Working With Community:
Good Practices Community Based Disaster Risk Reduction
Disasters that hit many regions in Indonesia have caused extraordinary human and economic losses. Nevertheless, community is the first to receive the direct impact of disaster, during and after disaster event. Disasters reduce community capabilities, particularly the poor and marginalized group, including the sector of education. On the other hand, government and regional government in particular which are directly obliged to protect its citizens (including from disaster risk) in many cases fails to carry out its mandate.

Learning from the experience of the disaster earthquake in Yogyakarta and Central Java in 2006, it appears that the provincial, district, up to the village government level in both provinces do not have sufficient capacity to manage emergency response during disasters and support the recovery process as well. In dealing with disaster events such as earthquake, mount Merapi eruption, flood, landslide and other disaster-prone conditions that exist in each region, the mitigation and preparedness efforts are still limited. Hence, systematic efforts for disaster risk reduction at all levels need to be implemented with responsibility so that devastating impact of disasters can be minimized.

Learning on the experience of the impact of disasters in Yogyakarta and Central Java has encouraged the implementation of the Community-Based Disaster Risk Reduction program (PRBBK) supported by SC-DRR-UNDP in 2 villages in Yogyakarta and 2 villages in
Central Java Province, as well as the School-Based Disaster Risk Reduction (PRBBS) program supported by Plan Indonesia in 5 primary schools and 1 Madrasa Ibtida’iyah in Bantul District. The program’s objectives are to achieve a resilient and responsive toward disasters community, including school community, which is done through the integration of DRR into the planning system that already exists in the village and school practiced in regularity.

This is a summary of lessons learned obtained by Perkumpulan Lingkar during the implementation of PRBBK program in two provinces, Yogyakarta and Central Java and the implementation of PRBBS program in 6 Elementary Schools in Bantul District, Yogyakarta.

Perkumpulan Lingkar would like to express our gratitude to all partners, particularly to the communities in Gunung Kidul, Cilacap, and Bantul districts that has contributed to the publication of this book.

Yogyakarta, October 2012

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RESILIENT VILLAGE INITIATION PRACTICES:
Perkumpulan Lingkar’s Experience In Yogyakarta Special Province And Central Java Province

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Abstract

Disaster-exposed community is the key actors in disaster management as the knowledge, skills, and wisdom is based on their experience; they also have resources ready to be mobilized in order to manage disaster risks. Community initiatives should gain a position in disaster management, hence the goal of Community-Based Disaster Risk Management (Pengelolaan Risiko Bencana Berbasis Komunitas/PRBBK) is to enable community of managing risks and protecting livelihood assets from disaster impact in order to meet their basic needs which is done with maximum internal input and minimum external input, and at the same time enhancing their institutional capacity and maintain cross-sectors cooperation.

The initial activity of CBDRM/Resilient Village program is developing relationships with village community which is followed by disaster risk identification and analysis within the local area. The next is to develop plans of activities of reducing hazard and vulnerability, and building capacity. The role of community during this stage are: 1) developing village Disaster Management Plan; and 2) formulating Community Action Plan; 3) developing Contingency Plan; 4) establishing the action team for each activities and to
mobilize community resources; 5) endorse the integration of DRR within the village development planning; 6) implement DRR initiatives; and also 7) conduct monitoring and evaluation on the implementation of DRR activities, of which are done on fixed coordination and cooperation with the village government.

To ensure its effectiveness, strategies used are: Gender mainstreaming; Capacity Building; Sustainable Livelihood; Sustainable Development; Participatory Disaster Risk Analysis; Integrating DRR into Development Planning, and Program Sustainability and Institutionalization. The CB-DRR practices integrated into village development planning are the general characteristics of Resilient Village, which is indicated by: 1) the participatory process of identifying local risks, potential and problems; 2) communities are the key actors in disaster risk management within the region. The process of planning, implementing, monitoring and evaluation to manage risk is done through participatory approach; 3) community resource mobilization to support DRR practices, such as the DRR platform, village budget allocation, self-supporting in the form of energy, time, and material; 4) the integration of DRR initiatives into village development planning and sectors policies in which a multi-disciplinary, cross-cutting, and multi-hazard as the program scheme of intervention; and 5) media knowledge sharing, from the community to outsiders and inter-community, and vice versa.

Resilient community is a system with the ability to reduce, manage, and mitigate possible disaster impact, which is able to bounce back and reach new equilibrium to restore functions and structures using their own resources, and ensure the sustainability of the newly restored functions and structures. External initiation is positioned in such way so that the grass-root community can optimally use their own resources to manage local risks, while reducing external interventions.

Keywords resilient, mainstreaming, assets mobilization, disaster risk management.
INTRODUCTION

Disaster management paradigm nowadays has shifted from emergency response paradigm to mitigation/preventive and development paradigm, because every actions in all disaster management phases, such as prevention, mitigation, rehabilitation, and reconstruction, has been integrated into various development programs. From current paradigm, disaster risk reduction is an integrated, cross-sectoral and cross regional plan comprised of social, economic and environment aspects. The implementation of disaster risk reduction in national level, synchronized with those on regional and international level, put people as its subject and focal target. DRR initiatives strive to reduce disaster risks, while not forgetting local wisdom and traditional knowledge of the community.

As the subject, community is expected to actively access information sources, both formal and informal, so they can be directly involved in disaster risk reduction efforts. In DRR context, the responsibility of the government is to provide facilities, infrastructure and resources to support DRR efforts. Nevertheless, to support and strengthen local carrying capacity, DRR efforts shall use and empower local resources whenever possible, includes but not limited to fund, natural resources, skill, and economic and social processes within the community (Lingkar, 2010).

Three important points of paradigm shift are: 1) disaster management should not be focused on emergency response, but the entire risk management; 2) government should provide its citizen protection from disaster not because it is government’s responsibility, but because protection from disaster is a basic human rights; and 3) disaster management is everybody’s business: government, people and private sectors, with the government primarily responsible to coordinate DRR initiatives.

Community initiative is considered effective in reducing disaster risks, since it is the local community who knows and understands their own conditions and needs, and therefore able to use their own capacity to transform themselves and surrounding environment. Community is the main actor in obtaining information, analyzing, concluding, planning,
implementing, monitoring and evaluating activities to reduce their vulnerability and increase their capacity. Resilient Village initiative is designed to manifest a community who is able to manage risks and use their own resources optimally. Decentralization approach will ensure wider community participation opportunity in manifesting resilient village, interpreted here as a village community which is able to manage pressure or destructing forces (absorb, reduce, resist, divert, evade, adapt) and to maintain the structure and function of livelihood assets to recover after disaster.

Community-based disaster risk reduction approach is a framework to achieve a self-reliant community who are able to manage disaster risk using their own resources and to reduce external inputs. Beyond that, community is expected to be more resilient and able to bounce back after disaster. Activities in CBDRR includes hazard-vulnerability-capacity-risk analysis, DRR integration into development program, initiation of village DRR forum, disaster management planning, community DRR actions, and DRR institutionalization in existing system and mechanism.

In specific, the objective of CBDRR program is to protect vulnerable community and their livelihood assets from disaster impact, all the while increasing their organizational capacity and maintain cross-cutting partnership.

Resilient Village Initiative is implemented in four villages: Pengkok Village in Patuk Sub-district and Sampang Village in Gedangsari Sub-district, both in Gunungkidul District, Special Province Yogyakarta; and Negarajati Village in Cimanggu Sub-district and Panulisan Barat Village in Dayeuhluhur Sub-district, both in Cilacap District, Central Java Province. Disasters in those villages took lives, destroyed village infrastructures and disrupted livelihood. From previous disaster events, communities learn to reduce disaster risks by increasing their capacity and to organizing themselves.

INTEGRATION INTO DEVELOPMENT

The integration of disaster risk reduction measures into development programs is important to increase community safety and resilience. Development programs that ignore disaster risks can increase vulnerability and
causing disaster. On the other hand, disaster can destroy years of development programming and waste resources. Disaster will likely consume resources that otherwise can be used to improve public welfare. Disaster risk reduction efforts begin by shifting disaster management paradigm from responsive-reactive to preventive-planned and integrated into development.

Relation between disaster and development indicates at least four basic themes (UNDP & UNDRO, 1992):

1. **Disasters set back development programming, destroying years of development initiatives.** For example, disaster destroys infrastructures and utility system.

2. **Rebuilding after a disaster provides significant opportunities to initiate new development programs.** For example, self-help housing program to rebuild housing destroyed by an earthquake teaches new skills; strengthens community pride and leadership; and retains development funds that otherwise would be given to large construction companies.

3. **Development programs can increase an area’s susceptibility to disasters.** For example, a major increase in livestock development leads to overgrazing, which contributes to desertification.

4. **Development programs can be designed to decrease the susceptibility to disasters and their negative consequences.** For example, housing and schools constructed under building codes designed to increase safety and to some extent withstand earthquake.

Moreover, community based disaster risk reduction, including multi-stakeholder partnership led by the government as duty bearer, is the key to ensure sustainable development and resilient community.

**RESILIENT VILLAGE GOAL**

Every citizen has the right to feel safe and be
protected by the government. In disaster context, disaster management effort is a part of government responsibility in providing protection and safety to the people, as stated on Law no 24/2007 on Disaster Management. Nevertheless, communities should also exert their own resources and work with other stakeholders to initiate disaster management. One manifestation of resource mobilization is community-based organization (CBO) in disaster management, where community members can actively involve in disaster management measures. Community as the main actor of disaster management should be more active and involves in decision making process related to disaster risk management. They should be involved in every process of disaster management programs, from analysis, identification, planning, implementation, monitoring and evaluation.

UNISDR (2004) defines resilience as “the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions”. The resilience of a community in respect to potential hazard events is determined by the degree to which the community has the necessary resources and is capable of organizing itself both prior to and during times of need.

The ability of community to manage their own risks is the goal of community-based disaster risk reduction. On the other word, community is the main actor in achieving disaster resilience. Commonly used definition to explain community resilience is community with the capacity to anticipate, reduce, or absorb potential stress or destructive forces through resistance or adaptation; capable to manage or maintain certain basic functions and structures during disastrous events; and capable to recover or ‘bounce back’ after disastrous event (John Twigg, 2009). Term ‘resilience’ itself is associated with spring force, and can be interpreted as bouncing back or jump back – means, the ability to return to previous condition (Paton, 2006).

In disaster-affected communities, resilience is associated with capacity to
return to normal condition prior to disaster, in social, economic and environmental terms. At community level, resilient community is an empowered community. They are able to manage their vulnerability and hazard with their own resources, and minimize their risks. Resilient community is able to physically adapt to disaster impacts to protect the environment and livelihood; to ensure economic and business certainty; to ensure administrative (including disaster management and social functions) and environmental sustainability.

One aspect of resilience is adaptive ability against hazards which highlights community ability to use personal and social capacity to manage needs and challenges, and to alter reality. Resilience put greater emphasis in what community can do for itself and in ways to strengthen their capacities, rather than focusing in their vulnerability or their needs in emergency situations. Capacity to adapt comprises of two elements. One, the existence of the resources required to facilitate coping with the disruptions and loss associated with hazard activity. Second, systems and competencies required by people and communities to coordinate and utilize these resources to confront challenging circumstances and to adapt to the hazard (Paton, 2008).

Community resilience or resistance implies to the ability to adapt and alter reality; and utilize new opportunities. In other words, people or community possess the capacity to adapt (Klein, Nicholls & Thomalla, 2003), and increase the capacity through learning (Paton, 2006). To obtain resilience, individuals, community or social institutions affected by disaster should be aware to develop and manage their resources.

‘Disaster-resilient community’ is an ideal. No community can ever be completely safe from natural and man-made hazards. It may be helpful to think of a disaster resilient or disaster-resistant community as ‘the safest possible community that we have the knowledge to design and build in a natural hazard context’, minimizing its vulnerability by maximizing the application of DRR measures. DRR is therefore the collection of actions, or processes, undertaken towards achieving resilience. (Geis DE, in John
Therefore, it can be concluded that resilient society/community is a system with the ability to reduce, manage, and mitigate possible disaster impact, which is able to bounce back and reach new equilibrium to restore functions and structures using their own resources, and ensure the sustainability of the newly restored functions and structures. External initiation is positioned in such way so that the grassroots community can optimally use their own resources to manage local risks, while reducing external interventions.

APPROACH AND STRATEGY

Village Resilient Program is implemented using community based disaster risk reduction (CBDRR) approach. CBDRR is a community development framework implemented by a community through hazard identification and management; reducing vulnerability; systematic and integrated resource management towards sustainable development; all while reducing risks without creating new dependences, to reach the overarching goal: a safer and resilient community.

Some assumptions behind the implementation of disaster risk reduction are: a) The most vulnerable group or community is the key/main actor in CBDRR; b) Community is the utmost authority in understanding local disaster; c) Local community has the chance to learn intensively about local challenge, threat, obstacle and weakness against disaster; d) Local resources should be sustainably refined and developed for disaster management (and development) purposes; e) CBDRR experience in one community can be modified, revised, and adapted to be implemented in other communities. Although vulnerable group is considered as the main actor, this does not means that vulnerable group is the only target group. When disaster strikes, other groups (non-vulnerable groups) should act as support groups for vulnerable groups.

Some important principles in the implementation of community-based disaster risk reduction are: 1) Meaningful participation – assuming participation of vulnerable groups: children, elderly, disabled, minority, etc.; 2) Bottom-up approach, not top-down. Community has access and control, which increase sense of belonging to
disaster management system that has been/is/will be built; 3) Thorough community participation in planning, implementing, monitoring and evaluating throughout the process; 4) Community controls DRR system, and not controlled by the system.

Various strategies are employed to ensure program success, i.e. gender mainstreaming; capacity building; sustainable livelihood; participatory disaster risk assessment; DRR integration into development planning; and institutionalization.

PROCESS AND IMPLEMENTATION

Participatory Hazard, Vulnerability and Capacity Analysis

This analysis is conducted to identify and analyze hazard, vulnerabilities, capacities and risks in the community. The result is community risks profiles, includes gender-based risks differentiation and women perspective on vulnerability and risks. Community risks profile will be used as the basis for the formulation of village development planning, disaster management plan, community action plan, and contingency plan. Moreover, by knowing their own risks, community shall be able to conduct disaster risk reduction efforts in their daily life.

Risk Management Analysis and Building Code Analysis

Risk Management Analysis is conducted to analyze disaster impact in livelihood sectors through damage and losses assessment. This activity is supplemented with adaptation strategy analysis to help the community safeguard their important livelihood assets and inspire them to adapt against disaster and climate change, as the groundwork strategy for sustainable livelihood.

Building Code analysis is conducted to review and analyze construction structure, especially public buildings. Using participatory approach, community knowledge is synchronized to government safety standards.

The result is a building code documents, contains hazard profile and its impact to buildings (houses and public facilities), disaster history, general requirements (location, administrative, access, social culture, material and construction, water and sanitation), and constructor. Building code document
provides recommendation and instructions for safer building constructions.

**DRR Mainstreaming Into Village Development**

Disaster risk reduction mainstreaming is an effort to put DRR as an integral part of sectoral policies and village development planning. Villages who do not have RPJMDes can directly insert DRR programs, both stand-alone programs and intersecting programs, into their RPJMDes draft. Those who already have, can revise or modify their RPJMDes.

The integration process is based on mechanism stated on Minister of Home Affairs Regulation no. 66/2007 on Village Development Planning. The process is divided into three phases. First Phase, Input Phase, is to analyse village problems and potentials using participatory rural assessment tools (transect, village sketch, seasonal calendar, and organizational diagram). The results are used to create village profile and disaster risk profiles, as the basis for DRR integration into village policy and development plans. Second Phase, Process Phase, consists of problems clustering and ranking, alternative actions analysis, and development program planning. After that, RPJMDes (Medium-term Village Development Plan) draft is formulated. Third phase is musrenbangdes, Village Development Planning Forum, to confirm RPJMDes draft, obtain inputs, and assign priority programs. Fourth phase is the final phase, where revised RPJMDes is ratified by Village Government and Village Representative Body.

DRR integrated village development planning is based on planning approach mentioned on Law no. 25 on National Development Planning System, i.e. political approach, technocratic approach, participatory approach, and bottom up-top down approach. The process applies some principles as follows: sustainable, holistic, learning and adaptive system, democratic and pluralistic.

This activity is accompanied by capacity building for village officials, as a means to establish DRR-integrated policies. Capacity building activities includes village profiles update, village development planning training, Village Regulation Drafting Training, and Village Governance Training. Facilitation to village development planning is also provided. Moreover, to
foster and enhance women participation in development process, public speaking training is provided for women.

DRR Action Planning

Following disaster risk assessment and priority identification, community formulates disaster management plan (RPB, Rencana Penanggulangan Bencana). The process begins with rembug warga (community discussion forum) to discuss and reach agreement on Village Resilient Road Map. The road map serves as the basis for the formulations of several documents, i.e. disaster management plan, community action plan, and contingency plan. A DRR Forum, comprises of multi-stakeholder representatives, is established to ensure the implementation of cross-cutting DRR efforts which accommodate common interest. Facilitation to encourage the process (planning, implementation, monitoring and evaluation) is conducted by community members. Through this participatory mechanism, community can learn how to manage their own risks.

Community Action

DRR Community Action (Rencana Aksi Komunitas, RAK) comprises of prevention, mitigation and preparedness programs. The implementation is lead by Village DRR Forum, to encourage maximum resources mobilization from the stakeholders such as community, district government, vertical institutions, village government, and private sectors. Examples of RAK activities are:

Prevention

Activities to reduce or prevent hazard, such as:

- Dam construction
- Land rehabilitation, especially on landslide prone area (reforestation, terracing)
- Fogging to prevent dengue fever.

Land rehabilitation is focused in landslide point within forest production area, which is under the management of Perhutani RPH Cimanggu BKPH Majenang. Negarajati Village DRR Forum urges Perhutani to fulfill its responsibility and reduce landslide risk through reforestation and terracing. They also urge Perhutani to convert forest status into protected forest, especially areas prone to landslide and near the settlements. DRR Forum also asks for Perhutani involvement in DRR activities,
especially in early warning mechanism.

Mitigation

Mitigation is activities to reduce disaster risk through physical development and raising awareness and capacity building against disaster. For example:

- Ratification of Disaster Management Plan and Community Action Plan through Village Regulation (Perdes, Peraturan Desa)
- Forest Protection Area establishment, to support land and water conservation.
- Restoration and construction of clean water installations and rainwater tanks.
- Creates hazard map and evacuation map; and install evacuation signs.
- Dissemination of safer building knowledge for families
- Establishment of community nursery.
- Development of household-scale business.
- Skill improvement on harvest processing.

Preparedness

Preparedness is programs and activities to anticipate possibilities of disaster, to avoid casualties, material damages and disruption to society. For example:

- Establishment of Community Radio in Pengkok Village (DeTa FM)
- Establishment of hazard observation post for flood and landslide.
- Early warning system installation (extensometer).
- Contingency plan.
- Simulation/technical exercise for landslides and flood.
- Trainings on SAR, evacuation and camp management.
- Provide emergency equipment: tents, HT, kitchen kit, generator set, P3K kit, evacuation equipments.
- Ready-to-use fund for emergency situation, managed by cooperative.

DRR Organization Initiation in Village Level

One reason for the initiation of DRR organization in village level is to prepare community against disaster, and in long term, to make them more resilient. Community organizing method is employed to establish organization vision, goal, structure, tasks division and
commitment, while mobilize resources. On the other hand, to build an organization capable to manage disaster risks, structured and programmed capacity building is necessary. Trainings provided for village level DRR organization consists of DRR subjects (risks analysis, emergency response, sustainable livelihood, advocacy) and organization management (leadership, planning, negotiation, resources mobilization, budgetting and financial management, proposal drafting and reporting, facilitation techniques, and documentation).

Local DRR organization is the manifestation of community participation in disaster risk management, as well as a coordinated, organized and systematic effort to institutionalize DRR into community structure. Local DRR organization also serves as government partner in conducting disaster risk reduction efforts during normal times (pre-disaster phase). During and after disaster, DRR organization becomes government partner in planning, implementing, monitoring and evaluating emergency response and recovery activities. In other words, community organization is the leading sector in mobilizing community resources in conducting hazard mitigation, vulnerability reduction, and capacity building, while reducing external inputs.

Through a village consultation, community agrees to establish a multi member forum to mobilize community resources in time of disaster. The agreement is based on the lack of multi-stakeholders organization/institution in the village level that administers disaster management or disaster risk reduction affairs. Such forum is called Disaster Risk Reduction Platform (DRR Platform) and the task of this forum is developing plans, implementing, monitoring and evaluating disaster management or DRR activities being implemented in the village.

The role of this community organization are 1) developing village Disaster Management Plan; and 2) formulating Community Action Plan; 3) developing Contingency Plan; 4) establishing the action team for each activities and to mobilize community resources; 5) endorse the integration of DRR within the village development planning; 6) implement DRR initiatives; and also 7) conduct monitoring and evaluation on
the implementation of DRR activities. DRR platform, for example, invites stakeholders from various sectors during the development stage of Contingency Plan, to formulate the steps, resource allocations and commitment in emergency situation, following by rehearsal and simulation exercise. During the exercise, forum members are actively engaged in performing early warning and evacuation procedures, preparing shelter, as well as establishing health service post and public kitchens. At the end of exercise, they evaluate the overall implementation process together with the village government and other stakeholders to improve the document.

Negarajati DRR Platform is actively conduct one of DRR initiatives, through developing networking and partnership as well as advocating of community rights to Perhutani to fulfill its forest management obligations, as the realization of activities listed in the Disaster Management Plan (RPB) and the Community Action Plan (RAK). Nevertheless, several weaknesses are identified during the process such as organizational management, management of communication, as well as member activeness.

DRR Platform consists of a minimum of representatives from:

a. Social-Functional: village government, BPD, LPPMD, Family Welfare Movement (PKK), Youth, Lembaga Masyarakat Desa Hutan (Forest Village Forum), Community Leaders, Religious Leaders

b. Territorial-Particular: Hamlet/Sub-village Head, Neighborhood, Government agency/private sectors

c. Profession: Farmers, craftsmen, entrepreneurs, Farmers, civil servants, military, police, and midwives

d. Marginal group: The poor, women, and different ability people

An organization is considered capable if it is able to (1) mobilize community assets and resources that can reduce the risk and impact of disasters, (2) disseminate knowledge and skills, (3) developing networks and partnerships, (4) undertake hazard reduction initiatives, reduce vulnerability, and conduct a sustainable capacity building.

DRR Campaign
This effort is conducted to increase public awareness and school so that they can involve in community actions especially because school is an integral part of the community. DRR campaigns is conducted through: 1) interactive movie screening; 2) Dissemination of DRR information through formal/informal community activities (Quran reciting, social gathering, posyandu, neighborhood regular meeting); and 3) educational games and discussions in schools to identify hazards, vulnerabilities, capacities, risks, and understand disaster preparedness, as well as implementing workshops on DRR integration into school education.

Institutionalizing DRR

To ensure DRR institutionalization into community, there are several efforts that can be done such as: 1) enhance village government official and local organization capacity on public policy and village governance; 2) establish a multi-stakeholder forum incorporated in the village DRR platform; 3) ensure the community has acquired and implemented the analysis tools (VCA, PRA, and village development planning forum (musrenbangdes) through tools development workshops and plan exercise assistance. Thus, community is expected to be able to develop the analysis and planning tool so it can be used to update village risk profile, disaster management plan, and village development planning documents regularly and that disaster risk reduction can be part of the social system and village development planning.

The above framework can be illustrated in the flow chart below:

RESULTS

1. Improve community knowledge and skills to recognize the risks, develop plans, implement, and monitor disaster risk management initiatives.
2. Improve village government knowledge and skills to formulate an accountable and participatory village development planning and local governance.

3. The establishment of Disaster Risk Reduction Platform which consists of representatives from social-functional, sector, territorial-particular, and marginal groups, and the Community Action Team.

4. Documented blueprint for DRR planning into the Disaster Management Planning, Community Action Plan for DRR, as well as Contingency Plan that have been exercised.

5. Structural risk reduction initiatives through the development of rain reservoir tank (Penampung Air Hujan), embankments, preparedness equipment provision such as tents, jerry cans, Handy Talky and radio of community, land rehabilitation (land terracing and drainage), culverts installation, monitoring post and early warning tools.

6. Non-structural risk reduction initiatives which include
trainings of SAR-evacuation, public speaking for women, organic agriculture, preparedness funds, local crops cultivation and processing, landslides and floods simulation.

7. Communities are able to demonstrate the use of the risk analysis and planning tools.

8. The integration of DRR initiatives into village development planning and sectors policies.

9. Community resources mobilization to manage hazards through a self-supporting energy, time, tools, and building materials.

10. Open opportunities for close cooperation between communities and local government, vertical government agencies and private sectors in disaster risk management.

11. Increase public awareness in recognizing warning signs and hazards.

12. Increase relationship of social groups, groups and government official/institutions with a mutual trust and openness.

13. Available allocation for DRR programs and activities in Village Budget, including operational budget for DRR Platform.

14. Film documentary on women’s perceptions toward disaster. Women are more and more aware of their position in the development planning and disaster management process. This can be seen in women’s involvement during the program implementation activities in which women voices are being recognized and women special needs during disaster situation is more appreciated, and also the raising awareness to enhance their capacities toward disaster.

Women spend most of their time in the house and that makes them at a higher risk during disaster event; they also have to save their children. Thus, women need to be trained and improve their skill in doing the children and self-evacuation. (Suciwati)

My husband is willing to do the housework after we discuss the meeting results. I will actively participate in the DRR platform because I think it is important for us to build safe community. (Siti Hanani)

PROBLEMS FACED

1. Village autonomy has not been understood and well practiced by village and districts government, so village develops courage to
organize its own government, including formulate local regulations and sectors policies.

2. **Multi-stakeholder commitment** to DRR action is hampered by bureaucracy in the planning and implementation of the program. Assistance and advocacy is needed on an ongoing basis.

3. Concept that DRR is the government obligation is not well institutionalized. DRR program has not yet become the government policy that stipulated into Medium-Term District Development Plan (RPJMD Kabupaten).

4. Disaster management emergency-oriented paradigm is still deeply embedded in the community as well as in government. Community level of participation during assessment, village meeting, planning, and mitigation and preparedness activity is quite low but extremely high during emergency drill/simulation.

5. Having difficulties in translating disaster terms into local language that is easily understood by the community.

6. The district and sub-district government effort in enhancing village institutional capacity is less optimal.

**OPPORTUNITIES AND CHALLENGES**

**Opportunities**

1. The culture of gotong-royong, self-reliance, tolerance is still well practiced and becomes a social capital in managing risk.

2. Community knowledge and policy on DRR that has not been written as community capacity can be institutionalized.

3. The existence of Gunung Kidul District Disaster Management Plan policy.

4. The existence of other actors and programs within the village (such as Tagana, farm field trainings, health/village cadre) that can support this program simultaneously.

**Challenges**

1. Increasing a collective community involvement in the stage of planning, implementing, and monitoring the Community Action Plan, thus, village government and DRR platform need to disseminate DRR and Community Action Plan
information to community.

2. Updating village profile/information regularly through the assessment of village risk, problem and potential at the end period of Disaster Management Plan, Community Action Plan, and Medium-Term Village Development Plan.

3. The continuity of assuring the commitment to accomplish the implementation of Disaster Management Plan and Community Action Plan by stakeholders. Effort that can be done is through developing intensive communication to stakeholders.

4. Institutionalizing and/or integrating DRR into local level development planning activities in a sustainable manner.

5. Formulating district policy on Disaster Management Plan, Community Action Plan, Contingency Plan, and Medium-Term Village Development Plan that already integrating and/or mainstreaming DRR.

6. Building the capacity of Technical Unit Office (Unit Pelaksana Teknis Dinas/UPTD) at sub-district and district level in terms of Community-Based Disaster Risk Reduction framework so that DRR programs and activities can be integrated and sustainable.

Lessons Learned

1. Contingency plans should be integrated with other activities, such as evacuation and First Aid training, development of evacuation routes map and signboard, emergency response equipment provision.

2. People who have experienced catastrophic events are more open and cooperative to the program, rather than those who have not, so the challenge is to change the collective memory into collective action.

3. DRR integration into village development planning should be based on good governance and the official capacity so that village can produce new policies which are in accordance with community needs and also DRR mainstreaming. Similar to community participation, meaningful participation can be achieved only if the community has increased its capacity.

4. CB-DRR will not be effective as long as village autonomy
is not implemented in a holistic manner, both in rules, systems, bureaucracy, as well as implementation. Village as a government entity and front line still shackled by the system and the government bureaucracy on the top of it, such as village initiatives to implement DRR had uprooted due to the absence of regulating policies.

5. Not all community indigenous knowledge can increase local capacity to manage risks; many of them are likely become the driving factors behind vulnerabilities such as mystical and fatalistic outlook.

6. The large fund of grant program makes people become susceptible-to long process; instead they want to receive the money immediately. Thus, it can kill community initiative and self-reliance. It needs a proper strategy and extra tight in organizing the reports expense so that it will not be misused and lead to a conflict. External resources should not be more than the average amount usually managed by the community/village since it can create a perception that disaster risk management requires a huge cost.

7. Through gender mainstreaming approach within CB-DRR program provides an opportunity to incorporate gender mainstreaming in rural communities. It has become a mandatory by referring to the fact that the disaster victims are mostly women and children, who belong to the vulnerable and need special attention groups category in disaster risk reduction. Gender mainstreaming need to be performed with a precautionary principle toward a possibility of causing double burden on women which is the effect or impact of the program.

8. The importance of building safe house awareness has become a new culture to community nowadays. It derives from their experiences during earthquake disaster in 2006, especially those in Pengkok and Sampang villages. Traditionally, community possesses and uses local knowledge in selecting the locations of their homes and buildings and they are still used until today.
POTENTIAL FOR REPPLICATION

This program can be effective if the community has a knowledge system and new skills as well as having experience of disaster events which is driven by their self-supporting capabilities in managing risk. Resilient Village program interventions help systematizing these skills and knowledge and transform them to be a knowledge building that integral to social system, from collective memory into collective action. External parties only acknowledge and support the establishment of community resources mobilization to manage risk that is in accordance with the elements of planning or disaster management cycle.

Several things that need to be addressed is the basic idea of DRR integration into village planning, of the proposed programs and priorities as the results of risk and hazard priority, as well as the potential and problems in each region, not just the physical-infrastructure issues. This must be accompanied by enhancing village government technical and managerial capacity to administer the government, such as validating data skills, implementing Musrenbangdes, drafting regulations and budgets. Another consideration that also important is how to involve various parties in the program implementation, especially the marginalized groups which are often overlooked by the community.

Organizing local groups or village DRR platform can be done in two methods. The first method is to establish a new organization in the form of DRR platform that embodies all village level multi-stakeholders. This is done when any organization that performs disaster management and disaster risk reduction activities does not exist. While the second method is, if such organization already exists in the village, all it takes is to revitalization this organization. All DRR platforms in four villages are formed using the first method.

This program provides quite a large fund to village/community which may suggests that Resilient Village program requires high cost. But this large amount can be reduced through financing program activities and management using existing resources within the village/community.
Program intervention budget and spending by other parties (partners) in the community during the implementation of CB-DRR program (Resilient Village) should not be assumed to be a financial illustration of similar programs elsewhere. This is because, in principle, resources mobilization and the needs required to replicate the program can be carried out independently by the community, so it can be said that it does not require large fund/high cost; for example, assessment activities and the process of village documents development can be adjusted to the local communities self-supporting level or go along the existing programs in the village.

CONCLUSIONS

The goal of this program is “safer communities through the practice of community-based disaster risk reduction and integrate DRR into local development process”. The success indicator of this program is that community is practicing and institutionalizing CB-DRR which is integrated into development planning; thus, community capacity is increasing and indirectly reduces disaster risk level. Resilient Village program development serves as initial program to the Community-Based Disaster Risk Reduction framework toward Resilient Village.

Through this program, there has been an effort to reduce vulnerability such as identifying hazard, vulnerabilities, capacities, risks, as well as analyzing local potential and problems in each village. Also, there is other effort to reduce disaster risk conducted by the community independently such as land rehabilitation. Meanwhile, the effort to increase capacity is done through the integration of DRR in RPJMDes, developing Resilient Village roadmap, developing Disaster Management Plan, Community Action Plan for Disaster Risk Reduction, as well as Contingency Plans document in each village, developing building code document, evacuation routes, installation of water supply facilities for drought, provision of early warning and emergency response equipment, allocating budget for preparedness, establishing hazard monitoring posts, radio of community, natural resources management, and village DRR platform.

The understanding of disaster risk reduction is everybody
concern becomes the main approach to the engagement of multi-stakeholders in the program which is manifested in the voluntary involvement in DRR Platform. The other stimulant is through hearing process which is held between DRR platform and stakeholders in order to ensure an effective partnership and collaboration.

The institutionalization of CB-DRR framework was conducted through building the village government and local institutions capacity on local governance and public policy, acquiring the assessment tools of hazard, vulnerability, capacity, risk, and participatory rural appraisal (PRA); and development planning process and mechanism as well. Thus, it is expected that community can carry out the risk analysis again as a basis for developing the Disaster Management Plan, Community Action Plan, and Contingency Plan documents, and conduct village potential and problems assessment as a basis for development planning that incorporate DRR initiatives. Furthermore, communities can apply DRR in daily life and make it an integral part of the social system that has been established.

The CB-DRR practices integrated into village development planning are the general characteristics of Resilient Village, which is indicated by:

1. The participatory process of identifying local risks, potential and problems.
2. Communities are the key actors in disaster risk management within the region. The process of planning, implementing, monitoring and evaluation to manage risk is done through participatory approach.
3. Community resource mobilization to support DRR practices, such as the DRR platform, village budget allocation, self-supporting in the form of energy, time, and material.
4. The integration of DRR initiatives into village development planning and sectors policies in which a multi-disciplinary, cross-cutting, and multi-hazard as the program scheme of intervention.
5. Media for knowledge sharing, from the community to outsiders and inter-community, and vice versa.

Obviously, within 1 year of program implementation in Negarajati, Panulisan Barat,
Pengkok, and Sampang villages is not made these villages become a Resilient Village at once. In general, the achievement of the program is laying the foundation toward Resilient Village which is started by enhancing community capacity to reduce risks, managing local assets so that it remains functioning during disaster situation, and able to recover afterward.

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A MODEL OF COMMUNITY-BASED LANDSLIDE EARLY WARNING SYSTEM IN NEGARAJATI VILLAGE, CILACAP DISTRICT, CENTRAL JAVA PROVINCE

Ruhui Eka Setiawan and Untung Tri Winarso

Abstract

The characteristic of landslide include the movement of rock, debris material, soil and material which is caused by the high pressure of land by the objects/buildings on it, a high level of steepness, triggered by heavy rainfall that hit the hills and unstable regions. Landslide events in Negarajati village, based on the results of village history and risk assessment conducted with the communities, took place since 1974. Landslide caused roadway shifted by more than 12 meters and caused the death of two people in Garunggang sub-village, Hamlet 2. After the land use over-functioning from teak to pine forest plantation in the 1980s, the frequency of landslides intensity is suspected to increase from small to medium level, which occurred in a respective way, starting from 1996, 2000, 2003, 2006 up to 2007.

The greatest landslide event which occurred on February 2, 2009 destroyed 10 houses and one mosque, 28 houses and one mosque were severely damaged, 92 homes with minor damage. The location are adjacent to the settlement in Garunggang and Telagaluhur sub-villages or gerumbul in Hamlet 2, as well as in the small part of Citalaga gerumbul in Hamlet 1. The material losses suffered by the residents, among others, are the soil material that buried the paddy fields and irrigation canals which are now

*This paper was presented at National Conference of Community Based Disaster Risk Management VIII, Kupang 5-8 September 2012.

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both turned into gardens or lands; the destruction of rural road infrastructure and lighting installation; Citalaga spring and water pipeline for residents consumption covered in mud which further increasing the community risk of fulfilling their needs, both for emergencies and self-recovery.

One of the community’s initiatives to address these conditions is through the development of a community-based landslide warnings system. With the full involvement of representatives from the community, this activity is carried out in several stages, ranging from the development of the landslide warnings system which is intergrated into village landslide Contingency Plan, including exercise and evaluate the plan. During the preparation stage of village landslide hazard warning system, the community reached an agreement on the landslide status of alert to determine the status of landslide event which is based on the period of warnings – Bahaya (Level 1) and Awas (Level 2). The status of alert is determined through direct observation at the hazard source which is conducted by Early Warning Team. In response to each critical condition, community also develops a procedure which provides guidance of actions need to be performed. This Landslide Early Warning System is a part of Negarajati village Landslide Congtingency Plan document.

The development of contingency plan is an integral part of mitigation and preparedness activities, as stipulated in Negarajati village Community Action Plan (RAK) for Disaster Risk Reduction. Preliminary activities prior to the preparation and testing of contingency plans include: 1) risk assessments; 2) resources mapping; 3) landslide-prone area mapping, including determine safe ground/locations as: a) temporary gathering point, and b) evacuation/refugee locations; 4) determine the evacuation routes and installation of signboards which provide direction to the location of gathering point and evacuation; 5) the provision of ground movement detector (extensometer) and sirens that are connected in several points for the dissemination of warnings to the community; 6) training for protection measures and rescue and hazard communication; 7) establish hazard monitoring and management of information posts; 8) the provision of communication devices such as Handy Talk which is connected to RAPI network and Perhutani; 9) coordinate multi-stakeholders in village level for
the implementation of landslide disaster preparedness rehearsals. While it serves as media to enhance community preparedness, it also builds village stakeholders commitment of responding hazard events in the village, especially landslides.

Landslide threat warning system of Negarajati village is indeed supported by the ground movement monitoring device (Extensometer). This tool is used to measure the ground movements and give warning alerts. Even so, it is important to understand that the tool is not the the main primary tool to ensure community safety. Indeed, the most important thing is how the community knowledge and attitude are able to undertake mitigative and preparedness initatives responsibly. Through the presence of this monitoring device, regular monitoring to the source of hazard should be carried out independently by the community to ensure its sustainability.

Keywords landslide, extensometer, landslide warning system, status of alert, mitigative.

I. Introduction

Landslide events in the village Negarajati first took place in 1974 when the hills there was still dominated by plants Teak (Tectona grandis) and bamboo (bamboussa sp), based on the results of village history and risk assessment conducted with the communities. Administratively, Negarajati village located in the working area of the Regional Forest Management (Resort Pemangkuan Hutan/ RPH) of Cimanggu, of Forest Management Unit (Bagian Kesatuan Pemangkuan Hutan/ BKPH) of Majenang, Forest Management Division (Kesatuan Pemangkuan Hutan/KPH) of Banyumas. In 1980s, there was a land use over-functioning from teak to pine (Pinuss mercussii) plantation. Because of this changes, and the growing population and residential in the region, the frequency of landslides intensity is suspected to increase from small to medium level, which occurred in a respective way, starting from 1996, 2000, 2003, 2006 up to 2007.

The greatest landslide event in Negarajati Village was occurred in 2009, which triggered a disaster in the forest of Indonesian State Forest Company or Perhutani, plots
number 24 and 27. These sites are adjacent to the settlement in Garunggang and Telagaluhur sub-villages or gerumbul as it is called in the local term in Hamlet 2, as well as in the region of Citalaga in Hamlet 1. Landslide material such as soil, stone, wood, and mud brought massive damage to those areas. Damage and losses suffered by the Negarajati community are including:

1) Infrastructure; damaged roads, bridges, irrigation canals, water distribution lines, lighting installation, springs and reservoirs. In addition, landslide destroyed 10 houses and one mosque, 28 houses and one mosque were severely damaged, 92 houses suffered minor damage in Hamlet 2, and in Citalaga region at the small part of Hamlet 1, soil material covered the reservoir and village main street so that the access to Negarajati, Kutabima, and the Cisalak villages were completely cut off.

2) Environment; Citalaga springs which serves as a source of clean water for residents in 3 villages during dry season covered in mud, so community from Garunggang, Telagaluhur, and some part of Telagasari gerumbul could not fulfill their needs for clean water. There were many farmland or plantations belong to the community covered in mud and turned into wasteland until this moment.

3) Social-Culture; village government public service, schools activities, as well as community activities such as Quran reciting, social gathering, food preservation and integrated health service, could not be conducted for over than 1 month.

4) Economic; community assets/livelihoods destroyed, which is resulting in the loss of economic income for those who worked as tappers, farmers, merchants, local handicraftsmen such as pandanus woven mats and banana sale (flavored bananas). Meanwhile, their business development funds had been used to fulfill family needs during the emergency situation.

5) Humans; most of community’s energy, time, and mind are being focused on undertaking actions needed to overcome the emergency situations, so the survivors no longer
have the time and energy to perform activities to meet their needs. In addition, many of them suffered the psychological trauma which caused lifelong damaged to their lives and the environment as well.

One of the community’s initiatives to address these conditions is through the development of a community-based landslide warnings system. With the full involvement of representatives from the community, this activity is carried out in several stages, ranging from the development of the landslide warnings system which is intergrated into village landslide Contingency Plan, including exercise and evaluate the plan. During the preparation stage of village landslide hazard warning system, the community reached an agreement on the landslide status of alert to determine the status of landslide event which is based on the period of warnings – Bahaya (Level 1) and Awas (Level 2).

The development of contingency plan is an integral part of mitigation and preparedness activities, as stipulated in Negarajati village Community Action Plan (RAK) for Disaster Risk Reduction. Preliminary activities prior to the preparation and testing of contingency plans include: 1) risk assessments; 2) resources mapping; 3) landslide-prone area mapping, including determine safe ground/locations as: a) temporary gathering point, and b) evacuation/refugee locations; 4) determine the evacuation routes and installation of signboards which provide direction to the location of gathering point and evacuation; 5) the provision of ground movement detector (extensometer) and sirens that are connected in several points for the dissemination of warnings to the community; 6) training for protection measures and rescue and hazard communication; 7) establish hazard monitoring and management of information posts; 8) the provision of communication devices such as Handy Talk which is connected to RAPI network and Perhutani; 9) coordinate multi-stakeholders in village level for the implementation of landslide disaster preparedness rehearsals. While it serves as media to enhance community preparedness, it also builds village stakeholders
commitment of responding hazard events in the village, especially landslides.

A series of activities carried out with the community during the development of landslide hazard warning procedure are: a) the installation of ground movement monitoring tool (extensometer); b) the introduction of extensometer; and c) the formulation of landslide warning procedures. During this activity community is reminded that extensometer is not a primary tool to monitor the ground movement and the community agreed to conduct active mitigation and preparedness initiatives, for example by doing direct observation on the source of threat. This is mainly carried out during rainy season where the intensity of heavy rainfall is high which may trigger a landslide event.

The active involvement of all members of community, especially those of the high-risk group, also becomes a benchmark of the village stakeholders’ commitment in responding to the possible disasters within the region. Negarajati Village landslide warning system is pursued in a simple, integrated and comprehensive ways so that it can be applied and updated independently by the community. The extensometer is not a main factor of ensuring the community safety, but how through routine monitoring efforts undertaken by stakeholders in the community (e.g. Perhutani, village government, and community) can enhance people knowledge and awareness in performing appropriate and rapid response.

II. Geological Condition
1. Cilacap District

Most region in Cilacap District (Kabupaten), based on its lithology characteristics, depositional phase or environment, is included in the Southern Mountains Zone (Nusakambangan Island), and some region is included into the Middle bending (which covers Dayeuhluhur, Wanareja, Majenang, Sidareja, and northern part of Kedungreja sub-districts), while other are included in the South Serayu Mountain Range. Nusakambangan Island is a continuation of the Southern Mountains, which is stretching at the southern part of Java Island from the east to west (around Blambangan, East Java) (around Pelabuhan Ratu in West
Java), but then falter down by the block (graben) in several places such as Yogyakarta and Kebumen alluvial plains\(^1\).

The general conditions of the soils’ ability in Kabupaten Cilacap can be described as follows:

a. 0 – 15 % (flat) area of 1,504,32 hectares
b. 15 – 25 % (sloping) area of 15,415,68 hectares
c. 25 – 45 % (steep slope) area of 15,523,2 hectares
d. x > 45 % (very steep slope) area of 22,696,03 hectares

According to the regional formation caused by certain natural phenomena, regions in Cilacap can be divided into 2 categories: (1) erosion area; and (2) deposition area; in which the intensity of erosion depends on the steepness of a region (slope field). The higher level of steepness, greater the possibility of erosion will be.

2. Cimanggu Sub-District

Cimanggu is one among 18 districts existed in Cilacap District and it has a unique geological characteristics. As stipulated on the geological map of Kabupaten Cilacap, the geological formation of Cimanggu consists of:

a. Kumbang Formation (Tmpk). Volcanic breccias rocks, lava, dikes and tuffs of andesite to basalt, tufa sandstone and conglomerate.

b. Tapak Formation (tpt). Composed of sandstone and conglomerate and andesite breccias. In the upper part consists of calcareous sandstone and marl and brown and brownish yellow conglomerate, soft, medium weathering, many cracks with a thickness of 2-4 m.

c. Halang Formation. Composed of andesitic sandstone, conglomerate and marl sandstone.

d. Alluvium Formation. Consists of gravel, sand, silt, clay as beach and stream sediment.

e. Alluvium Fan Formation. A mixture of andesite gravel, pebbles, sand and tufaan leterit.

f. Rambatan Formation. Consists of calcareous sandstone and conglomerates inserted with a thin layer of marl and shale

3. Negarajati Village

Administratively, Negarajati

\(^1\)Attachment of Cilacap Regional Regulation No. 24/2008 on Cilacap District Medium Term Development Plan (RPJMD). 2008-2012.
Village is included in Cimanggu Sub-District, the western part of Kabupaten Cilacap, so its geological condition is quite similar to Cimanggu. The geological structure of Negarajati indicates that a fault is extending from Negarajati up to Panimbang, stretching from the West-Central-South through Negarajati - Cilempeuyang - the northern part of Cimanggu - Bantarmangu - Mandala - Panimbang.

There are 3 (three) hamlets in Negarajati village and each hamlet consists of up to 3 or 4 sub-village or gerumbul. The first one is Hamlet 1 which consists of 4 gerumbul, namely: Garajati, Babakan, Telagasari, and Bojong, and the second is Hamlet 2 which consists of 2 gerumbul, namely: Telagaluhur and Garunggang. While the third is Hamlet 3 which consists of 3 gerumbul, namely: Karanganyar, Pagedangan, and Cacaban.

Negarajati Village is a hilly area with the slope between 20% - 25% as in residential areas and 30% - 40% as in production forests, and it is also directly adjacent to the settlement of the Hamlet 1 and Hamlet 2. Hamlet 3 is in the lower part of the hilly areas and it is easier to be reached by taking a detour passing through 5 villages. Although this means that they have to walk further, most people prefer this long route because the road condition is better compare to the short one. Meanwhile, access of transportation from Negarajati center administration is steeper and in a very poor condition, making it dangerous for people to walk through it. In addition, there is a lot of surface water flow such as rivers, springs, and infiltration wells (property of community) with an average depth of 20-30 m. Erosion may occurs on slopes with steepness up to 30°-40° or about 20%, and ground movement often found in the region, both on the upper and middle slopes, as well as in the settlement areas. The quick ground motion on curved glide plane mainly occurs in the hillside which the level of steep greater than 30% or equal to 60°-70°, and occurs also in the riverbank and cliffs cut areas. While the slow ground motion with a horizontal field movement, occurs on the surface of clay stone or impermeable rock, or on a long.

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plane motion at the middle and lower slopes, thus is included as the landslides-prone areas\(^3\). Vegetations that can survive and grow well in such areas are:

- Tree crops such as teak, rosewood, acacia, mahogany, sengon, hibiscus, bamboo, etc.
- Plant fruit such as banana, rambutan, durian, jengkol, avocado, langsat/duku etc.
- Plantation crops such as cloves, coffee, cardamom, sahang, coconut etc.
- Shrub plant such as Erythrina variegata, cinnamon etc.
- Pioneers plants such as pandanus, sulanjana/king grass etc.

III. Risk Management Initiatives

The emergency up to early recovery response for the landslide is carried out independently by the community, coordinated by the Negarajati Village Head and supported by all Negarajati community including women and youth. Some of the attempts conducted by the community are established a health service post (polindes) and public kitchen, search and rescue remaining assets or house appliances, managing aids from various donors such as Perhutani, BPBD, Bank BRI, RAPI, PMI (Indonesian Red Cross), Pertamina, Holcim Company, and etc. They also collaborate and work together with nearby communities such as Cisalak and Kutabima village to clean landslide material from the settlement areas, open the access of transportation, and also restore the function of Citalaga springs. The recovery of individual farmland/plantations is managed by its owner independently because the time and cost needed for recovery process of those areas is beyond village capacity to handle.

The community initiative is considered quite effective in order to reduce the disaster impacts, as they supposed who understand the situation and condition of their own region. They live with the natural phenomena that might be one of the factors which may trigger the occurrence of a hazard, and local community know best what they really need, especially during emergency situation. Understanding the experience is not only to be a mere theoretical knowledge, but how through this knowledge, communities are able to

\(^3\)Ibid.
identify the strengths and problems, and hazards in their environment, so that they are empirically able to support and enhance their skills in managing the sources of problems and dangers and to enhance their ability to reduce the risks exist in their own territory. This is the starting point of Negarajati Village DRR Platform movement in establishing the mitigation and preparedness initiatives, one of which is the development of community-based landslide warning systems.

The previous emergencies experience definitely shows that an effective response to humanitarian needs in times of crisis is highly dependent on the level of preparedness, including in the planning stages, and the ability and availability of resources at their disposal (elements at risk). Based on the issues mentioned above, it is important to formulate a contingency plan at the village level, which is a part of the preparedness program and an integral part of the Negarajati Community Action Plan (RAK) for Disaster Risk Reduction 2010-2012. Contingency Plan is a management plan that is used to ensure the existence of adequate arrangements in anticipation of a state of crisis/emergency.

Results from the hazard, vulnerability, capacity, and risk assessments shows that there are at least five potential hazards in Negarajati Village. Those hazards are landslides, drought, social conflict, crop failure, and Cikungunya disease. They may cause death, loss of property, as well as environmental damage. However, based on the level of exposure (the amount of losses incurred), the frequency of occurrence and the extent of the impact, as well as the capacity needed by community, landslides being the highest risk faced by the community.
In order to promote a hazard warning systems that can be operated by communities, the system must be able to be managed and developed by the community independently. The contingency plan development activities is carried out in several phases and done with the full involvement of community representatives. Some of the activities are:

1) Identify existing resources in the community that can be mobilized by villagers to survive the emergency situation.

2) Build strong commitment from stakeholders within the village level (cross-sector and cross-region) to coordinate the fulfillment of basic needs during emergency situation.

3) Design and develop supplement activities for example, formulate a disaster-prone areas map, determine the safe point/location and safe routes, install signboards that provide guidance to the gathering/evacuation point, develop safety and emergency response procedures, emergency supplies and equipment provision, conduct safety drill and hazard communication that can help identify the situation of an emergency, as well as conduct of rapid assessment training to evaluate the damage and losses on community resources; establish monitoring post and center of information.

4) Conduct a regular emergency response simulation in order to check its compatibility with the pre-determined procedures, evaluate and then practiced it with regularity so as to the knowledge is distributed to all member of community, which eventually will enhance community capacity toward disaster events.

Today, landslides events which occur almost every year and become a constant threat especially during rainy season are being recognized by the community of Negarajati because of the high level of vulnerability exist in community. Some of the vulnerabilities are as follows:

a. The settlement are located on unstable area

b. The settlement are adjacent to the source of threats, for example near a production forest with slope above
50%
c. The awareness to maintain quality of environment is still low
d. The lack of community preparedness in facing disaster events
e. The development of local business in the community to enhance food security and financial communities is lack.

Thus, effort needed to be done is by reducing disaster risks through community capacity building in preparedness, mitigation, and risk reduction.

Initiative to build community preparedness is emerged with the establishment of Negarajati Preparedness and Emergency Response Teams. The team is a part of the Village Negarajati DRR Forum in which its member is the existing village structure/ functions, such as civil defense unit (Satuan Perlindungan Masyarakat/Linmas), Youth, Police, Family Welfare Movement (PKK), Village Community Empowerment and Development Institution (Lembaga Pembangunan dan Pemberdayaan Masyarakat Desa/LPPMD, LMDH, Village Health Service, village government, Perhutani Ranger, as well as members of community who join the team voluntarily. The tasks of this team are as follow:
a. Observe prone area/locations and sources of threat.
b. Serve as warning chain (transfer the warning) to the communities and local authorities (village head).
c. Compile, simulate and evaluate village contingency plan with regularity.
d. Evacuate and secure the disaster area during emergency situation.
e. Provide proper treatment to the dead and refer the injured to hospital.
f. Provide temporary safe place/location that serves as assembly/refugee point.
g. Conduct the loss and damage assessment.
h. Provide clean water and sanitation facility, medicine, food, security, psychosocial, and education in emergencies.
i. Coordinate with other stakeholders to mobilize resources.

The scope of Preparedness and Emergency Response Team are including:
a. Monitoring and Hazard Warning
b. Evacuation and Transportation
to avoid the risk of hazard. All of these actions require valid and accurate information, supported by mobilization of resource.

The development of landslide hazard warning procedure is conducted with the participation of Negarajati DRR Platform as well as local government. By referring to landslide hazard characteristics, determined hazard warning signs, status of alert, and undertaken actions is agreed.

The process of developing landslide hazard warning procedure are as follows:

A. Developing Hazard Map

Based on the participatory mapping which is done through disaster risk assessments and Participatory Rural Appraisal (PRA), Negarajati community produced a village sketch which is described in the earth landscape, projected on a flat surface (paper). The sketch informs infrastructure and settlements from the village down to the level of neighborhood (Rukun Tetangga and Rukun Warga - RT/RW). Classifying the landslide risk zone comes after that. The zone is divided into three zones; high risk zone (red), middle risk zone (yellow), and low risk

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zone (green). The village sketch also features other information such as the population distribution, location of public service facilities, fields and plantations. This information serves as a reference to determine which areas are considered potentially-affected by landslide and which areas are safe, so that people can decide safe paths/routes to get to the gathering point or evacuation point when landslide event occurs. The map is installed in strategic places within the village, such as village halls, village health service center, and other locations that usually used by the community for social activities.

B. Determine The Alert Level and Undertaken Actions

The next step is determined the landslide warning sings. The agreed warning signs is an integration of natural phenomenon possessed by community knowledge and results from the ground movement detection devices. At least, there are 2 stages of time is agreed in the community to respond the pre-determined landslide warning signs. Those stages are Bahaya (Level 1) and Awas (Level 2). The alert level is determined by direct observation on the source of threat which is conducted by Early Warning Team. Periodically, the change of status can be detected using the ground movement monitoring tool (extensometer) that has been installed in the selected critical points. The results are being analyzed by village Early Warning Team and become the basic consideration in giving warning to the public and the village government to determine actions response need to be taken.

C. Warning and Information Dissemination Media

After warning signs is identified, it is important to determine the status of conditions and actions to be taken to disseminate warnings to the community and stakeholders in the village so that people clearly understand the purpose of the action and confusion that can lead to the increasing number of casualties during rescue actions can be avoided. To solve this matter, the community agrees to use several local media which are considered simple and commonly used such as:

1. Kentongan (made from bamboo), which are available
in every neighborhood
2. Speakers (TOA), which is installed in the mosque in every hamlet
3. Siren, which is installed in several susceptible-to-landslide point adjacent to settlements
4. HT radio frequencies, exist in each RW and RT
5. SMS gateway from BMKG, received by information
6. Early Warning Team
7. Warning shouts from members of the community who first received the warning

D. Hazard Communication

In response to each critical condition, community also develops a procedure which provides guidance of actions need to be performed. Landslide hazard warning procedures, as listed in the contingency plan, starts at the phase of observing the natural signs and extensometer. The result of observation, particularly in the slow onset situation, is reported to Village Head who will analyze and decide whether the Contingency Plan is activated or not. If the analysis leads to the activation of the contingency plan, the Early Warning Team will disseminate hazard warnings to community. Meanwhile, at the rapid onset situation, right after a sound of alarm is heard, coordination is no longer needed and people should go to the nearest safe location immediately.

E. Hazard Warning Scheme

Warning scheme explains the warning signs and information distribution patterns, orders and direction issued by the local authorities in order to inform the situation to community.

1. Bahaya (Level 1)

- Observe Warning Signs
- Determine Status of Alert
- Disseminate Warning / information
- Community Prepare Emergency Supplies
- Report to Neighborhood, Sub-village, Village Head
The susceptible-to landslide area is observed continuously by Early Warning Team during rainy season.

Level 1 is applied for the emergence of these signs:

- Heavy rains for 3 consecutive days which lasts for 3-4 hours a day.
- Curved longitudinal cracks appears on the slopes in line with the hilltop and building began to shift.
- Water appears at the base of slope
- Trees/ poles/ houses is tilted.

Early Warning Team reports the situation to Village or Sub-village Head so that they can organize the community. Subsequently, this team also inform community about the status of alert using village meeting and loudspeaker in the mosque to ensure that all villagers is fully aware of the situation so that they can make a preparation. Level 1 is issued by the Early Warning Team.

After the rain:

- Immediately cover the ground cracks with impermeable material (such as clay soil) so that water does not infiltrate into the slope.
- Build impermeable drainage to divert the surface water away from cracked slopes.
- Create below ground drainage (using pipes/ bamboos) to drain gwater that had infiltrate into the slope.
- Make a dike/embankment using bamboo at the base of slope.
2. Awas (Leve)

When heavy rain lasts more than 2 hours and signs of moving ground/landslide appears such as:

- Collapse ground appears.
- Doors or windows suddenly jam or not closing properly indicating that construction is deformed at the initial conditions of ground movement
- Cracks is widened followed by the sound of siren.
- Bulging ground appears at the base of the slope.

- Small ponds appears at the base of the slope.

Early Warning Team reports to Village Head about the situation. Subsequently, this team also inform community about the status of alert using siren, kentongan, and loudspeaker in the mosque to ensure that all villagers is fully aware of the situation so that they evacuation to safe location. Based on this report, Village Head determine the status of alert Level 2 and activate
Village Contingency Plan and report the situation to relevant institution. He also order village Disaster Management Team to perform its duties to respond and relief.

However, if nothing happens within the next of 48 hours after the activation of the Contingency Plan and the rain has stopped, Village Head cancel the operation and with the recommendation of the BPBD, people can return to their home.

F. Landslide Hazard Warning Procedure

<table>
<thead>
<tr>
<th>Warning Signs</th>
<th>Status</th>
<th>Action</th>
<th>Decision Maker</th>
</tr>
</thead>
</table>
| ▪ Heavy rains 3-4 hours a day.  
▪ Curved longitudinal cracks appears on the slopes/building.  
▪ Water appears at the base of a slope  
▪ Trees/poles/houses is tilted. | *Bahaya* (Level 1) | ▪ Early Warning Team, Ranger observe the location.  
▪ Early Warning Team inform community about the status alert using loudspeaker and village meeting.  
▪ Community prepare emergency supplies  
▪ Contact the Village Head.  
**After the rain:**  
▪ Immediately cover the ground cracks with impermeable material (such as clay soil) so that water does not infiltrate into the slope | Early Warning Team |

▪ Build impermeable drainage to divert the surface water away from cracked slopes  
▪ Create below ground drainage (using pipes/bamboos) to drain water that had infiltrate into the slope.  
▪ Make a dike/embankment using bamboo
### Warning Signs

| ▪ Collapse ground appears.  |
| ▪ Doors or windows suddenly jam or not closing properly indicating that construction is deformed at the initial conditions of ground movement  |
| ▪ Cracks is widened followed by the siren sound.  |
| ▪ Bulging ground appears at the base of the slope  |
| ▪ Small ponds appears.  |

<table>
<thead>
<tr>
<th>Status</th>
<th>Action</th>
<th>Decision Maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awas (Level 2)</td>
<td>Early Warning Team inform community that the status is raised to Awas (level 2) using loudspeaker, siren, <em>kentongan</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Village Head activate Contingency Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evacuate community in high risk zone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Respon and relief</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Village Head contact and report the situation to District and BPBD</td>
<td></td>
</tr>
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</table>

### G. Introducing The Extensometer

One of the main agenda during the developing process of village landslide hazard warning procedure is the introduction of ground movement monitoring tool (extensometer). Shaped in a box, the extensometer is designed to monitor the ground movement, placed in a susceptible-landslide areas and connected with a sound alarm. The tool consists of 3 parts, namely: 1) gauge extensometer; 2) electrical devices; and 3) siren/alarm which functions to:

1. Monitor/measure the lateral movement at the slope surface with an accuracy of 1 mm.
2. Measure the vertical deformation
3. Predict the direction of sliding\(^5\).

Extensometer is placed in stable ground at selected area and connected with a wire/string which is stretched across an extension cracks. When an enlargement of crack caused by slope movement is detected, the wire/strings is stretched up to certain length which indicates the length of crack and ring the siren, giving a warning alarm to the community. The siren is using a dry power battery which can be recharged (normally once a month). The

box is equipped with the on and off switch so that the siren can be sounded manually. This can be done when no mechanical stretching is existed despite heavy rain fell over 2 hours while other warning signs, such as the emergence of infiltration water and tilted trees and the pole were occurred.

According the community, the sound of siren can be divided into two types; the first one is when the ground began to sloping after heavy rain hit for some time, and the second is when the ground began to move. The maintenance of this tool is quite simple; regular monitoring to ensure all components is functioned properly and to ensure that the equipment is free from any distractions, such as animals and irresponsible people. Maintenance includes checking the feasibility of cables, battery power supply, strength of wire, and the tool safety itself. The community is fully aware that extensometer is a supporting tool, so that they should not rely or depend on this tool only. The most important thing is that how they maintain regular monitoring processes, perform data analysis and process information of detected hazard warning through natural signs, assess and decide the level/status of the situation, disseminate information/warnings, and conduct drill and simulation on a regular basis.

Figure 1. The Position of Extensometer
H. The Installation of Ground Movement Monitoring Device

The ground movement monitoring device or extensometer is placed in plots of 24-A, Regional Forest Management (Resort Pemangkuan Hutan/RPH) of Cimanggu, Division of Forest Management of Majenang. The selected site is one of the most vulnerable points and it is about 200 meters from residential areas located in RT 1/RW 4, gerumbul Garunggang, in Hamlet 2, Negarajati Village. From the survey results, a curved crack of 20 cm wide with the depth of 40 cm was found at the location. Some considerations used in selecting the location of the tool installation are:

a. The location is on plot 24-A, Regional Forest Management of Cimanggu, Division of Forest Management Unit of Majenang (which belongs to Mr. Supendi).

b. A crack is identified within the location (a 20 cm wide with a depth of 40 cm, lead to prior location of landslide occurred previously in February 2, 2012).

c. The distance between hazard sources to the settlement is about 200 meters.

d. Muddy springs suddenly appear near the village settlement during rainy season.

e. There is a settlement in RT 1/RW 4, gerumbul Garunggang, Hamlet 2, Negarajati Village which is inhabited by 34 families.

V. Closure
A. Challenges

1) The commitment of resources mobilization by stakeholders at the village level during emergency time through effective coordination system.

2) Updating data that refers to hazard characteristics to update contingency plan and landslide procedure through DRR Forum coordination meetings.

3) Developing an easy to understand and low cost landslide warning system.

4) Conducting a regular monitoring to identify warning signs especially during rainy season to ensure a valid and accurate information.

B. Recommendations

1) The development of warning system can not be separated
from other activities such as hazard mapping, developing the evacuation route and signboards, as well as team readiness to understand the equipment so that it perform effectively.

2) Extensometer is not the primary tools to monitor hazard signs and to provide a sense of security to disaster-affected community; the important thing is that the Early Warning Team conducts a regular and sustainable direct observation on characteristics and signs.

3) Community self-reliance in procuring and installing extensometer must be balanced with the introduction and maintenance of the equipment so that the benefits of such device can be utilized in a long term.

4) The integration between the village and district contingency plans is very important to be encouraged to ensure alignment of actions, so local government should formulate the contingency plan for priority risks, especially for landslides.

C. Conclusions

By exercising the Contingency Plan regularly, several findings which can be used as recommendations for document improvement (document review) is obtained. The plan is need to be tested at least once a year so that the document is more and more suitable to the community conditions. Another advantage is that the pattern of dissemination of information and knowledge on community preparedness systems is improved. This activity is also an important means to open up opportunities and endorse learning communities by involving the other community (especially children) to raise their awareness and concern about disaster.

Early Warning Procedure using results from direct observation and ground movement tool is agreed, and Early Warning Team, civil defense units, Perhutani foremen are the key actors in doing the observation. The status of alert can be seen from the warning signs and this is classified into Bahaya (level 1) and Awas (level 2). However, it should be emphasized that the tool is not only warning tools that make people feel more secure; perform hazard monitoring with regularity is more important as a way of
preparedness.

The ownership of community early warning systems can be pursued through the introduction of extensometer, its function, the way it operates, as well as tool maintenance, and thus it is expected that the tool can be useful for a long time.

An inexpensive early warning system which is easy to understand and simple to operate by community requires efforts from various parties, especially from the academic and private sector.

Finally, Disaster Risk Management is the right and duty of all community and therefore it is essential to promote the interests of marginalized groups (vulnerable groups).

Bibliography

Attachment of Cilacap Regional Regulation No. 24/2008 on Regional Medium Term Development Plan (RPJMD) of Cilacap. 2008-2012.


Abstract

Disaster can destroy village resources, therefore hinders their development and reduce self-reliance, therefore village should have a clear vision and mission in managing disaster risk. Disaster risk reduction efforts are geared to become integral part of development plannings in the village. Likewise, each development management process should integrate disaster risk reduction elements. The integration is implemented throughout Musrenbangdes processes, including drafting and ratification, in which community members actively participate.

First phase is to ensure that community members, especially village officials and village organization representatives, understand development planning process. The process begins with problems/potentials identification in every level, from sub-village to village. As

Tahap awal adalah bagaimana warga terutama perangkat dan wakil-wakil lembaga atau komunitas di desa memahami proses perencanaan pembangunan. Proses diawali dengan menemukan masalah dan potensi yang ada di wilayahnya dari tingkat dusun sampai desa. Important additions to DRR integration process are hazard, vulnerability, capacity and risk identification. Based on these processes, priorities can be determined, in sub-village, sectoral, and village level. These priorities are what later become
proposed programs in village development plan. Tools mastery has become imperative to collect necessary informations on problems and potentials in village, as stated in Ministry of Home Affairs Regulations no 66/2007.

Keywords: Integration process, penguasaan alat

I. INTRODUCTION

Law 32/2004, in particular chapters on village government, stated that village is a legal entity with the authority to manage their own affairs, including those related to disaster management. Since disaster can destroy village resources, therefore hinders their development and reduce self-reliance, village should have a clear vision and mission in managing disaster risk. The ultimate goal of village autonomy is democratic and self-reliant village governance built on transparency, accountability and participation.

Community-based disaster risk reduction approach is a framework to achieve a self-reliant community who are able to manage disaster risk using their own resources and to reduce external inputs. Moreover, following disaster event, such community will be able to quickly recover from disaster impacts. In specific, this program aims to reduce community vulnerability while protecting their livelihood assets from disaster impacts; and to improve village governance capacities.

Disaster risk reduction efforts are geared to become integral part of development plannings in the village. Likewise, each development management process should integrate disaster risk reduction elements. The integration is implemented throughout Musrenbangdes processes, including drafting and ratification, in which community members actively participate.

At the beginning of the program, December 2009, Pengkok Village is in the process of drafting their RJMDes (Medium term Village Development Plan) for period 2010-2014. This momentum is utilized to ease the integration process. The integration process begins with training on RPJMDes Drafting, for village government officials, village organization representatives, and community members. Following the training, village government
appoints a task force of 15 people to draft RPJMDes document. The task force then fixes the schedules for sub-village development planning forum (Musrenbangdus), sectoral development planning forum, and village development planning forum (Musrenbangdes). Musrenbangdus in each sub-village begins with discussion on hazard and risk priority derived from HVCA (hazard, vulnerability, capacity analysis) and PRA (participatory rural appraisal) results, and existing village problems and potentials already mentioned in Pengkok Resilient Village Roadmap. The latter is the outcome of village discussion forum held before Musrenbangdes.

Unlike Pengkok, Negarajati Village already have an RPJMDes for 2008-2012 period. However, its drafting process did not observe the standards mandated on Ministry of Home Affairs Regulation no 66/2007 on Development Planning. At first, Negarajati Village Government is hesitant to revise its RPJMDes, because Cilacap Government has yet issued any regulations regarding the revision of RPJMDes.

Around October 2010, Cilacap District Government issued District Regulation no.2/2010 on Development Planning, which includes RPJMDes revision process, among others. The regulation helps accelerate and smooth the revision process of RPJMDes in Negarajati. In November 2010, Negarajati Village Government agrees to revise their RPJMDes. The process begins with the establishment of drafting team, consists of nine individuals who represent village government, village organization and community members.

The integration of DRR practices into development process is an important step to make community safer and more resilient against future disaster. Moreover, community based disaster risk reduction, including multi-stakeholder partnership led by the government as duty bearer, is the key to ensure sustainable development and resilient community.

II. INTEGRATION PROCESS

This program is an important part of Village Resilience initiation process, in which disaster risk reduction efforts is integrated into village policies and development planning. Integration process is implemented in accordance to Permendagri 66/2007 about
Village Development Planning. Also, this activity will provide village officials the opportunity to learn and improve their skill and capacity in drafting village development plans.

Based on Permendagri No 66/2007, village development planning is conducted through three phases. First phase, input phase, begins with village potential and problem analysis using participatory rural appraisal tools (transect, village sketch, seasonal calendar, organizational diagram). In this phase, the community is involved in the process. The result is village profile, comprised of village potentials and problems; and village risk profile. Both profiles will serve as the basis for the integration of disaster risk reduction into village development planning.

Second phase is to choose appropriate actions. The phase begins with village workshop, where representatives of village elements/organizations classify and rate problems; assess alternative actions; and formulate DRR-integrated village development program. Following the workshop is Musrenbangdes (Musyawarah Perencanaan dan Pembangunan Desa, Village Development Planning Forum), a forum to review village development plan, obtain inputs and make priorities. Third phase is where RPJMDes is being revised based on inputs and suggestions from community. Then, RPJMDes will be finalised and ratified by Village Government and Village Consultative Council.

A. INPUT
1. Rapid Study on Village Policies

Rapid study on village policies is conducted to explore and analyze concept, practices and pattern of village planning and budgetting policies. The study gives a full picture on existing planning and budgetting policies, which will be used as the basis of intervention to integrate DRR into development planning.

Processes of rapid study are:
<table>
<thead>
<tr>
<th>Challenge</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure that village has village profiles.</td>
<td>Secondary data collection: Input data about disaster information, obtained from HVCA analysis, and village profile update.</td>
<td>Conducted at the beginning of the project.</td>
</tr>
<tr>
<td>Ensure that target village have RPJMDes.</td>
<td>Rapid Study on Policies: Data collection through interview and review on village policies.</td>
<td>Conducted at the beginning of the project</td>
</tr>
<tr>
<td>Ensure the the drafting process is adhered to Minister of Home Affairs Regulations no.66/2007, and integrate DRR.</td>
<td>Rapid Study on Policies: Interview and document analysis, to obtain information about RPJMDes drafting process.</td>
<td>Conducted at the beginning of the project.</td>
</tr>
</tbody>
</table>

Rapid Study Results

1.1. Negarajati Village

Negarajati Village already has a RPJMDes, although its drafting process did not observe the mechanism as specified on Permendagri no. 66/2007. Village problems and potential analysis, as the basis of RPJMDes, was not conducted properly. Regulations states that the analysis should be obtained using PRA tools such as Venn Diagram, Seasonal Calendar and Village Sketch. However, the drafters just bypassed aforementioned processes and village problems and potentials analysis was conducted through mutual agreement on hamlet meeting forum. Hence, the results did not reflect what the village really needs.

The RPJMDes itself was not drafted through proper village development planning forum and sometimes, ignored inputs from hamlets. Although Negarajati Village do have annual village development
planning forum, the forum was only used to draft annual village program proposal.

In brief, important findings are:

1. The last Musrenbangdes, conducted in early 2008, did not produce RPJMDes, only Annual Development Planning for 2008.

2. Village problems and potentials analysis was not conducted using proper mechanism and means, therefore, it is safe to conclude that existing RPJMDes document was drafted without adequate data support.

3. Ideally, problem and potentials analysis should be obtained prior to village development planning forum. However, only Dusun III finished compiling problem and potential analysis before village development planning forum begun at 18 April 2008.

4. Selected program are basically five year programs splitted into five years.

1.2. Desa Pengkok

When the project was implemented, Pengkok Village do not have an RPJMDes, but only an RKP (Rencana Kerja Pembangunan, Development Workplan). Although village officials already have some trainings in village planning, in reality they face technical difficulties in formulating RPJMDes and other village regulations. In addition, some officials do not know that RPJM is required by law.

2. Participatory Rural Appraisal

PRA (Participatory Rural Appraisal) is a set of tools commonly used to facilitate rural community to analyze and improve their livelihood by themselves. Some PRA tools, such as Village Sketch, transect, Seasonal Calendar and Venn Diagram, are utilized in this project to obtain inputs for RPJMDes drafting process.

2.1. Summary of Problems/ Potentials Analysis in Negarajati

Problems:

1. Lots of overloaded vehicles are allowed to pass through the village, causing damage to its roads and bridges.

2. Inadequate drainage systems.

3. Landslides threaten people in Dusun I (RT 2/RW 1, RT 1/ RW 2, RT 5/RW 1), Dusun II (RT 1/RW 3, RT 2/RW 3), and
4. Main water source, Citelaga Spring, is threatened by landslide. Other springs lack of proper maintenance, which will result in dramatic drops of water supply in dry seasons.

5. Water resources use is not coordinated.


7. Weak forest management and lack of awareness regarding landslide threat, especially in landslide-prone pine forest under Perhutani management adjacent to Negarajati Village.

8. Agricultural product selling prices are below their production and operational costs.

9. Farmers rarely (if ever) receive assistance from agriculture extension office.

10. Food reserves in RT level are not well managed yet.

11. Negarajati village does not have a social security system that could help reduce poverty rate.

12. Village night patrol is not conducted regularly.

13. Uncertain sustainability of disaster management organization in village level

14. Community members do not fully understand the role and function of BPBD.

Potentials:

1. Community members are willing to share their time, manpower, materials and money for road improvement project.

2. Village Development Budget

3. People awareness in maintaining their surrounding environment.

4. Sumber Sari Forest Community Forum

5. Perum Perhutani KPH Banyumas Barat, as the manager of production forest (pine and teakwood)

6. Village receive profit-sharing with forest manager.

7. Most neighborhood in Negarajati owns granary.

2.2. Summary of Problems/Potentials Analysis in Pengkok

Problems:

1. Flood during rainy season will destroy crops in rice fields adjacent to Oyo River, especially in Kalinampu Sub-village. This flood sometimes even cut the bridge that
connects Pengkok to Playen sub-District.

2. After 2006 earthquake, most wells went dry. People are forced to rely to small springs in the riverbanks. During rain season, the roads, especially in Srumbung Sub-village, are muddy.

3. Landslides in Tompak area, Srumbung Sub-village, affects area within 1 km radius.

4. Trees replanting rate is slower than logging rate.

5. Water supply from sub-district government is not reliable and scarcely enough to fulfill clean water needs for one week. Sometimes, villagers must buy water to fulfil their families’ needs.

6. Fodder scarcity, especially during dry seasons.

7. Threat of disease outbreaks (dengue fever, diarrhea, and dysentery)

8. Strong wind poses a threat to buildings and trees.

Potentials

1. In farmlands near dam, rice can be harvested up to three times a year. Common rice varieties are ciherang, ciputih, cimelati and pandan wangi.

2. Farmers plant teakwood and elephant grass in some part of their land.

3. Most farmlands are run either by hired labour or profit-sharing system.

4. Farmlands in Srumbung and Ngrancahan are rainfed. Rice can only be harvested once a year. Most of the time, farmers cultivate non-rice crops such as corn, soybeans and peanut.

5. Farmlands in Kalinampu can produce rice twice a year because the lands receive irrigation from Oyo River using water pumps. Aside from that, farmers cultivate non-rice crops (soybeans, peanuts, corn, long beans, and kidney beans), tobacco, and kolonjono grass.

6. Various fruit trees and hardwood trees are planted in homegardens and tegalan (dry fields without irrigation). Types of trees commonly seen in homegardens are sapodilla, mango, mahogany, jengkol, bamboo, cashew, banana, coconut, rambutan, papaya, acacia, stink bean, and rosewood. Trees commonly seen in tegalan are teakwood, acacia, rosewood, mahogany, bambo, albizia, munggur, white leadtree
(lamtoro), gliricidia, and banana. In Pengkok, trees ownership provides easy access to building materials as well as savings against contingencies.

7. Diverse variety of livestock; cow, chicken, goat, rabbit, goose.

8. Farming, carpenter, stonemason and laborer are dominant livelihood activities in Pengkok. Other livelihood activities are bamboo crafting, food processing, fisheries, and renting fishing pond.

3. Village and Sub-village Profile Updates

This activity provides an opportunity to see the condition of each sub-village from various angles, such as settlement history, disaster history, demography, political, socioculture, physical, and economic. Sub-Village profiles and Village profiles then used as preliminary data for the drafting of village development plans.

4. Musrenbangdes Training

This training, aimed to village officials, provide necessary skills and knowledge to conduct proper and meaningful village development planning. This training also provides opportunity to explore the process of integrating DRR into village development planning.

5. Training of Village Regulations Drafting and Village Budgetting.

Trainings will provide village officials opportunity to improve their capacity and skills, especially in village governance and policy drafting. Following the trainings, village officials formulate and draft RPJMDes.
**RPJMDes Drafting**

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village officials lack the capacity and skills in village governance,</td>
<td>Conduct training and assistance towards RPJMDes drafting process,</td>
<td>Facilitation on document drafting:</td>
</tr>
<tr>
<td>village policy drafting, and proper RPJMDes drafting</td>
<td>to make sure that the process is in adherence to MOHA regulations no</td>
<td>1. Introduction</td>
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<tr>
<td></td>
<td>as the manifestation of DRR integration.</td>
<td>3. Problems</td>
</tr>
<tr>
<td></td>
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<td>4. Medium-term Village Development Plan:</td>
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<tr>
<td></td>
<td></td>
<td>a. Vision and Mission</td>
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<tr>
<td></td>
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<td>b. Development Policies</td>
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<td></td>
<td></td>
<td>c. Development Strategy</td>
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<td>5. Closing</td>
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<td></td>
<td></td>
<td>6. Appendices</td>
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<td></td>
<td></td>
<td>1. Dissemination of RPJMDes drafting process in Musrenbangdus, by</td>
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<tr>
<td></td>
<td></td>
<td>village officials and village organizations (BPD and LPPMD)</td>
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<td></td>
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<td>2. Collect inputs on Villae Regulation Drafts.</td>
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<td></td>
<td>3. Ratification of Village Regulation no 2 Year 2010 on Village</td>
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<tr>
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<td>Medium-term Development Plan 2010-2014.</td>
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<td>4. Ratification of Village Regulation no 10 Year 2012 on Revision on</td>
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<td>Medium-Term Village Development Plan 2008-2012.</td>
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</tbody>
</table>

**B. PROCESS**

1. **Workshop**

   Workshop is conducted to analyze data and result obtained from participatory village study. Participants classify problems, rank problems, and determine alternative activities and programs. The outcomes of workshop are Disaster Management Plan (Rencana Penanggulangan Bencana, RPB) and RPJMDes draft.

   Action Selection Process is as follows:
### Problem Classification

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>To ensure DRR-related problems can be classified into three sectors.</td>
<td>Facilitate and oversee analysis results by classifying problems into three sectors.</td>
<td>Conducted at pre-musrenbangdes workshop. Three sectors are:</td>
</tr>
</tbody>
</table>

### Problems Ranking

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure that DRR-related problems are ranked based on criteria and score into three sectors.</td>
<td>Facilitate and oversee scoring process. Scoring criteria are: damage level, impact, impact on poverty level, availability, impedance to income raise, impedance to basic right fulfillment. 1.</td>
<td>Conducted at pre-musrenbangdes workshop. Three sectors are:</td>
</tr>
</tbody>
</table>
Alternative Action Analysis

<table>
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<tr>
<th>Challenge</th>
<th>Action</th>
<th>Notes</th>
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</table>

Program, Activities, and Funding

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Analyze alternative actions and derive them into programs and activities.</td>
<td>Facilitate and oversee the process for program and activities based on alternative action, in regard to problem rank and budget forecast.</td>
<td>Conducted during pre-musrenbang workshop</td>
</tr>
<tr>
<td>▪ Analyze funding source and the allocation for five years, based on problem ranking.</td>
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</tbody>
</table>

C. RESULTS

Currently, both villages have RPJMDes with disaster risk reduction efforts integrated into it, and formulated in accordance to government regulation (Internal Affairs Minister Regulation no 66/2007). Both RPJMDes are ratified through village regulations. Moreover, village officials understand and able to facilitate participatory village study, as a part of village development planning process.

1. Pengkok Village

2. Negarajati Village

Ratification of Village Regulation no 10 Year 2012 on Revision on Medium-Term Village Development Plan 2008-2012.

D. TOOLS DEVELOPMENT

It is important for the community to understand and master participatory assessment tools mentioned on Minister of Home Affairs Regulation no 66/2007, to discover information related to village potentials and problems. Tools mastering will play an important role in formulating and drafting village development plans, such as medium-term village development plan and annual development plan. Community facilitators should ensure that village government able to implement PRA tools as a requirement in village development planning. DRR should be integrated into development programs, in village level and organizational level. To further develop the tools and ensure that it is acquired by the community, workshop on participatory village tools ownership is conducted. Through this workshop, community should be able to understand the use and purpose of the tools, and able to fully utilize them in village development planning process.

III. CONCLUSION

1. Challenge

Village development planning process should not be regarded as mere formality, but an important process that should be conducted in adherence to good governance principles and existing regulations. It should be done in such a way that disaster risk reduction becomes mainstream in the development process. However, community-based disaster risk reduction would not be effective if village autonomy is not implemented in full and still restrained by system and bureaucracy in the levels above. For examples, village initiatives to run DRR program sometimes ended halfway because sub-district or district have not issued any regulations for this. In the other hand, village sometimes unable to take full advantage of village autonomy due to lack of resources, inadequate capacity, or fear of violating regulations.

2. Recommendation

Capacity building for village officials and village organizations is essential part of village development planning process, and it helps
ensure that the process is conducted in compliance with existing regulations and good governance standards.

3. Conclusion

Village development process should be fully understood by the entire village stakeholders. DRR mainstreaming or/and integration process should use existing policy drafting procedures. Furthermore, various approaches in policymaking process, such as political, technocratic, participative and top-down bottom-up, should also be taken into account.

**DRR integration in development planning should be based by good governance and implemented by competent government officials, in order to deliver policies that mainstream DRR and suited to community needs. Meaningful community participation will only be achieved if said community increase their capacities. In the end, the ownership of DRR practices becomes an integral part of village development planning.**

REFERENCE

[2] Law No 32 Year 2004 on Regional Government
[3] Law No 24 Year 2007 on Disaster Management
FOREWORD

As Indonesia is on meeting point of the earth tectonic plate, this country is dealing with many natural disasters. One of natural disaster-prone region in Indonesia is Yogyakarta province. May 2006 earthquake has shown how factual loss which is suffered by its citizens as the impacts. Not to mention other hazard (natural or non-natural) within the province.

Thus, it is important for all stakeholders, including schools, to strengthen themselves toward disaster events so that the losses could be reduced. The goal is that community is resilient toward disaster and they are able to carry out a self-supporting disaster risk reduction initiatives through identifying and managing risks within their environment.

School and Disaster Preparedness

In terms of disaster management, school as public space is having real roles in building community resilience. As a unit of education, school has responsibility to implement education, even during disaster situation. In initiating disaster risk reduction activities, school serves as an effective for building nations culture including builds citizens disaster preparedness culture; specifically to children/students, educators, educational laborers, and other stakeholders and public in general. (School-Based Disaster Preparedness Framework, Consortium for Disaster Education/Kerangka Kerja Sekolah Siaga Bencana, KPB, 2011)

School, as its main task is an education-service-
implementator institution also has a responsibility to provide protection to children, specifically as has been mandated in Child Protection Law (National Regulation No. 23/2003). In context, school practically must be able to manage disaster risk reduction initiatives in accordance with hazard within its area. That means school disaster preparedness should be as a security protection. Besides government and competent stakeholders, other caring institutions obviously have the same concern of ensuring the education needs fulfillment and protection as well.

Compatible with the above goal, Perkumpulan Lingkar through School Based for Disaster Risk Reduction Program has the interest of developing disaster preparedness in school communities by initiating Safe and Prepared Schools/Sekolah Aman dan Siaga Bencana. Besides using participatory approach, this program also applies school approach in order to achieve this goal; school as a development of disaster risk reduction center motivates communities around the school area to be engage and give their supports (enabling environment), and that activities involving the related stakeholders in school (children and adults) is always focus on student interest.

Safe and Prepared School Framework of Lingkar

Safe & Prepared School (SASB) or School-based Disaster Risk Reduction of is a framework to develop the capacities of overall school components in managing and reducing disaster risks within the school area, to build preparedness by strengthening the knowledge and attitude, implementation of emergency response plan, school preparedness policies and early warning system, and the ability to mobilize school resources before, during, and after disaster event. The purpose of this framework is that school components ability to reduce disaster risks in school area is increasing.

Implementation of Safe & Prepared School

Perkumpulan Lingkar has implemented this program in 6 (six) elementary schools (Sekolah Dasar/SD) in Bantul: SD Brajan, SD Cepokojajar 1, SD Payak, SD Muhammadiyah Pandes, Islamic Elementary School/MIN Jejeran, and SD Putren. The implementation is
held in 2 (two) stages, first in September 2009 to July 2010 supported by PLAN Indonesia, second in Mei to October 2011 as collaboration between Perkumpulan Lingkar with the six schools listed above.

This program is particularly carried out through the learning implementation into school curriculum (KTSP and RPP by teachers) and joint activities of all community school components for school-based disaster risk reduction. The objectives of this activity are: (1) increasing school capacity in the practices of child-centered school disaster preparedness and disaster risk reduction and relevant to the local context; (2) increasing children participation in planning, implementation and evaluation of disaster risk reduction in school; and (3) documenting program best practices through project monitoring and evaluation.

Strategies implemented in the program are:

a. School-based. School as the centre of development, management and of disaster risks reducing by motivating communities around school as enabling environment.

b. Child-centered. All activity, both those involving children and adults, always oriented in the interests of children/students. The involvement of children is done since the beginning until the end of program; from Knowledge, Attitude and Practice (KAP) survey; risks assessment, designing/planning, implementing, monitoring and evaluating student action for DRR and climate change, up to DRR activities organized at provincial level. The program promotes the establishment of enabling environment to student participation in DRR. Through students DRR action program, children develop DRR and climate change action plan in a form of a mini-proposal, proposing their ideas to teachers and school principal.

c. Gender-mainstreaming. Introducing gender perspective into the overall project management cycles which include the process of planning, implementing, monitoring and evaluating. In the context of project management, gender mainstreaming is meant to “guarantee a proportional of women involvement”. Gender-mainstreamed is done through of moderation,
facilitation, quotation, and groups disaggregated techniques. Methods used during the program are: 1) regularly confirm the school of the equivalent composition between man and women participants in all activities, particularly those related to students; 2) giving special notes to facilitator in the activity Term of Reference, endorse women participation in all activity, both in discussion, concepts and opinions articulation, as well as games and working group; and 3) disaggregation data based on gender (gender differentiated) in every activity done in the beginning of the project (baseline) that may be useful to consider gender composition in school activities.

d. Disaster Preparedness Education. Disaster Preparedness Education is the compilation knowledge on risks reduction initiatives which include actions of preparing, supporting and re-building community during disaster situation. It also reduces some impacts caused by disaster so that preparedness and emergency response occur in saving community. This strategy is described as follow: institutionalizing DRR into school planning and policies which involved community, DRR integration into school curriculum, and etc.

e. Education for Sustainability. This focus on personalities toward collective-actions and contextual education suit to present risks and culture. Decade Education for Sustainable Development gives opportunities to: 1) reforming structures and characters of elementary education; 2) reorienting recent education program; 3) developing public awareness on the significance of sustainable development; and 4) building education system and partners capacity in order to build other sustainable developments.

f. Inclusive Education. Inclusive education must consider the presence of: 1) gender equity and non-discrimination involving all students, ignoring the difference of “changing system to fit the students”; 2) both of students and teachers as a learning community (teachers has interests to provide the best educational service), 3)
put the students as center of learning; appreciate differences and stimulating learning process to all students; 4) applying healthy way-of-life; protecting all students from violence, abuse and bullying; and 5) culture sensitive, increasing students participation and cooperation.

g. Capacity Building. The goal is to achieve empowered school components (children and adults) that are involve actively in school implementation, to design and to decide which education program is suitable for them based on their abilities. Capacity improvement applied in the form of education programs and technical counseling in various levels: individuals, community and institutional/organizational. At individual and community level, the strategy is taken by disseminating DRR during the assessment and campaigns. To students, it is applied by doing assessment of disaster risks, movie screening, and learning by playing fun and educative games so that children keep up their focus and absorb the DRR and climate change messages. The forms of capacity improvement for adult groups are technical training in designing School Development Plan (Rencana Pengembangan Sekolah/RPS) or School Strategic Plan (Rencana Strategis Sekolah/RSS) and School Budget and Program Plan (Rencana Kegiatan dan Anggaran Sekolah/RKAS); integrating DRR in Education Unit Level Curriculum (Kurikulum Tingkat Satuan Pendidikan/ KTSP), syllabus and RPP, school regulations, school budgeting and training of disaster preparedness school. The objective is the presence of components’ capacity on hazard, vulnerability and capacity, also disaster risks in school which stimulate on school management policies that mainstreaming DRR. At the institutional capacity level, the applied strategy is through the process of facilitating organizational management; planning and implementing participative and child-centered activities, also extending and reinforcing working relationship with schools and/or other organizations and local government as well.
h. Participatory Disaster Risks Assessment. The assessment of disaster characteristics and risk levels is held through participatory process, involving all elements of school community and all present resources. The model encompass of: (1) school community perception about risks, (2) hazard, vulnerability, and capacity mapping, (3) risks identification and analysis, (4) resources mapping, (5) resources mobilization, and (6) joined analysis and report to the school community. Therefore, the school community itself is expected to be able to decide the disaster characteristics and risk levels for each hazard exists on their territories and produce a holistic description of all primary hazard faced by school community.

i. Integrating DRR into School Policies. School-based disaster risk reduction management and initiatives is directed to a part in school management (RPS/RSS, RKAS, KTSP) and school education policy where DRR integration is done in every process; planning, implementing and evaluating.

j. Integrating DRR into Curriculum. DRR education is by delivering learning materials integrate to DRR and suit to type of hazard exists within school. Training and assisting teachers on DRR integration is intended to make teachers have primary ability to develop syllabus, RPP, up to teaching materials; to design local curriculum, or formulating self-development that contains DRR. During trainings implementation teacher were equipped with comprehension about teachers’ role as facilitators.

k. Program Sustainability and Institutionalization. Program facilitation and intervention is held with a guarantee that the project results can be useful and/or continued by community school at the end of this program. This strategy is conducted by applying participation principles as early as possible in the planning, implementing, monitoring and evaluating stage, including mobilizing school community resources and also integrating the interests of project sustainability in implementing strategy of capacity development.
Institutionalization is expected to be achieved in community school with project efforts that create pre-conditions as (1) stimulating powerful school policy, (2) stimulating a good school management, (3) stimulating efforts to built partnerships and networks, and (4) efforts to integrate DRR as part of a structure that already established in school community. Hence, this program facilitate techniques, practices and procedures appropriate with conditions and needs of the school, including provision of dedicated, trained and competent personnel.

Based on strategy described above, below are methods, techniques and activities used in the program:

a. Assessments. The activities were to (1) identifying disaster risks in school, (2) problems and potencies. The assessment result serves as a database for developing school documents as well as activities.

b. Participatory Workshop. Workshop methods involve representatives of all components of school community in order to produce mutual understanding, agreed outcomes and the work plan/ follow up activity.

c. Establishing School Preparedness Team. Team with main task to held development and execution of save and prepare for disaster school. Other than school principal and teachers, the team should be assembled by local residents.

d. Trainings. It is conducted to enhance school community capacity to develop save and preparedness school. Several training activities are: (a) integrating DRR into curriculum, (b) integrating DRR into school policy, (c) disaster preparedness school (a conceptual framework of prepared school, guidance of implementing preparedness school, school emergency plan, safe area map and route of evacuation, school evacuation simulation procedure and simulation follow-up plan), (d) basic First Aid.

e. Focus Group Discussion. Discussion is to gain input for programs development and implementation, done with children and adults group.

f. School Assistance. Routine visits to assists school Headmaster and teachers during the process of planning, implementing, evaluating school activities and documents.
1. Assisting group of teachers to develop the integration of DRR into curriculum and to ensure the accomplishment of DRR education in each school.

2. Assisting school principals and teachers to develop the integration of DRR into School Disaster Risks Profile, RPP, RKAS and Annual Calendar.

3. Assisting for School Preparedness Team to improve their capacity in developing Contingency Plan and to exercising the plan.

4. Assisting students to ensure their participation in disaster risks reduction initiatives through student mini project for school DRR.

Practice and Exercise. Implementable actions both indoor and outdoor in order to have experiment (trial) or to test their plan.

School Networking Development. The utilization, development and strengthening of existing community networks, both communities and schools to support and involve in the program activities.

Participation of Program Beneficiaries

1. Direct Beneficiaries

There are 391 people as the member of the six schools mentioned before (SD Brajan, SD Cepokojajar 1, SD Payak, SD Muhammadiyah Pandes, MIN Jejeran, dan SD Putren). This direct beneficiary covers School principals, Educational Staffs (teachers and non-teachers) and students.

2. Indirect Beneficiaries

a. Department of Education

Bantul Department of Elementary Education, UPT-PPD of Pleret Sub-district and UPT-PPD of Piyungan Sub-district.

b. Village Government and Village DRR Platform

All of six schools located in 4 (four) different villages: Sitimulyo, Srimulyo, Pleret and Wonokromo. The community, as in other villages in Bantul District already has a village DRR Platform: Sitimulyo DRR Platform, Srimulyo DRR Platform, Pleret DRR Platform, and Wonokromo
DRR Platform. SB-DRR program also invites and stimulates these stakeholders to participate within the process. This involvement of stakeholders’ is on several activities, such as assessments, workshops, document development and simulation exercise.

c. Elementary Schools at Piyungan and Pleret Sub-districts

19 schools in UPT-PPD Piyungan Sub-district and 19 schools in UPT-PPD Pleret Sub-district.

d. School Community

The School Committee, Parents Association (Paguyuban Orang Tua/POT) as well as the nearby residents/communities.

Participation of Beneficiary

In general, the participation of beneficiary is the involvement on planning, implementing, monitoring and evaluating program. Schools also contribute in providing consumption and facilities in order to support activities conducted.

Participation in planning process includes of school framework development, establishment of school team, curriculum development team and formulating students’ mini project.

Participation in program implementation includes of HVCR assessments (children and adults), school preparedness training, training for teachers, implementation of students mini project and The School Core Team consisting of 3 (three) coordinators: 1) School Coordinator for (the school principal); 2) Students Coordinator for (Teacher/The 4th Grade Class Guardian), and 3) Coordinator of Parents Association (POT/School Committee). These three coordinators are the key-person in spreading information about activities and school-based DRR. The UPTD and Education Department are also participate in stimulating commitment team work of curriculum to execute education of DRR and Safe and Prepared School in each schools.

Participation in monitoring and evaluating process conducted through in half monitoring of the project, both by the adults and children. Bantul Department of Education commitment to monitor the implementation of DRR education conducted by
curriculum development team in each school.

Program Monitoring and Evaluation

Monitoring executed internally by Lingkar through routine weekly meeting to ensure the execution, results and the end of program. Meanwhile, participative evaluation executed periodically in the half-part and in the end of the program.

§ Middle Project Evaluation
Done by involving active participation of all beneficiaries components (reading report) from children, educational and non-educational workers, school committee representative (parents’ association/POT) also include representatives of local residents containing of local village/sub-village government and UPTD.

§ Final Project Evaluation
Executed internally by Lingkar to see the lack and excess of the execution and also the program achievements.

ACTIVITIES

In pursuance of the results by approach, principle and methodology, program execution Safe & Prepared School (SASB) can be described in three stages major: the drafting of school baseline; initiation and implementation of Safe & Prepared School (SASB) and program monitoring-evaluation.

1. School Baseline

Drafting the school baseline aimed at measuring and getting an early description of the school in some aspects. A quick study performed participatory by involving school citizens (teachers/non-teachers and students) and parents’ association. The preliminary study covering of 3 (three) things: (1) school disaster preparedness, (2) community school perception and students participation in DRR; and (3) disaster participatory action research.

(1) School Disaster Preparedness

The Aim is to get description of the school disaster preparedness. Survey with device by questioner adapted from risk reed and friendly school for kids by this study might give us the picture of the school physique condition commonly, knowledge and response about DRR, policies
(school management), emergency response plan, early warning system and resources mobilization. Besides, stakeholder analysis also conducted to map all stakeholders in each school.

(2) Community School Perception and Students Participation in DRR

In common, the study aimed to see how the aspects of knowledge, attitude and practice (KAP) of educational staffs (teachers/non-teachers) and community in the context of children/students’ participation in DRR. Other to adult respondents, this study focussed to the children' KAP or by seeing how the level of knowledge, attitudes and practices belong to the children. In general this KAP has executed by using questioner and focus group discussion. The three aspects mentioned above measured to see the gap presence.

(3) Disaster Participatory Action Research

It has conducted as assessment of threat, vulnerability, capacity and risk of disaster in school. The study executed as collaboration between school citizens (students, teachers, non-teachers, school-committees and parents’ association) in each school. From the process, as follow are the highest threat and risk of disasters found and identified in each school.

<table>
<thead>
<tr>
<th>No</th>
<th>School</th>
<th>Threat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SD Brajan</td>
<td>Earthquake, Flood</td>
</tr>
<tr>
<td>2</td>
<td>SD Cepokojajar</td>
<td>Earthquake, Flood</td>
</tr>
<tr>
<td>3</td>
<td>SD Payak</td>
<td>Earthquake, Tornado</td>
</tr>
<tr>
<td>4</td>
<td>SD Muh Pandes</td>
<td>Earthquake, Tornado</td>
</tr>
<tr>
<td>5</td>
<td>MIN Jejeran</td>
<td>Earthquake, Flood</td>
</tr>
<tr>
<td>6</td>
<td>SD Putren</td>
<td>Earthquake, Flood</td>
</tr>
</tbody>
</table>

2. Initiation and Implementation of Safe & Prepared School (SASB)

The primary developments of school are as follow.

(1) The School Main-Team Development

This is the development of school citizens in works of School-based DRR, like in curriculum development, the school preparedness-team
and so on. The activities are drafting and resulting a mutual agreement about program participative framework and focal point in each school, containing of School Coordinator and thematic focal points (study of risks, curriculum, participation and children’ activities, school committee and emergency response plan). Each focal point has a role in coordinating program activities. This team fully involved in planning, testing, implementing, monitoring and evaluating the implementation of the program.

(2) The School Curriculum Development

This is a development of school curriculum integrated with DRR, conducted as training and counseling. Capacity improvement by DRR integrated in curriculum training conducted with involving Elementary Education Department District of Bantul so the teachers get the description and strategy suitable with departmental rules. The counseling conducted in drafting of RPP. The RPP drafting executed by class-teachers directly, adapted to the syllabus that existed or already used in their schools. By the kind of threat based on the study of disaster risks in each school, the teachers determine behavior indicator of DRR efforts. The indicator then analyzed for the suitability to the standard competency and primary competency (Standar Kompetensi dan Kompetensi Dasar/SKKD) in syllabus. So until integrated into the RPP.

(3) Safe & Prepared School (SASB) Initiation

The initiation comes from the results of school risks study conducted both by children and adults. The main activities compulsory to be executed in the initiation are Preparedness for Disaster School training, School Emergency Response Plan drafting, command posts rehearsal, test/simulation and evaluation and document repairing also School Routine Simulation Policy ratification. Of a series of activities, the school citizens other then expected to be able to understand the conceptual frame of Safe & Prepared
School (SASB) also able to implement it practically.

Training of Safe & Prepared School (SASB) activities conducted to improve the adult school citizens’ capacities (teachers, non-teachers, school committee and parents’ association) in practices and development in Prepare for Disaster School. General materials conveyed are Conceptual Frame of Prepare for Disaster School, Guide of Prepare for Disaster School Performing, School Emergency Plan, Secure Area Map and Evacuation Route Map, Fixed Procedure of Evacuation Simulation at School and Follow-up Plan in Drafting of The Safe & Prepared School (SASB) Main Document.

In drafting the Safe & Prepared School (SASB) main document or document of emergency plan, the first thing to do is identifying school’ needs and capacities in order to performing Safe & Prepared School (SASB). Of workshops held, there are 4 (four) results of ‘what-to-do’ things: (a) raising a commitment of the school citizen in coping emergency things happened in school; (b) agreeing a scenario drafting; (c) agreeing a plot activities response (SOP before, a moment and after the disaster); (d) and preparing resources needed: facilities, infrastructures and human resources being then called as the School Preparedness Team.

Intensive discussions conducted for some special purposes as validating the concept of emergency response plan drafting, drafting the contains of preliminary and conclusion chapter, validating the evacuation line, analyzing the necessity of supporting resources, planning phases for material test/simulation, training of PPGD, setting-up the evacuation map and signs, conducting command posts rehearsal, testing/simulating the materials and evaluation, validating school policies in emergency plan and simulation.

3. The School-based DRR and children-centered DRR Implementation Suitable with the Local Context in The School Plan

Of policy analysis conducted found that not all partner
schoo ds have School Strategic Plan (RSS) document or School Development Plan (RPS). Generally schools only have annual work plan namely School Activities and Budget Plan (Rencana Kegiatan dan Anggaran Sekolah/RKAS). By the findings, the intervention to push the existence of School Management Plan document becomes important. Through informal approach to the School Principals and advocacy to UPT-PPD in every sub-district area, it has agreed to be carried out a workshop related to RPS and the integration of DRR into it.

The workshop held in two area of UPT-PPD: UPT-PPD sub-district of Piyungan and UPT-PPD sub-district of Pleret. Other than to convey comprehension about the importance of RPS document and the drafting, workshops held to improve the school citizens’ capacity in integrating DRR into RPS or other school policies.

This already performed mapping becomes a consideration in drafting the RPS. Therefore, counseling conducted to ensure that the agreement of workshop would be translatable. The involvement of School’ Supervisor and UPT-PPD also become important in the process and counseling of school plan drafting in each school.

4. Networks and Advocacy Development on Government of District of Bantul and Province of DIY

The development of networks and advocacy conducted by stimulating the appearance of process to share and exchange their practices of Safe & Prepared School (SASB) development experiences in each school range or in curriculum team work network. The routine meeting media on level of range and UPT-PPD effective enough in dissemination of ‘DRR Virus’ to other schools.

Besides, this program opened spaces of discussion about how the policy of District of Bantul government in this matter Elementary Education Department District of Bantul related to DRR and kinds of schools’ program equitable for support given by the Department. Of the process, schools become ‘more confident’ in implementing DRR efforts.

5. The Model of Children’ Participation-based Service Learning Development in Theme
of “DRR and Climate Change”

The quick assessment of knowledge, attitudes and practices of DRR has given us an early description that basically some of the students have already the knowledge, attitude and practices of DRR. The students have the capacity to participate in DRR works. Besides, by the disaster risks analysis conducted by the students has enabled them to identify threats similar with threats identified in disaster risks analysis conducted by the adults. This two baselines which become the basic of the model development.

In order to develop the model of this service learning, this program conducted 3 (three) activities as: (1) children/students’ group capacity development about climate change issue; (2) mini project of DRR action/climate adaptation facilitation; and (3) students’ plan action for DRR campaign facilitation. The students’ capacity development conducted through simple and delightful techniques/ways with hopes for the conveyed materials can be easily absorbed and relatively un-bored. Materials conveyed encompassed of knowledge about disaster, possible-to-do actions as preparedness of disaster (DRR) and also the climate change. The usage of media films or games are also able to be conducted as an after school activity.

Facilitation of students’ participation in DRR efforts in their school conducted through implementation of students’ mini project. By the results of DRR plan at school analysis, known that the students has choose, plan, and implement it. As follow are formations of students’ mini projects in DRR and climate change.
<table>
<thead>
<tr>
<th>No</th>
<th>School Name</th>
<th>Theme of Students’ Mini Project</th>
</tr>
</thead>
</table>
| 1  | SD Payak     | 1. DRR Campaign trough Posters  
|     |              | 2. Mapping of Safe Places in School                                                            |
| 2  | SD Cepokojajar | 1. Ready for Disaster-Bag Campaign  
|     |              | 2. Formation of The Litter-Guard Squad                                                          |
| 3  | SD Putren    | 1. Ready for Disaster-Bag Campaign  
|     |              | 2. Media of Information  
|     |              | 3. Formation a Disaster Percussion Group                                                        |
| 4  | SD Brajan    | 1. Ready for Disaster-Bag Campaign  
|     |              | 2. Mapping of Safe Places in School                                                             |
| 5  | MIN Jejeran  | 1. DRR Campaign trough Posters  
|     |              | 2. Mapping of Safe Places in School                                                             |
| 6  | SD Muh. Pandes | 1. DRR Campaign trough Posters  
|     |              | 2. Trees Planting  
|     |              | 3. Mapping of Evacuation Line and Safe Places in School                                          |

In the students action plan for DRR campaign, this program has facilitated the idea of students’ campaign by using “wayang kertas” media (wayang - Javanese traditional puppet, kertas – paper; wayang kertas – wayang made from paper, mostly reuse paper). In the process, the students endowed of skills in making and playing wayang kertas. This was choosen as the media because it was simple, easily to be understood and interesting. Besides, the usage of media wayang kertas has able to be functioned to promote green life style by showing people that some of second-hand things can still be used for useful things.

6. The Educational Peer Model Development in DRR and Climate Change

It formed in development, design and drafting of educational peer module/guide package (Module for Children Cadre). Basic materials in the module drafting sourced from activities with children/students. It needs acuteness and ability to identify by the facilitator to catch things critical an unique from the students in the process of conveying, accepting, and also responding information. It becomes the priority thing because this module addressed to be the students/children’ guidance when they have to be facilitators for their peer.
Focus group discussion conducted to get the ideas and input from students about the ‘design’ of peer module. Other to dig students’ opinions about the appropriate method and content in disseminating DRR among students, this discussion also testing the draft of materials from the drafted module.

7. Program Monitoring and Evaluation

Program monitoring and evaluation undertaken to ensure the implementation of strategy, method and activity planned and to measure the work performance, process, results and output. Beside of periodically undertaken internally and externally, this program improving devices of evaluation in the level of children/students’ participation.

PROGRAM RESULTS

Although there are some notes, this program generally has achieved its outputs; school has DRR plan, as well as school development policy and teaching-learning activity in the classroom, in considering the interests and needs of children, also has exercised the preparedness tools. School members already able to identify disaster risks in their school and already has capacity and knowledge about DRR and climate change. Students are able to identify hazards in their schools and know what and how-to respond it. This program also has facilitated students in implementing mitigation, DRR and climate change efforts in the school. Besides, validation from adults (educational staff and school committee/parents association) with the same hazards identified by students becomes indications of students’ ability in recognizing hazards in the school.

Other than knowledge, ability and capacity, school, especially the school principal and educational staffs, also comprehends about how closely related the national and regions policy framework to the DRR implementation at school; as mentioned in National Law on Disaster Management No. 24/2007, Circular of Minister of National Education (SE) No. 70a/MPN/SE/2010 about DRR Mainstreaming into Curriculum, Circular of Government District of Bantul No. 360/0144 about DRR Activities at School, The Disaster Management Plan of Yogyakarta Province, and etc.
In terms of institutionalization, the partner schools have also follow up the portrait of disaster risks by having their arrangement of disaster risks management planning, in policy framework, mitigation of disaster, teaching-learning process, up to local resources mobilization. Schools has integrate DRR materials in long and short term of school management guidance/policy documents such as School Development Plan or School Strategic Planning, KTSP Document, Budget and Program School Plan, School Annual Calendar, school programs and activities.

Curriculum Policy (KTSP) has also able to be transformed by the educational workers through their ability in developing Syllabus and RP) in particular subjects which integrates DRR that suit to school condition. School has also developed and implement as well as evaluate school primary of preparedness document or School Contingency Plan. The document becomes the technical guide in school when an emergency situation occur, where everything has been agreed and pre-detemined by all stakeholders, as well as early warning, evacuation and hand over the students to parents procedures, assess damage and losses and also other existing resources. The most important is that educational workers has been succeed to exercise, evaluate and identify the lack so that they able to revise and improve the plan. To ascertain the plan integrated in school development plan, the school principal has also issued a decree and established simulation/test as a school program/activity. For short-term, continuity prepared by school are completing facilities, infrastructures and resources supporting the school preparedness; one is training of First Aid.

School has also open opportunities for students’ participation, expression and articulation. The students know their interests and needs. But this often neglected. The students considered have no skills and capacities. As result, their opinion often un-required. The impact of this less fair room for students to articulate their opinion stimulates a feeling of fear to speak-up and to convey ideas they may have. And this program tried to open these spaces. Students/children have encouraged conveying what they want to spoken up and also stimulated the School to listen
and consider their students opinion. In facilitating DRR activities done by children, it has been described how firm the synergy of cooperation between adults and children. But at least we can still be optimistic that this will be growing better in the future.

Additional result come from the program implementation is springing of the occurrence and open spaces of synergy and collaboration from stakeholders on DRR practices in school. UPT-PPD, in this matter means School Supervisor Board, feels competent to put-in DRR in the agenda as one of supervising points, involved in DRR activities in school and encouraging dissemination information about the importance of DRR to other school in range. The village DRR Platform becomes aware on the importance of considering and involving schools in village’ DRR activities and so does the reverse. Besides, as well as initiative of Police Sector of Pleret to get involved in disaster simulation activity conducted in school.

Program Impacts

The program impacts not only for school community but also for all stakeholders in school community. Village community, for example. In disaster preparedness, school initiates a development preparedness activity in school, also the necessity to synergize the preparedness initiative in the village level.

The program impacts for students (children) can be read from (1) their ability to express the knowledge, ideas and initiatives related to DRR to their peers, family, teachers and society; (2) shall have attention to any information about threats or disaster and hazard of disaster condition occurs outside their school-range or living-hood; and (3) the growing curiosity about phenomenon and situation of disaster in and out of their school-range and living-hood. While the program impact for educational workers (including school principal) are: understanding and awareness of the school that implementation of School-based DRR/SASB need no high cost; the beginning of open spaces for participation of female groups, proportionally, in school meetings as a form of mainstreaming gender strategy in program cycles; the ability of schools in implementing DRR practices by their own power (simulation); understanding of school that School-based DRR/ Safe and Prepared School (SASB)
may increase competition among schools; and ability of the school principal and teachers in disseminating the program to other schools.

Besides, other elementary schools in range of Sub-district UPT-PPD has also (1) intend to replicate SASB development where partner schools as the reference; (2) dissemination of experiences by the six partner schools the implementation of SASB to the other 26 principals of elementary schools in range of Sub-district Piyungan and Pleret related on the necessary of no-high-cost even no-cost at all to implement School-based DRR/ Safe and Prepared School (SASB), strategy of integration in policy and tools of learning process and tactical and strategic chances in school development efforts.

The Safe and Prepared School materials, information (knowledge) and school practices, has also disseminated to local residents around schools. Other than implementing DRR efforts appropriate on their own idea-initiatives in school circumstances, children also needs to convey local residents around their school about it, for example for building the evacuation and safe location map outside the school. And now parents feel comfort (ayem – Javanese language) because the school has applied DRR principles. This program also build spaces of school community transparency and understanding about children/students role as key-actors in DRR practices at the community and local residents level where school supports the implementation of DRR efforts by children through mini-project. Besides, MUSPIKA feels intend to engaged in simulation in school.

The program impacts for government in countryside, village, and sub-district and district level. At countryside, village and sub-district level the impacts can be read from the existence of support in realizing SASB efforts as important part and component in DRR in society through participation in attending activities such as assessment of HVCA for adults, emergency response planning, prepare for disaster school training, simulation, etc. While for government in district level the impacts are (1) the opening space for government, especially Elementary Education Department District of Bantul, to re-emphasize the policy of implementation for DRR education integrated in
curriculum and implementation of periodical simulation in school, as written in Circular (SE) No. 360/0144. In particular activities, Drs. H. Sahari (Head of Elementary Education Department District of Bantul); Slamet (Chief Sphere of Elementary School); Partini, M.Pd.; and Dra. Subiyati conveying their hopes for the possibility of schools to respond the stimulant of School-based DRR/SASB and to implement the DRR education in school activities, also asserting Elementary Education Department commitment in monitoring program achievement; (2) the occur initiative of Ms. Muslimah, S.Pd. as School Supervisor of UPT-PPD Pleret for monitoring and post-program evaluating implementation of Safe and Prepared School; (3) the awareness/understanding of UPT-PPD of and Pleret Piyungan Sub-districts to implementation of School-based DRR/SASB and national-and-region policy framework related to DRR in school.

Lastly, the impacts for other stakeholders, individual, group or institution, which are not beneficiaries of the program are: (1) dissemination of experiences and concepts about School-based DRR/SASB from partner schools to the other schools in range, like SD Putren and SD Brajan which are grouped in the same range, communicated informally about the implementation of School-based DRR/SASB conducted in their school in a routine weekly range-meeting, so do the other schools; (2) shared experiences of implementation of Safe and Prepared School between partner schools of Lingkar with partner schools of PLAN Indonesia (2 teachers and 9 students) from SD Cepokojajar with SD Pariaman, Padang, West Sumatra; (3) distribution materials of activities and results of training (training of prepare for disaster school and teachers training) to teachers from other schools by initiative of teachers from partner schools; and (4) result of local and national mass-media reporting (print media, on-line and television).

Program Sustainability

This program has 3 (three) main achievements: the increasing school capacity in Safe and Prepared School and SB-DRRand suitable with the local context; the increasing of students’ participation in DRR actions in school; and the
documented learning through evaluation and monitoring. To assure the continuity post of program, this program applied principles of participation in executing planning, implementation, monitoring and evaluation for every activity. The high level of participation akin of warranty of sense of belonging (ownership) from the school on this program. Besides, the program implementation has also based on the school self-power, where contribution given by schools also large in providing budget for activities implementation. And to assure the continual achievement post of the program, Lingkar still keeps the built relationship and visits the partner schools, motivating and watching over the works of teams has been formed.

Specifically, the already done strategies in order to assure the continuity of the program are:

1. Participation in all activities and minimize intervention input

Active participation in all activity levels allowed students and all school components have the sense of belonging (ownership) so they can understood the plot of the activity. The sense of belonging to the activities and felt as a part of the program would more assure the continuity of the existing activities to be their needs.

2. Enhancing Beneficiaries capacity

With the capacity improvement, beneficiaries (education Department, teachers, and students) can practice independently what was acquired and understood from the program so they can continue the achievement of this program.

3. DRR integration into learning tools

This program facilitate development of DRR learning tools (syllabus and RPP) with DRR integrated so practices of DRR will always done routinely in teaching-learning activities.

4. Integration of DRR activities into extracurricular activity

Stimulate institutionalization of DRR into activities, such as Little Doctor and Hadroh School with DRR songs.

5. Media of Learning/Reference
This program produced various guides and references that could be used to replicate similar activities in the future.

6. Integration of DRR into school policy
This program facilitate DRR mainstreaming and concept of Safe and Prepared School into document of school management planning and policy, as well as School Development Plan (Rencana Pengembangan Sekolah/RPS), School Strategic Plan (Rencana Strategis Sekolah/RSS), school vision and mission, School Activities and Budget Plan (Rencana Kegiatan dan Anggaran Sekolah/RKAS); integrating DRR in Curriculum of Education Iteming Level (Kurikulum Tingkat Satuan Pendidikan/KTSP), decree of school principal in school emergency plan and others. This also to warrant the existence of allocation for the program, activity and resources that encourage and support DRR support at school.

7. Advocacy
Regional government support, in this matter is education Department, has become highly important for the continuity of this program and other similar programs. Beside of cooperation with education Department manifested by opening dialectical space for education Department side, Lingkar has also cooperated/allianced with other institutions in the similar fields like PMI (Indonesian Red Cross), The Village Government, the village DRR Platform, also coordinated actively with DRR Platform in DI Yogyakarta province.

8. The utilization of Peers Network
The program replication and dissemination of knowledge to teachers/other schools also conducted by using existing network such as school in the same UPT-PPD sub-district, MGMP and so on.

9. Enhancement Program Comprehension for School Supervisor
School Supervisor has become a strategic ‘click’ in order to monitor the post-program implementation of Safe and Prepared School/SASB. Therefore, it is very relevant to have
communication with school supervisors in order to give intake understanding/comprehension about the program.

10. Building SB-DRR Coalition

The key of this program independency and continuity is the way of each schools to interact one to another. By the presence of coalition, community school will be able to remain in existence than moving separately. Coalition will also attract parties, as example press for public expose and for more strategic will be able to push the government policy. Embryo of coalition has start to appear especially because the adjacent; SD 1 Cepokojajar with SD Payak, SD Brajan with SD Putren and SD Muhammadiyah Pandes with MIN Jejeran. Besides, communication space available in UPT-PPD level has also maximized in order to open discussion space for interschool information sharing. And in terms, this program opens and encourages the role of UPT-PPD sub-district.

OBSTACLES, CHALLENGES AND SOLUTIONS

In the implementation process, Lingkar has identify few obstacles, both internally and externally, or in other words whether from school and executor team. Characteristic, condition and motivation from different school in giving response to program plan and implementation that also supported by the different of school principal’s role and initiative in pushing the involvement and active participation of staffs in program activities.

Things going different in popular program like Healthy School Program, Favorite School Program (in competition range), Adiwiyata School, etc. These programs were being likely to be prioritized. Moreover the real support coming from the education Department or even government. Schools are much more intended to improve image and prestige-oriented programs or activities so DRR program gets less attention.

From teachers, obstacle comes from the presumption of big part of teachers that the program will give consequences to their jobs quantity – adding job, more jobs; this makes them resistant and unconcerned to the program implementation. In curriculum development, it has been a habit for teachers
to use the same RPP, year by year and they feel unwilling to improve it.

Other than that, many activities/meetings involving lots of parties shall need a long-term coordination process.

In context of program management, the planning stage has still considered to be infirm. As the consequence, time scheduled for implementation often ‘collided’ to academic schedule or school examination. In other words, by the limited time for program implementation and the density of school internal activities itself the target program is not enough compared with quantity and quality of the achievement and intervention needed.

Besides, filling or documenting process and results of the previous activities. The weakness of monitoring to program implementation impacted to the infirm communication and coordination of internal executor team.

From the obstacles mentioned above, various of problem-solving has been agreed as alternative solutions to respond challenges and obstacles identified along the program implementation.

First, coordination in training activities at all partner schools, as HVCR learning for children and adults (agreed to be) directly conducted by the school principal in determining schedule of activities over the teaching-learning hours. This could encourage all teachers to always follow in the activities actively. During now, teachers’ participation mostly ceded and represented to younger teachers.

The next step, the school principal would need to determine and ‘command’ upon the educational staffs (teachers) and non-educational staffs (school employees, but school-guard) that who ever among staffs who attend the going activity should be the same staffs in the next activity and would be so in the future; and it would be compulsory to be done at all partner schools. By this full participation of teachers, it occur possibility or warranty of the presence of disaster knowledge absorption that in the future would be used in RPP drafting and particular subjects (science, social studies, Indonesia language, physique and health education).

Second, coordination with schools on internal monitoring process which has been resulting
agreement of acceleration to chase the lessen material of activities suspended/replaced for examination/test and school holidays (the beginning of Ramadan/Islamic fasting period, Idul Fitri, etc.).

Third, set up a mutual agreement with school for the formation and appointment teachers as the school focal point in certain activity or theme.

Fourth, agreed to determine routine weekly activity acceleration in every school by simultaneous visit to schools in order to minimize the density activities in school.

Fifth, agreed to apply buddy system in every school visit.

Sixth, agreed to make effective weekly coordination by addition of thematic output discussion agenda. The purpose is to see the relation among themes/outputs/activities.

From the identification of obstacles and problem solving of the obstacles, not to meaning until the implementation end, this program remains no ‘homework’ to do. The assumption would be there are things that might cause problems or obstacles in implementing similar program. These are several notes considerable for future problem-solving and analysis.

1. Institutionalization of disaster issues and/or SB-DRR suitable with the context of local schools. This needs more than willingness to accompany and supervise the implementation process of the program indeed. The post-program assumption that school has to be prepared for the coming disaster in the future becomes a huge challenge.

2. Responsibility in endeavoring the children well-growth conducted by the whole parties, family, society, government and school; (including into it) policy and performance of UPT-PPD sub-district (Pleret and Piyungan), Elementary Education Department District of Bantul and PB Bantul focal point has not been conducive. This condition has still need more cooperation of all related parties by intensive communication, coordination and aware-participation.

3. It has still become necessity and the most important thing as an effort in achieving Safe and Prepared School/SASB, growing the passion
and awareness of part of educational workers.

4. The still strong paradigm to think among teachers that disaster is a destiny; even the teacher with this paradigm actively involved in program activities.

5. The still dominant emergency response paradigm (responsive paradigm), proven by the low participation of discussion, learning and/or planning; but in simulation process their passion an involvement were massive enough.

6. Intervention of program or similar only allocated to Region Government District of Bantul, Elementary Education Department and the school, but it is still minimally intervened in UPT-PPD sub-district level or each school’ School Supervisor. It is necessary and important the existent of intervention in capacity improvement by considering the strategic position of UPT-PPD in monitoring and evaluation of schools.

7. There has no institutionalization yet of SB-DRR by government neither do related Department so there is no mechanism supporting the implementation conducted in schools. This is inversely compared by other educational policies such as Nation Characterization Education.

8. The availability of the program implementation staffs with good integrity, capability and capacity and support the conduction of society development works, DRR issues education and children issues becomes the key factor to support the program implementation where the key-message of the program and activity able to be conveyed and understood by communities and processes are well documentable and institutional able.

LESSONS LEARNED

These are good learning and experiences earned from the program implementation.

(1) During the on-going program, activity with children mostly executed outdoor (out of classroom) by a basic consideration that children world is “learning by playing games” world. The density of agenda and content of subjects on elementary education in
Indonesia has disposed the energy and attention of the children in absorbing the essence of “Safe and Prepared School/SASB” as an integral part of them-self re-existence. This condition needs more than creativity of the program executor to read the real situation coped. Reach the target appear before the children become not enough without recognize the children’ world and interest against to flooding information from many sources of media (particularly in cities). This because of experience, once, that even children “just never be able to be arranged” by adults want, they showed their resistance by hitting tables (as their protest expression); which were creatively directed and then invited to “compose” a song/music from a Seri of percussion instruments made by recycled materials as conducted in “school routine visit” program.

(2) Playing and learning together with children experiences become important for all parties (especially adults). There are sides and characters of “playing also learning” in one time. It is not an easy thing, of course, but it is also not an impossible thing to do. Conducting counseling simultaneously in six partner schools with routine activities with children out of school hour gave all side a valuable learning that there is no best achievement with no mutual understanding from parents and the school it-self. Since that, if the success only measured by scores test of subjects, then school report for “Safe and Prepared School/SASB” as a subject will have no bad score in all six partner schools. Even the route of evacuation map in school made by students clearly has described their ideal hope for this program implementation from students “knowledge and interpretation”. Which mean the students/children have the future projection to actualize the best circumstances in their learning at school of Indonesian society.

(3) Counseling and reinforcement to the school principal specifically as the top level of the school institution to motivate the important review the strategic of this Safe and Prepared School
for school become a key-point. In implementation, there was an experience where one of six partner schools principal could not be contacted for a discussion or even just for sharing an update news about program implementation conducted by his teachers, school staffs and of course the students. As the result, the passion for being forward on the lowest level barred by the school principal’s passivity. This come the reversal in the other school with an active and open School Principal in accepting the program. It was the School Principal who motivated and gave comprehension to his staffs the importance of the program for students and also the school achievement.

(4) School assistance in the form of visit (informal approach) is the key to build mutual commitment in a good partnership so that actualizing Safe and Prepared School/SASB becomes to all’ goal.

(5) The result of Safe and Prepared School/SASB development program becomes a proud of the school in a interschool competition. This becomes a chance for development of institutionalization of Safe and Prepared School/SB-DRRat government level. Or, the simplest way is to show a competitive review like Adiwiyata School, to grow initiatives of other schools.

(6) The self-empowered school in program implementation where other than energy and time, the school also contributes in any spaces or financing in holding activities.

(7) Partner school gets the initiative to share experiences to other schools in a range of UPT-PPD sub-district.

(8) The school is able to articulate conception of Safe and Prepared School/SASB. It has proved by seminars of learning about what have learnt partner school has been able to share/convey well the materials of the program and how was the program actually to other schools. And the more interesting was they gave strategies or tips of DRR integration in curriculum, learning tools, even in policies (RPS).

(9) Partnership reinforcement of School Supervisors/UPT-
PPD with school has been strategic enough to push the schools in developing Safe and Prepared School/SASB. The partnership gave the schools, especially the school principals, passion in managing the school.

(10) By a dense academic schedule, duration of ideal implementation for the six schools has taken about 2 years approach. This has caused a good result as the achieved of parameter achievement of Safe and Prepared School/SASB.

(11) By its duration, the logic consequence is the increase quantity of resource needed: financing.

(12) Comprehension of the whole implementation staffs of the conception, purpose and plot of the program becomes the main key so that the comprehension about target and ‘relation’ output among staffs can minimize miss-understanding.

(13) Good and mature calculation in determining strategy of project implementation (time, resources, even financing) is the key of implementation and result expected.