

TABLE TOP EXERCISE EARLY WARNING SYSTEM IN BANJIR BANDANG DISASTER



UNDER COOPERATION

**YAYASAN PENGABDI MASYARAKAT
(YPM)
with
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**



2011

PREFACE

By delivering grateful to God that finally Yayasan Pengabdian Masyarakat (YPM) had completed the activity of *Table Top Exercise (TTE)* for banjir bandang early warning system smoothly and well.

This is the final report of activity describing about preparation, implementation dan result of TTE activity at Village hall of Desa Pakis Kecamatan Panti Kabupaten Jember. The preparation consists of: arrangement for participant's seat, scenario display allocation into four screen, scenario creation and rehearsal. The implementation of activity consists of simulation on scenario base that had been made, demonstration for several equipments (rainfall sensor and water level sensor). Result of TTE is Draft of Standard operating Procedures (SOP) for Early Warning System of Banjir Bandang at Desa Pakis.

Yayasan Pengabdian Masyarakat deliver gratitude to all stakeholders who had supported the implementation of activity, especially *Japan International Cooperation Agency (JICA)* that had put trust on YPM for activity holding.

Hopefully that the activity will give benefit for all related stakeholders especially for those living in DAS (catchment area) so that they can anticipate and reduce risk of banjir bandang disaster.

Jember, September 2011
Yayasan Pengabdian Masyarakat
Head,

Evita Soliha Hani

TABLE OF CONTENT

PREFACE	ii
TABLE OF CONTENT	iii
LIST OF IMAGE	iv
I. INTRODUCTION	
1.1 Background	1
1.2 Purpose	3
1.3 Outcome	3
II. METHOD OF ACTIVITY IMPLEMENTATION	
2.1 Form of Activity	4
2.2 Time and Venue	4
2.3 Participant	5
2.4 Mechanism and Design	5
III. RESULT OF ACTIVITY	
3.1 Preparation of TTE	6
3.2 Implementation of TTE	16
3.3 Comment from JICA.....	28
3.4 Result of TTE (SOP)	29
IV. CLOSING	
4.1 Conclusion	72
4.2 Recommendation	72
Appendix	
Schedule	73
Attendee List	74
Documentation	76

LIST OF IMAGE

Image 1. Arrangement of TTE Early Warning System in Desa Pakis.....	6
Image 2. Display of 4 (four) monitoring screen.....	7
Image 3. Scheme of General SOP for Early Warning System for Banjir Bandang Disaster in Desa Pakis Kecamatan Panti Kabupaten Jember	30
Image 4. Scheme of SOP Upstream for Early Warning System Banjir Bandang Disaster Desa Pakis Kecamatan Panti Kabupaten Jember	31
Image 5. Scheme of SOP Middlestream Area of Early Warning System for Banjir Bandang Disaster in Desa Pakis Kecamatan Panti Kabupaten Jember	32
Image 6. Scheme of SOP Downstream area of Early Warning System for Banjir Bandang Disaster in Desa Pakis Kecamatan Panti Kabupaten Jember	33
Image 7. Scheme of SOP Satlak PBP Early Warning System for Banjir Bandang Disaster in Desa Pakis Kecamatan Panti Kabupaten Jember	34

LIST OF TABLE

Table 1. Scenario of Impelentation for Rehearsal of TTE Early Warning System Banjir Bandang at Desa Pakis	9
Table 2. Implementation of Reherasal for TTE Early Warning System Banjir Bandang Desa Pakis	11
Table 3. List name of Key person in Early Warning System and Evacuation of Banjir Bandang Desa Pakis Kec. Panti Kab. Jember	17
Table 4. Implementation of TTE Early Warning System for Banjir Bandang in Desa Pakis	19
Table 5. SOP Early Warning System for Banjir Bnadang Disaster DAS Kalipakis for Each Condition.....	35

I. INTRODUCTION

1.1 Background

Indonesia has high risk of natural disaster occurrence. This is caused by many factors starting from nature condition until human fault. Geologically, Climatologically, and geographically, Indonesia is included as disaster vulnerable area. Rainfall above normal rate and in long duration, added with hill slope and limit of land cover had caused landslides.

Geology structures in Indonesia had made the surface of nature in Indonesia becomes in series of mountains and valley as well as many rivers that results the potential of banjir bandang, landslide and erosion occurrence. Banjir bandang is as one of most often disaster that occurs (by 60%) in Indonesia. Banjir bandang generally occurs in west area of Indonesia in which this part area receives rainfall more amount than Indonesia in east area.

Kabupaten Jember is as one of west area of Indonesia that vulnerable to banjir bandang occurrence. Banjir bandang in Kabupaten Jember that results most serious victims had occurred in 2006 at Kecamatan Panti, and then at Silo was in 2008 and 2009.

The increase of disaster occurrence in Indonesia had encouraged every concerned side to be more aware and arrange the management of disaster countermeasure that had been occurred. One of foreign institution that conducts study of natural disaster in Kabupaten Jember is *Japan International Cooperation Agency (JICA)*. Meanwhile NGO in Kabupaten Jember that intense in the study of disaster is Yayasan Pengabdian Masyarakat (YPM). JICA had made cooperation with YPM since the year of 2006 in conducting research/study concerning with natural disaster countermeasure in Kabupaten Jember. In 2006 and 2007, YPM and JICA activity were Training for Local Leader, Community Workshop, and Evacuation Drill. All of those activities were conducted in Desa Kemiri Kecamatan Panti. And then in 2010, YPM cooperate again with JICA in "Basic Research and Preparation for Sub

Project of Early Warning and Early Evacuation”. In this case, YPM conducted the research at three disaster hazard locations in Kabupaten Jember, namely Kecamatan Panti, Kecamatan Sukorambi and Kecamatan Silo. In addition, there was also activity for DAS Kalijompo namely Focus Group Discussion and Site Watching for Early Warning System before Banjir Bandang occurrence that aimed to determine root problem in the implementation of early warning within the solution. Those activities were continued by the activity of **Table Top Exercise Early Warning System before Banjir Bandang Occurrence** in order to result effectiveness strategy for the implementation of Early Warning System before Banjir Bandang Occurrence. In this case is Standard Operating Procedures (SOP) for DAS (Catchment Area) of Kalijompo.

Next, in 2011 there is cooperation with JICA to conduct FGD and TTE activity for Desa Pakis of Kecamatan Panti after the occurrence of small scale of banjir bandang on February and March 2011.

Table top exercise is simulation that designed to test theoretical ability of a group in responding such situation. One of big benefit of Table Top Exercise is enabling people to test hypothesis without causing any problem impact on the community.

Concept of Table Top Exercise is familiar to anyone who had ever involved in the game of board and table role. A facilitator will explain the prescription of scenario and then “the player” around the table will give their response to the scenario, by using scenario change as the response of their actions and random factors that can be determined by dice roling and cards image. The participants may come from single, agent, or any various groups of peoples, by the cooperation in testing exercise besides the preparedness in responding.

Table Top Exercise (TTE) in *early warning system* is exercise activity to increase the community capability and stakeholders about early warning system of danger existence.

1.2 Purpose

1. Sharing information about usual or current procedures of monitoring for anticipation of banjir bandang and also procedures of information delivery among stakeholder.
2. Clarification of the problem about people's early evacuation before banjir bandang occurrence, through usual or current procedures of monitoring and information delivery.
3. Creation of manual/SOP for Early Warning System.

1.3 Outcome

Outcome or benefit of this activity is the enhancement of community capacity on the knowledge dan skill in reducing disaster risk through SOP for the strategy of increasing of effectiveness for early warning system.

II. METHOD OF ACTIVITY IMPLEMENTATION

2.1 Form of Activity

Form of activity in *Table Top Exercise (TTE) of early warning system* is exercise activity to enhance the community capacity and stakeholders about early warning system for banjir bandang.

2.2 Time and Venue

The activity of TTE was implemented on:

Day/Date : Sunday, 18 September 2011

Venue : Village Hall of Desa Pakis Kecamatan Panti Kabupaten

Jember with the agenda arrangement as below:

Day/Date	Time	Agenda	Venue	Note
Sunday, 18-09- 2011	07.30- 08.00	Registration	Village Office Hall of Pakis Kec. Panti	YPM
	08.00 – 08.15	Introduction of FGD	Explain general overview of Site Watching result	YPM
	08.15- 10.45	Continuation of FGD	Village Office Hall of Pakis Kec. Panti	-Make solution for root problem of first day solving -Determination of evacuation site
	10.45- 11.00	Introduction of TTE	Brief Explanation about TTE and scenario	YPM
	11.00- 12.00	Table Top Exercise	Village Office Hall of Pakis Kec. Panti	Rehearsal of Simulation
	12.00- 13.00	BREAK	Village Office Hall of Pakis Kec. Panti	Pray and Lunch
	13.00- 13.15	Brief introduction of Before Table Top Exercise	Village Office Hall of Pakis Kec. Panti	JICA Expert and Short Term Expert JICA
	13.00- 15.00	Table Top Exercise	Village Office Hall of Pakis Kec. Panti	Simulation
	15.00- 15.30	Comment of the process for simulation activity	Village Office Hall of Pakis Kec. Panti	Short Term Expert JICA
	15.30- 15.45	Closing	Village Office Hall of Pakis Kec. Panti	YPM

2.3 Participant

In TTE, there are three main groups namely facilitator, participant and observer. Facilitator of TTE is a team from Yayasan Pengabdian Masyarakat (YPM) Jember. Participants of TTE are stakeholders in the catchment area of Kalipakis area, namely local people, village officer and representative from Satlak Kabupaten. Meanwhile the observer of activity is JICA which is also the main sponsor of this activity. The participants in the TTE activity are:

1. Community of Desa Pakis that consist of:
 - a. Upstream area : Plantation area of Kahendran
 - b. Middle stream area: Portal area and Dusun Pakis Utara
2. Downstream area: Dusun Cempoko and Dusun Kemundungan
3. Kecamatan Panti
4. Irrigation Agency of Kabupaten Jember
5. Board of Nation Unity, Politics and Public Protection
6. Rayon Command Military (Koramil)
7. Sector Police (Polsek)

2.4 Mechanism and Design

Activity of *table top exercise* is divided into three steps, namely: preparation, implementation and result of activity.

III. RESULT OF ACTIVITY

3.1 Preparation of TTE

There are some activities in the preparation such as arrangement of participant's seat, allocation of scenario display, creation of scenario into four screens, creation of scenario and rehearsal as well as simulation.

3.1.1 Seat Arrangement

In order to obtain optimum seat arrangement of participants, then it was arranged so that the voice and view of coordinator can be seen by the participants. In addition, among participants should be able to hear and see each other. The seat arrangement of TTE that is used is semicircle and facing the coordinator that in detail can be seen as below image:

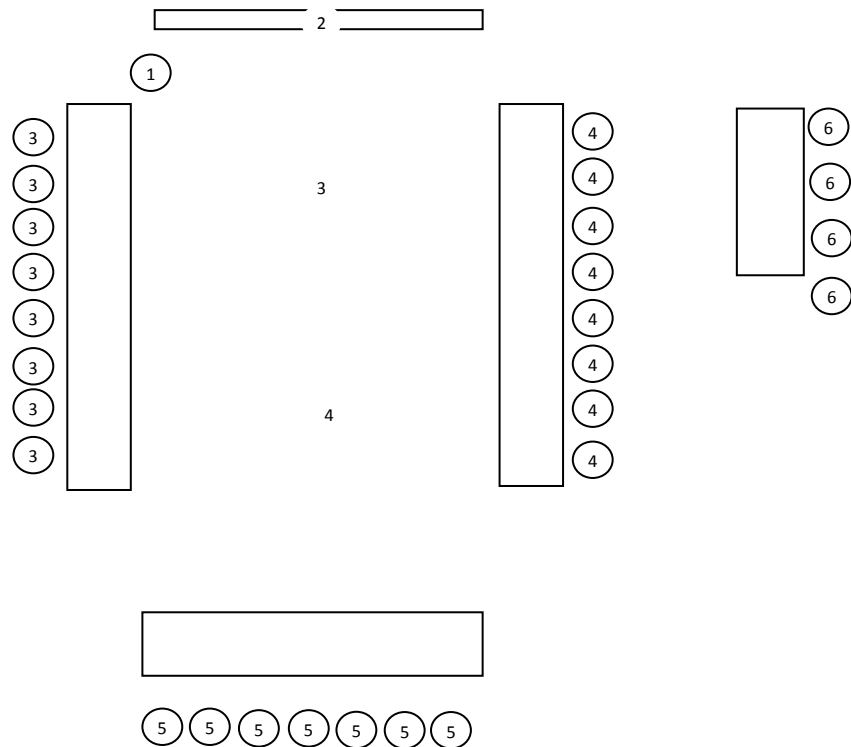


Image 1. Arrangement of TTE Early Warning System in Desa Pakis

Note:

1. Coordinator
2. Screen display on Screen 4
3. Table and chair of participants side 1
4. Table and chair of participants side 2
5. Table and chair of participants side 3
6. Observer

3.1.2 Display of Four Screen Scenario

Next, in order to increase the participant understanding and ease them, it was created scenario display into four screens, namely:

1. First Screen is about status guidance and information about level of rainfall and water level sensor.
2. Second screen, condition of rainfall and accumulation of rainfall.
3. Third Screen, illustration for the signs of weather (cloudy, rainfall and other natural symptoms in certain condition).
4. Four Screen record of discussion result that created into SOP.

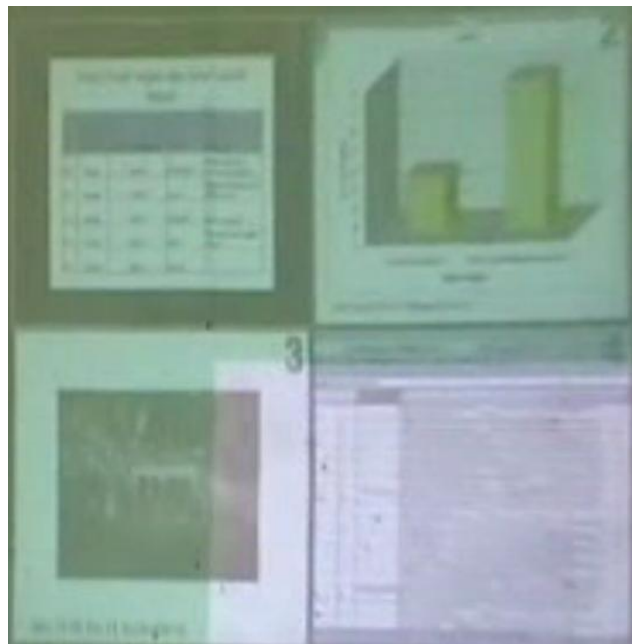


Image 2. Display of 4 (four) monitoring screen

3.1.3 Simulation Scenario

Next is scenario creation that based on real condition, symptoms of rainfall, landslide. The scenario creation was starting from 13.00 WIB until 9.00 in the morning on the next day. However, because of limit of time on simulation, the scenario creation was based on time that assumed by one hour in the scenario that similar to 5 minutes in simulation condition (*table top exercise*).

The following is scenario in table top simulation for early warning of banjir bandang at Desa Pakis Jember.

Table 1.Scenario of Impelentation for Rehearsal of TTE Early Warning System Banjir Bandung at Desa Pakis

NO	Date	Time	Time in the scenario	rainfall data	rainfall data accumulated	Rainfall sensor	Water Level sensor	FIELD CONDITION
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	18 September 2011	13:15	13:00	0	0	Lv0	Lv0	Cloudy Condition
2		13:20	14:00	0	0	Lv0	Lv0	Cloudy Condition
3		13:25	15:00	0	0	Lv0	Lv0	Cloudy Condition
4		13:30	16:00	0	0	Lv0	Lv0	Start to drizzle
5		13:35	17:00	5	5	Lv0	Lv0	Start to drizzle
6		13:40	18:00	0	5	Lv0	Lv0	Drizzle goes into heavy rain
7		13:45	19:00	23	28	Lv0	Lv0	Drizzle goes into heavy rain
8		13:50	20:00	5	33	Lv1	Lv0	Drizzle goes into heavy rain
9		13:55	21:00	0	33	Lv1	Lv0	Drizzle goes into heavy rain
10		14:00	22:00	15	48	Lv1	Lv0	Heavy Rain
11		14:05	23:00	30	78	Lv2	Lv1	Heavy Rain, River Water Level
12		14:10	24:00	22	100	Lv3	Lv1	Heavy Rain, River Water Level
13		14:15	01:00	9	109	Lv3	Lv2	Heavy Rain, River Water Level
14		14:20	02:00	14	123	Lv4	Lv2	Heavy Rain, River Water Level
15		14:25	03:00	20	143	Lv4	Lv3	Heavy Rain, River Water Level
16		14:30	04:00	82	225	Lv5	Lv4	Heavy Rain, River Water Level
17		14:35	05:00	52	277	Lv5	Lv5	Heavy rain, sand, stone, wods flow down
18		14:40	06:00	24	301	Lv5	Lv5	Rain start to decrease
19		14:45	07:00	4	305	Lv5	Lv5	Rain start to decrease
20		14:50	08:00	0	305	Lv5	Lv5	Rain is stopped
21		14:55	09:00	0	305	Lv5	Lv5	Rain is stopped (start for survey anf emergency actions)

3.1.4 Rehearsal

Rehearsal is conducted before the implementation of *table top exercise* started. The participant was conditioned to be in the real exercise (simulation). Rehearsal was started by small explanation from the coordinator of rehearsal (M. Rondhi) about what will be conducted by the participant of rehearsal, about the content of each four screen. In order to make more clear, it was set under the condition that the community will make evacuation on level 3.

The rehearsal was started at 11.15 which is as the reflection of real rehearsal, namely at 13.15. In detail, the following is the overview of rehearsal for table top exercise of early warning system for banjir bandang.

Table 2. Implementation of Reherasal for TTE Early Warning System Banjir Bandang Desa Pakis

Time	Time in the scenario	rainfall data	rainfall data accumulated	Rainfall Sensor	Water Level sensor	Coordinator activity in the rehearsal	Participant Activity in the rehearsal
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
11:15	13:00	0	0	Lv0	Lv0	<ul style="list-style-type: none"> - Coordinator gave information that the condition is still normal - Coordinator gave question to the player of simulation: what will be conducted by each participant of simulation. 	<ul style="list-style-type: none"> - Participant in the rehearsal gave response for the question of coordinator Community in upstream area (Kahendran plantation): still work as usual. Middle stream community: still work as usual. Downstream community: still work as usual. Village officers: still work as usual. Sector Police and Rayon Military: still work as usual. Satlak: still work as usual
11:20	14:00	0	0	Lv0	Lv0	<ul style="list-style-type: none"> - Coordinator give information that condition is still normal, cloudy condition - Coordinator gave question to the player of simulation: what will be conducted by each 	<ul style="list-style-type: none"> - Participant in the rehearsal gave response for the question of coordinator Upstream community (Kahendran plantation): still work as usual, monitoring the weather. Middle stream community: still work as usual, monitoring the weather. Downstream community: still

						participant of simulation.	work as usual, monitoring the weather. Village officers: still work as usual, monitoring the weather. Sector Police and Rayon Military: still work as usual, monitoring the weather. Satlak: still work as usual, monitoring the weather.
11:25	15:00	0	0	Lv0	Lv0	Pre-memory	Pre-memory
11:25	16:00	0	0	Lv0	Lv0	Pre-memory	Pre-memory
11:25	17:00	5	5	Lv0	Lv0	<ul style="list-style-type: none"> - Coordinator gave information that condition is started to be rain - Coordinator had given question to the simulation participants: what will be conducted by each participant of simulation. 	<ul style="list-style-type: none"> - Participant in the rehearsal gave response for the question of coordinator Upstream community (Kahendran plantation): inform to the middle stream community and LMDH (Forestsideside villager organization) of Forestry Company that the rain has started and check the equipments. Middlestream community: increase awareness by keep monitoring weather. Downstream community: weather monitoring. Village officers: coordination, increase awareness and

							weather monitoring. Sector Police and Rayon Military: weather monitoring while waiting for information from village. Satlak: check preparation and equipments.
11.25	18:00	0	5	Lv0	Lv0	Pre-memory	Pre-memory
11.25	19:00	23	28	Lv0	Lv0	Pre-memory	Pre-memory
11.30	20:00	5	33	Lv1	Lv0	<ul style="list-style-type: none"> - Coordinator gave information that accumulative rainfall is 33 mm/hour. - Coordinator give question to the simulation participants: what will be conducted by each participant of simulation. 	<ul style="list-style-type: none"> - Participant in the rehearsal gave response for the question of coordinator. - Upstream community (Kahendran plantation): Inform to the middle stream community and LMDH (Forestsideside villager organization) of Forestry Company that accumulative rainfall is 33 mm/hour. Middlestream community: increase awareness and check equipments. Downstream community: update information from upstream and make coordination with head of dusun. Village officers: coordination, increase awareness and weather monitoring. Sector Police and Rayon

							<p>Military: waiting for information from village and check the preparation of equipments..</p> <p>Satlak: check preparedness and equipments while waiting for information from village.</p>
11.30	21:00	0	33	Lv1	Lv0	Pre-memory	Pre-memory
11.35	22:00	15	48	Lv1	Lv0	<ul style="list-style-type: none"> - Coordinator gave information that accumulative rainfall is 48 mm/hour. - Coordinator give question to the simulation participants: what will be conducted by each participant of simulation 	<ul style="list-style-type: none"> - Participant in rehearsal gave response for the question of coordinator Upstream community (Kahendran plantation): Inform to the middle stream community and LMDH (Forestsideside villager organization) of Forestry Company that accumulative rainfall is 48 mm/hour. Middlestream community: increase awareness. Downstream community: update information from upstream and make coordination with head dusun to determine evacuation site. Head of Desa Pakis: record all information from upstream, make coordination with village officers, increase awareness. Sector Police and Rayon

							<p>Military: waiting for information from village and check preparation of equipments.</p> <p>Satlak: check equipments preparation while waiting for further information from village.</p>
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3.2 Implementation of TTE

The implementation of *table top exercise* was started at 13.15 and it was ended at 14.55 WIB by the assumption that the real nature time is at 13.00 WIB until at 09.00 WIB on the following day. The implementation of TTE was matched with scenario that had been created. In addition, it was also demonstrated several tools in the scenario such as utilization of rainfall sensor that performed by JICA. Besides, participant of TTE also demonstrated the tool for early warning system such as megaphone, handy talky but because of some situation that made those equipments could not be performed by participants.

Generally, the cooperation among participants was relatively good although there were some participants who still did not well understand about method of simulation so that in the beginning they thought that this is as discussion activity and not a simulation. This happened because some participants delivered their opinion by ignoring the committee and also other participants so that the time utilization was over than the limit in the screen. After several level of rainfall and water level (still in normal condition level) finally cooperation started to be established. In normal condition, participants still conducted normal activities (working) while waiting for the information from upstream area of Afdeling Kahendran Plantation (Mr. Satuman) and also monitoring the weather condition in upstream whether it is dark cloudy or not. If it is dark cloud with fog then it is possible for heavy rain occurrence in upstream. This is conducted because oftentimes there is no rain in downstream but there is heavy rain in upstream. Besides, resident in downstream (Dusun Cempoko) also monitor the height of river water.

Table 3. List name of Key person in Early Warning System and Evacuation of Banjir Bandang Desa Pakis Kec. Panti Kab. Jember

No.	Stakeholders	In charge person	Position	No Telepon
1.	Upstream Area (Regional Plantation Company /PDP Afdeling Kahendran)	Satuman	Head RT 09	081 559 963 155
		Trianto	Opsinder Kahendran	085 859 326 544
		Supandi	Vice of Opsinder Kahendran	085 859 792 100
		Senawi	Security of PDP	081 559 878 535
2.	Middlestream Area (Dusun Pakis Utara)	Supianto	Vice Head Dusun Pakis Utara	085 859 322 572
		Samsul	Head RT 08	08574926073
		Romli	Head RT 09	-
		Hartono	Head LMDH	085 859 676 001
		Sunaryo	Forestry Comp Kaliputih Rambipuji	085 230 030 415
3.	Downstream Area (Dusun Cempoko and Dusun Kemundungan)	Sutrisno	Head Dusun Cempoko	085 859 866 030
		Senimin	Head RT 02	087 757 882 956
		Husaeri	Head RT 03	0331 527 8822
		Atro	Head RT 06	081 559 667 091 0331 7774435
		Zaenudin	Head RT 07	085 859 546 575
		Slamet	Head RT 09	085 549 70040
		Rahman	Head RT 10	081 559 551 073
		Mahrus	Mosque Caretaker	085859977732
		Sugito	Head Dusun Kemundungan	085859016777
		4.	Desa Pakis	Zaini
A Wahid	Secretary of Village			085815240038
Agus Tri Laksono	Treasurer of Village			085749203049
Makrus	Babinsa Pakis			081 358 689 304 081 249 136 97
5.	Kecamatan Panti	Drs. Yahya I.	Head Kecamatan Panti	081 336 449 077 0331 337 143 (0331) 711234 (Kantor)
		Udik	Sector Police of Panti	0331 363 2879 0331 711 330
		Harianto	Police Agent Panti	0331 408 4836
		Sumayar	Rayon Military Command Panti	0331 711 501 0331 777 4542
		Sugeng	Binmas	081 336 980 273
		Heri	Satlak PBP/Bakesbangpol	081 249 707 66
		Setiawan	Linmas	0331 337 853
6.	Kabupaten Jember	Suli	Panti Observer	081358444828
		Prabowo	PU Irrigation	(0331) 5255958
		Juru Pakis	PU Irrigation	(0331) 7862541

Next is when there is start of rainfall or drizzle, simulation became effective and efficient concerning with time allocation as well as answer from the participant. But, there is certain condition in close time to evacuation that time needed is inadequate and as the impact is all participants could not mention about the activity being conducted.

In the condition of close time for evacuation, participants of TTE already been well responded and could apply as each main duty and function. The community has been prepared for evacuation when the rainfall sensor shows the level and it kept increasing the level. The community had conducted evacuation immediately after receiving the information from upstream area (plantation) that rainfall level had reached level three.

Soon after the rain stopped, participant of simulation also conducted activity such as victim listing, refugee, emergency response condition and some emergency kitchen needs and health service. Besides, community in upstream (Plantation area) also kept reminding to be aware for any secondary flood occurrence. Next, in detail the simulation implementation can be seen in following table.

Table 4. Implementation of TTE Early Warning System for Banjir Bandang in Desa Pakis

No	Time	Time in Scenario	Rainfall Data	Accumulated Rainfall Data	Level	Rainfall Sensor	Sensor Ketinggian Air	Coordinator	Participant of TTE
1	13:15	13:00	0	0	0	Lv0	Lv0	Coordinator instructed participants to see the screen that it is started on Cloudy condition. What will be conducted by participants?	<ul style="list-style-type: none"> - Head Desa Pakis : Monitor the weather progress situation intensively and make it as priority - Satlak : waiting for information from disaster hazard site - Dusun Cempoko : doing normal activity while being aware for the progress weather situation - Kecamatan Panti: monitor the information of weather progress and upstream condition
2	13:20	14:00	0	0	0	Lv0	Lv0	Coordinator instructed that time has changed but it is still cloudy condition. What will be conducted by participants?	<ul style="list-style-type: none"> - Head Desa Pakis : Monitor the weather progress situation intensively and make it as priority - Satlak : waiting for information from disaster hazard site - Dusun Cempoko : doing normal activity while being aware for the progress weather situation - Kecamatan Panti: monitor the information of weather progress and upstream condition
3	13:25	15:00	0	0	0	Lv0	Lv0	Coordinator instructed to keep seeing on the screen that showed cloudy condition. What will be conducted by participants?	<ul style="list-style-type: none"> - Head Desa Pakis : Monitor the weather progress situation intensively and make it as priority - Satlak : waiting for information from disaster hazard site - Dusun Cempoko : doing normal activity while being aware for the progress weather situation - Kecamatan Panti: monitor the information of weather progress and upstream condition

4	13:30	16:00	0	0	0	Lv0	Lv0	Coordinator instructed participants to see the screen that showed starting of drizzle condition. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: Spread the information of weather condition in upstream to Head Desa Pakis and Head Dusun Cempoko (Sutrisno) - Head Desa Pakis : Recording each receiving information within the progress - Head Dusun Cempoko : doing normal activity while being aware for the progress weather situation - Head Dusun Kemundungan : Monitor the information within the progress - Satlak (PU Pengairan) : Verifying information of weather condition progress - Kecamatan : Seeking for and waiting for information from village and report to the superior - Babinsa : report the progress of situation to Rayon Military Command, asking for information from village
5	13:35	17:00	5	5	0	Lv0	Lv0	Coordinator instructed participants to see screen that the screen showed starting of drizzle condition. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: Checking evacuation site that had been determined in upstream. - Head Desa Pakis: <ul style="list-style-type: none"> - Preparing office hall of desa Pakis as evacuation site. - Inform the community to secure important documents (certificate, diploma marriage document etc). - Make coordination with head of dusun to keep aware.

6	13:40	18:00	0	5	0	Lv0	Lv0	Coordinator instructed participants to see that drizzle goes into heavy rain. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: - Always remind the upstream community to keep aware and prepared if there is disaster occurrence at any time. - Check the equipments for emergency condition preparation. - Inform to Head Desa Pakis. - Head Dusun Cempoko: reminding the community to be more aware for the change of river condition - Head Dusun Pakis Utara : monitor the progress of information - Head Dusun Kemundung : monitor the progress of information
7	13:45	19:00	23	28	0	Lv0	Lv0	Coordinator instructed participants to see that drizzle goes into heavy rain. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: - Always remind the upstream community to keep aware and prepared if there is disaster occurrence at any time. - Check the equipments for emergency condition preparation. - Menginformasikan kepada Kades Pakis. - Head Dusun Cempoko: reminding the community to be more aware for the change of river condition - Head Dusun Pakis Utara : monitor the progress of information - Head Dusun Kemundung : monitor the progress of information
8	13:50	20:00	5	33	0	Lv1	Lv0	Coordinator instructed participants to see that drizzle goes into heavy rain. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: Always remind the upstream community to keep aware and prepared if there is disaster occurrence at any time. - Head Desa Pakis : recording and spread the information of weather progress condition in upstream - Head Dusun Cempoko : receiving

									<p>information from Mr. Satuman directly or from head desa and spread to community through head RT</p> <ul style="list-style-type: none"> - Satlak : - Make coordination in Kabupaten, PU Pengairan is on aware condition and prepare heavy equipments. - Keep monitoring further information from Heda Desa Pakis - Kecamatan : - Reporting the condition to the superior - Standby staff in Kecamatan prepares personel for handling security at disaster hazard site. - Appeal each village to start being aware.
9	13:55	21:00	0	33	0	Lv1	Lv0	Coordinator instructed participants to see the screen that there is heavy rain. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: Always remind the upstream community to keep aware and prepared if there is disaster occurrence at any time. - Head Desa Pakis : recording and spread the information of weather progress condition in upstream - Head Dusun Cempoko : receiving information from Mr. Satuman directly or from head desa and spread to community through head RT - Satlak : - Make coordination in Kabupaten, PU Pengairan is on aware condition and prepare heavy equipments. - Keep monitoring further information from Head Desa Pakis - Kecamatan : - Reporting the condition to the superior - Standby staff in Kecamatan prepares personel for handling security at disaster hazard site. - Appeal each village to start being aware.

10	14:00	22:00	15	48	0	Lv1	Lv0	Coordinator instructed participants to see the screen that rain is still heavily puring. What will be conducted by participants?	<ul style="list-style-type: none"> - Head Dusun Cempoko: Make coordination regularly to Head RT and spread the information progress to community - Head Dusun Kemundungan: Doing normal activity while monitoring the progress condition. - Head Desa Pakis : Monitor village area especially disaster hazard area, verify and spread the information - Satlak : Make coordination with related agencies such as PMI and PU Kabupaten - Kecamatan Panti: Reporting Kabupaten especially security section about condition of Desa Pakis, Kemiri, and Suci.
11	14:05	23:00	30	78	1	Lv2	Lv1	Coordinator instructed participants to see the screen that rain is still heavily puring. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: Start to evacuate community and check whether there is still some people stay at the house. Next is informing to Mr. Supiyanto about rainfall level that reach level 2. - Middlegstream (Mr. Supiyanto): Spread the information to the community and LMDH (Hartono) as well as Mr. Samin to give warning through loud speaker. - Hartono (middlegstream area): widespread through loudspeaker in mosque and ask community to stay away from river. - Head Dusun Cempoko (Downstream): Contact Head RT 3 (near bridge) Mr. Mahrus and ask to give warning to community through loudspeaker.
12	14:10	24:00	22	100	1	Lv3	Lv1	Coordinator instructed participants to see the screen that rain is still heavily puring. What will be conducted by participants?	<ul style="list-style-type: none"> - Mr. Satuman (Head RT) Kahendran/Upstream: Keep monitoring condition and make sure that there is no resident stay at home (all had been evacuated) - Supiyanto : Go into Mr.. Hartono (LMDH) to inform the progress of condition - Hartono (middle stream) : Start to evacuate

									<p>into evacuation site</p> <ul style="list-style-type: none"> – Head Dusun Cempoko : Instruct Head of RT and local leader to immediately conduct evacuation and report to Head Desa Pakis – Head Desa Pakis: Keep making coordination with Secretary of Desa Pakis asnd ask Secretary of Desa to make coordination with related stakeholders. Check location and keep aware until morning time. – Kecamatan Panti: Continue the information to superior in Kecamatan, Rayon Military Command and Head of Sector Police as well as Kabupaten level. For babinsa to be immediately go into location and contact office for preparing personnel. – Satlak: The condition at 1 am, evacuation is more focused on supply of instant food. PMI will handle for victim, PU pengairan will prepare heay equipments to handle the soil landslide and change of flow line, if necessary, PU will prepare gabion. Satlak aid at 1 am will be not so optimum, therefore first priority is on food logistic supply.
13	14:15	01:00	9	109	2	Lv3	Lv2	Coordinator instructed participants to see the screen that rain is still heavily puring. What will be conducted by participants?	<ul style="list-style-type: none"> – Head Desa Pakis : Inform to Kabupaten that emergency kitchen has been established in village office – Kecamatan Panti: Always report the information progress to the superior – Satlak : Distribute aid (such as instant food clothes and blanket), Make coordination with PMI (volunteer) and PU (for heavy equipments)
14	14:20	02:00	14	123	2	Lv4	Lv2	Coordinator instructed participants to see the screen that rain is still heavily puring. What will be conducted by participants?	<ul style="list-style-type: none"> – Mr. Satuman (Head RT) Kahendran/Upstream: Stay in the evacuation site and control tent of evacuees as well as keep checking whether there is still resident not yet evacuate. Altogether in establishing emergency kitchen. – Supiyanto (middlestream area): Always

											<ul style="list-style-type: none"> prepared to make coordination and prepare lightning evacuation site by bringing and on the electric power generator. - Dusun Cempoko (downstream): Already in the evacuation site and see dam condition from near site of evacuation area, make coordination with Head of RT 2 and RT 3 - Dusun Kemundungan (downstream): in the evacuation site, make coordination with RT 10 and RT 7
15	14:25	03:00	20	143	3	Lv4	Lv3	Coordinator instructed participants to see the screen that rain is still heavily puring. What will be conducted by participants?	<ul style="list-style-type: none"> - Head Desa Pakis: Actuate head dusun and head RT to handle disaster. Make coordination with village health n village office service center and public welfare section. In this condition sometimes Satlak come to the village office together with Head of Kecamatan. Head Desa go around to check field condition in dusuns starting from dusun Kemundungan, Cempoko, Pakis utara, etc. - Satlak : Come to office of Desa Pakis to check upstream condition and evacuees 		
16	14:30	04:00	82	225	4	Lv5	Lv4	Coordinator instructed to see the screen that heavy rain is followed by debris.	<ul style="list-style-type: none"> - Satlak: After evacuation is finish, Satlak make inventory of evacuation site: number of victim and loss, deploy heavy equipments in the location. All activity is coordinated by Bakesbangpol linmas. - Mr. Satuman (Head RT) Kahendran/Upstream: Appeal the community to keep calmdown and not being worry and also to pray together. - Supiyanto (Middle stream area): Inform community through RT 9 that condition is danger. Hartono: Keep staying at the evacuation site make list and inform needs of evacuees. Contact Mr. Sawir - Mr. Sawir : Always being prepared and ask the community to stay away form river - Kecamatan: Kecamatan such as Rayon Military Command and Sector Police come by 		

									bringing aid and equipments.
17	14:35	05:00	52	277	5	Lv5	LV5	Coordinator instructed participants to see the screen that it is still heavy rain and sand, stone as well as woods flows down.	<ul style="list-style-type: none"> – Head Desa Pakis: in morning time condition, all community will help each other among community from other dusuns will come to help. – Satlak: Make inventory of evacuees, victim, etc. PMI and Military Army (TNI) come to help checking infrastructure as well as making emergency bridge if needed. – Downstream: Keep staying in the evacuation site with family, relatives and community and ask the community for not getting close into river. Giving information to Head Desa and Police. There is possibility that the bridge has been swept away by the river. – Kecamatan : Military (TNI) will bring cleaning equipments such as hoe and other equipments
18	14:40	06:00	24	301	5	Lv5	LV5	Coordinator instructed participants to see the screen that rain start to decrease	<ul style="list-style-type: none"> – Head Desa Pakis: Securiey officers (police and army) will be already in the site. Head Desa will give command to village officers such as Head of RT, RW and Public Relation Officers to enter disaster site and start cleaning. Aid is also distributed, and it is also start receiving aids from other side.
19	14:45	07:00	4	305	5	Lv5	LV5	Coordinator instructed participants to keep seing the screen that rain start to decrease. What will be conducted by participants?	<ul style="list-style-type: none"> – Head Desa Pakis: Security officers (police and army) will be already in the site. Head Desa will give command to village officers such as Head of RT, RW and Public Relation Officers to enter disaster site and start cleaning. Aids also start to be received and there is distribution of aids to victim and refugee.
20	14:50	08:00	0	305	5	Lv5	LV5	Coordinator instructed participants to keep seeing the screen that rain is stopped. What will be conducted by participants?	<ul style="list-style-type: none"> – Head Desa Pakis: Head instruct to distribute logistic. Each Head RT in upstream and downstream will take responsibility for each evacuation site. Public protection officer (linmas) will check resident houses security. – Mr. Satuman (Head RT)

										<p>Kahendran/Upstream: Contact Head Desa Pakis to inform priority logistic needs such as food, blanket and medicines, etc.</p> <p>– Head Dusun Cempoko (Downstream): Inform to community for not leaving the evacuation site because of not knowing upstream condition.</p>
21	14:55	09:00	0	305	5	Lv5	LV5	Rain is stopped (start to conduct survey and emergency action)	<p>– Satlak: Conduct emergency reparation and make coordination with Bakesbang to do survey.</p> <p>– Kecamatan: Babinsa will help for cleaning together with community at the site.</p>	

3.3 Comments from JICA

Information path on last banjir bandang occurrence in 2011 at Desa Pakis Kecamatan Panti Kabupaten Jember on the result of simulation can be seen that it is very long and complicated. In addition, early countermeasure for evacuation was not proper enough, in which it was conducted when the water almost overflow into surface area moreover residents were briefly come close into river when it was already overflow. Banjir bandang occurrence and also victim existence in Desa Pakis on last March 4 2011 was indicated by 3 items namely:

1. In banjir bandang occurrence, when the water height is high enough had caused loose on soil and potentially for continuously collapse
2. In Dusun Kahendran, 2 meter from soil surface consists of stones so that high water amount caused natural dams because the water could not be absorbed due to many stones. This cause banjir bandang.
3. Information from upstream is late

Therefore, it is necessary to know characteristic/typology of the area to put proper equipments and able to give early countermeasure for banjir bandang. Based on 7 problems exist in FGD can be known that network weaknesses in communication can be minimized by a habit in the delivery methods. For infrastructure problem, it needs cooperation with budget from government. The problem concerning with Godwill and old age of earth is actually cannot be determined, however we still should be prepared by keep joining trainings.

Training is useful for having preparedness in pre, during and after banjir bandang disaster. Besides, training can help to give imagination for disaster occurrence about how to act. It is expected that resident of Desa Pakis keep conducting banjir bandang disaster training, having documentation (in the form of sketch or photos) of past banjir bandang historical occurrence, it is also necessary to tell story to grandchild as next generation. This is aimed so that next generation will have knowledge about identification of banjir bandang and equipments needed.

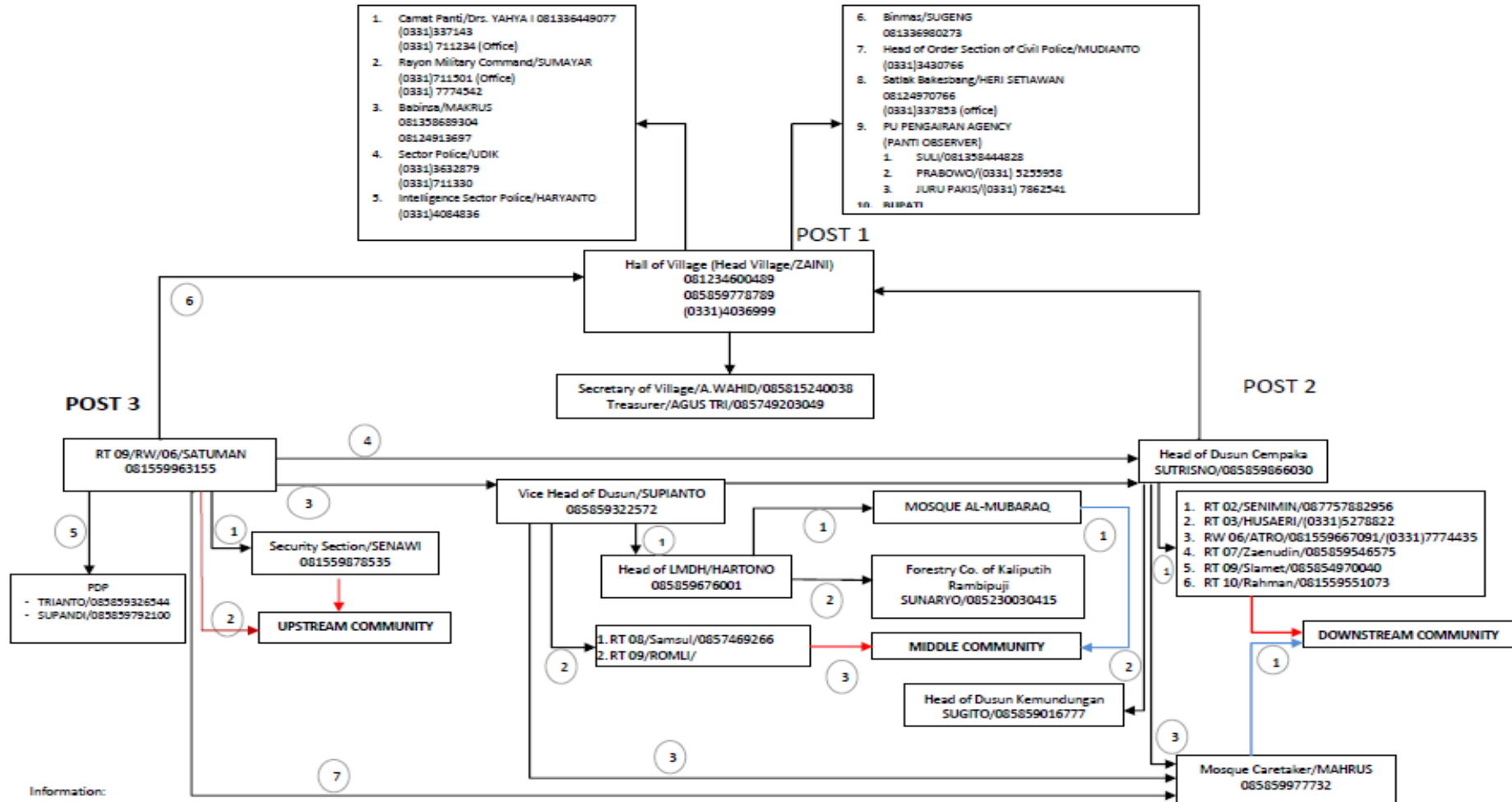
Solutions of FGD result in early Countermeasure of Banjir Bandang are:

1. It is necessary to have fast and efficient early information through SOP of information path that had been altogether agreed.
2. Early warning system is by using equipments that can identify banjir bandang occurrence earlier
3. Determination of evacuation site that had been agreed should be known by widespread people, and also it needs to conduct evacuation immediately after knowing the characteristic of flood occurrence such as dark cloud/heavy rain in upstream, water river smell muddy and turbid color (not clean), as well as thundering sound.

3.4 Result of *Table Top Exercise (TTE)*

Objective of TTE is besides sharing information also clarifying problem about existing procedures in the anticipation of banjir bandang disaster is arrangement of draft of manual/SOP early warning system for banjir bandang for DAS Kalipakis. The following is scheme of SOP for Early Warning System for Banjir Bandang Disaster Desa Pakis Kecamatan Panti Kabupaten Jember. The scheme consists of 5 items, namely: scheme of general SOP (Image 3), scheme of SOP upstream area (Image 4), scheme of middlestream area (Image 5), scheme of downstream area (Image 6), and scheme of SOP Satlak PBP (Image7).

SOP BANJIR BANDANG DESA PAKIS KECAMATAN PANTI



Information:

Note :

- = Information by *Handphone / HP (Ponsel) / SMS and Oral*
- = Information by using *Speaker*
- = Information by Using *Oral and Kentongan*

Image 3. Scheme of General SOP of Early Warning System for Banjir Bandang Disaster in Desa Pakis

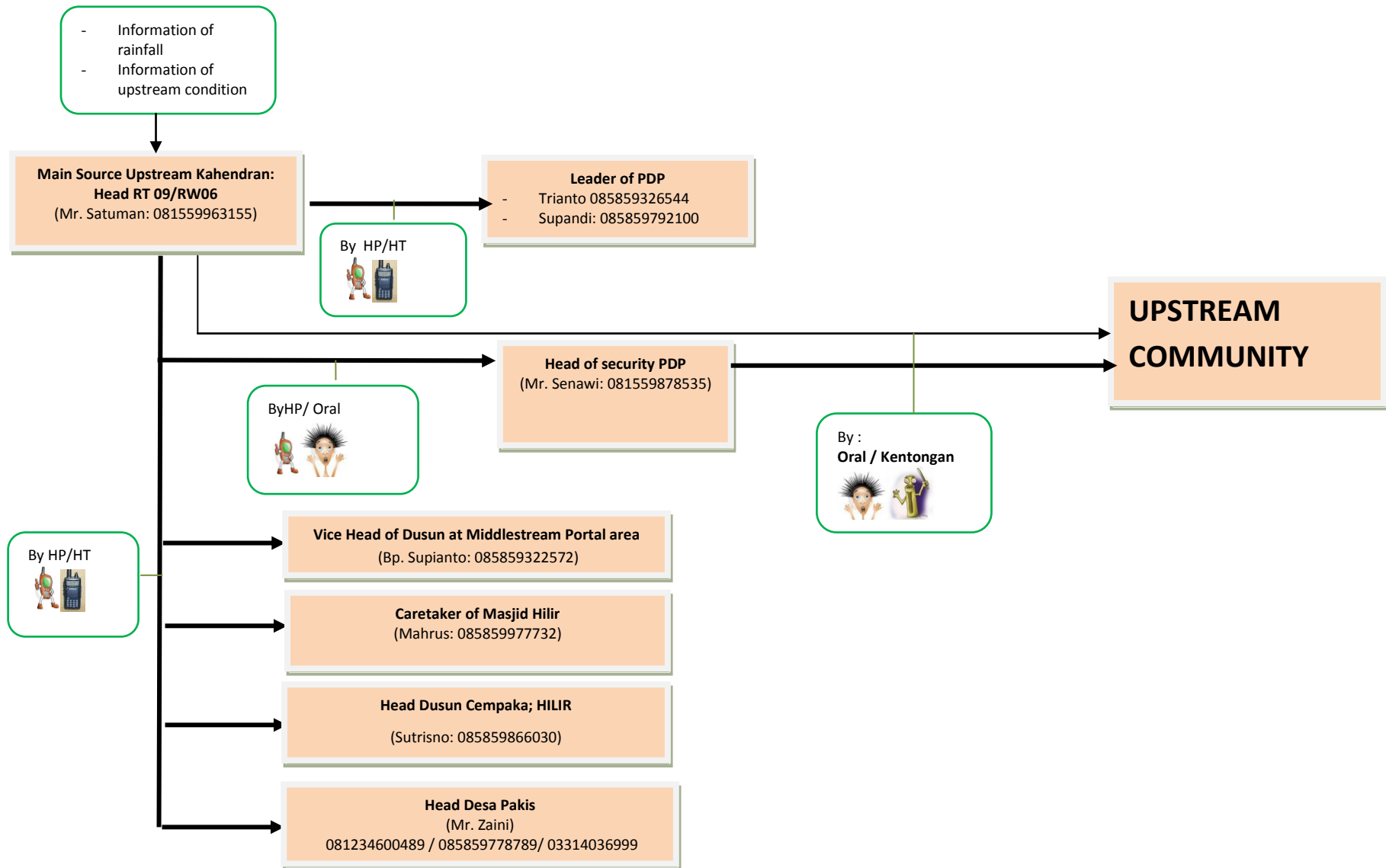


Image 4. Scheme of SOP Upstream Area of Early Warning System for Banjir Bandang Disaster in Desa Pakis

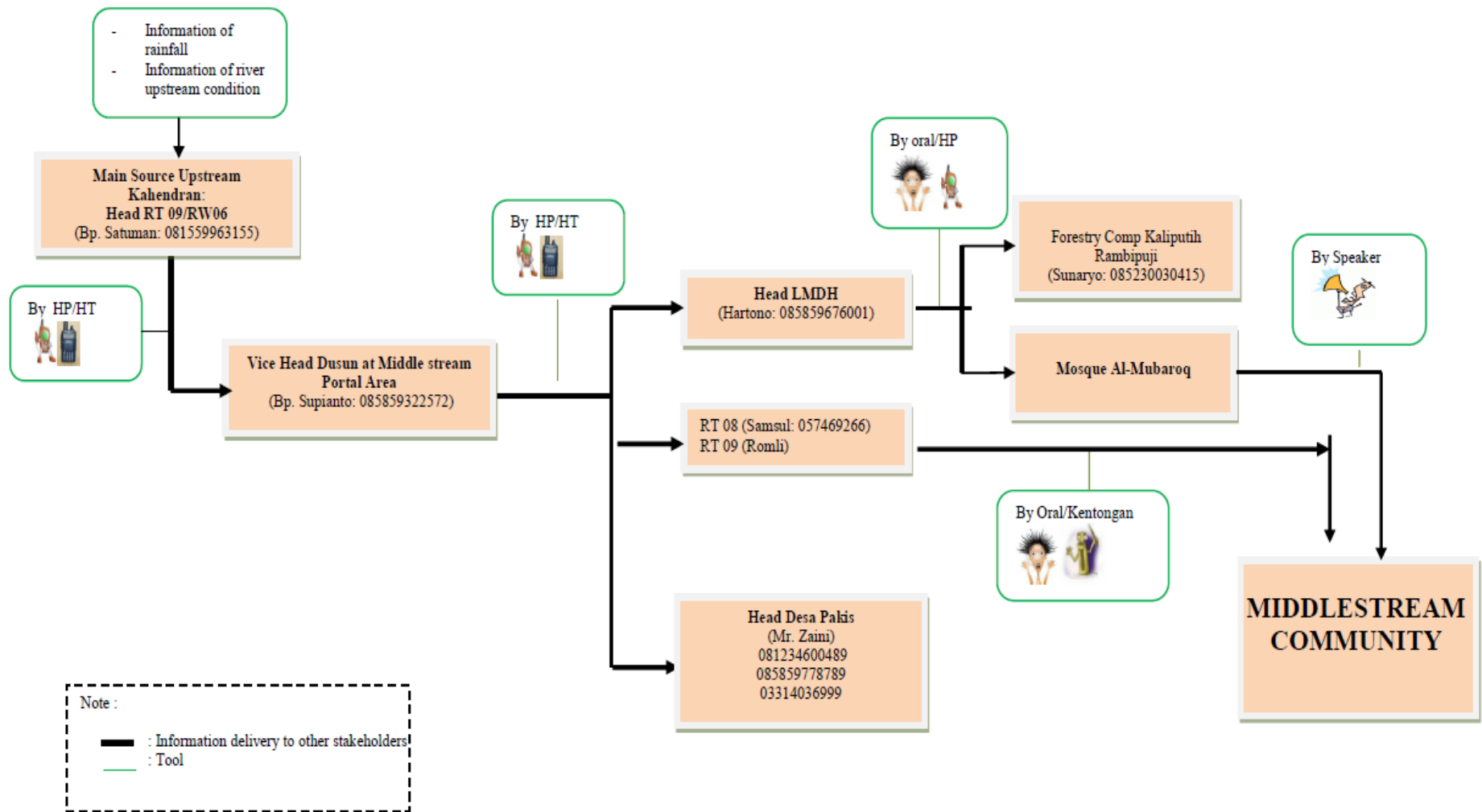


Image 5. Scheme of SOP Middlestream Area for Early Warning System for Banjir Bandang Disaster Desa Pakis

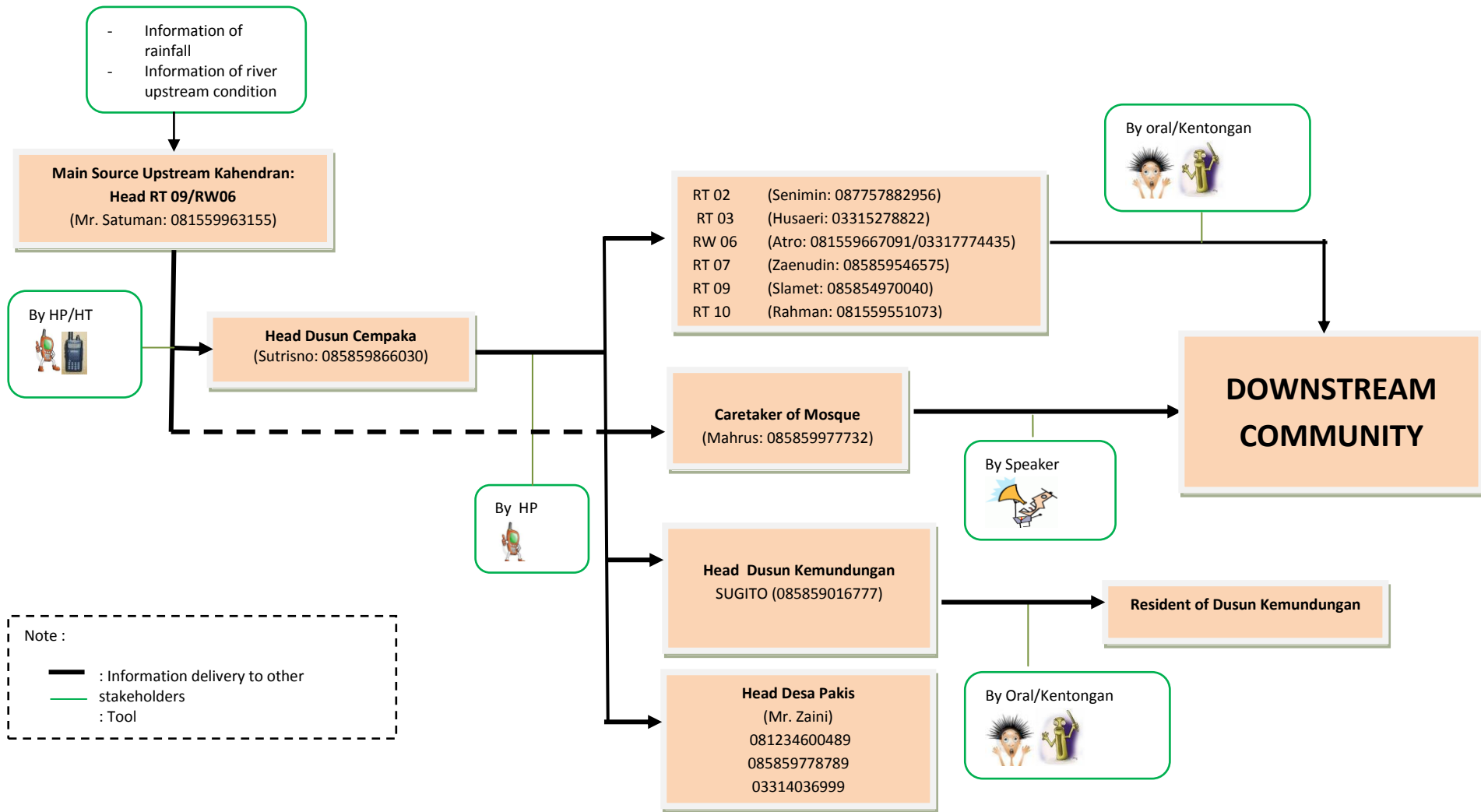


Image 6. Scheme of SOP Downstream Area of Early warning System for Banjir Bandang Disaster in Desa Pakis

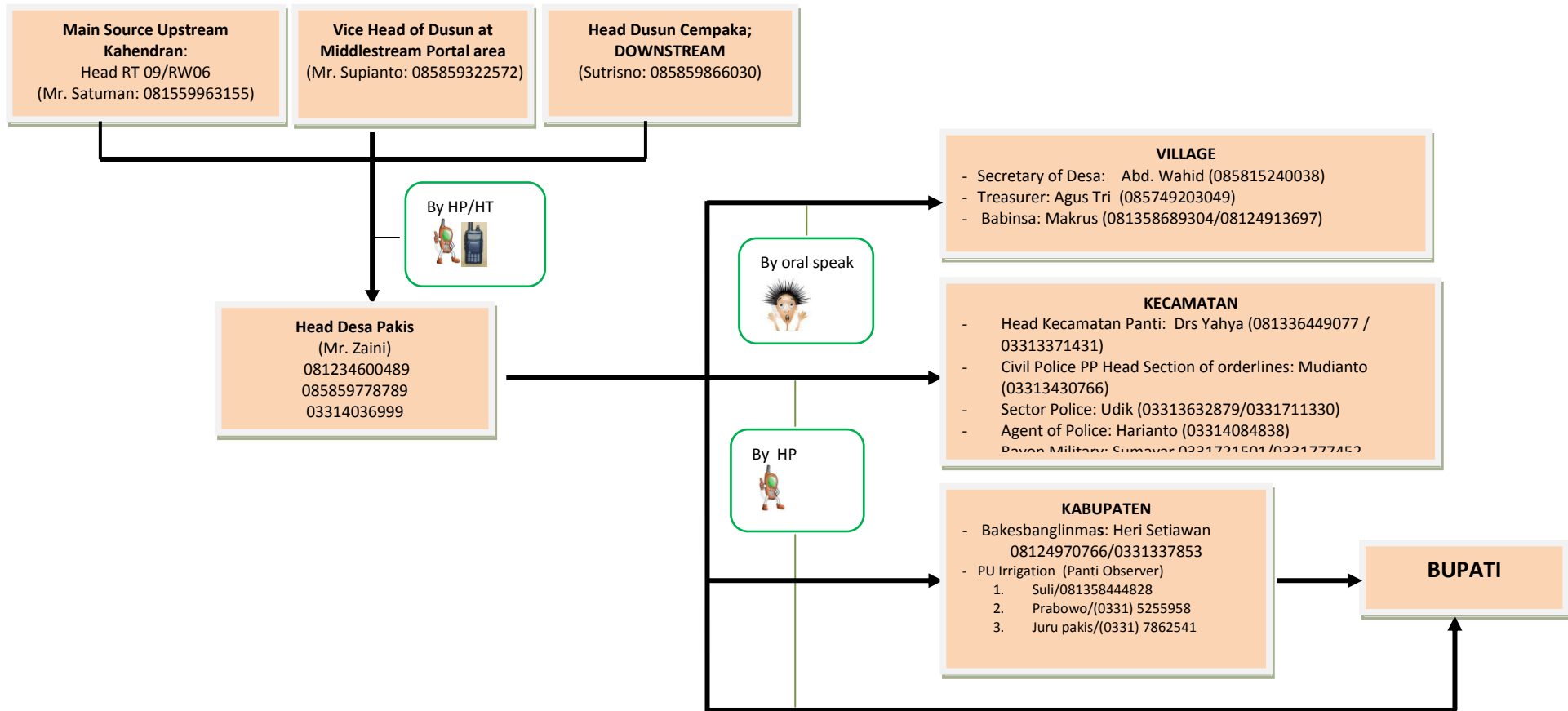


Image 7. Scheme of SOP Satlak PBP of Early Warning System for Banjir Bandang Disaster in Desa Pakis



Table 5. SOP DAS Kalipakis for Each Condition






Normal Condition (Condition 1)





Rainfall Level : 0

Water Level : 0

Status : Normal

No	Location	Stakeholder	Activity	Mechanism	Equipment
1.	Upstream Area of DAS Kalipakis (Kahendran Plantation)	1. Head RT 09 (Satuman) Others : 1. Opsinder of Kahendran Plantation (Trianto) 2. Vice Opsinder Kahendran Plantation (Supandi) 3. Security Kahendran Plantation (Senawi)	- Monitoring the condition of early warning system.	<ul style="list-style-type: none"> - Check the function of rainfall gauge. - Maintain and check the function as well as energy supply for communication tool: HP, HT, dan speaker. 	1. Rainfall gauge  2. Communication tool  Handphone HT Speaker
			<ul style="list-style-type: none"> - Conduct socialization about maintaining of environmental preservation and natural disaster anticipation 	<ul style="list-style-type: none"> - Conduct illumination and supervision to the action that damage environment such as illegal logging, garbage disposal at in proper place and so on. - Together with community make early warning system for banjir bandang consisting: disaster hazard map, evacuation path, gathering points and evacuation location. - Helping program of Satlak PBP Kabupaten Jember 	

			<ul style="list-style-type: none"> - Make communication intensively with middlestream and downstream of DAS Kalipakis concerning with weather and river condition of Kali Pakis. 	<p>Make contact via HP and HT to</p> <ol style="list-style-type: none"> Head Desa Pakis (Zaini) Vice Head Dusun of Pakis Utara (Supianto) Head Dusun of downstream Dusun Cempoko (Sutrisno) 	 <p>Handphone HT</p>
2.	Middlestream Area DAS Kalipakis (Dusun Pakis Utara)	1. Vice Head Dusun Pakis Utara (Supianto)	<ul style="list-style-type: none"> - Normal activity. - Make communication with upstream area concerning with weather and river condition of Kali Pakis. 	<ul style="list-style-type: none"> - Receive contact via HP or HT with Head RT 09 Kahendran Plantation (Mr. Satuman) 	 <p>Handphone HT</p>
3.	Downstream Area of DAS Kalipakis (Dusun Cempoko)	1. Head Dusun Cempoko (Sutrisno)	<ul style="list-style-type: none"> - Normal activity. - Monitoring condition of equipments of early warning system. - Make communication with upstream concerning with weather condition and Kalipakis river. 	<ul style="list-style-type: none"> - Monitoring function of water level in dam cempoko - Receive contact via HP or HT from Head RT 09 Kahendran Plantation (Mr. Satuman) 	<ol style="list-style-type: none"> Water level gauge  Communication Tool  <p>Handphone HT</p>
4.	Desa Pakis	Head Desa Pakis (Mr. Zaini)	<ul style="list-style-type: none"> - Normal activity. - Monitoring condition of equipments of early warning system. - Make communication with upstream concerning with weather condition and Kalipakis river. 	<ul style="list-style-type: none"> - Check the function of rain gauge equipments at desa Pakis office - Receive contact via HP or HT from Head RT 09 Perkebunan Kahendran (Mr. Satuman) 	<ol style="list-style-type: none"> Rainfall gauge  Communication tool



					  Handphone HT
5.	Kecamatan Panti	Camat Panti (Drs. Yahya I.)	<ul style="list-style-type: none"> - Normal activity. - Make communication with Head Desa Pakis concerning with weather and river condition of Kalipakis. 	Receive contact via HP or HT with Head Desa Pakis	  Handphone HT
6.	Kabupaten Jember	Satlak PB : Bakesbangpol Linmas/ Satlak PBP (Heri Setiawan).	<ul style="list-style-type: none"> - Normal activity while waiting for report/information. 		




Condition of Attention (Condition 2)



Rainfall Level : 1 (30 mm/Hour)



Water Level : 1 (100 Cm)

Status : Attention

No	Location	Stakeholder	Activity	Mechanism	Equipment
1.	Upstream Area of DAS Kalipakis (Kahendran Plantation)	1. Head RT 09 (Satuman) Others : 1. Opsinder of Kahendran Plantation (Trianto) 2. Vice Opsinder Kahendran Plantation (Supandi) 3. Security Kahendran Plantation (Senawi)	<ul style="list-style-type: none"> - Monitoring of recent condition - Head RT (Mr. Satuman) make coordination among stakeholders in plantation - Head RT (Mr. Satuman) give information to in charge stakeholders in outside of PDP Plantation - Give information to local resident about current condition 	<ul style="list-style-type: none"> - Measure and monitor rainfall condition on rainfall gauge - Make coordination each other with opsinder (Trianto), vice opsinder (Supandi), security (Senawi) about rainfall level 1 condition/on Status of Attention - Send information about rainfall condition and water level condition of upstream that already in Attention status (rainfall is 30 mm), to: <ol style="list-style-type: none"> a. Head Desa Pakis (Zaini) b. Vice Head Dusun Pakis Utara (Supianto) c. Head Dusun Cempoko (Sutrisno) - Give information by oral to local residents to be more aware that conducted by Head RT (Mr.Satuman) and Security of Kahendran Plantation (Senawi) that rainfall reach 30 cm and to be more aware 	1. Rainfall gauge  2. Communication tool  Handphone HT
2.	Middlestream Area DAS Kalipakis (Dusun)	Vice Head Dusun Pakis Utara (Supianto)	<ul style="list-style-type: none"> - Make coordination with Kahendran 	<ul style="list-style-type: none"> - Receive information and make coordination with Kahendran 	Communication tool

	Pakis Utara)		<p>Plantation</p> <ul style="list-style-type: none"> - Make coordination with LMDH and RT 08 and 09 - Report recent condition 	<p>Plantation (Mr. Satuman) about rainfall condition</p> <ul style="list-style-type: none"> - Inform via HP/HT to head LMDH (Hartono) and Head RT 08 (Samsul) as well as RT 09 (Romli) that information from upstream is that rainfall reach 30 cm (level 1) to be aware - Continue information delivery via HP/HT to Forestry Company of Kaliputih Rambipuji Asper (Sunaryo) conducted by LMDH (Hartono). - Reporting to Head Desa Pakis (Zaini) 	 <p>Handphone HT</p>
3.	Downstream Area of DAS Kalipakis (Dusun Cempoko)	1. Head Dusun Cempoko (Sutrisno)	<ul style="list-style-type: none"> - Make coordination with Kahendran Plantation - Make coordination with RT and instruct head RT to be more aware - Make coordination with Head Dusun Kemundungan - Reporting recent condition 	<ul style="list-style-type: none"> - Receive contact via HP or HT from Head RT 09 of Kahendran Plantation (Mr. Satuman) about rainfall condition - Check water level condition in water level gauge at the river of dam cempoko Kalipakis - Make contact via HP/HT with: <ul style="list-style-type: none"> a) Head RT 02 (Senimin) b) Head RT 03 (Husaeri) c) Head RW 06 (Atro) d) Head RT 07 (Zainudin) e) Head RT 09 (Slamet) f) Head RT 10 (Rahman) 	<p>1. Water level gauge</p>  <p>2. Communication tool</p>  <p>Handphone HT</p>

				<ul style="list-style-type: none"> - Inform to Head Dusun Kemundungan (Sugito) about rainfall information in upstream and water level in Kalipakis that it has entered level 1 - Reporting to head desa Pakis (Zaini) about information from upstream and checking result of water level in the river of Kali Pakis that it has entered level 1 	
4.	Desa Pakis	Head Desa Pakis (Zaini)	<ul style="list-style-type: none"> - Monitoring condition of rain gauge equipments - Make coordination with Kahendran plantation - Make coordination with Head Dusun to be more aware - Reporting recent condition to Kecamatan 	<ul style="list-style-type: none"> - Receive information via HP or HT from Head RT 09 Perkebunan Kahendran (Mr. Satuman). - Record incoming information from upstream, middlestream and downstream area. - Check rainfall condition and compare rainfall between upstream and downstream on rain gauge at desa Pakis office - Contact Head Dusun Pakis Utara (Supianto) and Head Dusun of Cempoko (Sutrisno) to check information and instructing to monitor recent condition as well as making coordination among dusuns. - Reporting recent condition (rainfall and water level on level 1) to: 	<p>1. Rainfall gauge</p>  <p>2. Communication tool</p>  <p>Handphone HT</p>

				<ul style="list-style-type: none"> a. Kecamatan Panti (Camat Panti/Yahya) b. Satlak Kabupaten (Heri/Bakesbang) 	
5.	Kecamatan Panti	1. Camat Panti (Drs. Yahya I.)	<ul style="list-style-type: none"> - Normal activity. - Make communication with Head Desa Pakis concerning with river condition of Kalipakis. - Prepare disaster post of kecamatan and check facilities - Reporting recent condition to Satlak Kabupaten 	<ul style="list-style-type: none"> - Receive contact via HP or HT from Head Desa Pakis - Make coordination among Kecamatan Leaders (Muspika) of Kecamatan Panti that rainfall condition in Pakis reaches 30 cm and river water level 1 as follow: <ul style="list-style-type: none"> a. Civil Police Head of Orderliness Kecamatan (Mudianto) b. Rayon Military Command Panti (Captain.Sumayar) c. Sector Police Panti (Udik) - Prepare disaster post of kecamatan - Reporting recent condition to Satlak Kabupaten (Heri/Bakesbangpol Linmas) 	 <p>Handphone HT</p>
6.	Kabupaten Jember	<p>Satlak PB:</p> <p>1. Bakesbangpol Linmas/ Satlak PBP (Heri Setiawan)</p>	<ul style="list-style-type: none"> - Normal activity. - Receive information from Head Desa Pakis as well as Kecamatan Panti, and make coordination among Satlak member 	<ul style="list-style-type: none"> - Receive contact via HP or HT from Head Desa Pakis (Zaini) and Kecamatan Panti (Yahya)/Camat Panti) - Satlak (Bakesbang/Heri) make coordination about information 	 <p>Handphone HT</p>





			<p>concerning with weather and river condition of Kalipakis.</p>	<p>report from Desa Pakis and Kecamatan Panti with related agencies as Satlak member :</p> <ul style="list-style-type: none"> a. PMI b. PU Pengairan c. Other related agencies of Satlak member <p>- Make coordination among Satlak member to prepare facilities and equipments that may be needed for the possibility of disaster occurrence while waiting for further information</p>	
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Condition of Aware (Condition 3)




Rainfall Level : 2 (60 mm/hour)



Water Level : 2 (120 cm)



Status : Aware

No	Location	Stakeholder	Activity	Mechanism	Equipment
1.	Upstream Area of DAS Kalipakis (Kahendran Plantation)	1. Head RT 09 (Satuman) Others : 1. Opsinder of Kahendran Plantation (Trianto) 2. Vice Opsinder Kahendran Plantation (Supandi) 3. Security Kahendran Plantation (Senawi)	<ul style="list-style-type: none"> - Monitor recent weather condition - Inform to related stakeholders. - Give announcement to resident that flood status is AWARE and it is expected to make preparation of evacuation. 	<ul style="list-style-type: none"> - Monitor rainfall condition by using existing tool intensively and also see upstream river condition. . - Send information about rainfall level that already on status of AWARE to : <ol style="list-style-type: none"> 1. Security of PDP (Senawi) 2. Opsinder (Trianto) and Vice Opsinder (Supianto) of Kahendran Plantation 3. Vice Head Dusun Pakis Utara (Supianto) 4. Head Dusun Cempoko (Sutrisno) 5. Head Desa Pakis (Zaini) - Inform to resident of plantation about AWARE condition and make preparation of evacuation by using speaker helped by Security PDP (Senawi). 	<ol style="list-style-type: none"> 1. Rainfall gauge  2. Communication tool   Handphone HT 3. Speaker 
2.	Middlestream Area DAS Kalipakis (Dusun Pakis Utara)	1. Vice Head Dusun Pakis Utara (Supianto)	<ul style="list-style-type: none"> - Make coordination with Plantation. - Make coordination with LMDH and Forestry company 	<ul style="list-style-type: none"> - Receive progress of information about rainfall and upstream condition via HP/HT from Kahendran Plantation (Mr. Satuman) about rainfall condition 	<ol style="list-style-type: none"> 1. Communication tool

			<ul style="list-style-type: none"> - Give announcement to residents that flood status is AWARE and it is expected that they will make preparation for evacuation. - Make coordination with Head RT 08 and RT 09. - Report recent weather condition. 	<p>that on level 2.</p> <ul style="list-style-type: none"> - Inform via HP/HT to : <ul style="list-style-type: none"> a. Head LMDH (Hartono) b. Head RT 08(Samsul) and c. RT 09 (Romli) <p>That information from upstream mention rainfall reach 60 cm level 2 and enter AWARE STATUS</p> <p>Continue information via HP/HT to Asper Forestry Company Kaliputih Rambipuji (Sunaryo) by LMDH (Hartono).</p> <ul style="list-style-type: none"> - Instruct LMDH (Hartono) to inform the community about AWARE condition and make preparation of evacuation by using mosque speaker. - Instruct Head RT 08 (Samsul) dan RT 09 (Romli) to give information by oral to residents to be more aware and make preparation for evacuation if needed - Report recent condition to Head Desa Pakis (Zaini) 	 <p>Handphone HT</p> <p>2. Speaker</p> 
3.	Downstream Area of DAS Kalipakis (Dusun Cempoko)	1. Head Dusun Cempoko (Sutrisno)	<ul style="list-style-type: none"> - Make coordination with Kahendran Plantation (Mr. Satuman) - Check water level 	<ul style="list-style-type: none"> - Receive contact via HP and HT from Head RT 09 (Kahendran Plantation) - Check river water level in water 	<p>1. Water level gauge</p> 

			<p>gauge in Kali pakis river</p> <ul style="list-style-type: none"> - Make coordination with Head RT and instruct Head RT to be more aware by the status of AWARE - Make coordination with Head Dusun Kemundungan - Reporting recent condition 	<p>level gauge at dam cempoko of Kali Pakis river</p> <ul style="list-style-type: none"> - Make contact via HP/HT to: <ul style="list-style-type: none"> a) Head RT 02 (Senimin) b) Head RT 03 (Husaeri) c) Head RW 06 (Atro) d) Head RT 07 (Zainudin) e) Head RT 09 (Slamet) f) Head RT 10 (Rahman) - Inform to Head Dusun Kemundungan (Sugito) about rainfall information in upstream from plantation and water level in Kali Pakis that enter level 2 - Reporting to head desa Pakis (Zaini) about information from upstream and checking result of water level in river Kali Pakis that enter level 2 - Instruct to caretaker of mosque (Mahrus) to widespread information that on AWARE status to the residents by using speaker and make preparation of evacuation if needed 	<p>2. Communication tool</p>  <p>Handphone HT</p> <p>3. Speaker</p> 
4.	Desa Pakis	Head Desa Pakis (Zaini)	<ul style="list-style-type: none"> - Receive and record information from upstream, middlestream and downstream about AWARE status 	<ul style="list-style-type: none"> - Receive information via HP or HT from Head RT 09 Kahendran Plantation (Mr. Satuman). - Record incoming information from upstream area, middlestream area and 	<p>1. Rainfall gauge</p> 

			<ul style="list-style-type: none"> - Check rain gauge in Desa pakis office - Contact Head Dusun to make coordination - Check and prepare facilities as well as make patrol - Report recent condition 	<p>downstream area.</p> <ul style="list-style-type: none"> - Check rainfall condition and compare rainfall of upstream and downstream in the rain gauge at desa Pakis office - Contact Head dusun Pakis Utara (Supianto) and Head dusun Cempoko (Sutrisno) to check information and instruct to monitor recent condition and make coordination each other among dusun , as well as informing the residents about AWARE status and to make preparation for evacuation if needed. - Make a patrol around disaster hazard area in Desa Pakis to check progress condition - Contact secretary of desa (A. Wahid) and treasurer of desa to prepare desa office and facilities for possibility of evacuation - Reporting recent condition to : <ul style="list-style-type: none"> a. Kecamatan Panti (Camat Panti/Yahya) b. Satlak Kabupaten (Heri/Bakesbang) 	<p>2. Communication tool</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Handphone</p> </div> <div style="text-align: center;">  <p>HT</p> </div> </div>
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5.	Kecamatan Panti	1. Camat Panti (Drs. Yahya I)	<ul style="list-style-type: none"> - Make communication with Head Desa Pakis concerning with weather and river condition of Kalipakis. - Prepare disaster post of kecamatan and check facilities - Reporting recent condition to Satlak Kabupaten 	<ul style="list-style-type: none"> - Receive contact via HP or HT from Head Desa Pakis - Make coordination among Kecamatan Leaders (Muspika) Kecamatan Panti that rainfall condition in Pakis reaches 60 cm and river water level 2 that already on AWARE status to: <ul style="list-style-type: none"> a. Civil Police Head of Orderliness Kecamatan (Mudianto) b. Rayon Military Command Panti (Capt.Sumayar) c. Sector Police Panti (Udik) - Prepare disaster post of kecamatan and prepare personnel for any possibility of helping evacuation if needed in hazard area - Reporting recent condition to Satlak Kabupaten (Heri/Bakesbangpol Linmas) 	 <p>Handphone HT</p>
6.	Kabupaten Jember	Satlak PB: 2. Bakesbangpol Linmas/ Satlak PBP (Heri Setiawan)	<ul style="list-style-type: none"> - Receive information from Head Desa Pakis as well as Kecamatan Panti, and make coordination among Satlak member concerning with weather and river condition of Kalipakis. 	<ul style="list-style-type: none"> - Receive contact via HP or HT from Head Desa Pakis (Zaini) and Kecamatan Panti (Yahya)/Camat Panti) - Satlak (Bakesbang/Heri) make coordination about information report from Desa Pakis and Kecamatan Panti with related 	 <p>Handphone HT</p>





				<p>agencies as Satlak member :</p> <ul style="list-style-type: none">a. PMIb. PU Pengairanc. Other related agencies of Satlak member <p>– Make coordination among Satlak member to prepare facilities and equipments that may be needed for the possibility of disaster occurrence while waiting for further information</p>	
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Condition of Evacuation (Condition 4)







Rainfall Level : 3 (90 mm/hour)






Water Level : 3 (140 Cm)




Status : Evacuation






No	Location	Stakeholder	Activity	Mechanism	Equipment
1.	Upstream Area of DAS Kalipakis (Kahendran Plantation)	1. Head RT 09 (Satuman) Others : 1. Opsinder of Kahendran Plantation (Trianto) 2. Vice Opsinder Kahendran Plantation (Supandi) 3. Security Kahendran Plantation (Senawi)	<ul style="list-style-type: none"> - Monitor recent weather condition - Inform to related stakeholders that rainfall level is on level 3. - Instruct resident to go for evacuation - Conduct evacuation process together with plantation residents 	<ul style="list-style-type: none"> - Keep monitoring rainfall condition, water level and possibility of soil crack by using existing equipments if the condition is still possible for this checking. - Send information about rainfall level, water level that it is on level 3 which means EVACUATION to : <ol style="list-style-type: none"> 1. Security of PDP (Senawi) 2. Opsinder (Trianto) and Vice Opsinder (Supianto) of Kahendran Plantation 3. Vice head Dusun Pakis Utara (Supianto) 4. Head Dusun Cempoko (Sutrisno) 5. Head Desa Pakis (Zaini) - Inform residents to go for EVACUATION by using existing equipments. - Help the process of evacuation as well as go into evacuation site that more safe area 	<ol style="list-style-type: none"> 1. Rainfall gauge  2. Communication tool  Handphone HT 3. Speaker and kentongan  Evacuation tool: 

					<p>a. palankeen</p>  <p>b. Tent</p>  <p>c. loader vehicle</p> <p>Evacuation site:</p> 
2.	Middlestream Area DAS Kalipakis (Dusun Pakis Utara)	Vice Head Dusun Pakis Utara (Supianto)	<ul style="list-style-type: none"> - Make coordination with Plantation - Inform resident to go for evacuation. - Help resident in conducting evacuation. 	<ul style="list-style-type: none"> - Make coordination with kahendran Plantation (Mr. Satuman) about rainfall level, water level and recent landslide. - Instruct resident of Dusun Pakis Utara to go for EVACUATION to provided site. - Make coordination with: <ol style="list-style-type: none"> 1. Head LMDH (Hartono) 2. Head RT 08(Samsul) and 3. RT 09 (Romli) To help resident in conducting EVACUATION and reminding 	<p>1. Communication tool</p>  <p>Handphone HT</p> <p>2. Speaker and kentongan</p>

				<p>each other about rainfall conditionas well as water level that reached level 3 and also informing to residents for evacuating into safer place.</p> <ul style="list-style-type: none"> - Report to Head Desa Pakis (Zaini) about resident evacuation condition 	 <p>Evacuation tool:</p>  <p>a. Palankeen</p>  <p>b. Tent</p>  <p>c. loader vehicle</p> <p>Evacuation site:</p> 
3.	Downstream Area of DAS Kalipakis (Dusun Cempoko)	Head Dusun Cempoko (Sutrisno)	<ul style="list-style-type: none"> - Make coordination with Plantation - Check water level gauge in Kali pakis river 	<ul style="list-style-type: none"> - Make coordination with Kahendran plantation (Mr. Satuman) about rainfall level, water level and recent landslide occurrence. 	<p>1. Water level gauge</p> 

			<ul style="list-style-type: none"> - Inform resident to go for evacuation. - Help the resident to conduct evacuation. 	<ul style="list-style-type: none"> - Check water level in water level gauge at dam cempoko of Kali Pakis river - Instruct resident of Dusun Cempoko to EVACUATE into provided site. - Make coordination with: <ol style="list-style-type: none"> 1. Head RT 02 (Senimin) 2. Head RT 03 (Husaeri) 3. Head RW 06 (Atro) 4. Head RT 07 (Zainudin) 5. Head RT 09 (Slamet) 6. Head RT 10 (Rahman) To help resident in conducting EVACUATION and reminding each other that rainfall condition and water level is on level 3 and inform to resident for going untuk safe EVACUATION site. - Instruct caretaker of mosque (Mahrus) to widespread information of EVACUATION status to residents by using speaker and to immediately conduct evacuation into safer place. - Inform Head Dusun Kemundungan (Sugito) about information of rainfall in upstream received from plantation and evacuation condition - Report to Head Desa Pakis (Zaini) about resident evacuation condition 	<p>2. Communication tool</p>  <p>Handphone HT</p> <p>3. Speaker and kentongan</p>  <p>4. Evacuation tool:</p>  <p>a. Palankeen</p>  <p>b. Tent</p>  <p>c. loader vehicle</p>
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					<p>5. Evacuation site:</p> 
4.	Desa Pakis	Kepala Desa Pakis (Zaini)	<ul style="list-style-type: none"> - Make coordination with plantation - Check rain gauge in Desa pakis office - Inform resident to conduct evacuation. - Help resident in conducting evacuation. 	<ul style="list-style-type: none"> - Make coordination with Kahendran Plantation (Mr. Satuman) about rainfall level, water level and recent landslide occurrence. - Record incoming information from upstream area, middlestream area and downstream area. - Check rainfall condition and compare rainfall of upstream and downstream in the rain gauge at desa Pakis office - Instruct task force at village level secretary of village (A. Wahid) and treasurer of village (Agus) to help resident in conducting EVACUATION and reminding each other that rainfall condition and water level is on level 3 and inform resident to go for EVACUATION into safer place. - Reporting that resident conduct EVACUATION to: 	<p>1. Rainfall gauge</p>  <p>2. Communication tool</p>  <p>Handphone HT</p>

				<p>a. Kecamatan Panti (Camat Panti/Yahya)</p> <p>b. Satlak Kabupaten (Heri/Bakesbang)</p>	
5.	Kecamatan Panti	2. Camat Panti (Drs. Yahya I.)	<ul style="list-style-type: none"> - Make coordination with plantation about recent weather condition. - Help resident in conducting evacuation - Reporting recent condition. 	<ul style="list-style-type: none"> - Make coordination with head Desa Pakis (Zaini) about resident evacuation (Location, number evacuees, needs) - Prepare and deploy personnel as well as activating disaster post for 24 hours and together with Kecamatan leader (Muspika) Kecamatan Panti helping evacuation by using facilities such as car, palankeen, etc to help evacuation process. - Reporting recent condition (rainfall level and water level on level 3) and also about refugee condition in Kahendran Plantation and Desa Klungkung to Satlak Kabupaten (Hery Setiawan Bakesbang). 	 <p>Handphone HT</p> <p>. Evauation Tool:</p>  <p>a. Palankeen</p>  <p>b. Tent</p>  <p>c. Loader vehicle</p>
6.	Kabupaten Jember	Satlak PB: 3. Bakesbangpol Linmas/ Satlak PBP (Heri Setiawan)	<ul style="list-style-type: none"> - Make coordination with plantation about recent condition. - Help resident to conduct evacuation - Reporting recent 	<ul style="list-style-type: none"> - Make coordination with Head Desa Pakis (Zaini) and Kecamatan Panti (Yahya) about resident evacuation (Location, number evacuees, needs). - Together with Kabupaten leader 	 <p>Handphone HT</p>




			condition.	(Muspida) help the evacuation by using facilities such as car, palankeen, etc and prepare aids during evacuation process. – Reporting recent condition (rainfall level and water level on level 3) and also about refugee condition in Desa Pakis to Bupati Jember.	
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Condition of Critical (Condition 5)






Rainfall Level : 4 (120 mm/hour)





Water Level : 4 (160 Cm)




Status : Critical






No	Location	Stakeholder	Activity	Mechanism	Equipment
1.	Upstream Area of DAS Kalipakis (Kahendran Plantation)	1. Head RT 09 (Satuman) Others : 1. Opsinder of Kahendran Plantation (Trianto) 2. Vice Opsinder Kahendran Plantation (Supandi) 3. Security Kahendran Plantation (Senawi)	<ul style="list-style-type: none"> - Stay in the evacuation site while keep monitoring recent weather condition. - Inform in charge stakeholders that status is CRITICAL. - Inform resident that Evacuation should be finished. 	<ul style="list-style-type: none"> - Stay in the evacuation site (evacuation) and coordinating refugee of plantation residents concerning with needs and refugee record - Send information about rainfall level condition and water level that under CRITICAL condition to: <ol style="list-style-type: none"> 1. Security of PDP (Senawi) 2. Opsinder (Trianto) and vice Opsinder (Supianto) of Kahendran Plantation 3. Vice Head Dusun Pakis Utara (Supianto) 4. Head Dusun Cempoko (Sutrisno) 5. Head Desa Pakis (Zaini) - Controlling resident condition of plantation area and inform resident that CRITICAL condition and also EVACUATION should be already finish and be careful on the river water flow because rain goes heavier inserted with landslide. 	<ol style="list-style-type: none"> 1. Rainfall gauge  2. Evacuation Tool  Handphone HT 3. Speaker 
2.	Middlestream Area DAS Kalipakis (Dusun Pakis Utara)	1. Vice Head Dusun Pakis Utara (Supianto)	<ul style="list-style-type: none"> - Make coordination with Plantation 	<ul style="list-style-type: none"> - Make coordination with Kahendran Plantation (Mr. 	<ol style="list-style-type: none"> 2. Communication tool

			<ul style="list-style-type: none"> - Make coordination with other stakeholders that evacuation should be finished. 	<p>Satuman) about rainfall level water level and recent landslide.</p> <ul style="list-style-type: none"> - Instruct resident of Dusun Pakis Utara to conduct EVACUATION to provided place. - Make coordination with: <ol style="list-style-type: none"> 1. Head LMDH (Hartono) 2. Head RT 08(Samsul) and 3. RT 09 (Romli) That it is already CRITICAL condition and still help resident in conducting EVACUATION and reminding each other that rainfall condition and water level is on level four and inform resident that EVACUATION PROCESS should be finished. - Report to Head Desa Pakis (Zaini) about resident evacuation condition 	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Handphone HT</p> </div> <div style="text-align: center;"> <p>2. Speaker</p>  <p>Evacuation Tool:</p>  <p>a. Palankeen</p>  <p>b. Tent</p>  <p>c. Loader Vehicle</p> </div> </div>
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					<p>Evacuation site:</p> 
3.	Downstream Area of DAS Kalipakis (Dusun Cempoko)	2. Head Dusun Cempoko (Sutrisno)	<ul style="list-style-type: none"> - Make coordination with plantation - Check water level gauge in dam cempoko of Kali pakis river. - Make coordination with other stakeholders that evacuation should be finished. 	<ul style="list-style-type: none"> - Make coordination with kahendran Plantation (Mr. Satuman) about rainfall level, water level and recent landslide. - Check river water level in water level gauge at dam cempoko and inform to Head desa Pakis (Zaini) - Instruct resident of Dusun Cempoko to conduct EVACUATION to the provided place. - Make coordination with: <ol style="list-style-type: none"> 1. Head RT 02 (Senimin) 2. Head RT 03 (Husaeri) 3. Head RW 06 (Ato) 4. Head RT 07 (Zainudin) 5. Head RT 09 (Slamet) 6. Head RT 10 (Rahman) That it is CRITICAL condition and help EVACUATION and reminding each other that rainfall condition and water level is on level four and inform to resident that EVACUATION should be finished. 	<p>1. Water level gauge</p>  <p>2. Communication Tool</p>  <p>Handphone HT</p> <p>3. Speaker</p>  <p>4. Evacuation Tool:</p>  <p>a. Palankeen</p>

				<ul style="list-style-type: none"> - Instruct to caretaker of mosque (Mahrus) to widespread information that it is on CRITICAL status to the residents by using speaker and evacuation should be finished. - Report to Head Desa Pakis (Zaini) about resident evacuation condition 	 <p>b. Tent</p>  <p>c. Loader Vehicle</p> <p>5. Evacuation site:</p> 
4.	Desa Pakis	Head Desa Pakis (Zaini)	<ul style="list-style-type: none"> - Make coordination with plantation. - Check rain gauge in desa Pakis office - Instruct Task Force to help resident in conducting evacuation and instruct that evacuation should be finished. - Make coordination with other stakeholders 	<ul style="list-style-type: none"> - Stay in the evacuation site and keep making coordination with Kahendran plantation about rainfall level, water level and recent landslide condition. - Record incoming information from upstream area, middlestream area and downstream area. - Check rainfall condition and compare rainfall of upstream and downstream in the rain gauge at desa Pakis office - Instruct task force at village level 	<p>1. Communication Tool</p>  <p>Handphone HT</p>

				<p>secretary of village (A. Wahid) and treasurer of village (Agus) that it is on CRITICAL condition and still help resident in conducting EVACUATION and reminding each other that rainfall and water level is on level four and inform that EVACUATION process should be finished.</p> <ul style="list-style-type: none"> - Reporting that evacuation process should be finished to: <ul style="list-style-type: none"> a. Kecamatan Panti (Camat Panti/Yahya) b. Satlak Kabupaten (Heri/Bakesbang) 	
5.	Kecamatan Panti	3. Camat Panti (Drs. Yahya I.)	<ul style="list-style-type: none"> - Help in conducting resident evacuation and instruct that evacuation should be already finished. - Reporting recent condition to Satlak Kabupaten. 	<ul style="list-style-type: none"> - Together with Kecamatan Leader (Muspika) Kecamatan Panti helping the evacuation by using facilities such as car, palankeen, etc, and inform that evacuation should be finished. - Make coordination with Head desa Pakis (Zaini) about resident evacuation. - Reporting recent condition (rainfall level and water level on level 4) and also about refugee condition in Kahendran Plantation and Desa klungkung to Satlak Kabupaten (Hery Setiawan- Bakesbang). 	 <p>Handphone HT</p> <p>Evacuation tool:</p>  <p>a. Palankeen</p>  <p>b. Tent</p>




					 <p>c. Loader vehicle</p>
6.	Kabupaten Jember	<p>Satlak PB: 1. Bakesbangpol Linmas/ Satlak PBP (Heri Setiawan)</p>	<ul style="list-style-type: none"> - Make coordination with plantation about recent weather condition. - Help resident in conducting evacuation. - Reporting recent condition. 	<ul style="list-style-type: none"> - Together with Kabupaten leaders (Muspida) to help evacuation by using facilities such as car, palankeen, etc to prepare help during evacuation process. - Make coordination with Head Desa Pakis (Zaini) and Kecamatan Panti (Yahya) about resident evacuation (Location, number, needs). - Reporting recent condition (rainfall level and water level on level 4) as well as about refugee condition in Desa Pakis to Bupati Jember. 	 <p>Handphone HT</p> <p>Evacuation tool:</p>  <p>a. Palankeen</p>  <p>b. Tent</p>  <p>c. Loader vehicle</p>







Consition of Danger (Condition 6)






Rainfall Level : 5 (150 mm/hour)





Water Level : 5 (180 cm)



Status : Danger

No	Location	Stakeholder	Activity	Mechanism	Equipment
1.	Upstream Area of DAS Kalipakis (Kahendran Plantation)	1. Head RT 09 (Satuman) Others : 1. Opsinder of Kahendran Plantation (Trianto) 2. Vice Opsinder Kahendran Plantation (Supandi) 3. Security Kahendran Plantation (Senawi)	<ul style="list-style-type: none"> - Stay in the evacuation site (under evacuation) - Monitor recent weather condition if still possible. - Give information that rainfall condition and water level is on status of DANGER. - Give information to resident that evacuation process is finished. 	<ul style="list-style-type: none"> - Stay in the evacuation site (under evacuation) by coordinating refugee of plantation area concerning with needs and list of refugee - Send information and make coordination about rainfall level condition, water level on level 5 that means DANGER condition to: <ol style="list-style-type: none"> 1. Security of PDP (Senawi) 2. Opsinder (Trianto) and vice Opsinder (Supianto) of Kahendran Plantation 3. Vice Head Dusun Pakis Utara (Supianto) 4. Head Dusun Cempoko (Sutrisno) 5. Head Desa Pakis (Zaini) - Inform resident that it is on DANGER condition and EVACUATION should be already finished, keep staying in the evacuation site and be aware to river water flow line because rainfall becomes heavier inserted with landslide. 	4. Rainfall gauge  5. Communication Tool  Handphone HT 6. Speaker 

<p>2.</p>	<p>Middlestream Area DAS Kalipakis (Dusun Pakis Utara)</p>	<p>1. Vice Head Dusun Pakis Utara (Supianto)</p>	<ul style="list-style-type: none"> - Make coordination with Plantation. - Make coordination with other stakeholders that evacuation should be finished. 	<ul style="list-style-type: none"> - Make coordination with Kahendran Plantation (Mr. Satuman) about rainfall level water level and recent landslide. - Instruct resident of Dusun Pakis Utara that condition is DANGER and still help resident in EVACUATION site, keep staying in evacuation site and reminding each other that rainfall and water level reaches level five and inform resident that EVACUATION process should be finished. - Make coordination with: <ol style="list-style-type: none"> 1. Head LMDH (Hartono) 2. Head RT 08(Samsul) and 3. RT 09 (Romli) About rainfall level and and water level that on level five and inform resident that EVACUATION process should be finished. - Report to Head Desa Pakis (Zaini) about resident evacuation condition 	<p>3. Communication tool</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Handphone HT</p> <p>2. Speaker</p>  <p>Evacuation tool:</p>  <p>a. Palankeen</p>  <p>b. Tent</p>  <p>c. Loader Vehicle</p>
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					Evacuation site: 
3.	Downstream Area of DAS Kalipakis (Dusun Cempoko)	1. Head Dusun Cempoko (Sutrisno)	<ul style="list-style-type: none"> - Stay in the evacuation site - Make coordination with plantation - Help resident in conducting evacuation and the evacuation should be finished. - Make coordination with other stakeholders. 	<ul style="list-style-type: none"> - Make coordination with Kahendran plantation (Mr. Satuman) about rainfall level, water level and recent landslide occurrence. - Instruct resident of Dusun Pakis Utara that it is DANGER condition and still help resident in the EVACUATION site, keep staying in the evacuation site and reminding each other that rainfall and water level is on level five and inform to residents that evacuation process should be finish. - Make coordination with: <ol style="list-style-type: none"> 1. Head RT 02 (Senimin) 2. Head RT 03 (Husaeri) 3. Head RW 06 (Atro) 4. Head RT 07 (Zainudin) 5. Head RT 09 (Slamet) 6. Head RT 10 (Rahman) About rainfall level and water level that on level five and inform residents that EVACUATION process should 	<p>1. Water level gauge</p>  <p>2. Communication tool</p>  <p>Handphone HT</p> <p>3. Speaker</p>  <p>4. Evacuation tool:</p>  <p>a. Palankeen</p>

				<p>be already finish.</p> <ul style="list-style-type: none"> – Instruct to caretaker of mosque (Mahrus) to widespread information that it is on DANGER status to the resident thorough speaker and that evacuation should be already finish. – Report to Head Desa Pakis (Zaini) about resident evacuation condition 	 <p>b. Tent</p>  <p>c. Loader Vehicle</p> <p>5. Evacuation site:</p> 
4.	Desa Pakis	Head Desa Pakis (Zaini)	<ul style="list-style-type: none"> – Make coordination with plantation – Instruct task force to help resident in conducting evacuation and instruct that evacuation should be finished. – Make coordination with other stakeholders 	<ul style="list-style-type: none"> – In the evacuation site and make coordination with Kahendran Plantation about rainfall level, water level and recent landslide occurrence. – Instruct task force at village level secretary of village (A. Wahid) and treasurer of village (Agus) that it is on DANGER condition and still help resident in conducting EVACUATION and reminding each other that rainfall rainfall and water level is on level five and inform that EVACUATION process should be finished. 	<p>1. Communication tool</p>  <p>Handphone HT</p>

				<ul style="list-style-type: none"> – Reporting that EVACUATION process should be finished to: <ul style="list-style-type: none"> c. Kecamatan Panti (Camat Panti/Yahya) d. Satlak Kabupaten (Heri/Bakesbang) 	
5.	Kecamatan Panti	4. Camat Panti (Drs. Yahya I.)	<ul style="list-style-type: none"> – Help resident evacuation and instruct that evacuation should be finish. – Reporting recent condition to Satlak Kabupaten. 	<ul style="list-style-type: none"> – Together with Kecamatan Leader (Muspika) Kecamatan Panti help the evacuation by using facilities such as car, palankeen, etc and inform that evacuation should be finished. – Make coordination with desa Pakis (Zaini) about resident evacuation. – Reporting recent condition (rainfall level and water level is on level 5) and also refugee condition in Kahendran plantation as well as in Desa Klungkung to Satlak Kabupaten (Hery Setiawan- Bakesbang). 	 <p>Handphone HT</p>
6.	Kabupaten Jember	Satlak PB: 1. Bakesbangpol Linmas/ Satlak PBP (Heri Setiawan)	<ul style="list-style-type: none"> – Make coordination with plantation about recent weather condition. – Helping resident in conducting evacuation. – Reporting recent condition. 	<ul style="list-style-type: none"> – Deploying additional other Satlak member if needed to help the refugee during the evacuation process (Social Agency, PMI, PU Pengairan, Resort Police, District Military) such as for location security, emergency kitchen, etc. – Keep making coordination with Head Desa Pakis (Zaini) and about rainfall condition, water 	 <p>Handphone HT</p>

				<p>level and recent landslide occurrence.</p> <ul style="list-style-type: none"> - Make coordination with all Satlak member: <ul style="list-style-type: none"> a. District Military b. Resort Police, c. PU Pengairan Agency, d. Social Agency e. PMI f. Kecamatan Panti and give information that Kahendran Plantation is heavy rain, rainfall and water level is on level 5 and instruct to help resident at the evacuation site, meanwhile rain goes heavier and condition is DANGER. - Using existing equipments and evacuation (car, evacuation site, evacuation tent, etc) to evacuate the resident. - Require the residents to keep staying in the evacuation site because it is still under danger condition. - Take over command into centralized command at the evacuation site, conduct disaster site survey and make sure that condition is safe for resident to return home into residential area. 	
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Basic activity in SOP based on TTE result can be concluded into 4 conditions, namely; (1) normal condition; (2) rainfall and banjir bandang condition; (3) evacuation condition; and (4) condition of post banjir bandang or back to normal. In detail is as follow:

1. Normal Condition

No	Stakeholder	Activity
1.	Satlak Kabupaten (Bakesbang, Resort Police, Distrcit Military, Public Relation office, Irrigation Agency, Health Agency)	<ul style="list-style-type: none"> - Conduct socialization about content of disaster regulation. - Complete the facilities provision concerning with banjir bandang disaster countermeasure. - Conduct simulation activity of early warning system to community.
2.	Kecamatan Leader /Muspika (Kecamatan, Sector Police, Rayon Military)	<ul style="list-style-type: none"> - Participate in the activity of satlak kabupaten, such as simulation of disaster countermeasure. - Make coordination with Satlak Kabupaten in Disaster Countermeasure - Make cooperation among Kecamatan leader (Muspika) and give instruction to village.
3.	Head Dusun middlestream area (Pakis Utara, Portal area and LMDH)	<ul style="list-style-type: none"> - Together with community creating early warning system for banjir bandang consisting of: creation of disaster hazard map, evacuation path and evacuation site determination. - Make equipments that will be used for early warning system such as kentongan, speaker and other communication tool. . - Participate in disaster activity with Satlak Kabupaten in each village level. - Make habit of communication among community in upstream and downstream concerning with climate condition and weather condition.
4.	Head Dusun Downstream area (Dusun Cempoko, Kemundung)	<ul style="list-style-type: none"> - Together with community creating early warning system for banjir bandang consisting of: creation of disaster hazard map, evacuation path and evacuation site determination. - Create equipments that will be used for early warning system such as kentongan, speaker and other communication tool. - Participate in disaster activity with Satlak Kabupaten in each village level. - Make habit of communication among community in upstream and downstream concerning with climate condition and weather condition.

2. Condition of Rainfall and Banjir Bandang

No	Stakeholders	Activity
1.	Upstream Community (Mr.Satuman Head RT 09 and administrator of PDP Afdeling Kahendran)	<ul style="list-style-type: none"> - Give information periodically about rainfall condition in upstream to resident in middlestream area and downstream area that rainfall level in upstream has entered level 3 - Make coordination with Mr. Supiyanto and Hartono (LMDH) in middlestream area and downstream area (Head Desa Pakis and Head Dusun) and inform as well as expecting for preparation of evacuation. - Head Dusun Cempoko and Head Dusun Kemundungan : Receive information from Mr. Satuman directly or from head desa and inform to residents through Head RT to make preparation of evacuation as also determining safe evacuation site - Reminding resident to gather important document, diploma, etc to be carried into evacuation site
2.	Satlak Kabupaten (Bakesbang, PMI, Resort Police, Distrcit Military, Public Relation office, Irrigation Agency, Health Agency)	<ul style="list-style-type: none"> - Make coordination among Satlak member in Kabupaten while waiting for further information from Head Desa Pakis - Condition of 1 am morning, then evacuation will be prioritized on supply of instant food. - PMI will help victim. - PU irrigation will prepare heavy equipment to handle landslide and flow line change, if it is necessary, PU will prepare gabion. - Satlak aids in 1 am early morning time will be not so optimum, therefore first priority is on food preparing supply.
3.	Kecamatan Leader /Muspika (Kecamatan, Sector Police, Rayon Military)	<ul style="list-style-type: none"> - Kecamatan Panti: After receiving information then the report is continued to superior in Kecamatan, Rayon Military Command and Kabupaten level. - For babinsa (Rayon Military) and Resort Police, they will come to the site and report the recent condition to the superior commander. - Sector Police commander and Rayon Military Command check preparedness of personnel.
4.	Head Dusun middlestream area (Pakis Utara, Portal area and LMDH)	<ul style="list-style-type: none"> - Together with resident make early warning system for banjir bandang disaster that consist of: determination of disaster hazard area, evacuation path and evacuation site determination. - Make equipments that will be used for early warning system such as kentongan, speaker and other communication tool. - Inform resident through loud speaker in the mosque and ask resident to stay away from river
5.	Head Dusun Downstream area (Dusun Cempoko, Kemundung)	<ul style="list-style-type: none"> - Together with community creating early warning system for banjir bandang consisting of: creation of disaster hazard map, evacuation path and evacuation site determination. - Create equipments that will be used for early warning system such as kentongan, speaker and other communication tool.

3. Evacuation Condition

No	(Stakeholder)	Activity
1.	Upstream Community (Mr.Satuman Head RT 09 and administrator of PDP Afdeling Kahendran)	<ul style="list-style-type: none"> - Monitor the condition and make sure that there is no resident still stay at home and all have been evacuated. - Make coordination with RT to prepare emergency kitchen. - Make coordination with Head Desa Pakis about recent condition
2.	Satlak Kabupaten (Bakesbang, PMI, Resort Police, Distrcit Military, Public Relation office, Irrigation Agency, Health Agency)	<ul style="list-style-type: none"> - Make coordination among Satlak member - Make coordination with Resort Police, Civil Police and Rayon Military Command to prepare for personnel. - Condition is at 1 am, then evacuation of Satlak will be prioritized on supply of instant food. - PMI will help victim, PU irrigation will prepare heavy equipments to handle landslide and flow line change, if necessary PU will prepare gabions.
3.	Kecamatan Leader /Muspika (Kecamatan, Sector Police, Rayon Military)	<ul style="list-style-type: none"> - Together with Satlak member helping evacuation of residents. - Make sure that all residents in disaster hazard area have been totally evacuated - Help Desa Pakis in preparing emergency kitchen as well as mergency medical treatment
4.	Head Desa Pakis	<ul style="list-style-type: none"> - Head desa will give instruction to village officers such as Head RT, RW and Public Protection officer to record list of victim in the evacuation site. - Instruct head dusun to distribute logostic. Each Head RT in upstream and downstream will be responsible for each evacuation site. Public Protection officer will check houses of residents security.
5.	Head Dusun middlestream area (Mr.Supiyanto) middlestream area (Pakis Utara and Portal area)	<ul style="list-style-type: none"> - Go to Mr.Hartono (LMDH) to inform progress of condition that evacuation should be started for middlestream area. - Inform resident through loudspeaker in mosque and ask resident to stay away from river and go into determined evacuation site.
6.	Head Dusun downstream area (Dusun Cempoko, Kemundung)	<ul style="list-style-type: none"> - Conduct evacuation site of resident in hazard area (near river flow area) - Evacuate livestock - Make coordination with Head Desa Pakis to prepare emergency kitchen and health service.

4. Condition of Post Flood or Back to Normal Condition

No	(Stakeholder)	Activity
1.	Informant (Plantation)	<ul style="list-style-type: none"> - Inform that condition in afdeling Kahendran (upstream) has been stopped and river flow line also decrease by using handphone or HT to Satlak Kabupaten, Kecamatan Panti, Head Desa Pakis, Head Dusun Cempoko, Head Dusun Kemundung. - Evacuation is finish and make list of victim. - Report Head Desa about condition in the evacuation site. - Require aid distribution to refugee especially for instant food and medicines.
2.	Satlak Kabupaten (Bakesbang, PMI, Resort Police, Distrcit Military, Public Relation office, Irrigation Agency, Health Agency)	<ul style="list-style-type: none"> - Conduct emergency reparation, make coordination among Satlak member and together with Bakesbang conduct survey - Kecamatan : Babinsa will help for together with community in the location.
3.	Kecamatan Leader /Muspika (Kecamatan, Sector Police, Rayon Military)	<ul style="list-style-type: none"> - Make list of victim in the evacuation site. - Take responsibility for supervision of aids distribution - Make emergency reparation, make coordination among Satlak and together with bakesbang conduct survey - Kecamatan: Babinsa (military at village level) will help cleaning together with community in the location.
4.	Head Desa Pakis	<ul style="list-style-type: none"> - Head Desa stated to take command to lead on village officers such as Head RT, RW and Public protection officers to enter disaster area and start cleaning. Aids start to be received and there is distribution on victim as well as refugee. - Make inventory of material loss and dead victim during banjir banjir bandang occurrence - Together with Rayon Military command and Public protection officer conduct cleaning.
5.	Head Dusun middlestream area (Mr.Supiyanto) middlestream area (Portal area)	<ul style="list-style-type: none"> - Make inventory list of victim. - Reporting head desa about condition in the evacuation site. - Require aid distribution to the refugee especially instant food and medicines.
6.	Head Dusun Downstream area (Dusun Cempoko, Kemundung, and Pakis Utara)	<ul style="list-style-type: none"> - Make inventory list of victim. - Reporting to Head Desa about condition in the evacuation site. - Require aid distribution to the refugee especially for instant food and medicines.

IV. CLOSING

4.1 Conclusion

Activity of *Table Top Exercise (TTE)* about early warning system for banjir bandang has resulted *Draft Standard Operating Procedures (SOP)* of Early Warning System for Banjir Bandang in Desa Pakis. This draft consist of scheme of general SOP, scheme of upstream SOP, scheme of downstream, and scheme of SOP Satlak PBP. The scheme is then explained into tables that consist of SOP location, stakeholder of activity should be done through activity mechanism and equipments needed in each condition.

4.2 Recommendation

Draft Standard Operating Procedures (SOP) for Early Warning System for Banjir Bandang in Desa Pakis above need to be followed up and make it as Book of *Standard Operating Procedures (SOP)* Early Warning System for Banjir Bandang in DAS Kalipakis. This book is expected to be used as hand-book at DAS area in anticipating and countermeasuring banjir bandang disaster.

APPENDIX

Schedule of Activity

Day/Date	Time	Agenda	Venue	Note
Sunday, 18-09- 2011	07.30- 08.00	Registration	Village Office Hall of Pakis Kec. Pantj	YPM
	08.00 – 08.15	Introduction of FGD	Explain general overview of Site Watching result	YPM
	08.15- 10.45	Continuation of FGD	Village Office Hall of Pakis Kec. Pantj	-Make solution for root problem of first day solving -Determination of evacuation site
	10.45- 11.00	Introduction of TTE	Brief Explanation about TTE and scenario	YPM
	11.00- 12.00	Table Top Exercise	Village Office Hall of Pakis Kec. Pantj	Rehearsal of Simulation
	12.00- 13.00	BREAK	Village Office Hall of Pakis Kec. Pantj	Pray and Lunch
	13.00- 13.15	Brief introduction of Before Table Top Exercise	Village Office Hall of Pakis Kec. Pantj	JICA Expert and Short Term Expert JICA
	13.00- 15.00	Table Top Exercise	Village Office Hall of Pakis Kec. Pantj	Simulation
	15.00- 15.30	Comment of the process for simulation activity	Village Office Hall of Pakis Kec. Pantj	Short Term Expert JICA
	15.30- 15.45	Closing	Village Office Hall of Pakis Kec. Pantj	YPM



ATTENDEE LIST
FOCUS GROUP DISCUSSION AND TABLE TOP EXERCISE
EARLY WARNING SYSTEM FOR BANJIR BANDANG DESA PAKIS KECAMATAN PANTI
YEAR OF 2011



Purpose : Table Top Exercise
Day/date : Sunday, 18 September 2011
Time : 08.00 – 16.30 WIB
Place : Desa Pakis Office of Kecamatan Panti Kabupaten Jember

No.	Name	Position	Institution/Address
1.	Sa'i	Head RT	Desa Pakis
2.	Mistiyono	Officer	Pertelon Pakis
3.	Umar	Public welfare section	Dusun Tajek
4.	Sugito	Kasun	Kemundungan
5.	Musawir	Head section	Pakis Utara
6.	Mulyadi	Officer	Dusun Tajek
7.	Makrus	Babinsa	Koramil
8.	Abd.Haris	Desa Consultative Board (BPD) staff	Desa Pakis
9.	Sutrisno	Head Dusun	Dusun Cempaka
10.	Satuman	Employee	Afdeling Kahendran
11.	Senawi	Employee	Afdeling Kahendran
12.	P. Imam Wahyudi	Head RT	Dusun Cempaka
13.	Supianto	Vice Head Dusun	Dusun Pakis Utara
14.	Selamet	Head RT	Dusun Kemundungan
15.	P. Sarapah	Head Farmers Group	Dusun Cempaka
16.	Iwan	Head Dusun	Dusun Pakis Utara
17.	Hartono	Head LMDH	Desa Pakis
18.	P. Fitria	Farmer	Dusun Cempaka
19.	P. Mahrus	Resident	Dusun Cempaka
20.	Sujarwo	Head section of security	Dusun Pertelon Pakis
21.	Zaini	Head Desa	Desa Pakis
22.	Didik Kuswinardi	Head section of technical planning	Public Work Irrigation Agency Jember
23.	Haris	Head block	Pertelon Pakis
24.	Diah Puspaningrum	member	YPM



ATTENDEE LIST
FOCUS GROUP DISCUSSION AND TABLE TOP EXERCISE
EARLY WARNING SYSTEM FOR BANJIR BANDANG DESA PAKIS KECAMATAN PANTI
YEAR OF 2011



Purpose : *Table Top Exercise*
Day/date : *Sunday, 18 September 2011*
Time : *08.00 – 16.30 WIB*
Place : *Desa Pakis Office of Kecamatan Panti Kabupaten Jember*

No.	Nama	Jabatan	Instansi / Alamat
25.	Ebban Bagus Kuntadi	Anggota	YPM
26.	Sunarsih	Head section of public affair	Desa Pakis
27.	Sani	Resident	Desa Pakis
28.	Sapiyatun Umar	Resident	Desa Pakis
29.	Hamami	Resident	Desa Pakis
30.	Yuliatin	Resident	Desa Pakis
31.	Mahbubah	Resident	Desa Pakis
32.	Nur Asiseh	Wife of secretary head village	Pakis
33.	Ulfiah	Resident	Desa Pakis
34.	Elvira	Wife of head village	Desa Pakis
35.	Djoko Soejono	Member	YPM
36.	Indah Ibanah	Member	YPM
37.	Subhan Arif Budiman	Member	YPM
38.	Aryo Fajar	Member	YPM
39.	Rokhani	Member	YPM
40.	M. Rondhi	Member	YPM

Documentation



Facilitator is leading TTE activity



Participant is joining TTE activity



Evaluation of activity by Mr. Uchida (JICA expert)



Evaluation of activity by Mr. Kinoshita (JICA expert)