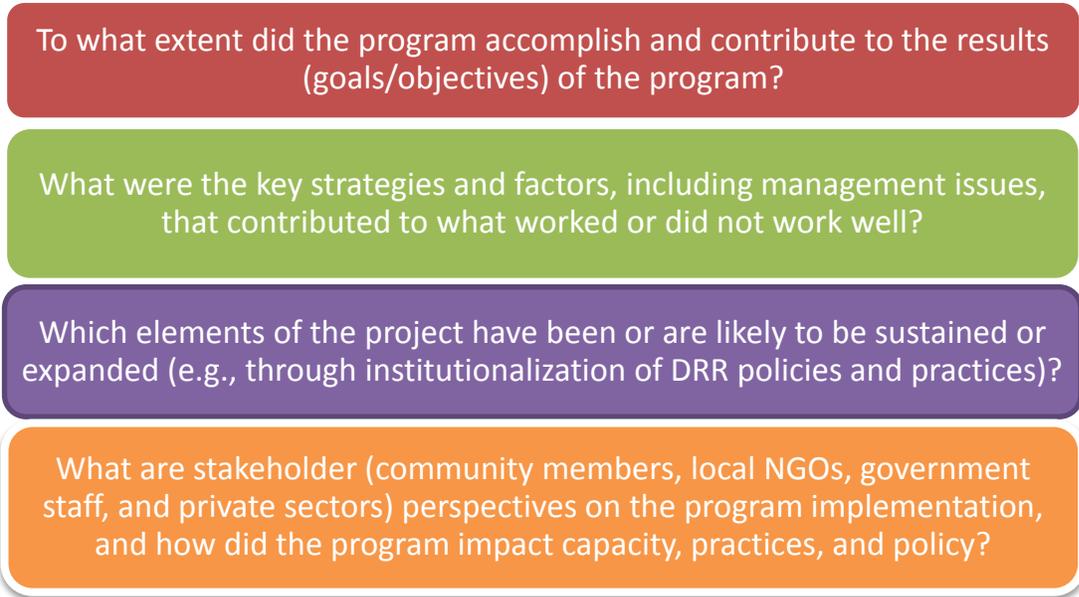
On the one side, district governments could benefit from this research to develop appropriate policies, planning, and budget allocations; while on the other side, the research will serve to identify future DRR programming including lessons learned from Mercy Corps' current project.

Chapter 2. Methodology

The overall objective of the research was to assess an evidence base relevant to build DRR capacity and enhance resilience of vulnerable urban coastal populations in Sumatra that will feed future interventions and decision-makers at governmental and non-governmental levels. The methodology proposed for this research encompasses **a mix method of quantitative and qualitative research** which includes an initial desk review of the main documents and relevant literature on the topic, **community survey**, to be followed by the use of qualitative and participatory research tools such as **Focus Group Discussions and interviews with key stakeholders** in the field (e.g. community groups, village leaders, government officials, CSOs), as well as **participant observation**.

The research tools was specifically developed for this research and aimed at gathering information on the resilience status of the target communities and the DRR capacities of the governance and civil society. The tools were used to dig into success, challenges and difficulties from past interventions in order to draw up context specific lessons learned and knowledge that could be applied in future DRR projects.

Figure 2: Key Research Questions



To enable assessing the project's **relevance, effectiveness, efficiency, sustainability, impacts, and gender equity**, the evaluation will examine the following aspects:

- *Changes in context and review of assumptions (relevance):* Is the project's design adequate to address the problem(s) at hand? Do the objectives and goals match the problems or needs that are being addressed?
- *Results in terms of outputs achieved (effectiveness):* Are the beneficiaries satisfied with the quality and delivery of services? If not, in what way did the services not meet with beneficiary expectations and why? What concrete improvements and changes have taken place (at the community) as a direct result of the program?

What were the major factors influencing the achievement or non-achievement of the objectives? What are the supportive factors and obstacles encountered during the implementation?

- *Assessment of outcome (impact)*: To what extent has the project contributed the capacity of beneficiaries (local government, CSO, village, and community) What happened as a result of the project? (This may include intended and unintended positive and negative effects) What real transformation has the activity made to the beneficiaries and project partner such as improved practice and greater awareness on psychosocial aspect as well as its accountability.
- *Achievement of projected performance indicators and targets (efficiency)*: Did the project achieve the target? Is the project delivered in a timely and cost-effective manner?
- *Sustainability*: Will the project's effects remain over time? Is there a stream of results that is likely to continue and what are the potential risks? Have the project accumulated knowledge and skills that will endure beyond project period and can be replicated elsewhere. What were the major factors which influenced the achievement and non-achievement of sustainability of the project?
- *Gender Equity*: How has the project addressed boys/male and girls/female particularly in terms of equal opportunity to access and control of resources, sharing project benefits and decision making)?

2.1. Review of Documentation and Secondary Sources

The evaluation applied a literature review of the program documentation and secondary resources. This involved gathering and careful examination of all basic documentation available concerning Mercy Corps project, including, among others: lessons learned, strategies and intervention plan, best practices, gap assessments, baseline and end line studies, evaluations, etc. Another document to review are:

- Project design and reports (e.g. detailed implementation plan; quarterly reports; baseline surveys and mid-line evaluation reports; and any other monitoring reports) to assess the quality of quantitative and qualitative data and make assessments of project results in relation to the project design and set targets.
- Use and reference all relevant policy and strategy documents at the province and national levels (from BNPB and BPBD) as well as national tsunami master plan and DRR related study and surveys report.

These inputs provided a comprehensive view of the application scope of the data collection methods, help to identify overlap and gaps, and enabled Migunani Team to suggest the change or improvements of specific areas. The revision of relevant documentation and secondary sources further fostered an in-depth understanding of the mandate and scope of Mercy Corps in general as well as pertinent programs. Further it facilitated the development of recommendations for future interventions and decision making processes. In addition, the analysis has made use of scientific models to systematize and extract the available information in order to draft the interview and focus group discussion guides.

2.2. Quantitative Methodology

The Quantitative methodology was intended to capture and to identify common patterns, trends and variations in findings. To identify the common patterns, trends and variation of findings, the evaluation conducted survey to community and BPBD as the main subject of the program. Below were the components of the quantitative study in the READI final evaluation

Table 2. Quantitative study components

Survey	Subject	Sample Size	Sample frame	Sampling method
Community Survey	Community member, DRR village team	230	N/A	Random
BPBD Survey	District BPBD	28	N/A	Purposive

As the study has some limitation, it did not apply sample size and sample frame methodology. The number was derived from the available individuals in the community and BPPBD office in time of survey and from FGD planning in qualitative study.

2.2.1 Community Survey

The community survey was conducted in five districts in Sumatra, namely: Bengkulu, Mentawai, Meulaboh, Nias, and Padang. Mentawai consisted of Tuapejat and Siberut. The community survey was completed using a random method and most them were representation of DRR village team.

Given that the total number of schools was not large it was not overly burdensome to conduct the survey using the census method. Enumerators collected data from each school. Depending on school location (ease of access) and time availability, the primary school survey was conducted by one or two enumerators, as below.

Table 3. Quantitative respondents

Area	Number of Respondent
Padang	68
Bengkulu	52
Mentawai	30
Meulaboh	48
Nias	32
Total	230

Table 4. Respondent of Community Survey per district

(A) Respondent	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Sex	N= 52	N=30	N=48	N=32	N=68
Male	37	19	23	23	25
%	71.15	63.33	47.92	71.88	36.76
Female	15	11	25	9	43
%	28.85	36.67	52.08	28.13	63.24
(B) Age Group					
15 - 24 old years	5	6	1	1	6
	9.62	20	2.08	3.13	8.82
25 - 59 Old years	41	22	42	29	57
	78.85	73.33	87.5	90.63	83.82
>= 60 Old years	6	2	5	2	5
	11.54	6.67	10.42	6.25	7.35
(C) Education					
Elementary school /	9	12	11	16	2
	17.31	40	22.92	50	2.94
Junior High School /	12	7	8	4	7
	23.08	23.33	16.67	12.5	10.29
Senior High School /	24	6	23	7	44
	46.15	20	47.92	21.88	64.71
D1	0	0	0	0	0
	0	0	0	0	0
D2	0	0	1	0	0
	0	0	2.08	0	0
D3	1	3	1	0	2
	1.92	10	2.08	0	2.94
S1	6	2	4	0	13
	11.54	6.67	8.33	0	19.12
No education	0	0	0	5	0
	0	0	0	15.63	0

2.2.2BPBD Survey

A total of 28 respondents from BPBD were targeted for quantitative data collection. The respondents consisted of 22 males and 6 females from 5 areas of intervention. The survey was the same format as community survey, but with additional question on BPBD's role as policy and regulation decision maker in DRR initiatives.

Table 5.Respondent of BPBD survey

TOTAL N=28	
Respondent	
Male	22
	78.57
Female	6
	21.43

Table 6. Distribution of BPBD survey per district

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Gender	N= 5	N=7	N=6	N=5	N=5
Male	5	5	4	4	4
	100	71.43	66.67	80	80
Female	0	2	2	1	1
	0	28.57	33.33	20	20

2.2. Qualitative Methodology

Semi-structured discussions/Key Informant Interviews: interviews aimed at identifying elements and processes affecting the resilience status of target communities and identify adequate DRR intervention components for future programming, as well as provide valuable information for governmental and non-governmental actors in the area. Interviews included briefings and discussions with government officials, civil society organizations and community representatives as well as interviews with people responsible for project implementation. Interviews was based on an interview guide consisting on a number of open-ended questions related to fixed topics, although they took formal or informal manner, according to the setting.

Focus Group Discussions: this method was employed to gather information on the knowledge, attitudes and perceptions of different groups of people, particularly community members and leaders concerning the resilience status of their communities. FGDs were essential to obtain a group vision on the issue as well as identify factors that concern the community as a whole. The FGDs furthermore identified context-specific challenges to be addressed. The discussions was held in special sessions, by invitation and appropriately guided for the purpose. A wide range of Participatory Rural Appraisal (PAR) techniques was used during the sessions to encourage participants to share perceptions and points of

view. A minimum of 2 focus groups (1 male, 1 female) per selected area were held.

2.2.1 Qualitative Data Collection

The informants for the FGD and interviews were determined by their availability and knowledge ability regarding the topics. Although the process was planned in advance, the number of informants who could attend discussions was not always in line with the original plans. Total numbers of the respondent who participated in the qualitative data collection process are outlined below.

Table 7. Informants of FGD in districts

No	Dates	District	Groups	Number of Participant	
				Male	Female
1	8 Dec 2014	Mentawai Islands	StaffBPBDMentawaiDistrictinTuapejat.	4	4
2	9 Dec 2014	Padang City	KSB LautBiru, UlakKarang Selatan Village	4	6
3	9 Dec 2014	Padang City	KSB ParupukTabing	11	3
4	9 Dec 2014	Mentawai Islands	FGD MitraLokal Ready inSiberut Island, Siberut Tengah Sub-district	2	0
5	10 Dec 2014	Mentawai Islands	KSB SaligumaVillageSiberut Island, Siberut Tengah Sub-district	8	3
6	10 Dec 2014	Padang City	Staff BPBD Padang City	7	4
7	10 Dec 2014	Padang City	FGD MitraLokalJemariSakato	6	1
8	12 Dec 2014	Nias District	Staff BPBD NiasDistrictinGunungSitoli	7	1
9	12 Dec 2014	GunungSitoli City	Staff BPBD GunungSitoliCityinGunungSitoli	4	0
10	13 Dec 2014	Nias District	KSB Botohaengan Village, Bawolato Sub-district, Nias District	6	2
11	14 Dec 2014	Bengkulu City	KSB PondokBesi Village, TelukSegara Sub-district, Bengkulu City	4	3
12	15 Dec 2014	Bengkulu City	KSB Kandang Village, KampungMelayu Sub-district, Bengkulu City	4	3
13	15 Dec 2014	Bengkulu City	Staff BPBD Bengkulu City	4	2
14	15 Dec 2014	Bengkulu City	FGD MitraLokalCahayaPerempuan (Women Crisis Centre) in Bengkulu City	1	2
15	15 Dec 2014	Aceh Barat District	KSB SuakRibee Village, Johan Pahlawan Sub-district Meulaboh	6	2
16	16 Dec 2014	Aceh Barat District	Staff BPBD Aceh Barat Meulaboh	3	3
17	16 Dec 2014	Aceh Barat District	KSB Pasi Pinang Village, Meurebo Sub-district, Meulaboh	12	2
Total				93	41

Table 8. Informant of Interview

No	Dates	Organization	Names	Gender
1	6-7 Dec 2014	Program Manager READI	Supriyanto	M

2	6-7 Dec 2014	M & E Officer READI	Henny Sari	F
3	8 Dec 2014	Director Radio Surak FM Mentawai	Sandang P	M
4	8 Dec 2014	Head of Preparedness Division of BPBD Mentawai Islands District	HatisamaHura	M
5	8 Dec 2014	BPBD Staff Mentawai Islands District	YalterSaogo	M
6	10 Dec 2014	Head of K3 and SPS member PT Semen Padang	Dainuri SE	M
7	10 Dec 2014	Member of KSB Saliguma Village, Siberut Tengah Sub-district, Mentawai Islands District	Paskalis	M
8	11 Dec 2014	Head of Preparedness Division BPBD Padang City	Henry	M
9	11 Dec 2014	Director Radio Classy FM Padang	Meidy	F
10	12 Dec 2014	Staff Hotel Grand Zuri Padang	Ricky	M
11	12 Dec 2014	Director Lembaga Samaeri Mandrehe Nias	Alex Zai	M
12	12 Dec 2014	Head of Broadcasting Division RRI Gunung Sitoli Nias	Ningsih	F
13	15 Dec 2014	Head of BPBD Bengkulu City	IrMulyani Garda Reputra	F
14	15 Dec 2014	Staff RRI Bengkulu	Henry	M
15	15 Dec 2014	Staff WCC Cahaya Perempuan Bengkulu	Sastro	M
16	15 Dec 2014	Head of KSB Pondok Besi Bengkulu	Wiwi Lianti	F
17	15 Dec 2014	Head of KSB Suak Ribee Village, Meulaboh	Abdul Karim	M
18	15 Dec 2014	Students SDN 19 Meulaboh	Tasya	F
19	16 Dec 2014	Director Yayasan Paramadina Semesta (YPS) Meulaboh	Karmalis	M
20	16 Dec 2014	Staff Coffee Toffe Padang	Mika	M
21	17 Dec 2014	Staff RRI Aceh Barat Meulaboh	Julian	M

2.3. Data Entry and Data Analysis

2.3.1. Data Entry

To enhance efficiency the survey planned to use mobile data collection utilizing the CSPro software platform. This software, which was installed on tablet computers, eliminated the need for additional resources and the possible introduction of errors associated with the data validation and input step. The software guided the enumerators to skip irrelevant questions (or not skip important questions), fill only logically correct numbers or dates, and even to take photos for observation. It was only used for collection of quantitative data. However the implementation of data quantitative collection was combined with paper based data collection as there was a limitation on the software installation on personal gadget owned by enumerators. The field researcher took a role on the data input from paper based to web based data collection.

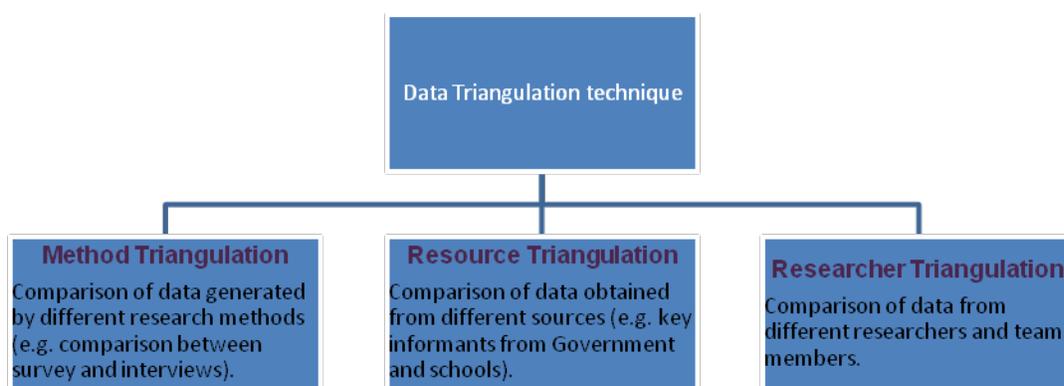
The qualitative data was collected using recorder, paper questionnaires and coded in a spreadsheet. All the data was entered on a daily basis and was checked every day by the field coordinator to ensure that all data was correctly entered. Enumerators were briefed on the data collection process every day to ensure validity of data and to minimize errors in

data entry. Further details on the data entry and verification process can be found in Annexes 3.

2.3.2. Data Analysis

Data analysis applied three approaches to triangulation: method, resource, and researcher. Data triangulation is an essential component of this process, allowing researchers to ensure accuracy and reliability. The team methodically examined and compared information collected from different sources (compare data from children survey and school survey) and research methods (compare the result from survey and interview/FGD) to assess whether they supported similar interpretations and findings. The figure below synthesizes the different triangulation techniques that were used to guarantee maximum veracity and soundness of conclusions.

Figure 3. Data Triangulation Techniques



a. Quantitative Analysis

The analysis of quantitative data applied simple descriptive statistics. The descriptive statistic helped to describe, to show or to summarize data in a meaningful way such that patterns could emerge from the data. Descriptive statistics provides simple summaries about the sample and about the observations that have been made. In the READI context, the descriptive statistics method provided a simple summary or description of the respondents' views on the READI program implementation, changes, and impact in community as a result of the intervention.

Several techniques were adopted to validate the data, as follows

- The first step toward ensuring accurate data involved the development of the survey instrument and selection of the data collection technique. Questions were adjusted according to the type of respondents, e.g.: community and BPBD.
- Daily checking of data entry and input was conducted to ensure that data was entered correctly. The data classification process was conducted with enumerators.

b. Qualitative Data Analysis Plan

Iterative qualitative analysis was conducted. To enable analysis, the qualitative data was coded, checked and edited, interpreted and verified. To aid consistency and systematic analysis of the different contexts – based on the topic list for in-depth interviews and FGDs

– a codebook (in Microsoft Excel form) was created to code and classify the qualitative data.

2.4. Data Collection

A field coordinator took the lead on the data collection process from 5 December – 23 December 2014 and worked intensively with ten enumerators and three qualitative researchers. The ten enumerators were trained on data input methods using CSpro (*mobile phone survey*). On this occasion Mercy Corps also provided a briefing to the enumerators of READI program and context.

2.4.1. Enumerators Training

Prior to data collection process, the enumerators received training on the overview of end-line activity, the instrument, as well as ethic in conducting a research. Migunani provided material on the instruments, and data collection gathering, data entry, and data input.

2.4.2. Enumerators Briefing

The field coordinator led the day to day briefing with enumerators after the data collection activity finished. The field coordinator of Migunani and CSpro specialist supervised and checked the data input process from the enumerators and discussed every problem related. CSpro specialist checked the answer of every data sent to the server and confirm again with the enumerators. This step needed to be conducted to ensure the accuracy of data entry process.

2.4.3. Technical Preparation

Migunani deployed five personnel to work on the endline and evaluation fieldwork, one person as a field coordinator, one trainer (and also qualitative researcher), and three qualitative researchers. The field coordinator was responsible for day to day data collection arrangement, and work together with CSpro specialist to ensure the data collection, data entry, and all fieldwork arrangement conducted as scheduled. CSpro specialist had a day to day briefing with enumerators to ensure the data collection was input as expected. Trainer was responsible to prepare the enumerator on the instrument understanding and substance understanding. Four qualitative researchers were responsible to conduct FGD and interviews of informant.

Chapter 3. Results and Analysis

This chapter discusses the finding and analysis of the implementation of READI project. As mentioned before, the analysis was based on the indicators of READI project with focused on the initial condition and latest condition of the target beneficiaries. However to provide theoretical information based on the analysis, a snap shot on the community resilience will be used as a base to provide description from the literature review perspective on DRR and community resilience.

3.1. Conceptual and Framework for Community Resilience

The READI project's main goal is to build DRR capacity and enhance resilience of vulnerable urban coastal populations in Sumatra. As written in the beginning, many have argued about community resilience terms and considered that the concept was ambiguous, contradictory and raises unresolved questions. However, it has a number of common characteristics such as the possibility to absorb and then recover/building back better from an abnormal event; being ready and prepared to face threats and events which are abnormal in terms of their scale, form of timing; an ability and willingness to adapt to a changing and sometimes threatening environment; a tenacity and commitment to survive; and a willingness of community to rally round a common cause and a shared set of values⁴.

This research believes that community resilience to disaster is a function of preparedness outcomes. *Using this approach, system or community resilience can be understood as capacity to manage, or maintain certain basic functions and structures, during disastrous events. A focus on resilience means putting greater emphasis on what communities can do for themselves and how to strengthen their capacities, rather than concentrating on their vulnerability to disaster or their needs in an emergency.*⁵ *Different features or layers of resilience are needed to deal with different kinds and severity of stress. The 'disaster-resilient community' is an ideal. No community can ever be completely safe from risks. It may be helpful to think of a disaster-resilient or disaster-resistant community as 'the safest possible community that we have the knowledge to design and build in a natural hazard context', minimizing its vulnerability by maximizing the application of DRR measures. DRR is therefore the collection of actions, or process, undertaken towards achieving resilience.*

This framework begins with a belief that the community is not invincible but they have a natural resistance to build upon. The community also has the right for basic services and safety and basic right is the foundation of community resilience. Natural resistance will be weakened if one of the rights is not realized. The right is non-negotiable.

The READI projects designed to responding to any components of risk reduction- either responding to the foundation of safety and or moving towards resiliency. The process

⁴McAslan, Alastair (2010), Community Resilience, Understanding the Concept and Its Application, Torrens Institute, Adelaide, Australia

⁵Twigg, John (2007), Characteristics of a Disaster-resilient Community A Guidance Note

begins with a principle that a rights based has ensured the foundation of safety culture in community which would contribute to strengthen community resilience.

The activities in the READI project implementation, which was intended to achieve the goal of building capacity and resilient of coastal community in Sumatera- was aligned with the effort to develop community resilience as written by John Twigg. The project was designed based on the OUADA and Hyogo framework for action which intended to build community resilient to disaster. According to John Twigg, there are five tables setting out the 'characteristics of a disaster-resilient community'. Each table covers a different thematic area relating to resilience and DRR. The five thematic areas are based on those in the Hyogo Framework for Action and are intended to cover all aspects of resilience.

Table 9. Theme in Community Resilience

Table	Thematic area
1	Governance
2	Risk assessment
3	Knowledge and education
4	Risk management and vulnerability reduction
5	Disaster preparedness and response

In this case, the READI project-which focused on building coastal community resilience-consisted of activities which reflected efforts to increase community's knowledge and to strengthen community's preparedness upon hazards, especially earthquake and tsunami.

The analysis of the following findings will look at the depth of the components of the community resilient based on the theoretical framework of community resilience by John Twigg. This theoretical based of community resilient has been used widely by organizations work in Disaster Risk Management (DRM) as a reference to conduct activities with community in developing resiliency.

3.2. Project Achievement Summary

The two years program focused on certain activities to strengthen coastal community resiliency in Sumatra. The program has contributed to the increased knowledge of the community on DRR and has enhanced community capacity to be more prepared for disasters. The table below provides a summary of the outcome of the project during two years implementation.

Table 10. Summary Table – Progress on Key Indicators (as per original indicators in the grant agreement, which were slightly modified in the document Modification 1)

Goal: To build DRR capacity and enhance resilience of vulnerable urban coastal populations in Sumatra		
Beneficiaries Targeted	1,679,289 individuals (0 IDPs)	
	IDPs: 0	
Beneficiaries Reached	1,462,293 individuals	87%
	IDPs: 0	0%
Geographic Area (s)	Bengkulu, Padang, Meulaboh, Nias, Mentawai	
Sub-Sector 1.1. Disaster Preparedness, Mitigation, and Management		
OFDA INDICATORS	TARGET	CUMULATIVE
<i>Indicator 1: Number of people trained in disaster preparedness, mitigation and management.</i>	50 people received DRR training	186 (372% of target) Boys 0-14 yo: 0 Girls 0-14 yo: 0 Men : 162 15-24 yo : 21 25-59 yo : 141 ≥ 60 yo : 0 Women : 24 15-24 yo : 6 25-59 yo : 18 ≥ 60 yo : 0
<i>Indicator 2: Number and percent of beneficiaries retaining disaster preparedness, mitigation, and management knowledge two months after training.</i>	40 people evaluated and 80% of beneficiaries retaining knowledge	107 (268% of target) and 58% Boys 0-14 yo: 0 Girls 0-14 yo: 0 Men : 84 15-24 yo: 10 25-59 yo: 74 ≥ 60 yo: 0 Women : 23 15-24 yo: 6 25-59 yo: 17 ≥ 60 yo: 0
<i>Indicator 3: Number of hazard risk reduction plans, policies or curriculum developed.</i>	5 hazard risk reduction plans developed	8 (160% of target)
PROGRAM IMPACT INDICATORS	TARGET	CUMULATIVE
<i>Indicator 1: Number of people with access to improved Emergency Warning Systems for earthquake and tsunami throughout the target areas of Sumatra.</i>	1,679,289 people have access	467,056 (28% of target) Boys 0-14: 70,600 Girls 0-14: 67,894 Men : 160,264 15-24 yo: 48,304 25-59 yo: 99,460 ≥ 60 yo: 12,500

		Women : 168,298 15-24 yo: 50,427 25-59yo: 102,361 ≥ 60 yo: 0	
Indicator 2: Number of potential vertical shelters identified.	50 vertical shelters identified	113 (226% of target)	
Indicator 3: Number of people with access to evacuation routes and certified vertical shelters.	100,000 people have access	374,965 (375% of target) Boys 0-14: 64,001 Girls 0-14: 56,229 Men : 123,870 15-24 yo: 36,634 25-59 yo: 78,184 ≥ 60 yo: 9,052 Women : 130,865 15-24 yo: 38,778 25-59 yo: 80,850 ≥ 60 yo: 11,237	
Indicator 4: Number of people participating in simulations.	10,000 people participate	12,545 (1258% of target) Boys 0-14: 2,659 Girls 0-14: 2,185 Men : 3,628 15-24 yo: 963 25-59 yo: 2,615 ≥ 60 yo: 50 Women : 2,354 15-24 yo: 822 25-59 yo: 1,489 ≥ 60 yo: 43	
Indicator 5: Number of people within broadcast range of the AM/FM radio frequency to receive hazard information broadcasts.	1,000,000 people within broadcast range and receive information	1,462,293 (146% of target) Boys 0-14: 268,729 Girls 0-14: 256,152 Men : 458,975 15-24 yo: 130,899 25-59 yo: 295,549 ≥ 60 yo: 32,527 Women : 478,437 15-24 yo: 134,198 25-59 yo: 303,711 ≥ 60 yo: 40,528	
Indicator 6: Number of local authorities adopting disaster preparedness systems developed in the program.	4 local authorities	0 local authorities	4 (100% of target)

This table shows that the program has achieved some of the target set in the indicators. The numbers of the output shows that the program successfully implemented beyond expectation. However, there were also notes on the program implementation and description of the output and outcomes which will be described on the following section.

3.2.1. Knowledge and Skills on DRR

A. Increased Knowledge through Raising Awareness

To increase community knowledge and skill on DRR, Mercy Corps conducted awareness raising campaigns on the hazards affecting the areas and potential preparedness and mitigation as well as conducting trainings for the community (Kelompok Siaga Bencana-Village Disaster Team) and training for the government (BPBD-Badan Penanggulangan Bencana Daerah-local disaster management body) . The activity was intended to enhance the community resilience, the coastal communities of Meulaboh, Padang, Bengkulu, Mentawai and Nias. Mercy Corps worked with local civil society groups, local government, and religious figures, spread the messages concerning a wide variety of natural hazards (i.e. earthquake, tsunami, landslide, coastal abrasion, tidal waves).

Table 11. Community attended in the DRR Meetings

Involve actively in a discussion and meeting on preparedness and DRR planning in the village N=230	
Yes	166 72.17
No	64 27.83

The table shows that a total of 72.17% or 166 persons out of 230 persons in five districts attended discussion or meeting about DRR in their village. Specifically in each area, the community participation was varied from one area to another area. The table below shows that the community pro-actively engaged in the meetings on DRR. In Bengkulu, 55.77% or 29 respondents out of the 52 respondents mentioned that they attended activity of discussion and meeting on preparedness and DRR planning in the village. While in Nias, 96.88% or 31 out of 32 respondents mentioned that they always attended discussion and meetings on DRR in their village.

Table 12. Community attended discussions and meeting on DRR per district

Involve actively in a discussion and meeting on preparedness and DRR planning in the village	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
	N= 52	N=30	N=48	N=32	N=68
Yes	29	18	41	31	47
	55.77	60	85.42	96.88	69.12
No	23	12	7	1	21
	44.23	40	14.58	3.13	30.88

The quantitative study also noted that the topics of DRR discussed during the meetings were varied. The most discussed topic was socialization, 65.65% or 151 out of 230 respondents said that they attended meetings on program socialization, while the other mentioned about VCA assessment (12.17%) and KSB establishment (16.96%).

Table 13. Disussions in the Community

	TOTAL
Topics of the meetings and discussions	N=230
A Program Socialization	151
	65.65
B PDRA implementation	34
	14.78
CVCA Assessment	28
	12.17
D KSB establishment	39
	16.96
V Others	6
	2.61

The percentage the discussion topics of each area were shown in the table below. The most attended discussion in Meulaboh was the socialization (77.08%) and KSB establishment (56.25%) meaning that, respondents were presence in both meetings.

Table 14. Discussion and Meeting Topics on DRR

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Topics of the meetings and discussions	N= 52	N=30	N=48	N=32	N=68
A Program Socialization	16	13	37	5	24
	30.77	43.33	77.08	15.63	35.29
B PDRA implementation	0	1	3	1	2
	0	3.33	6.25	3.13	2.94
CVCA Assessment	10	4	6	0	9
	19.23	13.33	12.5	0	13.24
D KSB establishment	13	19	27	5	39
	25	63.33	56.25	15.63	57.35
V Others	18	23	39	16	50
	34.62	76.67	81.25	50	73.53

Additionally, Mercy Corps included awareness on being a host family in case of emergency, to sensitize those not affected on ways to help, with the objective of maximizing collective effort during a disaster response. However, to ensure that everyone is potentially reached by the messages, Mercy Corps disseminated DRR posters and leaflets, produced a radio drama featuring sample stories of DRR-preparedness and pro-actively involved schools and religious institutions in the initiative. Those activities will be discussed separately in the next section.

The qualitative study noted that as a result of frequent discussions and meetings on DRR topics, including KSB establishment, the community mentioned that they gained better understanding on DRR knowledge. FGD with KSB Laut Biru and Ula Karang Selatan, Padang noted KSB participation in increasing community knowledge on Disaster and DRR.

“At the beginning of KSB socialization, it was difficult because it was considered as intimidation but by the additional knowledge about disaster from Mercy Corps and the continuous socialization through community groups in the village has made the community realized and considered the disaster risk reduction was important and compulsory knowledge for them. 80% of the community already had knowledge about disaster, they knew what to do if the disaster strike, meeting point and finding the information.” (KSB Laut Biru Ulak Karang Selatan - Padang)

Community in Bengkulu also admitted that socialization on Disaster and DRR from Mercy Corps and WCC (Women Crisis Centre) has contributed to the increased knowledge of the community. They were confident to take on certain actions in time of disaster as they have knowledge about preparedness.

The discussions and meetings in Bengkulu have added value of networking expansion. The KSB Saliguma started to have direct communication with BPBD and volunteers from other area.

"There was socialization from Mercy Corps and WCC, also trainings, for example disaster management training and strengthening the capacity, meetings and discussions, and even the volunteers were once involved in BPBD for 7 days. This is because of Mercy Corps and WCC that correlated us to the BPBD. We also had meeting and dialogue with BPBD on effort of WCC. There were three trainings, even more if added with meetings and discussions. There are changes now, we know what to do if the disaster strikes as we have the knowledge and be ready. We have network with BPBD now, there is cooperation with other volunteers." (FGD with Saliguma community, Bengkulu)

Nias and Meulaboh experienced a different process of gaining knowledge on disaster as they have a previous program on DRR with another organization. The activity of raising awareness on disaster and DRR was a process of adding knowledge from previous knowledge.

"The knowledge of the community about disaster has been improved because of the mentoring of LSM PELMAS for 3 years (Nias) remain the same, good in terms of knowledge about disaster."

B. Improving Capacity Building through Training

To sustain the raising awareness activity on DRR in the community, Mercy Corps conducted trainings to the community (KSB) and to BPBD. The training provided knowledge and skill on developing village's DRM planning document, assessing village's capacity and vulnerability on disaster, and conducting simulation. After receiving training from Mercy Corps, KSB conducted training for community in the village and other villages. The table below shows the tabulation of KSB members and non KSB member attended the training on DRR, disaster preparedness, and disaster management.

Table 15. Respondent attended training on DRR

	TOTAL
Attending training on DRR, disaster preparedness, and disaster management	N=230
Yes	151
	65.65
No	69
	30
Don't know	10
	4.35

The table shows that from 230 respondents, 65.55% or 151 mentioned that they attended training on DRR, disaster preparedness, and disaster management. The details tabulation of respondents attended the training is shown in the table below.

Table 16. Respondent attended training on DRR per area

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Attending training on DRR, disaster preparedness, and disaster management	N= 52	N=30	N=48	N=32	N=68
Yes	28	19	29	28	47
	53.85	63.33	60.42	87.5	69.12
No	23	10	18	0	18
	44.23	33.33	37.5	0	26.47
Don't know	1	1	1	4	3
	1.92	3.33	2.08	12.5	4.41

As mentioned previously, the training contributed to supporting community and KSB to gain knowledge and skill on DRR. Most of the KSB members in Padang gained self-confidence in transferring the knowledge that they received from the trainings to community members within the village. In addition to gaining knowledge, the KSB and community successfully worked on developing other disaster preparedness materials such as developing evacuation maps as well as conducting simulation

"There were training provided by Mercy Corps such an introduction to disaster training, preparing the evacuation map, simulation, and disaster mitigation - therefore, some KSB members were able to give socialization for the community about disaster risk reduction but, not all of them were able to deliver the materials to the community." (KSB Parupuk Tabing)

The trainings had also contributed to the community behavior changes in facing issues related to disasters. They said that they no longer panic when discussing disaster issues and they check and re-check their plans to decide next steps.

"We are able to make evacuation route map, the capacity of the community and KSB in improving the disaster risk reduction was improved as they followed the trainings provided by Mercy Corps, for example, previously, the community was panic when one of them got issues via short message service but now, they ensure the situation and the incident before making any decision what to do." (KSB Laut Biru Ulak Karang Selatan - Padang)

The establishment of KSB in Padang has encouraged community organizations to start working collaboratively with other stakeholders. KSB in Padang worked in coordination with BPBD and Lanud (air force) to re-evaluate the simulation and worked on the review for improvement.

"The simulation held by KSB was also evaluated continuously. They found some inadequacies and worked on some improvements; for example to enter the shelter, the people were stack in the stairs and the entrance of the building because of the position of the stairs inside the building - for this problem, they have asked for supports from BPBD for the additional stairs. In previously at Parupuk Tabing village, the evacuation lane was truncated by the LANUD as

it was closed for public - this is the community problem in order to do the evacuation. They have to take the outer way beside the LANUD which was longer and crowded with people from other villages. KSB worked with mentor NGO and Mercy Corps have tried to discuss this problem with LANUD and it was approved; LANUD opens the evacuation lane which has already been concretized by LANUD."

One important point of the establishment of KSB was the participation of the community leader in the KSB. Mercy Corps helped establish a community champion to provide opportunities for program sustainability. It was expected that the community would take more steps to institutionalize DRR into the community action plan. Community leaders who are champions in DRR could support the community to build networking on DRR with other stakeholders and encourage or motivate other member community to be consistently working to improve community preparedness and mitigation. The process of DRR institutionalization in the village government policy and regulation was stronger when community leaders, especially the village government officer, participated as a member of KSB. Other studies in DRR also mentioned that working through the current system in the village would support the legitimation of DRR as part of the village development.

"The chairman of KSB was a retired PU who was quite familiar with some people in BPBD and BNPB, this made KSB relation with other stakeholders run well as KSB did not hesitate to cooperate with other stakeholders for example with Puskesmas, LANUD or BNPB/BPBD. Besides, the engagement of the government officials has made KSB indirectly get recognition from the government and was likely to persist in order to run the KSB."

The approach in conducting community empowerment influenced how the community worked towards certain goals. Community-based DRR has been known widely as a comprehensive approach applied by many organizations to support the development of community resilience in DRR. The approach required full participation of the community in the institutionalization of DRR and intended to empower the community to adopt DRR in every aspect of village policy and regulation. Mercy Corps and JemariSakato also adopted the CBDRM approach in conducting community empowerment in Padang. The KSB in Padang admitted that the approach was effective as it allowed full participation of the community in revealing their capacity. The approach has made the community more aware of their potential and capacity to prepare for disasters.

"The approach done by Mercy Corps and Jemari Sakato as the local partner was considered effective by KSB Parupuk Tabing because it was more intensive and more sharing, the approach also had more potential of the KSB and the community surrounding. This made the the community know and realize their capabilities, this was the one used to run KSB. Another inadequacy was completed by Mercy Corps and Jemari Sakato through training and mentoring therefore KSB could run well."

FGD with KSB in Nias also noted that the trainings, discussions, and simulation had provided community with knowledge and skills to prepare for disasters. Villages, where the project implemented, had completed evacuation routes and maps. People also had

knowledge on the meeting points and safe areas. Although there was a preliminary program on DRR by other organization, the community felt the advantage of having KSB.

Under the mentoring from Mercy Corps, the capacity of the community has become more complete by the establishment of disaster preparedness groups in the village, strengthened with the simulation and the installation of evacuation lanes signs therefore the community knew where was the safe and assembly point.

KSB in Nias has been mentored by PELMAS for one year. This situation has been known by L-SAMAERI as MERCY's local partner therefore they provided the strengthening knowledge for the community in the village by establishing a disaster preparedness group and worked on certain simulations and disaster risk reduction training to facilitate their entry to the community. L-SAMAERI also provided agricultural training which got good acceptance from the community as they considered their needs of the agricultural and the processing of coconut plantation knowledge. Those programs have not run successfully because of the limited time and this has made a disappointment of the community towards EL-Samaeri. The community awareness of disaster and the organization when the disaster strike were quite good.

In Meulaboh, the establishment of KSB created a more structured organization in DRR activities and preparedness. The existence of KSB was officially launched by the head village decreed to work on DRR and preparedness. The community was aware of what to do in time of disaster and was informed with a mechanism to protect themselves. The project has contributed to the institutionalization of DRR and provided community with system of preparedness.

The community has had the capacity related to disaster as they ever got simulation from PMI. Their capacities was added by MERCY with the introduction to disaster and the disaster risk reduction therefore they knew what to do when the earthquake or tsunami come.

The community knew what to do when the earthquake and tsunami come, the assembly point, and where to find their family, the person in charge in case the disaster come have been assigned and reinforced by SK from the village official - from setting the path, observing the sea, and giving commands for evacuation. This simulation was held every year to remind the community about tsunami, tried to tell their experiences to their children to provide appropriate knowledge of earthquake and tsunami and the impacts as well.

The implementation of READI in Meulaboh was quite different from other four areas, as it included schools as the target of capacity building for children to gain knowledge on DRR. Community appreciated this effort because they had concern that lesson learned from tsunami 2004 could not be transferred to young generation. The story below shows how the tsunami 2004 in Meulaboh has taught a valuable lesson learned to the community to be more aware of DRR and improved the community's preparedness and response to disasters.

Feature Box 1. Straight Road and Right



STRAIGHT ROAD AND RIGHT

When a devastating earthquake struck the west coast of Sumatra at the end of 2004, which was followed by a large tsunami wave, this resulted in the whole west coast of Aceh province becoming ravaged. SuakRibee, a seaside village in the District of Meureubo, the city of Meulaboh, West Aceh district was no exception.

Abdul Karim, still remembers the destruction caused by the earthquake and tsunami and can still clearly recall the fear and panic of the villagers fleeing from the tsunami waves. At that time, many people in the village headed towards the sea to witness the phenomenon of receding tides. Abdul Karim actually forced himself to get away from the sea and take a straight path towards high ground in the village field, about seven miles from his home. "There are two paths to choose from once we arrived at the intersection at the end of the village. The first is a straight path, although somewhat narrow and not in very good condition and the second is a road that turns left. It is wider, shorter, and quieter but runs slightly

past the other side of the beach," recalls Abdul.

At that time he and his family, along with most villagers, used the straight path. Other residents, including visitors to the beach, chose the wider path. Many of the village residents who perished from the tsunami chose the wrong path, the wide path that turned left. As a result they were trapped and were swept away by the tsunami.

Experiences from the tsunami made Abdul Karim the chairman of Disaster Preparedness Group in the Suak Ribee village. He and his friends at KSB welcomed the assistance of NGOs, especially from Indonesia.

Mercy Corps helped increase the capacity and made plans to deal with emergency situations as a result of the earthquake and tsunami hazards. KSB does not want a lot of casualties and losses because of what had happened in the past. That's why they conducted many disaster risk reduction activities, including evacuation drills and they established rules such as prohibiting residents from staying on the beach and making a boundary fence on the beach and closing it every day. They also put up signs, lines and evacuation maps in a strategic place. Learning from bad experiences enabled them to give a positive response in the form of disaster risk reduction activities. This helps instill confidence in the face of disaster threats.

Ten years have passed since the devastating tsunami. Abdul feels that people have started to forget the incident. He was afraid that over time people forgot the lessons learned. He is afraid that the younger generation, especially those under 15 years, who were too young to remember the tsunami. The READI program has reduced some of these fears as they involve children in the activities. Through the school program, children learn about DRR and practice facing the danger of earthquakes and tsunamis. Through education, Abdul Karim can be sure that the learning of the tsunami will never be interrupted and will always continue to the next generation, so that the ability of people to deal with disasters will never be reduced or lost. Other than through formal education, Abdul Karim also has a powerful way to continue learning about the tsunami, namely through stories. Abdul Karim often tells stories based on personal experience to his children and other young people. He does not just talk, but also always end the story with a similar message, a message that is very strong. The message of the story is simple: "When an earthquake occurs, run away from the sea... runaway without looking back, and do not forget to take the STRAIGHT ROAD".



The qualitative study noted that the activity of mainstreaming DRR into school activities in Meulaboh has raised students' awareness on DRR and increased their knowledge about disaster preparedness and response.

In addition to training, the community also noted that the simulation has improved their skills and knowledge in disaster preparedness. Almost all respondents in the qualitative study mentioned that they have knowledge on the evacuation steps, evacuation signs, and evacuation maps. The table below shows the number of respondent who joined the simulation.

Table 17. Respondent joined the simulation

Participated actively in the DRR training or simulation?	Bengkulu	MENTAWAI	MEULABOH	NIAS	PADANG
Yes	30 57.69	16 53.33	27 56.25	22 68.75	53 77.94
No	22 42.31	14 46.67	21 43.75	10 31.25	15 22.06

The community learned how to recognize and respond to earthquakes and tsunamis, when to evacuate in the case of a disaster, where the evacuation routes are, and where to find emergency shelters. As a result of the simulations, the BPBD staff also learned how to organize simulation events and coordinate with other offices. In Bengkulu, the community had the opportunity to practice simulation and it made them understand where to go in times of disaster and other knowledge of evacuation. They also shared this knowledge with their family members and the other community nearby.

Previously, when we heard of the earthquake or tsunami, we acted spontaneously; running or doing anything depended on every individual instinct. We also did not ensure the information, did not know who to confirm or ask the truth of the information. There were many training and discussions, even we reviewed the intimidations and how to handle, simulations of where to run when a tsunami come, where was the assembly point - there were rules for everything. Now we had appropriate knowledge to share with our family, neighbors, and wider community if we get the chance to share. There were evacuation lanes and EWS. We also formed Disaster Preparedness Group that acted as volunteer when the disaster happen. During safe situation, we socialized and encouraged the community for disaster preparedness

Another program also conducted vulnerability and capacity assessments in the village as a basic requirement to all DRR planning document development.

Mercy Corps provided an opportunity for BPBD and the community to work together with the radio to disseminate information related to disasters and DRR. However, not all area of

intervention could receive information about disasters from the radio because many did not have a radio to listen to the radio broadcasting.

BPBD Capacity Building

A total of 187 BPBD and local government officials received capacity building training directly from the BNPB on technical skills where they lacked knowledge, as identified through an initial assessment. In circumstances where BNPB's Education and Training Facility cannot address the identified gaps directly, Mercy Corps provided the expertise and training to local government officials. Lessons learned and models from the awareness campaign were shared as part of the capacity building and knowledge sharing nature of the program with BPBD and BNPB to empower the replication of large-scale awareness campaigns.

3.2.2. Disaster Preparedness and Response

Preparedness actions were carried out within the context of disaster risk management and aimed to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response through to sustained recovery. Preparedness is based on a sound analysis of disaster risks and good linkages with early warning systems, and includes such activities as contingency planning, stockpiling of equipment and supplies, arrangements for coordination, evacuation and public information, and associated training and field exercises. These must be supported by formal institutional, legal and budgetary capacities. The related term "readiness" describes the ability to quickly and appropriately respond when required.

Disaster response is predominantly focused on immediate and short-term needs and is sometimes called "disaster relief". The division between this response stage and the subsequent recovery stage is not clear-cut. Some response actions, such as the supply of temporary housing and water supplies, may extend well into the recovery stage.

The READI project intended to strengthen community disaster preparedness and response towards hazards, especially tsunamis and earthquakes. Mercy Corps supported activities with the community and BPBD to improve community mechanisms to prepare and respond to disasters, such as developing evacuation maps, installing early warning system, identifying temporary shelter (vertical shelter).

3.2.2.1. Evacuation Maps

Mercy Corps and its local partner supported the community to develop evacuation maps as part of the effort of strengthening community disaster preparedness. Through a series of discussions and meetings, KSB and the community identified meeting points and developed maps of the safe location. In addition, Mercy Corps assisted the BPBD to identify tsunami evacuation routes and developed maps indicating the most suitable solutions and alternatives at the local community level. Mercy Corps supported the linkages between

BPBD and local government to recognize the evacuation routes officially through district level decrees and advocated for their inclusion into urban planning.

The maps reflected the evacuation possibilities in the area and provided information on guiding people toward vertical shelters. The vertical shelters were buildings that were identified and certified as tsunami-safe buildings. The maps were developed with communities to ensure the inclusion of easily recognizable landmarks and other measures to allow all beneficiaries to comprehend the routes, and to be aware of the disaster.

The table below shows that 25.22% or 58 respondents out of 230 respondents participated in the development of evacuation maps. While 57.88% mentioned that they were not involved in the development of the evacuation map and 17% mentioned that they did not know about the evacuation map. This figure represented the respondents from five areas who consisted of KSB members and community. Not all community members had the opportunity to participate in the evacuation map development. The evacuation maps were developed by KSB, community leaders, and some of community members.

Table 18. Respondent participated in evacuation map development

	TOTAL
Participate in evacuation map development	N=230
Yes	58
	25.22
No	133
	57.83
Don't know	39
	16.96

The table shows the participation of respondents in each area of the evacuation maps development. The highest respondent participation in developing evacuation maps was Padang, 32.35% where respondents mentioned that they were involved in developing evacuation maps,

Table 19. Respondent participation in developing evacuation maps

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Participate in evacuation map development	N= 52	N=30	N=48	N=32	N=68
Yes	7	5	14	10	22
	13.46	16.67	29.17	31.25	32.35
No	33	20	29	12	39
	63.46	66.67	60.42	37.5	57.35
Don't know	12	5	5	10	7
	23.08	16.67	10.42	31.25	10.29

Although every village was completed with evacuation maps, the quantitative study shows that not all of the community members recognized the evacuation maps in their village. From the total 230 respondents, 63.48% or 146 respondents recognized evacuation maps, the rest mentioned that they did not recognize it.

Table 20. Respondents recognize evacuation maps

Recognize evacuation maps	
Yes	146
	63.48
No	84
	36.52

In Nias, 25% or 8 out of 32 respondents mentioned that they did not recognize the evacuation maps. Mentawai also mentioned that 46.67% or 14 respondents out of 30 did not recognize evacuation maps. The highest figure was Padang, it was mentioned that 94.12% or 64 out of 68 respondents recognized evacuation maps.

Table 21. Respondents recognize the evacuation maps per district

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
	N= 52	N=30	N=48	N=32	N=68
Recognize evacuation maps					
Yes	28	14	32	8	64
	53.85	46.67	66.67	25	94.12
No	24	16	16	24	4
	46.15	53.33	33.33	75	5.88

Although people admitted that did not have a good understanding of the evacuation maps, the program successfully encouraged the community to develop evacuation routes and signs in their area. The quantitative study shows that 80.87% or 186 out of 230 respondents mentioned that they could find evacuation route or signs in their neighborhood.

Table 22. Availability of evacuation route or signs

N=230	
Availability of evacuation route or signs in the neighborhood	
Yes	186
	80.87
No	44
	19.13

The table shows that most villages in five districts developed evacuation route or signs. All respondent from Padang mentioned that they could find evacuation routes or signs in their neighborhood, 88.46 or 46 out of 62 respondents in Bengkulu mentioned that they now had evacuation route or signs. Nias was a bit contradictory to other area, as only 37.5% or 12 respondents out of 32 respondents said that evacuation route or signs were available in their neighborhood. Eight respondents mentioned that they were aware of the location of the evacuation signs or route. The community developed evacuation routes and signs through series of meetings and discussions. Almost all elements of the community was encouraged to participate in the development process.

Table 23. Availability of evacuation route or signs per district

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Availability of evacuation signs in the neighborhood	N= 52	N=30	N=48	N=32	N=68
Yes	46	21	39	12	68
	88.46	70	81.25	37.5	100
No	6	9	9	20	0
	11.54	30	18.75	62.5	0
Location of the evacuation maps	N= 29	N=14	N=34	N=8	N=62
A advertisement board on the street	1	1	9	1	27
	1.92	3.33	18.75	3.13	39.71
B Office of village head	19	6	18	0	24
	36.54	20	37.5	0	35.29
C in a disaster exhibition	6	0	1	2	0
	11.54	0	2.08	6.25	0
D friend's house	3	5	2	4	2
	5.77	16.67	4.17	12.5	2.94
V others	0	2	4	1	19
	0	6.67	8.33	3.13	27.94

The table shows that most of the evacuation maps were located in the office of the head village and a few of them were located on street boards and other community member's house. According to an informant from a FGD, the low percentage of evacuation route or signs in Nias was because the evacuation maps had not been socialized yet and some of them were broken. In Bengkulu, the evacuation maps were posted on houses and many were broken as they were made of paper.

Before the project, there were no maps and evacuation lanes - when the disaster happened, people ran to the locations based on their intuitive. There were discussions for mapping the safe areas in the surrounding and where to move when the tsunami happened. We were informed that Kandang was not more than 10 meter above the sea level - based on the description in the discussion and training included in the tsunami risky areas. We determined

the assembly point in the field which was not included in the area of Kandang but still could be reached in quick time and could move the evacuation to the higher areas. We also agreement on the evacuation lanes and the signs also have been installed by KSB. There was no formal socialization about the evacuation lanes and signs but in the organization of KSB, we had the chairman of neighborhood groups whom we expected were willing to deliver the information to their community through the forum in their community. Most of the signs in the houses have been broken because of the quality of the materials.

A total of 1,847 evacuation maps of Bengkulu City were printed and distributed to stakeholders in Bengkulu City including government and private sector offices and local NGOs. In addition, ten large maps were printed (size 2Mx3M) and hung in strategic places (such as government offices) and are accessible to the entire Bengkulu population. The table shows that only eight respondents in Nias mentioned the evacuation route socialization, while 24 out of 32 respondents did not have an understanding of the availability of evacuation routes in their area. While in Padang, people recognized the evacuation maps because there were mechanisms for socialization. Once KSB developed the evacuation maps, they shared it with community and informed the community how to read the maps.

The evacuation map has been made and disseminated to the community completed with the information on how to read the map. Jemari Sakato also participated in the production of the evacuation map and distributed them to the community. KSB has been able to produce their evacuation map and know how to read the map. (Parupuk Tabing).

Table 24. Socialization of evacuation maps

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Evacuation maps socialization	N= 28	N=14	N=32	N=8	N=64
Yes	21	9	23	8	61
	75	64.29	71.88	100	95.31
No	7	5	9	0	3
	25	35.71	28.13	0	4.69
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Institution who socialize the maps	N= 28	N=14	N=32	N=8	N=64
A KSB members	0	6	5	5	46
	0	20	10.42	15.63	67.65
B village head	6	2	9	0	6
	11.54	6.67	18.75	0	8.82
C CSO	9	0	11	0	23
	17.31	0	22.92	0	33.82
D BPBD	11	0	6	1	2
	21.15	0	12.5	3.13	2.94
E Government	0	0	0	0	0
	0	0	0	0	0
V Other	0	0	4	1	0
	0	0	8.33	3.13	0

Although area had a completed evacuation route, not all of them functioned well. In Nias, while 12 evacuation routes were recognized by the community, none of them were in good condition; two were broken, and the other was missing. A total of 95.65% or 44 out of 46 respondents mentioned that the evacuation route in their area was in good condition. In Meulaboh, 15.38% or 6 out of 31 respondents mentioned that the evacuation routes were broken. It means that the community needs to integrate DRR into the village development plan to be able to continuously renew the evacuation routes and other preparedness facilities.

Table 25. Condition of evacuation route

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
The condition of the evacuation route	N= 46	N=21	N=39	N=12	N=68
Good	44 95.65	12 57.14	31 79.49	0 0	60 88.24
Broken	1 2.17	6 28.57	6 15.38	2 16.67	7 10.29
Missing	1 2.17	3 14.29	2 5.13	10 83.33	1 1.47

The quantitative and qualitative study of FGD in Nias, Mentawai and Meulaboh revealed the challenge of the village and government consistently in providing continuous support in preparedness facilities. The broken evacuation routes need to be renewed soon to develop better community preparedness.

“Producing an evacuation map together with the mentor NGO, the map was displayed in some areas to be visible for community to read. Although the maps were broken and some were already missing, the community still remembered the site plan and the assembly point because the locations were easy to remember - the shelter in BPBD and the shops in Teuku Umar street.” (FGD with KSB in Meulaboh)

Learning from past problems with standard evacuation maps, Mercy Corps focused on the creation of 30 community-specific evacuation maps and trained government officials in order to replicate evacuation mapping in other areas. The community mapping utilized locally known landmarks and was facilitated by extensive interaction between government officials, community members, and Mercy Corps.

It was expected that the bottom up process on evacuation route development would provide a deeper understanding for the local community on the route. In Padang, all respondents mentioned that they had a good understanding of the evacuation route. Although most of the evacuation routes were broken, the community in Nias was able to memorize the map. The table below shows the community understanding on evacuation route in 5 areas of intervention.

Table 26. Community understanding on evacuation route

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Understand the evacuation route	N= 46	N=21	N=39	N=12	N=68
Yes	42	16	39	10	68
	91.3	76.19	100	83.33	100
No	4	5	0	2	0
	8.7	23.81	0	16.67	0
Neighborhood have agreement on meeting points	N=53	N=30	N=48	N=32	N=68
Yes	33	17	42	18	57
	63.46	56.67	87.5	56.25	83.82
No	9	2	1	8	4
	17.31	6.67	2.08	25	5.88
Don't know	10	11	5	6	7
	19.23	36.67	10.42	18.75	10.29
Location of meeting points					
A sub district office	0	0	0	0	6
	0	0	0	0	8.82
B village office	3	6	1	0	0
	5.77	20	2.08	0	0
C village administrator's house	1	0	0	0	0
	1.92	0	0	0	0
D personal house	0	0	0	3	0
	0	0	0	9.38	0
E Public field	11	7	3	7	12
	21.15	23.33	6.25	21.88	17.65
F government facility	5	0	9	0	34
	9.62	0	18.75	0	50
G School	18	2	3	7	8
	34.62	6.67	6.25	21.88	11.76
H Market	0	0	0	0	0
	0	0	0	0	0
V others	2	2	31	1	10
	3.85	6.67	64.58	3.13	14.71

Most people in the community had a good understanding of the meeting points. They developed an agreement and decided on the evacuation routes, including meeting points. A total of 87.5% or 42 out of 48 respondents in Meulaboh, mentioned that the community developed an agreement on meeting points and they had a good understanding of the location of meeting points. While Nias and Mentawai needed to provide more socialization to the community as only half of the respondents had a good understanding on meeting points, in Mentawai 36% respondents did not know whether the community had a good understanding of the meeting points.

The locations of the meeting points were various. Mentawai, Meulaboh, and Bengkulu preferred public fields as meeting points. Mentawai and Niasare highlands and the community preferred to utilize public field in the highlands as a meeting point. Buildings were few on both islands. The community also chose schools as another alternative of meeting points. The reason of choosing schools as meeting points was because it has big spaces and some public facilities are available.

The evacuation was expected to apply inclusive principles, where vulnerable groups were considered in the evacuation, from the planning session until simulation and implementation. The table below shows respondents understanding on the priority of evacuation.

Table 27. Priority on the evacuation

N=230	
Priority on the evacuation	
A Elder	73 31.74
B Children	121 52.61
C Woman	69 30
D Unhealthy Individual	13 5.65
E Pregnant Woman	21 9.13
F Person with Disability	31 13.48
G Don't Know	1 0.43
V Others	15 6.52

Most respondents (52.61% or 121 out of 230) mentioned that the priority for the evacuation was children, elderly (31.74%), and person with disabilities (13.48%). The

figure above shows that the community had some understanding of the inclusive principles during the evacuation process when they considered vulnerable as priority.

3.2.2.2. Temporary Shelter

The government is increasingly looking towards opportunities to provide stronger protection in the event of a tsunami by institutionalizing the use of vertical shelters as a standard preparedness measure. After the 2012 earthquake in Sumatra, most coastal cities started looking into potential vertical shelters as the evacuation centers. In fact, identifying vertical shelters was very challenging if conducted within a short time frame. Only a few of these shelters have been built in the years following the 2004 earthquake and tsunami.

At the beginning of the project, Padang had only seven structures that are currently recognized as vertical shelters, which represents only 1-3% of the city's need. Interviews with BPBD Bengkulu revealed that BPBD has prepared temporary evacuation shelters (Tempat Evakuasi Sementara-TES) in every village. The standard operation procedures were prepared and the evacuation routes were repaired. The BPBD planned to add more evacuation maps.

The table below describes the temporary shelters in five areas. Mentawai and Nias did not directly point to buildings as temporary evacuation shelters. From the FGD, it was found out that temporary evacuation shelter in Mentawai and Bengkulu, referred to highlands in both islands. However, they decided which part of the highland was agreed to be the temporary evacuation shelter.

Table 28. Temporary Evacuation Shelters in five districts

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Kinds of Mitigation facilities	N= 52	N=30	N=48	N=32	N=68
C Temporary evacuation shelter	4	0	7	0	26
	7.69	0	14.58	0	38.24

There were no shelters or buildings. There was discussion for assembly point and evacuation points at the community level. In Bengkulu, it was known the plan to place 10 siren alarms but still two sirens being realized or could be used, and it was difficult to reach the whole city. In Kandang, we used the sound of beaten power poles as the siren alarm. This was the initiative of the community and still considered having many weaknesses therefore here, we could not carelessly beat the power poles. TES has been prepared but there was no training in every village/KSB. (FGD with KSB Kandang, Bengkulu)

Padang provided different implementation of vertical shelter, where community, BPBD and private sectors worked together to identify buildings which can be considered and agreed as temporary evacuation shelter.

"Most of the community already knew where the shelters were and how many building could be used as shelter although they did not know the strength - only estimations that the buildings were strong enough such as the shelter PU building. KSB began to know and inventory how many buildings could be used for shelter, the mosque and PU building have been included in the list of shelters in Parupuk Tabing evacuation map. KSB kept on recording which building could be used for shelter. They had growing amount of list; three more mosques could be used as shelters. As an addition, they had proposed to BNPB and BPBD to build outside stairs because most of the stairs in the shelters were still inside only." (FGD in Parupuk Tabing)

Government buildings, banks, schools, malls, and natural and man-made hills were all potential vertical shelters that could serve neighboring communities. One of the sophisticated vertical shelters in Padang was the Grand Zuri Hotel. Mercy Corps was able to build a partnership with the Grand Zuri Hotel to use the hotel as one of the available vertical shelter in Padang. The Grand Zuri Hotel showed commitment to develop its building and human resources to be more responsive and prepared for disasters and to provide its building as a place for the community to evacuate to.

Feature Box 2. Grand Zuri Vertical Shelter

Grand Zuri VERTICALSHELTER

If you go to the Grand Zuri Hotel in Padang, take time to see the top floor of the hotel. This story serves as a temporary evacuation shelter (TES), a place where the community can take refuge during an earthquake and tsunami. This place is dedicated as a TES because the floor can be accessed from the outside of the hotel. This gives access to those who wish to seek protection from the threat of a tsunami. The building is also equipped with spare blankets, drinking water, medicine and food. There is also a generator and fuel reserves. The top floor can also function as a helicopter landing place when an emergency occurs.



All the staff wears an orange pin that says "Emergency Response Team. "This pin indicates that all hotel personnel can assist in the event of an emergency.

"Yes, this pin indicates that all the people have them, have been trained and prepared to deal with emergencies," explained

Ricky the front office clerk. He added, "we hope, with this pin, the guests feel safe and secure when they choose to stay at our hotel."

The hotel is also equipped with officers who are trained on emergencies and they form an emergency response team. This is possible because of the full support of Mercy Corps Indonesia.

The Grand Zuri Hotel became the second hotel in Indonesia (the first hotel in Sumatra) which also serves as a vertical shelter and as a temporary evacuation. The existence of this hotel as a TES was passed through the signing of a MoU with the government of the city of Padang in October 2014. As a TES, the Grand Zuri gets an extra advantage because, as Ricky pointed out, this hotel can promote themselves because they can provide "a sense of security and ensure the safety of their guests."



The table below shows that 38.24% or 26 respondents out of 68 respondents in Padang mentioned about having temporary evacuation shelter, and 44.12% respondents mentioned that the village have evacuation signs. About 14.58% or 7 respondents out of 48 respondents in Meulaboh mentioned the availability of temporary evacuation shelters in Meulaboh, 20.83% respondents mentioned that villages have evacuation signs and 20.83 % of respondents mentioned the availability of evacuation routes to temporary shelters. Bengkulu had a different interpretation about temporary evacuation shelter as they considered it as a public field that can be used as a temporary shelter in the time of a disaster. About 7.69% or 7 people out of 52 mentioned the availability of a temporary evacuation shelter, 36.54% or 19 respondents mentioned the availability of evacuation signs. The figure shows that the community still does not have much information about temporary evacuation shelters. KSB needs to work more on the sharing of information to inform communities about the safe places to go during a disaster.

Table 29. Temporary Evacuation Shelter

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
A Temporary evacuation shelter	4	0	7	0	26
	7.69	0	14.58	0	38.24
B Evacuation sign	19	0	10	0	30
	36.54	0	20.83	0	44.12
C Evacuation routes to temporary shelter	4	3	10	0	1
	7.69	10	20.83	0	1.47

Distance became one of the important elements in identifying vertical shelter. Therefore, the distance between houses and the vertical shelter had to be minimized. In some area, such as Nias and Mentawai, the vertical shelter was not always a building; it was also sometimes a highland.

Previously, there was no shelter, but now there is an area for evacuation agreed by the community. Shelters have to be on hills that can be reached in five minutes. The lanes into TES were still maintained regularly. KSB measured the time for evacuation from houses into the hills surrounding the village. The quantitative study shows that 33.04% or 76 out of 230 respondents mentioned that the distance between their house and the shelter was 0-100m, 20.43% or 47 respondents lived 101-200m from the vertical shelter and 46.52% lived >200m from the vertical shelter. This means that the vertical shelter identified are located not too far from the houses.

Table 30. Distance between house and vertical shelter building

Distance between house and vertical shelter building	N=230
0-100 m	76
	33.04
101 - 200 m	47
	20.43
> 200 m	107
	46.52

The table below shows the distance between houses and the vertical shelter per district. In Padang, 51.47% or 35 out of 68 respondents mentioned that the distance between the house and the vertical shelter was 0-100m. However, 53.85% out of 52 respondents in Bengkulu mentioned that the distance between house and vertical shelter was more than 200m. Although 200m was considered to be not too far, however, it took long to reach the shelter.

Table 31. Distance between house and vertical shelter per district

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Distance between house and vertical shelter (on foot)	N= 52	N=30	N=48	N=32	N=68
0-100 m	11	13	11	6	35
	21.15	43.33	22.92	18.75	51.47
101 - 200 m	13	8	4	12	10
	25	26.67	8.33	37.5	14.71
> 200 m	28	9	33	14	23
	53.85	30	68.75	43.75	33.82

From the total 230 respondents, 36.09% of respondents mentioned that the time needed to reach the vertical shelter from house (on foot) was less than 10 minutes, 31.3% respondents mentioned that it was 10-20 minutes. Considering that the project was specifically intended for tsunami hazard, time needed to reach vertical shelter was an important point to consider. The community really needed to identify the closest vertical shelter and ensure its proper function for evacuation.

Table 32. Time needed to reach vertical shelter

	TOTAL
Time needed to reach vertical shelter (on foot)	N=230
< 10 minutes	83
	36.09
10 - 20 minutes	72
	31.3
21 - 30 minutes	33
	14.35
> 30 minutes	42
	18.26

According to most respondents, although vertical shelters were available, they have not yet adopted inclusive and gender principles. About 63.24% or 43 out of 68 respondents in Padang mentioned that the shelter was not based on inclusive and gender principles, moreover, in Bengkulu, most respondents (86.54% or 45 out of 52 respondents) admitted that they did not know whether the available shelter had a gender and inclusive perspective. The building or rehabilitation of vertical shelters was beyond Mercy Corps capacities, however, it was good to mainstream inclusion and gender perspective starting from the awareness-raising session, DRR planning document, and implementation of the principals.

Table 33. Vertical shelter applied gender and inclusive principle per district

TABEL 40	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Gender and inclusive principles applied in the vertical shelter	N= 52	N=30	N=48	N=32	N=68
Yes	0	5	17	3	16
	0	16.67	35.42	9.38	23.53
Not Yet	7	12	24	6	43
	13.46	40	50	18.75	63.24
Don't know	45	13	7	23	9
	86.54	43.33	14.58	71.88	13.24

Another important thing after identifying vertical shelter was how to ensure that vertical shelter was always ready to be used in an emergency situation. Community needs to have a plan on maintaining and taking care of the vertical shelter to ensure the safety of the shelter. About 47.06% or 32 out of 68 respondents in Padang mentioned that planning to manage and take care of the vertical shelter was available. Padang worked together with the private sector (hotel) and government to provide the vertical shelter as well as responsible for its maintenance.

Table 34. Availability of planning to manage and take care of vertical shelter

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Availability of Planning to maintain and take care of the vertical shelter	N= 52	N=30	N=48	N=32	N=68
Yes	2	8	26	1	32
	3.85	26.67	54.17	3.13	47.06
No	4	6	15	8	19
	7.69	20	31.25	25	27.94
Don't know	46	16	7	23	17
	88.46	53.33	14.58	71.88	25

3.2.2.3. The Early warning System

Early warning system is a set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.⁶

One of the focuses of READI Project was to strengthen community readiness by building or developing comprehensive mechanisms of disaster preparedness through enhancing early warning systems. As intended for communities living in coastal areas which had tsunami potential, Mercy Corps invited and welcomed stakeholders to provide accessibility towards early warning systems for tsunamis and earthquakes. Mercy Corps also created linkages between the community, BPBD, and radio to enhance early warning mechanism as community preparation in time of disaster.

The quantitative study shows how early warning systems were understood by community, the kind of EWS used in their village, and the condition of the EWS. From a total of 230 respondents, 53.91% or 124 respondents mentioned that they understood the term early warning system, 65.22% or 150 respondents informed that EWS was available in their village, the most used EWS (49.13%) in all five areas was siren and Kentongan (wooden log) 16.07%). Some places used mosques and church bell as early warning tools. The figure shows that not all community members had an adequate understanding of EWS in their village. Although Mercy has facilitated and encouraged the community to develop early warning systems for tsunami and earthquake hazards, some of the community members depended on natural warnings or local wisdom. In Meulaboh, people considered signs from the sea to predict tsunamis. The community in Padang depended on the siren, before the program, the community depended on signs from nature, but after community had knowledge on EWS, community had choices to develop EWS.

⁶UNISDR (2009)

FGD in Bengkulu also noted that community had a better understanding on the importance of EWS and developed an agreement to decide the model of EWS suitable for them.

“Previously we did not know about EWS, but after having discussions with WCC, we are encouraged to use local material to develop EWS agreed by community. In Bengkulu there were 2 sirens out of 10 which has been planned to be installed. Two sirens were not enough to cover all around Bengkulu city. Community in Kandang will use power pole as sign in time of disaster. The EWS has been discussed but not yet socialized to community.” (FGD Kandang, Bengkulu)

KSB and government need to work more on the socialization of EWS, so that community was better informed on EWS. A total of 60% respondents mentioned that EWS in their village functioned well, and 40% of respondents said that it did not function well. The reason they did not function was because it was broken and no operator was available. The community needs to put their attention towards the maintenance of the EWS to develop stronger community preparedness towards disaster.

Table35. Early Warning System

	TOTAL
Understand the term the Early warning system	N=230
Yes	124
	53.91
No	106
	46.09
Availability of EWS in the village	
Yes	150
	65.22
Not available	80
	34.78
Kinds of EWS	N=230p
A Sirens	113
	49.13
B Kentongan: traditional wooden log	37
	16.09
C Radio HT	30
	13.04
D TV	25
	10.87
E Newspaper	10
	4.35
F Announcement from mosque	26
	11.3
G Church bell	5
	2.17
V Others	2
	0.87
Condition of EWS facilities in the village	
Functioned	138
	60
Not functioned	92
	40
Reasons of not functioned	
A Broken	46
	20
B Operator not available	30
	13.04
C Others	18
	7.83

The table below shows that the community had a good understanding of early warning system in each area. Although most of them were currently equipped with EWS, the planning and budget available for maintenance was still minimal. Mercy Corps developed an MOU with the government in each district, however, more advocacy is needed to be carried out to provide budget on the sustainability of mainstreaming DRR into development planning so that maintenance of what has been currently developed by community, was in the budget and government plans.

Table 36. Early Warning System per district

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Understand the Early warning system	N= 52	N=30	N=48	N=32	N=68
Yes	37	11	24	7	45
	71.15	36.67	50	21.88	66.18
No	15	19	24	25	23
	28.85	63.33	50	78.13	33.82
Availability of EWS in the village					
Yes	47	8	18	10	67
	90.38	26.67	37.5	31.25	98.53
Not available	5	22	30	22	1
	9.62	73.33	62.5	68.75	1.47
Kinds of EWS					
A. Sirene	45	3	4	4	57
	86.54	10	8.33	12.5	83.82
B. Kentongan: traditional wooden log	5	0	0	6	26
	9.62	0	0	18.75	38.24
C Radio HT	0	0	4	0	26
	0	0	8.33	0	38.24
D TV	1	0	0	0	24
	1.92	0	0	0	35.29
E Newspaper	0	0	0	0	10
	0	0	0	0	14.71
F Announcement from mosque	4	0	12	0	10
	7.69	0	25	0	14.71
G Church bell	0	5	0	0	0
	0	16.67	0	0	0
V Others	1	0	1	0	0
	1.92	0	2.08	0	0
Condition of EWS facilities in the village					
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
	N= 52	N=30	N=48	N=32	N=68
Functioned	35	6	29	3	65
	67.31	20	60.42	9.38	95.59

Not functioned	17	24	19	29	3
	32.69	80	39.58	90.63	4.41
TABEL 47					
Reasons of not functioned					
A Broken	13	15	0	15	3
	25	50	0	46.88	4.41
B Operator not available	3	8	8	11	0
	5.77	26.67	16.67	34.38	0
C Others	2	1	11	4	0
	3.85	3.33	22.92	12.5	0

3.2.2.4. Emergency Information System (Emergency Masts)

Communities were provided with the knowledge and skills to develop and strengthen local and existing disaster preparedness and response mechanisms. The existing and local mechanism provided the opportunity for sustainable DRR initiative.

Mercy Corps developed an integrated Emergency Information System (Mast) to better serve communities in the case of an emergency. The READI project aimed at bridging the gap of the currently existing early warning systems and the broadcast of to provide accurate information to the community. A study of BNPB and BMKG in 2012 highlighted the lack of proper infrastructure to inform citizens of sudden emergencies; only 34 tsunami-warning sirens exist in Indonesia out of an estimated need of 1,000 and just 171 digital video broadcasting systems out of 500 needed.⁷ READI supported four emergency masts which became the BPBD's responsibility after developing the appropriate standard operating procedures. The extensive pre-design consultations and inclusion of all stakeholders became a model which can be replicated by the government and private sector.

READI encouraged the community to develop an emergency information system based on the local potential and common acceptable customs in community. The community agreed on specific mechanisms or system of information dissemination within the community in time of disaster. Qualitative study shows that before READI project, community did not have systematic or structured emergency information system, but now they have an understanding of an information system in an emergency. FGD in Padang revealed that KSB has established a team which has the special assignment to inform the community during a disaster, using Kentongan, power pole, to coordinate the community to gather at meeting points.

In Meulaboh, the emergency information system was conducted through BPBD and BPBD provided information to some of the appointed community members.

⁷<http://www.thejakartapost.com/news/2012/05/10/are-we-ready-next-disaster.html>

“BPBD provided incident information to the community, while the community also had the emergency information system by shouting - there was a particular person giving command to evacuate. The community was automatically running without command in time of earthquake because of their experience with tsunami that made them alert.” (FGD Pasi Pinang, Meulaboh)

Bengkulu also mentioned that currently the community had an information system of emergency and food coordination with BPBD.

We and the community just waited and searched for the information. There were training and socialization about information system and emergency communication flow. Three of us have been trained by the government/BPBD together with the volunteers from other areas and got the role to deliver the information. In time there were some hazardous signs, the person in charge has to deliver the information to the government; could be RT, RW, or village officer who was responsible to pass on the information to BPBD or higher government official in order to make quick decision. (FGD Kandang, Bengkulu)

3.2.2.5. Dedicated AM/FM Emergency Radio Channel

To enhance the emergency information system and to raise public awareness on DRR, especially preparedness and response, Mercy Corps worked together with local radio to develop information system on emergency and public education.

Mercy Corps built linkages between the community, BPBD, and radio to build a mechanism or system on emergency information as well as provided knowledge and public awareness on DRR and preparedness. Mercy Corps provided a model that can be later developed by BPBD and the community to strengthen the mechanism or system of disaster preparedness and response. Mercy Corps worked with Classy FM Radio in Padang, Surak radio in Mentawai, and RRI I Meulaboh, Nias, and Bengkulu. BPBD and community were expected to be the resource person in the radio to talk about DRR. However, BPBD and community needed to be encouraged to network independently with the radio.

Working together with radio was intended to develop real-time information mechanism following an emergency. Mercy Corps coordinated with a dedicated AM/FM radio channel in Meulaboh, Padang, and Bengkulu to broadcast real-time information in the immediate aftermath of a disaster. The option of an AM/FM dedicated frequency was dictated by the necessity of reaching all the people whether at home, on the streets or in the car.

Although the planning was to support the community preparedness, in some areas, people did not listen to the radio intensively. In Mentawai, most informants mentioned that they did not have a radio to listen the radio broadcasting on DRR. People relied on other resources to gain information and knowledge on disasters. The table shows the data about how community utilized radio as a source of information of disaster in five areas.

Table 37. Radio as a means of DRR public awareness

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Availability of radio or gadget to listen to radio broadcast	N= 52	N=30	N=48	N=32	N=68
Yes	39	8	23	24	53
	75	26.67	47.92	75	77.94
No	13	22	25	8	15
	25	73.33	52.08	25	22.06
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
The frequency of listening to radio	N= 39	N=8	N=23	N=24	N=49
Less than 1 hour/day	22	4	17	12	49
	56.41	50	73.91	50	92.45
1 -2 hour/day	8	1	6	5	1
	20.51	12.5	26.09	20.83	1.89
2 - 3 hour/day	6	1	0	4	0
	15.38	12.5	0	16.67	0
> 3 jam hour/day	3	2	0	3	3
	7.69	25	0	12.5	5.66
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Time to listen to radio	N= 39	N=8	N=23	N=24	N=49
A In the morning	10.26	50	47.83	4.17	3.77
B In the afternoon	1	1	3	5	6
	2.56	12.5	13.04	20.83	11.32
C at night	4	2	1	2	9
	10.26	25	4.35	8.33	16.98
D Flexible	30	1	8	16	36
	76.92	12.5	34.78	66.67	67.92
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Reasons for listening to radio	N= 39	N=8	N=23	N=24	N=49
A Listen to the songs	23	0	6	3	14
	44.23	0	12.5	9.38	20.59
B Listening to the news	23	7	19	21	42
	44.23	23.33	39.58	65.63	61.76
C Listen to the programs	0	1	3	1	14
	0	3.33	6.25	3.13	20.59
D Listening to favorite broadcaster	0	0	1	0	0
	0	0	2.08	0	0
V others	1	0	1	0	0
	1.92	0	2.08	0	0
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Listening to disaster information through radio	N= 39	N=8	N=23	N=24	N=49

Yes	26	8	22	22	47
	66.67	100	95.65	91.67	88.68
No	13	0	1	2	6
	33.33	0	4.35	8.33	11.32
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Information about DRR provided in	N= 39	N=8	N=23	N=24	N=49
A advertisement	20	0	1	2	27
	38.46	0	2.08	6.25	39.71
B News	21	8	23	23	44
	40.38	26.67	47.92	71.88	64.71
C Speech from local government	0	0	0	1	1
	0	0	0	3.13	1.47
V Others	1	0	0	0	0
	1.92	0	0	0	0
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Challenges in listening to disaster broadcasting from radio	N= 52	N=30	N=48	N=32	N=68
A unclear broadcasting	21	13	7	25	8
	40.38	43.33	14.58	78.13	11.76
B Do not have time	22	4	15	3	42
	42.31	13.33	31.25	9.38	61.76
C do not have electroic equipment to access radio	8	14	17	5	2
	15.38	46.67	35.42	15.63	2.94
V Others	1	1	9	0	16
	1.92	3.33	18.75	0	23.53

From FGD with community in Padang, it was found out that CLASY FM was known as radio for DRR. Parupuk Tabing broadcasted DRR into mosques. It was expected that community had more knowledge on DRR from the radio broadcasting in the mosque.

However, RRI in Meulaboh,- which is known as DRR radio-, faced some challenges, such as not many of the community members did not use or have access to radio, limited their ability to access information from BPBD.

The big difficulty faced by RRI was the late information due to the lack of RRI's devices to access the information from BPBD – they only used mobile phone whilst in time of disaster, mobile phones often could not function properly.

RRI had their own policies to publish the disaster information – they also had their own SOP. RRI wants to be a radio that provides education about disaster to the community. During a disaster, the communication device that still functions well is the radio. Beside, RRI was located in a safe area in time of tsunami because it was far from the beach areas. RRI also could reach a wide range of areas supported by the existing equipment. This made RRI the radio to deliver any information about the disasters.

In Mentawai, most of community member did not listen to the radio because there was no electricity. For those who were able to listen to the radio, the radio broadcasting is not from Mentawai but from Bengkulu. Community in Saliguma was unable to receive broadcasting from Surak Radio.

“They seldom listened to the radio. There was no electricity in the village. Some of them only listened to the radio from Bengkulu, the Suara Mentawai could not reach in Saliguma village.” (FGD Saliguma, Mentawai)

In Bengkulu, Mercy Corps worked with RRI and Flamboyan Radio FM to have DRR and emergency information material broadcasted. However, using radio as an emergency information system was not really effective as most people were not accustomed to listen to the radio. Another challenge was the unavailability of speaker on the DRR broadcasting. BPBD had not used the opportunity to conduct public awareness on DRR to the community through the radio.

“WCC cooperated with RRI and Flamboyan FM to broadcast the disaster information. It was informed to the community therefore the community could access the information which was expected also functioned as early warning system. It was not too effective as most of the people rarely listened to the radio nowadays, even most of them did not have any radio – it was not because of their capabilities to buy but, a few of them utilize the radio as the source of information. Only the house wives listened to the radio while preparing for the meals or doing household activities. The coordination between KSB and the radio was disconnected but coordination between KSB and BPBD still ran through the volunteers in BPBD., BPBD has not been confident enough to speak in public via radio broadcast. (FGD with KSB Kandang, Bengkulu)

The use of radio as part of the emergency information system needed to be reviewed in some areas. Certain communities or people did not always use it as a main media to get information and knowledge. There was a need to think about how to invite people to listen to DRR or thinking about how to develop emergency information system based on the needs or local existing mechanism.

3.2.2.6. Partnership

To strengthen the collaboration work, Mercy Corps encouraged KSB to work collaboratively with BPBD and private sectors (radio). In every district (not included Mentawai) Mercy Corps developed an MOU with BPBDs and radio to strengthen community preparedness and response towards disasters. It was expected that after the program finished, the community has a networking map with stakeholders for a more sustained collaboration.

General understanding mentioned that no single organization can effectively address the challenges of disaster risk reduction. Effective partnerships between policy makers, researchers, and practitioners in the public, private and civic sectors were the cornerstone of effective and sustainable interventions.

READI program has encouraged stakeholders to work together towards common goal in disaster preparedness. The qualitative study in Padang mentioned that KSB worked together with BPBD to conduct training and public awareness. The program has also provided opportunity for sustainability as KSB has successfully engaged village administrator to allocate budget for disaster preparedness activity.

“Previously, BPBD merely provided training to handle fire but now, most of the people whether in the community, village officers, and half of the KSB members knew BPBD and they were the village officers (Tabing). There has been cooperation with BPBD through training but with the village government has not been written in a written rules but when KSB submitted proposal, the village government gave positive response and granted it.” (FGD with KSB Parupuk Tabing, Padang)

Table 38. Coordination

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
BPBD/government conducted coordination with village in terms of disaster management	N= 52	N=30	N=48	N=32	N=68
Yes	28	16	30	25	41
	53.85	53.33	62.5	78.13	60.29
No	3	2	12	3	3
	5.77	6.67	25	9.38	4.41
Don't know	21	12	6	4	24
	40.38	40	12.5	12.5	35.29
The frequency of the coordination	N= 52	N=30	N=48	N=32	N=68
Once/year	38	24	23	26	42
	73.08	80	47.92	81.25	61.76
Twice/year	13	3	14	5	12
	25	10	29.17	15.63	17.65
Three times/year	0	2	6	1	13
	0	6.67	12.5	3.13	19.12
Fourth times/year	1	1	5	0	1
	1.92	3.33	10.42	0	1.47
Village build coordination and work together with school in disaster preparedness	N= 52	N=30	N=48	N=32	N=68
Yes	20	14	31	23	57
	38.46	46.67	64.58	71.88	83.82
No	7	2	6	0	3
	13.46	6.67	12.5	0	4.41
Don't know	25	14	11	9	8
	48.08	46.67	22.92	28.13	11.76
Existence of DRR team at schools in the village					
Yes	11	14	33	12	61
	21.15	46.67	68.75	37.5	89.71
No	7	7	5	2	2
	13.46	23.33	10.42	6.25	2.94
Don't know	34	9	10	18	5
	65.38	30	20.83	56.25	7.35
Village build coordination with radio providing information on disaster					
Yes	1	9	27	8	38
	1.92	30	56.25	25	55.88
No	10	6	10	14	6
	19.23	20	20.83	43.75	8.82
Don't know	41	15	11	10	24
	78.85	50	22.92	31.25	35.29
Village government regularly informed the updated condition about hazards					

Yes	9	18	28	4	51
	17.31	60	58.33	12.5	75
No	13	2	17	12	10
	25	6.67	35.42	37.5	14.71
Don't know	30	10	3	16	7
	57.69	33.33	6.25	50	10.29

Partnership with CSOs

When implementing the program, Mercy Corps worked in partnership with civil society organizations (CSO), such as WCC in Bengkulu, L-Sameri in Nias, Ready in Mentawai, YPS in Meulaboh, and Jemari-Sakatoin Padang for capacity building and awareness campaign. The awareness campaign was implemented in partnership with local civil society organizations, targeting over 200,000 households in the five target areas (combined). Mercy Corps has a long history of collaborating with local civil society organizations in Indonesia and was able to foster fruitful relationships that gained it access to remote communities such as those in the Mentawai Islands. Partnership with local organizations was fundamental to the implementation of a successful awareness campaign because of the level of trust and effectiveness that are gained by “localizing” the messages and the people spreading them.

Partnership with Private sectors

READI project also intended to build participation of private sectors to be actively involved in the efforts of disaster risk reduction and community preparedness. To raise awareness on disaster risk reduction and build emergency information system in community, READI project developed partnerships with radio stations in five areas. The radio broadcasted activities of the KSB and it inspired communities to work more in building community awareness towards disasters and preparation. It also functioned as tools for an emergency information system. One of the committed radio was Classy FM in Padang who declared itself as a radio for disaster preparedness. Classy FM provided sessions on disaster risk reduction awareness and community preparedness and had a resource person from BPBD and KSB. The live broadcasting with KSB was also relayed to mosques in order to reach as many people as possible. Declared as radio for disaster preparedness, Classy FM has made a commitment to continuously conduct awareness raising on DRR even when the project is finished.

To support the community raising awareness on disaster, Coffee Toffee, a coffee shop in Padang provided vouchers for those who won the quizzes on DRR in Classy FM. However, Coffee Toffee’s commitment was only available during the project lifetime unless BPBD Padang followed up to continue the partnership.

PT Semen Padang was actively involved in strengthening community preparedness and awareness towards disaster. It supported trainings and radio communication for KSB in Padang. PT Semen Padang also developed TRC (Tim Reaksi Cepat – Emergency Team Response) to be prepared in time of disaster.

3.2.2.7. Governance

Governance in DRR led the integration of all cycles in Disaster Risk Management into the process of institutionalization of DRR activities in village development planning. The process required community participation and collaboration with other stakeholders to provide more sustainable effort in disaster preparedness and response. READI project did not specifically aim to strengthen the DRR planning, rather that it supported the community to develop DRR planning as a basic step to develop stronger mechanism of community disaster preparedness. Started by establishing KSB which would later work on the community support to strengthen the integration of DRR into development planning, the villages in five districts made an effort to build resilience towards hazards in their area. The establishment of KSB was expected to encourage political consensus of the importance of DRR at village level. KSB was trained to develop community planning at village level, such as conducting vulnerability and capacity assessment, developing community action plan, developing evacuation maps and early warning system, simulation, and socialization of DRR planning to community.

In every district, after establishment of KSB, the community worked towards DRR planning document development, especially the VCA, evacuation plan, and simulation. It was expected that all groups, including vulnerable groups, within the community were able to participate in the process of DRR activities. It was very important that all groups in community were able to participate so that the discussions resulted in inclusive regulation and policy.

The quantitative study shows the participation of the groups within the community in the discussions of DRR planning in their villages. It was found that 41.3% or 95 out of 230 respondents mentioned that women participated in the discussions and meetings. A total of 44.78% of respondents mentioned that youth participated in the discussions and 63% of respondents also mentioned that village leaders took part in the discussion. It seems that all community elements have been provided an opportunity to participate in the discussions. It was very important to ensure that DRR regulation and policy produced represented the opinion of all elements in the community.

Table 39. Groups participated in the discussion of Disaster Risk reduction planning

Groups participated in the discussion of Disaster Risk reduction planning	N-230
A Women	95
	41.3
B Persons with Disability	7
	3.04
C Elderly	29
	12.61
D Youth	103
	44.78

E Village leaders	146
	63.48
F Village administrator	90
	39.13
G Government	40
	17.39
V Others	1
	0.43
W Don't Know	34
	14.78

The table below shows an interesting finding about women's participation. The quantitative study found out that female participation was quite high, unless in Nias. A total of 77.03% out of 48 respondents in Meulaboh confirmed that women were involved in the DRR discussions in their village. A total of 43.33% out of 30 respondents in Mentawai also noted female participation in the discussion. FGD with community and KSB in Bengkulu highlighted the importance of women representation in the discussion.

"It was very important that Ibu-ibu (women) are present in the discussion. They can contribute opinion from different perspectives. They also supported the adoption of gender perspective in the regulation and policy." (FGD with KSB Kandang, Bengkulu)

Another finding was the importance of having a DRR champion in the village. It was expected that the champion supported the process of DRR institutionalize in the village. The table shows that youth, village leaders, and village administrators were the groups mentioned by most respondents as active participants in the discussions. Mercy Corps needed to identify a group of champions to provide leadership to sustain the DRR initiatives in the community

Table 40. Groups Participated in the discussions per district

Groups participated in the discussion of Disaster Risk reduction planning	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
	N= 52	N=30	N=48	N=32	N=68
A Women	16	13	37	5	24
	30.77	43.33	77.08	15.63	35.29
B Persons with Disability	0	1	3	1	2
	0	3.33	6.25	3.13	2.94
C Elderly	10	4	6	0	9
	19.23	13.33	12.5	0	13.24

D Youth	13	19	27	5	39
	25	63.33	56.25	15.63	57.35
E Village leaders	18	23	39	16	50
	34.62	76.67	81.25	50	73.53
F Village administrator	20	17	28	3	22
	38.46	56.67	58.33	9.38	32.35
G Government	3	2	9	1	25
	5.77	6.67	18.75	3.13	36.76
V Others	1	0	0	0	0
	1.92	0	0	0	0
W Don't Know	22	2	5	1	4
	42.31	6.67	10.42	3.13	5.88

The quantitative and qualitative study shows that the process of DRR planning in five areas had adopted the inclusion or representation of vulnerable groups in community decision making. Through the adoption of inclusion principles in the village DRR planning, it was expected that the very basic rights of people formally recognized by the village to safety, to equitable vulnerability reduction and relief assistance, to be listened to and consulted.

The process of DRR institutionalization had resulted in the production of DRR regulation and policy in the village level. Most of the areas had been completed with necessary DRR documents, however, the biggest percentage of the respondents (42.17% out of 230) mentioned that they did not know about DRM planning document of their village. It shows that the developed document was not well socialized to entire community members. Some of the respondents were aware that the documents were available, while the other did not. It was an area of improvement to socialize the documents to community. However, community was aware of the regulation on the land use in their area, especially area prone to disaster. About 49.97% or 108 out of 230 respondents mentioned that they were aware of the availability of village Regulation on land use in the prone disaster area.

Table 41. Disaster management planning document

N=230	
Disaster Management Planning Document developed by village	
A VCA assessment document	18
	7.83
B Village disaster management document	47
	20.43
C Community action plan document	24
	10.43
D Contingency planning document	21
	9.13
E Evacuation planning document	65
	28.26

F SOP disaster document	33
	14.35
G Don't know	97
	42.17
V Others	9
	3.91
Availability of village regulation on land use in the prone disaster area	
Yes	108
	46.96
No	40
	17.39
Don't know	82
	35.65

The table below shows how the DRR documents were developed by the community in five areas. Almost all respondents in the area were familiar with evacuation planning document. The respondents of this survey consisted of KSB members and non KSB members. However, if socialization was conducted consistently, community would have more information about DRR planning document. In Padang 42.65% out of 68 respondents mentioned that their village had developed evacuation planning document. A total of 37.5% respondent in Nias also mentioned the similar condition. The figure told us that simulation has made the community get information directly about evacuation planning and assisted community to gain deeper understanding on evacuation process. FGD in Mentawai with KSB members and community noted that the community would like to have more practice, such simulation, than theory as they gained deeper understanding from simulation.

Table 42. DRM planning developed by community

Disaster Management Planning Document developed by village	BENGKUL	MENTAWA	MEULABO	NIAS	PADAN
	U N= 52	I N=30	H N=48	N=32	G N=68
A VCA assessment document	1 1.92	1 3.33	11 22.92	2 6.25	3 4.41
B Village disaster management document	7 13.46	5 16.67	18 37.5	15 46.88	2 2.94
C Community action plan document	1 1.92	1 3.33	10 20.83	2 6.25	10 14.71
D Contingency planning document	1 1.92	0 0	9 18.75	0 0	11 16.18

E Evacuation planning document	7	5	12	12	29
	13.46	16.67	25	37.5	42.65
F SOPs	4	1	6	0	22
	7.69	3.33	12.5	0	32.35
G Don't know	36	19	19	1	22
	69.23	63.33	39.58	3.13	32.35
V Others	0	0	5	0	4
	0	0	10.42	0	5.88
Availability of village regulation on land use in the prone disaster area					
Yes	25	13	19	13	38
	48.08	43.33	39.58	40.63	55.88
No	6	4	18	4	8
	11.54	13.33	37.5	12.5	11.76
Don't know	21	13	11	15	22
	40.38	43.33	22.92	46.88	32.35

One important point of the institutionalization of DRR was the integration of DRR in the development planning. It ensures the continuous process of DRR adoption had a budget from village development planning. DRR adoption in the village development planning supported the achievement of sustainable development as it provided comprehensive analysis of reducing vulnerability and enhancing village capacity. DRR supported the development of an enabling environment for sustainable development.

The table shows that 46.52% or 107 out of 230 respondents mentioned that the village planning included the needs of DRR and 31.74% respondents mentioned that disaster management activity has been integrated in the village midterm development plan. It means that some areas started to ensure the sustainability of DRR activities by providing the budget. The table also shows that community in some areas had initiated to manage and take care of vertical shelter. A total of 31.74% out of 230 respondents mentioned that village allocated a budget to manage and maintain the vertical shelters.

Table 43. DRR and village development planning

	TOTAL
The village planning included the needs of DRR	N=230
Yes	107
	46.52
No	123
	53.48
TABEL 62	
The disaster management activity integrated in the village midterm development plan?	
Yes	73
	31.74

No	157
	68.26
TABEL 63	
Availability of planning to manage and maintain the vertical shelter	
Yes	69
	30
No	52
	22.61
Don't know	109
	47.39

The table below shows the figure of integration of DRR and village in five areas. Meulaboh was the most intensive area in integrating DRR into village development planning, 64.58% respondents out of 48 respondents mentioned that village planning had included DRR activities, other areas such as Bengkulu, Mentawai, and Nias needed to be encouraged to prioritize mainstreaming DRR in in the village development planning.

Table 44. DRR and village development planning per district

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
The village planning included the needs of DRR	N= 52	N=30	N=48	N=32	N=68
Yes	17	11	31	12	36
	32.69	36.67	64.58	37.5	52.94
No	35	19	17	20	32
	67.31	63.33	35.42	62.5	47.06
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
The disaster management activity integrated in the village midterm development plan	N= 52	N=30	N=48	N=32	N=68
Yes	6	2	33	3	29
	11.54	6.67	68.75	9.38	42.65
No	46	28	15	29	39
	88.46	93.33	31.25	90.63	57.35
	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
Availability of planning to manage and take care of the vertical shelter	N= 52	N=30	N=48	N=32	N=68
Yes	2	8	26	1	32
	3.85	26.67	54.17	3.13	47.06
No	4	6	15	8	19

	7.69	20	31.25	25	27.94
Don't know	46	16	7	23	17
	88.46	53.33	14.58	71.88	25

Interviews with the head of BPBD Bengkulu mentioned that BPBD has raised the budget so that BPBD was able to be more flexible in implementing the program. Staff changes and rotation seems to challenges for BPBD to move forward on producing DRR regulation and policy. A new staff needs more time to adjust the assignment and follow the updates the process of DRR planning and policy development. Although Mercy Corps provided training for BPBD Bengkulu to develop DRR planning document, BPBD did not have an opportunity to document the planning and it stopped the workshop stage. As a result, BPBD could not socialize the document to community or to villages.

“There were training to prepare contingency planning and risk maps, but not documented. WCC promised to provide the documentation in a document. The staff and Kalaksa turn-over was quiet high that made the knowledge of BPBD not increased significantly. In two years, there were three times changes – they did not come if invited to discussion because still in adaptation. There were mentoring process and hazards reviewed about contingency and action plan, but also not documented and stopped only in workshop process. It was not documented therefore it could not be communicated to other community or the local government – the limited program implementation time and resources have made the output of the workshop was not maximum.” (FGD with KSB Kandang, Bengkulu)

Chapter 4. Main Findings

In this section we developed the most important findings relating to community preparedness and response towards disaster arising from the analysis of the dataset collected in Mentawai, Bengkulu, Padang, Nias, and Meulaboh. We have divided our main findings in accordance with the criteria used to evaluate the project.

Figure 45. Description of Evaluation Criteria

Criteria	Description
Relevance	It concerns the extent to which the project has addressed important needs in terms of community disaster preparedness, and has done this in accordance to current policy guidance. It also refers to the extent to the project has been consistent with the approaches and principles set down in pertinent current policy.
Effectiveness	It is measured in terms of achievement of the outcomes of the project.
Efficiency	It is a measure of the costs incurred to produce the expected outputs.

Impact	It refers to evidence that the outcomes of the project have brought about real lasting changes. These changes justify the planned intervention.
Coordination	It refers to the effective collaboration and communication amongst stakeholders delivering the project and key stakeholders. It includes the analysis of possible complementarities, disruptions and duplications.
Sustainability	Once longer-term changes reflect new or built capacity within the target beneficiaries, or the services available to them are identified, the issue of sustainability is addressed. This can reflect political will and policy changes, economic factors and other developments that increase the probability of those changes being durable.
Ownership	It concerns to the degree of responsibility that key actors involved assume for the actions implemented and their readiness to take over and continue working on the topic.
Gender	It refers to the way the project has addressed men and women particularly in terms of equal opportunity to access to DRR
Coverage	It refers to the proportion of affected people and communities that have been reached by the project. It focus on geographical coverage as well as on the project reaching particular sub-groups of the target population who are particularly vulnerable

4.1. Relevance

Relevance concerns the extent to which the project has addressed important needs in terms of community resilience, and has done this in accordance to current policy guidance. It also refers to the extent to the project has been consistent with the approaches and principles set down in pertinent current policy. Relevance tried to find out *Changes in context and review of assumptions based on the following questions:*

- Is the project’s design adequate to address the problem(s) at hand?
- Do the objectives and goals match the problems or needs that are being addressed?

The READI project was designed to support the development of community resilience for coastal community in Sumatra. There were several conditions that show vulnerability as well as capacity of community towards earthquake and tsunami. The coastal area of Sumatra was known as areas which are earthquake and tsunami prone areas, therefore, the community needs to be invited to work together with stakeholders to strengthen the capacity and reduce the



Figure 4 - BNPB/BMKG assessment

vulnerability through disaster preparedness and response.

Learning from the experience and history about how people reacted to earthquake and tsunami in Sumatra coastal area, the community needs to be more aware and prepared by developing mechanism of preparedness and response.

BNPB and BMKG released data on the lack of proper equipment and infrastructure throughout vulnerable locations across Indonesia.⁸In Meulaboh, Nias, Padang, Mentawai, Bengkulu, only partial disaster warning systems are in place, composed of remote-activated sirens and manually activated mosque loudspeakers in case of tsunami warning. The limitations of this structure became obvious during the latest tsunami warning when, by the time the warning was issued, most of the volunteers who were supposed to activate the system in the mosques were gone or were never there.

READI encouraged the community to develop early warning system based on local capacity and potential. Nias adopted church bell as one of the early warning system, while Meulaboh used mosques' speaker as a warning alarm of tsunami. Although the implementation of deciding and installing early warning system faced challenges, it has been a priority for the community to adopt the EWS suitable for their area. Mercy Corps also worked with private sectors such as radio to build emergency information system. Although it faced challenges, , it has brought awareness of the private sectors to be able to participate in enhancing community preparedness and response towards disaster.

Moreover, the sirens, while functional still failed to alert the entire population due to poor coverage. Most importantly, with phone and electricity networks down, very few options were available to reach the population with potentially lifesaving information. Although the District Disaster Management Agency (BPBD) of Padang city it is customary to transmit a radio message through Radio Republik Indonesia (RRI), this is not part of a Standard Operating Procedure (SOP) and the communication protocol still relies heavily on phone exchanges, a method that not only defies the real-time purpose of the messages, but would be unsuitable for a major disaster.

The lack of proper mitigation facilities and poor emergency encouraged Mercy Corps to design a program to address the problems at hand. Learning from the earthquake of magnitude 8.6 which struck off the coast of Northern Sumatra about chaos situation in cities along the coast, the sudden exodus of people toward higher ground was instinctual rather than based on real time information.

Sirens alerted the population to a tsunami warning, but no other measure was in place to feed communities with direct real-time information on the developments of the emergency. Despite the existence of a *text message* notification service offered by the Indonesian Meteorological, Climatological and Geophysical Agency (BMKG), and re-published through Twitter, not all communities can be reached by these messages during an emergency due to the busy networks and also network coverage issues. The lack of direct information during

⁸Adopted from MC proposal

an emergency, especially when coupled with poor preparedness, contributes significantly to the exacerbation of panic among the population.

In response to the chaos of tsunami alert, the President of Indonesia and the Head of BNPB⁹ called for a change in the management of evacuation plans by introducing the concept of vertical shelters¹⁰. Although accompanied by explicit financial commitments from the government, this plan has not yet been endorsed at the district level. Despite the decision that every newly constructed government building has to double as a vertical shelter, these remain too few to accommodate evacuees. Additionally, the identification and certification of other buildings as earthquake and tsunami proof is far from being on track.

READI program worked with BPBD and private sectors such as hotel to identify and decided building that can be used as vertical shelters. Padang has successfully identified some buildings owned by private sectors to be vertical shelters. However in Nias and Mentawai where buildings were minimal, community were encouraged to find and identify highland as vertical shelters.

From the activities and project implementation it can be concluded that the program of READI was relevant as it answered the community needs on capacity building and disaster preparedness and mitigation in the five areas. The qualitative study mentioned that READI has answered community needs of knowledge on preparedness.

Community in Padang mentioned that the project has answered community needs of knowledge on disaster preparedness and response.

The program was based on the community needs because they did not know about disaster, now they found it helpful by the knowledge given, and some felt more prepared in time of disaster (Padang).

It was suitable as the community was more prepared because of the technical knowledge in time of earthquake and tsunami. The children were already taught what to do and where to go. The mothers did not find their children at school but at the assembly points.

Other than real needs of community, the READI program was aligned with international policy and priority on DRR. READI program fits into OFDA's mandate with interventions that contribute to saving lives, alleviating suffering, and reducing the economic impact of future disasters by building local capacity for disaster management, increasing risk and mitigation awareness, and improving warning systems. The READI program strategy was also closely aligned with the priorities of the Hyogo Framework for Action (HFA) to build

⁹Vertical Shelters Become Option in Tsunami Areas. Jakarta Globe, 17 April 2012. (<http://www.thejakartaglobe.com/home/vertical-shelters-become-option-in-tsunami-areas/511885>)

¹⁰An earthquake and tsunami-resistant structure (e.g. reinforced concrete) with a shelter area standing at least 5m above the forecasted maximum wave height. (Tsunami Evacuation Handbook, JRC-EU, 2011)

the resilience of nations and communities to disasters, established in 2005 and adopted by 168 member states of the United Nations, including Indonesia. The ASEAN Agreement on Disaster Management and Emergency Response (AADMER) established in 2009 and ratified by member states (including Indonesia) also reinforces these same priorities. The READI program was responsive to this OFDA APS in alignment with global and regional frameworks for DRR, as outlined below:

Table 356. Program Strategy Alignment with global, regional and OFDA DRR Priorities

Hyogo Framework	AADMER ¹¹	OFDA APS Objectives	READI SUMMARY (see technical design for details)
1. Ensure that DRR is a national and local priority with a strong institutional basis for implementation	Articles 6 and 10	Strengthen regional linkages with other relevant training and management organizations.	The program is designed to align with global, regional, and national strategies for disaster risk reduction and will support the Hyogo Framework for Action and the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) as outlined in this table.
2. Identify, assess and monitor disaster risks and enhance early warning	Articles 5 and 7	Improve dissemination and use of international, regional, and national warnings, such as tsunami or cyclone early warnings by at-risk communities.	<i>Enhanced Emergency Information System (Emergency Masts)</i> <ul style="list-style-type: none"> • Applying an adapted emergency warning system design from Japan to the target areas. <i>Dedicated AM/FM Emergency Radio Channel</i> <ul style="list-style-type: none"> • Establishment of a dedicated AM/FM radio channel for BPBD to broadcast real-time information during a disaster.
3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels	Articles 6 and 7	Improve vulnerable populations' understanding of risks posed by multiple coastal hazards.	<i>Awareness Campaign & Pro-active Engagement:</i> <ul style="list-style-type: none"> • Hazard awareness campaigns and potential preparedness and mitigation measures. • Awareness on being a host family in case of emergency. • Twitter, Facebook, text messages and radio, and traditional methods.
4. Reduce underlying risk factors	Article 6	Promote risk-wise behavior by implementing DRR measures that enhance environmental and natural resource	<i>Awareness Campaign & Pro-active Engagement:</i> <ul style="list-style-type: none"> • Awareness campaigns on the hazards affecting target areas and potential preparedness and environmentally sound

¹¹ASEAN Agreement on Disaster Management and Emergency Response (AADMER)

			protection.		mitigation measures to promote risk-wise behavior.
					<i>Tsunami Vertical Shelter</i>
					<ul style="list-style-type: none"> • Facilitate the transition to vertical shelters through the assessment and identification of suitable buildings.
5. Strengthen disaster preparedness for effective response at all levels.	Articles 6 and 8	6	Strengthen community, local, and national capacities to address vulnerability and exposure to coastal hazards.		<i>Evacuation Maps:</i>
					<ul style="list-style-type: none"> • Identify tsunami evacuation routes and create maps “with the community, for the community” indicating the most suitable solutions and alternatives at local level.
					<i>Capacity Building</i>
					<ul style="list-style-type: none"> • Enhance the link between the Education and Training Facility of the National Disaster Management Agency and district level officials. • Provide <i>ad hoc</i> training to address gaps.

Capacity building to BPBD activity was also an answer of the complexity in Indonesia bureaucracy in providing training to improve human resource in BPBD. Local governments are required by the Disaster Management Law to institute specialized agencies as part of decentralization policies, yet they are largely lacking in the training, capacity, and equipment necessary to address disaster risk reduction needs. The National Disaster Management Agency (BNPB) Center for Education and Training is mandated to provide much needed skills to local officials; however, the limited involvement of the Center at the district level has resulted in little engagement with sub-national disaster management staff. READI provided training to BPBD as a strategy to link the bottom up process in the community on preparedness and response. This gave advantages for BPBD to speed up the staff capacity building process.

4.2. Effectiveness

Effectiveness measured in terms of achievement of the outcomes of the project. It answered the following questions:

- Are the beneficiaries satisfied with the quality and delivery of services? If not, in what way did the services not meet with beneficiary expectations and why?
- What concrete improvements and changes have taken place (at the community) as a direct result of the program?
- What were the major factors influencing the achievement or non-achievement of the objectives?

- What are the supportive factors and obstacles encountered during the implementation?

READI has resulted in increased awareness of the community and strengthened the capacity of the government. It has also encouraged the identification, development, and establishment of preparedness infrastructure and procedures which gave benefit for all stakeholders.

From the qualitative study it shows that the community realized the advantages of READI program to educate the community on DRR, especially knowledge on preparedness and response. It was also noted that the short program implementation has not yet provided more opportunity for community to document the discussions and to practice knowledge on preparedness and response. Community in Nias noted that at least 60% community members had a good knowledge of preparedness.

Community in other areas such as Meulaboh, Bengkulu, Mentawai, and Padang noted some visible improvements of community preparedness, such as availability of evacuation maps, vertical shelters identification, development of early warning system, and also simulation. However, almost all areas noted the duration about the program implementation. Eight to ten months of program implementation was not enough to build stronger preparedness mechanism within the community and BPBD. FGD with community and BPBD in Bengkulu noted that community improvement was in the level of changing paradigms, but not yet in behavior. They have produced several DRR planning documents but it has not yet been documented.

“The design was quiet good but because of the limited time (8 months only) therefore the mentoring process has not completed yet – still in KSB consolidation process and training to prepare basic documents. We have not reached the documentation and technical training process. The limited time also made the BPBD mentoring process has not finished yet. Ideally, BPBD also prepared for continuing the pioneered relay built by READI program.”

Mentawai also noted the duration of the program which was considered short, however, visible changes also can be found in the community such as evacuation maps availability, evacuation route, simulation and herb planting in the shelter. Distance was one of the biggest challenges in Mentawai. The distance between one village to another village was quite far. It brought consequences to the number of communities present in the DRR activities. The short project duration (10 months) and the distance of the village assisted by the facilitator were the problems, as well as there was no transportation fee for the participants. The community made a living from the sea or agriculture was hard to leave their jobs without any substitute. But the spirit of KSB members covered up the problems. Some of KSB members had high awareness therefore they keep practicing and gathering routinely even though the READI program ended. As they had experiences with disaster, most of the community whose houses were ruined gave a good response towards the evacuation map and signs. There was a little mistake in the poster; it was written Siberut Selatan which should be Siberut Tengah. The map was done after the program ended (a

little bit late). The members of KSB had limited comprehension abilities – they did not like writing and analyzing. KSB liked physical activities like building evacuation lanes, earthquake simulation, and planting medicinal plants in TES. Mercy Corps used the local facilitator because Mentawai people were easier to receive local people to be their mentor as their philosophy “our people, our brother vs newcomer”.

It needed longer time to implement the program therefore there was information dissemination from KSB to the community. The members/administrators of KSB had strong influence for the success of the program and the dissemination. The selection process of proper KSB members had a great impact – most of the KSB members were activists/selected people who were also members or administrators for other organization therefore they had limited time for meeting with KSB. The impacts were in one of the village, members’ turnover was quiet high which influenced the arrangement of document and activities. Another challenge was this village only experienced earthquakes, but other disasters were still considered as hazard, therefore it was hard to actively drive them. It was different from the areas which had floods or landslides, the community in this type of areas were easier to cooperate with.

4.3. Efficient

Efficient measures the costs incurred to produce the expected outputs. It answered the questions of *Achievement of projected performance indicators and targets (efficiency)*:

- Did the project achieve the target? Is the project delivered in a timely and cost-effective manner?

READI Program has noted remarkable outputs in terms of indicator fulfillment. It has achieved the target beyond expectations and delivered in a timely and cost effective manner as the result was doubled.

The capacity building for BPBD surpassed the target number. Originally it was planned that the program would train 50 people and at the end of the project it reached 186 individuals or 372% of the original. The participants were also evaluated on the knowledge retained two months after the training. The total staff evaluated reached 268% of the 40-person target.

Another achievement was that the program developed eight (8) hazard risk reduction plan documents; five (5) vulnerability and capacity assessments (VCAs) and three (3) tsunami evacuation maps of Padang, Bengkulu, and Aceh Barat.

A projected 467,056 people in Padang (50% of population) and in Bengkulu (12.5% of population) have access to an improved emergency warning system for earthquakes and tsunamis. The government (BNPB, BPBD West Sumatra, and BPBD Padang) constructed 31 siren units in Padang City and BMKG constructed two (2) siren units in Bengkulu. The percentage of individuals with increased access to an emergency warning system has reached 28% of the total targeted 1,679,289 people.

The program identified a total of 113 buildings as potential vertical shelters, which is 226% of the original target of 50 buildings. In addition, 21 hills and highland areas surrounding villages were identified as evacuation sites, reaching a total number of 134 potential evacuation sites: 98 sites in Padang; 9 sites in Meulaboh; 21 sites in Nias/Gunungsitoli; and 6 sites in Bengkulu.

The project contributed to community disaster preparedness and response. The number of people with access to evacuation routes totals 374,965; 154,925 in Bengkulu; 115,000 in Nias; 35,500 in Aceh Barat; 5,120 in Mentawai; and 64,420 in Padang. This work has reached 375% of the original target of 100,000 people. The number of people participating in simulations/drills totals 12,545; 1,773 from Nias/Gunungsitoli; 4,546 from Padang; 2,212 from Mentawai; 2,514 from Aceh Barat; and 1,500 from Bengkulu. This simulation reached 125% of the targeted 10,000 people.

Although not all areas were able to receive radio broadcasting on DRR, an estimated 1,462,293 people within broadcast range of the AM/FM radio frequency are able to receive hazard information broadcasts: 640,752 in Padang (75% of population); 58,883 in Mentawai (75% of population); 261,196 in Nias/Gunungsitoli (100% of population); 182,364 in Aceh Barat (100% of population); and 319,098 in Bengkulu (100% of population). This achievement has reached 146% of the targeted 1,000,000 people.

In Mentawai Islands, 21 evacuation routes, totaling 3,916 meters, have been repaired and are easily accessible to the community. A total of 2,000 people have participated in evacuation simulations and have access to evacuation routes.

The project also contributed to the development of DRR policy and regulation. Four local authorities developed disaster preparedness systems in the program; Bengkulu, Aceh Barat, Nias, and Gunungsitoli.

Despite of the achievement, the project noted some challenges in the program implementation strategy. In Mentawai, where distance had been a potential challenge for the community to actively attend meetings, the community had to take the risk of having no income as consequences of attending discussions and meetings on DRR. The spirit of KSB members to learn was the supporting factors. Another important point to consider was the approach has to be adapted with local customs. In Mentawai, the comprehensive abilities of KSB members were limited, they did not like writing and analyzing activities. KSB liked physical activities such as building evacuation lanes, earthquake simulations, planting medicinal plants in TES. It needed longer time for program implementation therefore there was information dissemination from KSB to the community. There was assistance and review for the hazards, rekon and renaksi but not documented. Saibi village already included the disaster planning in next planning village budget in the amount of 15%. The activities were the discussed activities in renaksi they have arranged. The maps were broken as they were made from paper but the evacuation lanes were routinely maintained.

To sustain the DRR initiative, the community needs to reserve some funding from the village budget allocation. However, not all villages were able to finance the activities. Community funds such as the fund for mangrove planting in Kandang village only needed 5 million rupiahs but it had great impact for the community involved. Kandang and Padang Serai were located on the beach that could be stimulated by providing funding to establish leasing and lending swimming equipment. KSB members also worked as coastal guards. The funds obtained could be used for PRB activities. Pondok Besi and Penurunan could be stimulated with the evacuation equipment and public logistic that could be managed and rented for party, but could also be used in time of disaster.

It was better if there were also side funds provided by other organization. The fund would be disbursed when the community found something important to be done and to be funded.

In terms of program implementation, staff mentioned that it would be better if there were administration staffs but they recruited only program coordinator, finance and facilitator who were good in assisting the community but not good in preparing documents. The program needed a document specialist to obtain a maximum output, RPB, renkon and renaksi as promised – at that time the promised outputs were books and the history of the village as well.

4.4. Impact

Impact refers to evidence that the outcomes of the project have brought about real lasting changes. These changes justify the planned intervention. It has the following questions:

- To what extent has the project contributed the capacity of beneficiaries (local government, CSO, village, and community)?
- What happened as a result of the project? (This may include intended and unintended positive and negative effects)
- What real transformation has the activity made to the beneficiaries and project partner such as improved practice and greater awareness on DRR aspect as well as it accountability.

The READI program has brought some changes on community life. Some of the KSBs admitted that READI has brought more knowledge and skills to the community to be prepared for disasters. KSB also socialized and simulated earthquakes and tsunamis and shared with the community survival tips and where to assemble in case of an emergency. In addition to this, the community received direct training from Mercy Corps and was able to transfer it to other communities nearby. The transfer process was another opportunity for sustained DRR initiatives in the community.

Although implemented during a short program duration, READI was also able to encourage women to participate in the process of DRR stock taking. The women understand how to prepare their children and where to find their children during a disaster.

The program also contributed to building community self confidence in taking part in DRR initiatives. KSB Laut Biru with the assistance of Mercy Corps were also able to provide socialization for the community and were involved in the activities of the community and disseminated pamphlets and posters in the village and in the schools. KSB also tried to provide information about KSB Laut Biru for the village nearby, Ulak Karang Selatan, and tried to assist this community step by step and provide socialization. During a disaster, KSB became the coordinator in the search and rescue and started a proposal to find funding for BBM, search and rescue team, and even BPBD also joined KSB related to BBM for the search and rescue team.

The program has also successfully encouraged community to independently take initiative to strengthen the community with preparedness and response activity. In Padang, the activities and the programs of KSB Parupuk Tabing ran properly. KSB had lots of ideas such as independent evacuation without waiting for the instruction from the leader or organization by observing the natural signs. KSB held independent evacuation simulation without any expenses by giving the letters and visiting related stakeholders, LANUD, Puskesmas, Village Office, and explained their purposes, objectives, and their difficulties which were welcomed by all those stakeholders following with they were providing assistance. KSB also did the shelter inventory, some building and including providing advice for an under construction mosque to build outside stairs to make it easier to be accessed in time of disaster. They have proposed for assistance to build outside evacuation stairs in some buildings to BNPB and BPBD.

One interesting finding was from Meulaboh, where DRR initiatives were also introduced through schools. The initiatives have contributed to the increased knowledge of children on disaster preparedness and response. The story below shows that education is one of the effective ways to teach young people how to behave facing the hazards of earthquake and tsunami.

Feature Box 3. Now I know

NOW I KNOW



When the 2004 tsunami hit her village, Tasyawas one year old and still in her mother's arms. She had no recollection of the major earthquake and the devastating wave that destroyed the village, Meulaboh, in Aceh Barat. The tsunami sunk parts of the village, said her grandfather. Everything that was once on the beach is gone now, destroyed by the tsunami or submerged under the the sea.

Tasya occanssionaly hears the story of the tsunami and to Tasya, the story contains scary, horrible things. She and her friends were never able to imagine, let alone know what to do about them. Therefore, when her school performed simulations to face the threat of earthquakes and tsunamis, Tasyawas very pleased learn what to do. The school

held three simulations and Tasya and her friends (in class V) do not get bored practicing. They get to hide under a desk, gather in the school yard and run a small run away from the sea towards a temporary evacuation shelter 600 meters from the school. The DRR programs conducted in the schools is conducted by YPS (Paramadina Universe Foundation) with the full support of the READI Program and Mercy Corps Indonesia.

"Now I know what to do if there is an earthquake," Tasyasays. She is excited when she describes her experiences in school to her family and friends. Tasya's experience shows that education is one of the effective ways to teach young people how to behave when facing the threat of earthquake and tsunami.

The READI project in Bengkulu encouraged women to participate in the public decision making process and some women are KSB members. The program encouraged gender sensitivity principles to be adopted while conducting DRR initiative.

“If women were involved in the management, then we knew their needs in evacuation areas. Now, women could survive together with their children if their husbands were not home “(FGD KSB Kandang Bengkulu).

Another unexpected impact of the project implementation was the tendency of the community dependency as caused by a grant given to the community by another organization. In three of the assisted villages, there were improvements in knowledge and community involvement in PRB activities (Padang Serai, PondokBesi, and Kandang), but Penurunan village did want to be more involve in this program. This was because the village did not receive funds to conduct DRR activities. Previously, Penurunan village was assisted by another organization and got a million rupiahs to be managed by KSB but they were disappointed with Mercy Corps’ program because it was not grant funded. As a result, the KSB officers in this village were less enthusiastic.

Since the READI program, BPBD Bengkulu became the reference for BPBD in other regencies. They learned from Mr. Garda (Preparedness Division). Mr. Garda used the documentation (photographs) and the work of 4 KSB (chart of analysis and map of hazards/risks). The evacuation map in the town and village were useful. The police, search and rescue unit, and TNI asked for some of them and used them. The READI program gave a new spirit for BPBD (some of BPBD members with good concern to their job) – they got useful information and partner for discussion. The community grew calm as they knew what to do during a disaster.

Another promising initiative for the DRR initiative sustainability was the increasing budget of BPBD. The BPBD budget increased twice because Mercy Corps provided the information of several items to be budgeted such as map multiplication and maintenance of early warning information devices. Independent evacuation simulation program was the first for BPBD and it was because of Mercy Corps. The simulation was centered in Padang Serai village which was inspired by BPBD to be routinely held in the next budget year.

The project in Mentawai has contribute to the increased community awareness on DRR initiative. They considered it was important to have routine meetings to discuss the hazards and activities to anticipate it. The evacuation lanes were routinely maintained by the community/KSB. There were some efforts to allocate the village budget for disaster management activities. The community (KSB members) knew some things to do before and in time of disaster. The community awareness increased and even the KSB had the initiative to communicate with BPBD.

4.5. Sustainability

Once longer-term changes reflect new or built capacity within the target beneficiaries, or the services available to them are identified, the issue of sustainability is addressed. This can reflect political will and policy changes, economic factors and other developments that increase the probability of those changes being durable.

- *Sustainability:*
- Will the project's effects remain over time?
- Is there a stream of results that is likely to continue and what are the potential risks?
- Have the project accumulated knowledge and skills that will endure beyond project period and can be replicated elsewhere?
- What were the major factors which influenced the achievement and non-achievement of sustainability of the project?

One of the indicators for sustainability was the availability of mainstreaming DRR into the village regulation and policy. The integration of DRR into village development planning will ensure the continuity of DRR activities as part of the village development program. If stakeholders showed commitment to continue what has been started by the project. At the community level, KSB in Padang committed to continue the socialization for the community which was already provided by Mercy previously for KSB and the community in Ula Karang Selatan. Although there was no budget yet, KSB hoped the knowledge they have got from Mercy Corps would not disappear. KSB Parupuk Tabing would continue the steps started by Mercy Corps. If there were no running programs or activities, the community would easily forget the knowledge related to disaster. KSB would seek for cooperation with other organizations outside so that KSB could run continuously.

Although the community shows a committed effort to continue the program, it was still be a challenge to integrate DRR into village government planning. In an FGD with KSB, it was found out that the village had a challenge with networking with other stakeholders to propose support for financing DRR activities.

“There was no budget in village level, the head of the village found difficulties as the village budget was decreased. It might be the government and House of Representative responsibilities. KSB ever proposed a logistic reserve in time of disaster but there was no realization because of the wrong line – it should go to the village level first, while the proposal was directly going to the provincial level. “(FGD in KSB Kandang, Bengkulu)

The table below shows the opportunity of sustainability of the DRR initiative in the village through village planning. From the figures of percentage, it was found out that most of the respondents had the opinion that the village planning has not yet included the needs of DRR. It was still a challenge for the community to put DRR initiatives as a priority and part of the village development planning.

Table 47. DRR Mainstreamed in the Village Planning

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
The village planning included the needs of DRR	N= 52	N=30	N=48	N=32	N=68
Yes	17 32.69	11 36.67	31 64.58	12 37.5	36 52.94
No	35 67.31	19 63.33	17 35.42	20 62.5	32 47.06

Table 48. Integration of DRR in the Village midterm development plan

	BENGKULU	MENTAWAI	MEULABOH	NIAS	PADANG
The disaster management activity integrated in the village midterm development plan?	N= 52	N=30	N=48	N=32	N=68
Yes	6 11.54	2 6.67	33 68.75	3 9.38	29 42.65
No	46 88.46	28 93.33	15 31.25	29 90.63	39 57.35

Despite of the challenge to include DRR initiatives as part of the village development planning, the community will try to independently continue the in initiative on a small scale. In Mentawai, nine months after the READI program ended, KSB still had routine meeting which could be longer if BPBD was more actively involved with KSB in every activity. There were some replications in a modest format in other villages and would be disseminated into wider areas but they are still waiting for the 2015 budget. KSB was seeking a disaster budget in the amount of 15% (in Saibi village). A member of the KSB provided counseling from hamlet to hamlet within their village.

Another commitment from the private sector also marked the opportunity for sustainability. BPBD developed an MOU with hotels and the private sector to support or provide services on disaster preparedness and response. Radios supported the public campaign and awareness on DRR. They dedicated a special program on DRR broadcasting and developed mechanism to spread information during an emergency.

Overall, the program focused on the development and building of community disaster response and preparedness and had a short duration of implementation. The sustainability of the DRR initiative became the next priority to work on.

4.6. Ownership

Ownership concerns the degree of responsibility that key actors involved assume for the actions implemented and their readiness to take over and continue working on the topic. The READI project prepared and encouraged the community to be more independent in

building community resilience towards disaster. Although some areas mentioned that the program has a short duration to build their confidence to continue and take over the responsibility, some community initiatives emerged to keep the project up. In Mentawai, Soluguma village has routine activities to keep and maintain the evacuation lanes. RRI also took the responsibility of the radio which will consistently have a broadcasting program on DRR in five areas of the intervention. All KSB have also committed to continue the activities beyond the project implementation. The Grand Zuri Hotel also showed its commitment to support the government and community in providing vertical shelter.

4.7. Coverage

Coverage refers to the proportion of affected people and communities that have been reached by the project. It focused on geographical coverage as well as on the project reaching particular sub-groups of the target population who are particularly vulnerable (e.g. children with disabilities, especially, girls with disabilities).

The summary result or output of the project shows that the project has reached the coverage beyond expectation. The capacity building activities reached 172% of the target and also with other achievements which shows that the project has extended its coverage beyond what was originally planned. The table below shows the coverage of the project. It has covered most of the groups within community. In Meulaboh, the project also targeted children at schools as one of the subjects in the program.

Table 48. Coverage of beneficiaries in the community

Groups participated in the discussion of Disaster Risk reduction planning	
A Female	95
	41.3
B Disability	7
	3.04
CElderly	29
	12.61
D Youth	103
	44.78
E Village leaders	146
	63.48
F Village administrator	90
	39.13
G Government	40
	17.39
V Others	1
	0.43
W Don't Know	34
	14.78

4.8. Gender

Gender refers to the way the project has addressed men and women particularly in terms of equal opportunity to participate in the decision making process. Gender part was intended to answer the following quotations:

- How has the project addressed men/male and women/female particularly in terms equal opportunity to access and control of resources, sharing project benefits and decision making?

Mercy Corps embraced gender awareness and integration as a strategic objective and as a critical element for impactful programs. These values were consistently reflected throughout the program implementation by seeking an understanding of gender roles in the community and tailoring the interventions accordingly, increasing the opportunities for integration and balance. The quantitative study mentioned that about 41% of the discussions within community were attended by female participants. FGD in Bengkulu also noted that women participated in discussions has resulted in the more gender sensitive decisions. The decisions in the community considered the need of the certain groups including women. They admitted that women have different needs and were able to contribute more in the disaster preparedness and response activity. However, it can't be denied that the adoption of gender and inclusive principles in DRM still have a long way to go in the DRR field. The table below shows how gender and inclusive principles was adopted in community activities on DRR. Most of the respondents mentioned that they did not have an idea on how gender and inclusive principles were adopted in the vertical shelter. This means that here was a need to raise more awareness in the community on the inclusive and gender perspective in DRR so that they can mainstream gender and inclusiveness in the DRR activities and policy.

Table 49. Gender and inclusive principles adoption

	BENGKULU N= 52	MENTAWAI N=30	MEULABOH N=48	NIAS N=32	PADANG N=68
Gender and inclusive principles applied in the vertical shelter					
Yes	0	5	17	3	16
	0	16.67	35.42	9.38	23.53
Not Yet	7	12	24	6	43
	13.46	40	50	18.75	63.24
Don't know	45	13	7	23	9
	86.54	43.33	14.58	71.88	13.24

4.9. Coordination

Coordination refers to the effective collaboration and communication amongst stakeholders delivering the project and key stakeholders. It includes the analysis of possible complementary, disruptions and duplications. In addition, the program worked to build linkages and strengthen coordination between private sector actors interested in taking a more active role in DRR and disaster response, working alongside BNPB and UN agencies.

The READI program strategy highlighted the important dynamics of partnership and working with the various stakeholders. Mercy Corps started the program with three different activities of partnership with: civil society organizations for the awareness campaign; the private sector for the development of radio and emergency masts; and the government to enhance the capacity of its sub-national partner (BPBD) by strengthening the link between the BPBD and its national counterpart.

The program strategy also demonstrated the network of feedback and the individual responsibilities that stakeholders will be expected to assume, taking ownership in co-designing, testing, and overall dedicating considerable resources to implement the program. Mercy tried to bridge the linkage between private sectors and government to support KSB. It was quite challenging for KSB to open communication with other stakeholders, even with the government.

Another challenge was to continue what was already started between BPBD and the radio. As in Bengkulu, BPBD was not really confident to speak for DRR in the talk show program. It needs longer term project implementation to build trust and to encourage BPBD to take over responsibility of public awareness campaign through radio.

Chapter 5. Conclusions and Recommendations

- The achievements on the evacuation maps can be followed up by putting the maps in a strategic place. This is not intended for all maps, only for the relevant part of the map within the area. Another suggestion is adding the writing under evacuation signs. This writing would refer to the location of the indicated TES. Paths should be simple, because when people are in a panic situation, the straight path will facilitate the evacuation process.
- Partners should be brought together in a joint learning forum, given the background of each of the different partners and considering the different conditions of each site. This would be a great learning opportunity for partners as well as facilitate networking.
- The networking between project officers should be strengthened so that inter-agency cooperation (BPBDs, Radio, KSB, the private sector and local partners) can be realized not only to work together on activities held by the PO, but to really foster cooperation among each of the parties. (E.g. partners with BPBDs, or cooperation with BPBDs KSB, KSB with private agencies, KSB partners with radio etc.)
- The coordination and organization is good, however, it needs to be more blended between the parties. There should be a special officer at Mercy Corps who can take care of certain things completely unrelated to the other activities. A coordination meeting, exchange study, or hearing meetings could be used to strengthen this. Visibility also needs to be strengthened because in many areas, particularly remote,

they do not know Mercy Corps, communities recognized local partners more than they recognized Mercy Corps.

BPBDs

- BPBDs need more learning sessions; project officers could facilitate this and will address the problems of the organization culture, equalization and transfer capabilities of employees in BPBDs.
- There was an urgency of mapping the needs of BPBD and took priority of what action BPBD should take, which area has been good, and what skill should BPBD has. It will include soft skills needed in addition to hard skills and technical requirements in addition to knowledge. BPBD also needed motivational training, training of peace building, conflict resolution, trauma recovery, first aid/FA psychological, as well as training motivation and self-development (managerial skills and computer applications) that can even be facilitated by project officer.
- BPBD needs to have more detailed staff capabilities for mapping. For example, mapping staff who have the capacity to carry out their duties on socialization.
- There was a need to prepare additional material, especially material that will equip BPBDs to conduct dissemination to other parties. For example, to KSB or community. The material for dissemination or training can be much simpler from material from BNPB or NGO. It needs to be created and made of special material, which is much simpler, more applicable, more interesting to bring in for other agencies or in the community and schools. This material can be in the form of a module or teaching and presentation materials.
- Learning from BPBDs Meulaboh experience to initiate some heavy machine rental (dump trucks, backhoes, water tanks, bulldozers, etc.) from BNPB when there is no emergency. It helped shorten the bureaucracy and gained income for its maintenance and operational cost. This model can be duplicated, with different ways and forms adapted to the local conditions of each region.

KSB / Society

- It is necessary to map the capacity of KSB member. KSB needs to identify members who have the capacity to disseminate or socialize information to the community. Up to this time, the capacity building reached only KSB members and not directly to the community. Therefore, KSB needs to have the capacity to conduct training and community organization.
- As part of the capacity building, KSB needs to be equipped with teaching props, materials, simpler socialization material, and publication material that can be include in printed materials, simple handouts, and easy to understand by community. It will ensure the continuity of the program if there is an opportunity to

share and learn within the community. The publication materials can assist the community to conduct public learning.

- It is also important to consider the addition of targeting the younger generation, since there are gaps in terms of experience between young generations and adults. It is important to transfer the experience, truth, theory and lessons learned from survivors and ensure that it is transferred to the next generation, either through meetings, school or informal conversations.
- There is a need to encourage KSB to get formal recognition at the level of village government, also KSB needs to be taught also to advocate for vertical or government agencies related to the interests of KSB.
- Mercy Corps has the opportunity to bridge and initiate cooperation between KSB and private agencies. CSR funds from private institutions may also be directed to the needs of KSB, as would be done by PT Semen Padang with some KSB in Padang. It should be considered forms of further cooperation between the parties and adapted to the needs and conditions of each region.

Chapter 6. Stakeholders' Perception about Mercy Corps through READI Project

There was additional information from the study about the perception of stakeholders on Mercy Corps' work through the READI Project. The survey intended to collect and gather stakeholder's perception during the process of project implementation. The survey intended to collect respondents' perception of Mercy Corps in five areas, namely: accountability, working towards gender sensitivity and inclusion, and developed partnership with community, CSO, and government.

The stakeholders involved in this survey represented all levels in the project, from community to policy makers. There were 68 respondents. Table 50 shows the results of the survey:

Table 36. Respondents of Perception Survey

Respondent	BENGKULU Mentawai Meulaboh Padang TOTAL				
Gender					
Man	11	2	14	24	51
	61.11	100.00	82.35	77.42	75.00
Female	7	0	3	7	17
	38.89	0:00	17.65	22:58	25.00
Age Group					

15-24 years	2	0	1	1	4
	11:11	0:00	5.88	3:23	5.88
25-59 years	16	2	15	30	63
	88.89	100.00	88.24	96.77	92.65
> 60 years	0	0	1	0	1
	0:00	0:00	5.88	0:00	1:47

Table 3

Last Education

High School / level	16	2	17	21	56
	88.89	100.00	100.00	67.74	82.35
D3	0	0	0	3	3
	0:00	0:00	0:00	9.68	4:41
S1	2	0	0	6	8
	11:11	0:00	0:00	19:35	11.76
S2	0	0	0	1	1
	0:00	0:00	0:00	3:23	1:47

75% out of 68 respondents are male and 93% of them were between 25-59 years. Most of the respondents were graduated from senior high school.

6.1. On Accountability

Table 37. Stakeholders' perception on Accountability

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Mercy Corps listen, discuss, and accept feedback from community members and partners in program planning to increase community resilience to disasters					
Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	2	0	0	4	6
	11:11	0:00	0:00	12.90	8.82
Agree with the statement	10	2	7	20	39
	55.56	100.00	41.18	64.52	57.35
Strongly agreed with the statement	5	0	10	7	22
	27.78	0:00	58.82	22:58	32.35

Mercy Corps ensure that community members and partners to provide assessment and questions to Mercy Corps, and ensuring their responses and feedback.

Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	0	1	1
	0:00	0:00	0:00	3:23	1:47
Agree with the statement	14	1	11	22	48
	77.78	50.00	64.71	70.97	70.59
Strongly agreed with the statement	4	1	6	8	19
	22:22	50.00	35.29	25.81	27.94

Mercy Corps inform plans, reports, and development activities that community members and partners are able to provide feedback and recommendations.

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	1	0	0	3	4
	5:56	0:00	0:00	9.68	5.88
Agree with the statement	11	1	9	23	44
	61.11	50.00	52.94	74.19	64.71
Strongly agreed with the statement	5	1	8	5	19
	27.78	50.00	47.06	16:13	27.94

6.2. Working towards gender sensitivity and inclusion principles

Table 8 B

Mercy Corps involves a group of women and men to discuss disaster management

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	1	0	1
	0:00	0:00	5.88	0:00	1:47
Agree with the statement	6	1	5	17	29
	33.33	50.00	29.41	54.84	42.65
Strongly agreed with the statement	12	1	11	14	38
	66.67	50.00	64.71	45.16	55.88

Table 9

BENGKULU Mentawai Meulaboh Padang TOTAL

Mercy Corps is working together with all levels of the community, including vulnerable groups in disaster management activities.

Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	4	0	4
	0:00	0:00	23:53	0:00	5.88
Agree with the statement	13	2	6	18	39
	72.22	100.00	35.29	58.06	57.35
Strongly agreed with the statement	5	0	7	13	25
	27.78	0:00	41.18	41.94	36.76

Table 10

BENGKULU Mentawai Meulaboh Padang TOTAL

Mercy Corps provides support for civil society organizations and government in addressing issues related to gender and vulnerable groups

Strongly disagreed with the statement	0	0	1	0	1
	0:00	0:00	5.88	0:00	1:47
Do not agree with the statement	2	0	1	2	5
	11:11	0:00	5.88	6:45	7:35
Agree with the statement	11	2	8	19	40
	61.11	100.00	47.06	61.29	58.82
Strongly agreed with the statement	5	0	7	10	22
	27.78	0:00	41.18	32.26	32.35

Table 11C

Mercy Corps to provide guidance and invites all interested parties to discuss the issue of disaster to find the right ways and strategies for capacity building in the field of disaster..

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	0	0	2	2
	0:00	0:00	0:00	6:45	2.94
Agree with the statement	12	1	10	15	38
	66.67	50.00	58.82	48.39	55.88
Strongly agreed with the statement	5	1	7	14	27
	27.78	50.00	41.18	45.16	39.71

Table 12

BENGKULU Mentawai Meulaboh Padang TOTAL

Mercy Corps provides full support for capacity building of all parties involved in disaster issues through training, simulation and other capacity building efforts.

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Agree with the statement	8	2	7	21	38
	44.44	100.00	41.18	67.74	55.88
Strongly agreed with the statement	9	0	10	10	29
	50.00	0:00	58.82	32.26	42.65

Table 13

Mercy Corps to make sure all parties are vulnerable to disaster problems getting the right information so that it has increased capacity to cope with disasters and the issues of disaster

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	0	1	1	2
	0:00	0:00	5.88	3:23	2.94
Agree with the statement	8	2	9	25	44
	44.44	100.00	52.94	80.65	64.71
Strongly agreed with the statement	9	0	7	5	21
	50.00	0:00	41.18	16:13	30.8

6.3. Stakeholders' perception capacity building by Mercy Corps

Table 11C

BENGKULU Mentawai Meulaboh Padang TOTAL

Mercy Corps to provide guidance and invites all interested parties to discuss the issue of disaster to find the right ways and strategies for capacity building in the field of disaster..

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	0	0	2	2

	0:00	0:00	0:00	6:45	2.94
Agree with the statement	12	1	10	15	38
	66.67	50.00	58.82	48.39	55.88
Strongly agreed with the statement	5	1	7	14	27
	27.78	50.00	41.18	45.16	39.71

Table 12

BENGKULU Mentawai Meulaboh Padang TOTAL

Mercy Corps provides full support for capacity building of all parties involved in disaster issues through training, simulation and other capacity building efforts.

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Agree with the statement	8	2	7	21	38
	44.44	100.00	41.18	67.74	55.88
Strongly agreed with the statement	9	0	10	10	29
	50.00	0:00	58.82	32.26	42.65

Table 13

Mercy Corps to make sure all vulnerable parties to disaster getting the right information so that it has increased capacity to cope with disasters and the issues of disaster

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	0	1	1	2
	0:00	0:00	5.88	3:23	2.94
Agree with the statement	8	2	9	25	44
	44.44	100.00	52.94	80.65	64.71
Strongly agreed with the statement	9	0	7	5	21
	50.00	0:00	41.18	16:13	30.8

Table 14

Mercy Corps support new ideas in programs and activities to improve the quality and capacity of disaster management in the community

BENGKULU Mentawai Meulaboh Padang TOTAL

Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	0	0	0

	0:00	0:00	0:00	0:00	0:00
Agree with the statement	13	2	11	23	49
	72.22	100.00	64.71	74.19	72.06
Strongly agreed with the statement	5	0	6	8	19
	27.78	0:00	35.29	25.81	27.94

6.4. Stakeholders' perception on how Mercy Corps work with Civil Society

Table 15

BENGKULU Mentawai Meulaboh Padang TOTAL

Mercy Corps discussed the activities and the approach taken together with civil society organizations working on issues of disaster

Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Agree with the statement	12	1	13	23	49
	66.67	50.00	76.47	74.19	72.06
Strongly agreed with the statement	5	1	4	8	18
	27.78	50.00	23:53	25.81	26.47

Table 16

Mercy Corps in collaboration with other civil society organizations to develop activities and approaches to the government and the community to improve community preparedness for disasters

BENGKULU Mentawai Meulaboh Padang TOTAL

Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	2	0	2
	0:00	0:00	11.76	0:00	2.94
Agree with the statement	11	2	8	24	45
	61.11	100.00	47.06	77.42	66.18
Strongly agreed with the statement	7	0	7	7	21
	38.89	0:00	41.18	22:58	30.88

Table 17

Mercy Corps is conducting long-term to strengthen the network which aims to

BENGKULU Mentawai Meulaboh Padang TOTAL

improve the quality of disaster management in the public and government

Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	1	0	3	4
	0:00	50.00	0:00	9.68	5.88
Agree with the statement	9	1	8	22	40
	50.00	50.00	47.06	70.97	58.82
Strongly agreed with the statement	8	0	9	6	23
	44.44	0:00	52.94	19:35	33.82

Table 18 (E)

Mercy Corps conducted approach and broaden the private sector to get involved and cooperate in matters of disaster

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	1	1	2
	0:00	0:00	5.88	3:23	2.94
Agree with the statement	12	2	10	17	41
	66.67	100.00	58.82	54.84	60.29
Strongly agreed with the statement	6	0	6	13	25
	33.33	0:00	35.29	41.94	36.76

Table 19

Mercy Corps is working with the private sector to develop opportunities, activities and approaches as well as new possibilities multiply

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	0	1	1	0	2
	0:00	50.00	5.88	0:00	2.94
Agree with the statement	15	1	6	18	40
	83.33	50.00	35.29	58.06	58.82
Strongly agreed with the statement	2	0	10	13	25
	11:11	0:00	58.82	41.94	36.76

Table 20

Mercy Corps opened and strengthen the links between civil society organizations and the private sector and the government aims to improve the quality of disaster management in the public and government

Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	0	2	2
	0:00	0:00	0:00	6:45	2.94
Agree with the statement	14	1	11	25	51
	77.78	50.00	64.71	80.65	75.00
Strongly agreed with the statement	4	1	6	4	15
	22:22	50.00	35.29	12.90	22:06

Table 21

Mercy Corps help support and strengthen the capacity of the private sector in disaster management issues

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	2	0	0	0	2
	11:11	0:00	0:00	0:00	2.94
Do not agree with the statement	2	1	0	1	4
	11:11	50.00	0:00	3:23	5.88
Agree with the statement	12	1	10	21	44
	66.67	50.00	58.82	67.74	64.71
Strongly agreed with the statement	2	0	7	9	18
	11:11	0:00	41.18	29.03	26.47

Table 22

Mercy Corps to report to the local and national governments about the activities carried out regularly.

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	1	0	0	0	1
	5:56	0:00	0:00	0:00	1:47
Do not agree with the statement	1	0	1	4	6
	5:56	0:00	5.88	12.90	8.82
Agree with the statement	16	2	13	21	52
	88.89	100.00	76.47	67.74	76.47
Strongly agreed with the statement	0	0	3	6	9
	0:00	0:00	17.65	19:35	13:24

6.5. Stakeholders' perception on how Mercy Corps advocating Government

Table 23

Mercy Corps is working with governments to strengthen the commitment and capacity to provide effective services to the public and accommodate the expectations of the public about disaster management

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Do not agree with the statement	0	0	1	0	1
	0:00	0:00	5.88	0:00	1:47
Agree with the statement	15	2	5	24	46
	83.33	100.00	29.41	77.42	67.65
Strongly agreed with the statement	3	0	11	7	21
	16.67	0:00	64.71	22:58	30.88

Table 24

Mercy Corps influence the government to change and implement policies and practices in disaster management.

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	3	0	0	6	9
	16.67	0:00	0:00	19:35	13:24
Do not agree with the statement	3	0	3	11	17
	16.67	0:00	17.65	35.48	25.00
Agree with the statement	10	2	11	11	34
	55.56	100.00	64.71	35.48	50.00
Strongly agreed with the statement	2	0	3	3	8
	11:11	0:00	17.65	9.68	11.76

Table 25

Mercy Corps to support the government in providing resources to the community better prepared for disasters

	BENGKULU	Mentawai	Meulaboh	Padang	TOTAL
Strongly disagreed with the statement	0	0	0	1	1
	0:00	0:00	0:00	3:23	1:47

Do not agree with the statement	0	0	0	0	0
	0:00	0:00	0:00	0:00	0:00
Agree with the statement	8	2	3	22	35
	44.44	100.00	17.65	70.97	51.47
Strongly agreed with the statement	10	0	14	8	32
	55.56	0:00	82.35	25.81	47.06