한국위기관리논집 제7권 제5호 2011. 10 233~250쪽

The Effect on the Facilitators of Yonmenkaigi System Method Process

- The Cases of Indonesian Mt. Merapi Area -

이영철

본 연구는 사면회의에서 진행자가 미치는 영향이 매우 중요하다는 인식에서 시작하였으며, 향후 진행자 교육 방법과 진행과정의 개선을 제시하고자 하였다. 연구대상 지역인 인도네시아 메라피 화산은 세계에서 가장 활동적인 화산 중 하나로서 정상 분출구에서 종종 화산 쇄석암이 분출되며, 양질의 모래로서 평가 받아 건축자재로 활용되고 있다. 따라서 모래 채취사업이 급속도로 확산되었으며 지역에 경제적 이득을 제공한다. 그러나 한편으로 경제적 수익과 지역의 이해관계가 복잡하게 연루된 탓으로 채취 작업 활동에 대한 적절한 통제가 어려운 형편이다. 과도한 채취 작업으로 인하여 사방댐과 하천 기반시설들이 파괴됨으로서 자연재해가 일어날 경우 막대한 인명과 재산피해가 발생한다. 이 문제를 해결하기 위해 가능한 비구조적인 방재수단을 정착시키고, 또한 모래 채취 관리 능력을 향상시키기 위한 방안으로 협동적인 역할이 필수적이고, 사면회의는 적용될 수 있는 대안이라고 할 수 있으며 워크숍에 유능한 회의진행자가 반드시 필요하다. 사례 연구에서는 7명의 사면회의 진행자를 선발하여 교육 후 3개 시범마을에서 사면회의를 실시한 뒤 그 결과를 분석하였다. 결론적으로 효과적인 방재 활동수단의 하나로서 지역주민들의 협력적인 팀워크와 통제를 적절하게 이끌어 내는 것이 중요하다고 할 수 있다.

주제어: 사면회의, 회의진행자, 채취 작업관리

Ⅰ. Introduction

Mt. Merapi of Indonesia is one of the most active volcanoes in the world, and the oldest record of eruption in 1006 was engraved on the stone monument. During eruptions, viscous andesitic lavas generate lava domes. Lava dome collapse has often generated pyroclastic flows. This type of pyroclastic flow is called “Merapi-type pyroclastic flow.”

Major eruption which produces approximately 5 million cubic meters of pyroclastic deposit occurs in a decade. Especially after major eruptions, debris flow occurs frequently because of a huge amount of unstable pyroclastic deposits. Fortunately, sand in Mt. Merapi area has a good

quality and is popular as construction material. As a chief industry in the foothills of Mt. Merapi is agriculture generating low income, the sand mining has extended rapidly and become an important income source of rural areas. However, the sand mining activity is uncontrollable so far because of social problems such as complex right and interest. Improper sand mining causes serious damage to sabo facilities and the other river infrastructures.

The capacity of sand mining management as disaster reduction in local community plays essentially in mitigating the risk of the disaster. In some cases of the disaster occurrence, the number of casualties at mining area has significant correlation with the degree of the capacity of sand mining management as the disaster reduction owned by the community. The improvement of capacity of sand mining management in local community is therefore necessary.

Since the sand provided by volcanic activity of Mt. Merapi is considered as an attractive local resource, the sand mining activity is becoming one of the important economic activities and income sources in Mt. Merapi area. Moreover, the proper sand mining management will contribute to the reduction of disaster risks and damages in the community. On the other hand, the sand mining has not been controlled appropriately in the existing framework resulting in serious problems such as expansion of non-registered sand miners, improper excavation, excessive transportation, damages of disaster countermeasures facilities, and so on. Due to the complexity of stakeholders relating sand mining, it is quite often that consensus building among them meets difficulties in decision-making for proper sand mining management. Moreover, it is seldom that the local community is involved in the decision-making on sand mining management even though they are directly suffering from the negative impacts of current improper sand mining.

In order to improve the capacity for sand mining management at the local community level, collaborative action is necessary. The Yonmenkaigi system is one alternative that may be utilized. Therefore, at first the Yomenkaigi workshop in three villages of Indonesian Mt. Merapi area was held from August 12 to August 29, 2009. The process of Yonmenkaigi workshop was led by facilitators who trained by beginner program for short-term. The purpose of this study is to find the effect of facilitators in the Yonmenkaigi workshop process. In so doing, three cases of Yonmenkaigi workshop in villages are analyzed and the evaluation of facilitator is drawn through the checklist for evaluation of facilitators in workshop.

II. Yonmenkaigi System Method and Facilitator

1. Features of the Yonmenkaigi System Method

The Yonmenkaigi System Method was originally designed and used for collaborative action development for a small group in community-citizen vitalization initiatives called machizukuri in a mountainous municipality of Chizu-cho, Tottori, Japan(Okada, 2008:27). Now Yonmenkaigi System Method has been applied to both rural areas and urban areas in Japan(1996, 2005, 2006, 2008, and 2010) as well as in Korea(2009).

The primary objective of the Yonmenkaigi System Method(YSM) is to develop a collaborative action plan for a community in a workshop with a disaster risk context. In order to achieve the objective, the system method focuses on four broad aspects of management, public relations(PR) and information, soft logistics, and hard logistics. These four aspects(roles) are considered required issues for future action. The time dimension is also considered with each of these role-sharing elements(Kamita, 2008: 41).

Participants of YSM first collect information and knowledge from a community diagnosis exercise and then decide for themselves on the theme/goal of the action plan. Afterwards, the action plan to achieve their goal ads well as a plan to implement the action plan is developed by participants(Lee, 2010: 51).

Yonmenkaigi System Method workshop provides a platform for face-to-face communication for participants to become aware of the concerns of others, to discuss the current state of their community and to collaboratively develop an implementable action plan. In this workshop method, the process of making collaborative action plan is systematically developed. Other workshop methods lack this type of system. The emphasis of YSM is on disaster mitigation and prevention rather than on post-disaster situations. In YSM, participants serve the roles of both planners and executors as subjects of action plans. The basic characteristics of YSM are summarized in <Table 1>.

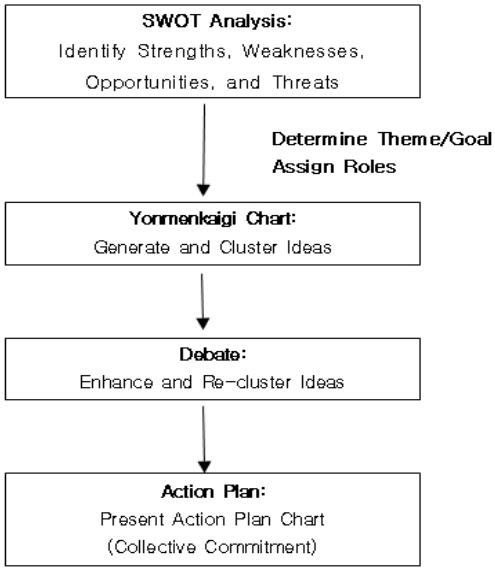
<Table 1> Basic Characteristics of the Yonmenkaigi System Method

Application	Disaster mitigation and prevention for sand mining management
Objective	Collecting visions and hopes of residents for proactive disaster reduction planning as sand mining management in local community
Who Decides Themes and Scenario	Facilitator suggests guidelines and participants determine the theme and scenarios
Participants	Self-governed Community Association for sand mining management(as representatives of residents)
Facilitator	Specialists
Typical Size	One Team(8 to 16 people); Four Groups(2 to 4 people each)
Outcomes	Developing an action plan for field activity of sand mining management in the local community

※ Source: Study on Community Development at Mt. Merapi Area(Okada, 2010: 23).

2. Process of the Yonmenkaigi System Method

The process of the Yonmenkaigi System Method(YSM) consists of four main steps: (1) carrying out a SWOT(Strength-Weakness-Opportunity-Threat) analysis, (2) completing the Yonmenkaigi Chart, (3) debating, and (4) presenting the action plan chart, as shown in <Figure 1>. Carrying out a SWOT analysis constitutes the first step of the process. The SWOT analysis provides the participants with an opportunity to share their ideas and views about the current state of the community. Which leads to a holistic and detailed views of risks faced by the community and future actions. In the SWOT analysis, four types of color cards, corresponding to the four SWOT categories of Strengths, Weaknesses, Opportunities, Threats, are used to express participants' views(Kamita, 2008: 42).



<Figure 1> Process of the Yonmenkaigi System Method

※ Source: Research Institute of Infrastructure Management(Okada, 2008: 43).

Taking into account the current conditions of the community identified during the SWOT analysis, participants then determine the theme/goal of the workshop. Afterwards, the participants are divided into four groups. Each of four groups is assigned one of the four roles of management, public relations(PR) and information, soft logistics and hard logistics. Once the group/role assignment is complete participants start to express their action components and views in accordance with their assigned role by utilizing color cards in a specially designed chart called

Yonmenkaigi Chart. By constructing a Yonmenkaigi Chart, participants set out the vision and actions for the four groups/roles. The action components for each of the roles are grouped according to one of the time frames: 3 months, within 6 months, within 1 year, and beyond 1 year(Lee, 2010: 50).

Participants discuss within their respective groups and plan the actions of their assigned role. Once each group completes the articulation of its action components, debating among groups is carried out to enhance the collaborative action plan. Finally, participants develop an action plan chart for the future.

3. The Role of YSM Facilitator

The name “Facilitator” comes from the Latin word Facilis, which means to do or make easy. A facilitator pays attention to group process in addition to content in order to “make easy“ any meeting or forum involving groups of people or teams. A ‘facilitator‘ is someone who skillfully helps a group of people understand their common objectives and assists them to plan to achieve them without taking a particular position in the discussion. The facilitator will try to assist the group in achieving a consensus on any disagreements that preexist or emerge in the meeting so that it has a strong basis for future action. Facilitation is useful when participants in a meeting are concerned about each person having an opportunity to speak and be heard by all(Schwarz, 2002: 42).

A skilled facilitator helps draw out each participant′s ideas, opinions, beliefs, suggestions, wants, and needs. A skilled facilitator directs the flow of communication so that the purpose of the meeting is fulfilled. In summary the roles of the facilitator during the YSM Workshop are:

- To helps the workshop participants understand their common objectives, potentials and problems
- To encourage the workshop participants in deliberating their ideas
- To assist the workshop participants in achieving the consensus on the action plan
- To guide the process of YSM workshop

4. The Tasks and Skills of YSM Facilitator

To be a good facilitator, especially for an effective facilitator they should be endowed with capacity and skills of the facilitator. There are several aspects to be consider as the YSM

facilitator(Lee & Baiq, 2010: 22).

1) An effective facilitator
   (1) The ability to listen carefully as well as understand
   (2) Neutral position and focus on objective
   (3) Deep interest in issues which deal with Yonmenkaigi Workshop
   (4) Collaborative attitude with participants
   (5) The skill to ensure the flow of discussion after participants have discussed
2) The basic skills of Facilitator
   (1) Communication
   (2) Diffuse confrontation
   (3) Psychological methods
   (4) Design of Workshop Process
3) The tasks of the Facilitator
   (1) Focus on objective of the group
   (2) Setting the stage initially for the successful outcomes
   (3) Share all relevant information
   (4) Use specific examples and agree on what important words mean
   (5) Clarifying participants' roles, responsibilities and expectations
   (6) Recording the actions, time scale and assigned individual tasks (helped by note taker)
   (7) Declaration of closure

III. Facilitator Training Program of YSM for Field Activity

The Yonmenkaigi System Method(YSM) workshop needs facilitators to lead the process of workshop, which in the study the facilitators are coming from University of Gadjah Mada(UGM) Team. For that purpose, seven facilitator candidates from UGM had been selected to participate in the Facilitator Training Program before the Yonmenkaigi workshop was implemented in village level. The training process was held during April to June 2009 comprising transfer knowledge and several workshop simulations.

1. Structures of Facilitator Training Program

The purpose of Facilitator Training's Program is to educate the YSM facilitator to be able to lead and manage the process of YSM workshop. The training program is divided into two stages namely Stage 1A(beginner version) and Stage 1B(intermediate version). At first, the focus of training was to emphasize the importance of understanding the YSM workshop process, and then the training was focused on the need to understand the local background where the YSM workshop will be applied.

To improve the facilitator' ability and understanding on the YSM process several simulations were conducted during training period. Between the simulations of YSM workshop, several discussions regarding the methods and simulations process as well as some questionnaire surveys to the participants were conducted to improve the future application of YSM workshop.

2. Implementation of Facilitator Training Program

1) Beginner Program(Stage 1A)

In general, the beginner version was conducted for three days. The first day of training consisted of introduction of YSM which introduced the fundamental and the steps of YSM i.e. SWOT Analysis, Yonmen Chart, Debating and Action Plan Chart followed by conducting YSM simulation. Some papers related to this subject were distributed as additional information sources for facilitators. The second day of training was started by review and short discussion about day 1 program. During day 2 of training the trainees the simulation of YSM workshop were also conducted. The last day of training was review on the YSM simulation workshops. Supplementary lecture was given to share additional information related to the YSM process.

2) Intermediate Program(Stage 1B)

The Intermediate Program is conducted to prepare the implementation of YSM in real cases, which in this study is the sand mining management in the villages. The Stage 1B consists of three times of simulation in order to upgrade the abilities of facilitators. To know the current situation of local community, which is a target area of YSM simulation, facilitator candidates carried out a field survey in intermediate program. After that course finished, the facilitators conducted the real YSM workshop with local community people in the villages related to project. YSM process, in total seven simulations were conducted during the training program, as shown in

<Table 2>.

<Table 2> Simulation during the Facilitator Training Program

Training Stage	Simulation	Theme	Participants	Date
Beginner Program	Simulation 1	Parking Area in Civil & Environment Department	UGM	April 2, 2009
	Simulation 2	Solid Waste Management	UGM	April 3, 2009
	Simulation 3	Disaster Education for Kindergarten Students in Merapi	UGM, KU[1)]	April 7, 2009
	Simulation 4	Improving Income Level for Kepuharjo	UGM, YEC[2)]	April 23, 2009
Intermediate Program	Simulation 5	Sustainable Sand Mining Management in Kemiren Village	UGM, KU, YEC, BBWS[3)]	May 4, 2009
	Simulation 6	Sand Mine Reclamation in Sindumartani	UGM, YEC	May 20, 2009
	Simulation 7	Develop Salak Agriculture in Kemiren Village	UGM, KU	June 3, 2009

IV. Implementation of YSM in Local Community and Analysis

1. Kemiren Village

The YSM in Kemiren Village was held on August 12, 2009 followed by 13 participants including the representative of LPSPD[4)] (5 people), village government(6 people), and villagers(2 people). Yonmenkaigi workshop was conducted in five steps; SWOT analysis, defining strategy based on SWOT analysis, Yonmen chart, debating/discussion, and final presentation of action plan <Table 3>. The YSM process took two and half-hours to be finished. The process was led by one main facilitator and four sub-facilitators in each group and recorded by a note taker and cameraman. The process smoothly carried out because all participants had same interest and there is no significant conflict among them(Djoko, 2010: 15).

1) KU; Kyoto University
2) YEC; Yachio Engineering Co. Ltd.(Japanese Company)
3) BBWS; River Administration Bureau of Indonesia
4) LPSPD; Village Potential and Resources Management Institute

<Table 3> The Result of SWOT Analysis in Kemiren YSM

Strengths 1. Have an office 2. The location for truck survey is well known 3. Sufficient Human Resources 4. members were former truck driver 5. Having conducted survey before	Weaknesses 1. Communication is not good 2. Not facilitator with survey method
Opportunities 1. Safe and quite(conducive) condition 2. Assistance from UGM, KU and YEC 3. Support from Village Government 4. Support from villagers 5. Support from related government agency 6. Proactive truck drivers 7. Most truck drivers know members	Threats 1. Many activities 2. Local truck driver 3. Unsupported villagers 4. Disaster

※ Source: The Guidebook of Yonmenkaigi System Method(2010: 14).

The YSM resulted in a consensus to conduct sand truck survey and a series of action components to ensure the survey implementation. The objective of the survey is to know the number of sand trucks and the volume of sand transported by the trucks passing through Kemiren Village in a week. It was also decided that the survey including the preparation and data entry would be conducted in a two months. At the end of the field activity, a workshop would be held to present the result of survey to related parties and to discuss the follow up action.

In the Kemiren YSM workshop, as shown in <Table 4>, four groups of Management, Information, Soft Logistics, and Hard Logistics created 40, 25, 22, and 29 action component cards, respectively in the Yonmenkaigi Chart before debating. After debating, the number the movement[5] of action component card was recorded as 41, 33, 31, and 34, respectively, for a total of 139.

<Table 4> Changes in the Action Component in Kemiren YSM

	Management (M)	Information (I)	Soft Logistics (S)	Hard Logistics (H)
Before debate	40	25	22	29
Changes to action plan components after debate				
Arrange	1	2	1	1
Add[6]	0	0	1	1
Move	0	0	0	0
Delete[7]	0	1	0	0

5) Moving a card from one group to another indicates that the action plan component is more suitable or preferable for the shifted group rather than for the original group.

6) Addition of a new card indicates that a new action plan component has been identified and prepared in

<Table 4> Changes in the Action Component in Kemiren YSM(continue)

	Management (M)	Information (I)	Soft Logistics (S)	Hard Logistics (H)
Collaborate[8)]	23	6	13	2
No change	17	24	16	30
Total movements	41	33	31	34

※ Source: The Guidebook of Yonmenkaigi System Method(2010: 15).

2. Sindumartani Village

Workshop to plan the field activity in Sindumartani Village was held on August 28, 2009 in the Community Village Hall. All nine participants, most of members are the village government officers. The workshop was started by the presentation of the grand strategy of post-mining management in Sindumartani Village by the representative of UGM Team followed by the introduction of YSM by main facilitator. The program thus continued to the Yonmenkaigi process. The result of modified SWOT Analysis by the YSM participants is presented in <Table 5>.

The objective of the field activity is to conduct survey for mining location in Sindumartani Village and transfer it to a map. The field activity was planned to be conducted during September to October 2009. At the beginning, several participants were confused about the YSM process, especially to fill the Yonmen Chart. However, with guidance from the facilitators, participants were very enthusiastic in following the YSM process(Djoko, 2010: 17).

<Table 5> The Result of SWOT Analysis in Sindumartani YSM

Strengths	Weaknesses
1. Sufficient Human Resources 2. Members have known the miners and land owners 3. Having conducted survey before 4. Sufficient knowledge about the survey location 5. Location of mining area to be surveyed relative close to the village center	1.Lack of knowledge on the effective method for survey of mining area 2.Lack of knowledge on the advantage of the survey of mining area 3 Lack of financial support 4.Lack of motivation to conduct survey of mining area 5.Lack of team work among Sindumar tani team

order to achieve the group mission.

7) Deleting a card indicates that such an action component is no longer required of desirable. In other words, it indicates that such an action component cannot be carried out.

8) This indicates that the concerned groups or overlapped groups will work together and collaborate for the same action plan component. Because some action plan component require collaboration across the groups to perform the action plan components.

<Table 5> The Result of SWOT Analysis in Sindumartani YSM(continue)

Opportunities	Threats
1. Assistance from UGM, KU, and YEC 2. Support from Village Government 3. Support from villagers 4. Support from related government agency 5. Good relationship among villagers 6. Support from third parties 7. Potential partners from outside Sindumartani	1. Temporary mining location 2. Incidental activities in village 3. Unsupportable person/organization 4. Weather and Disaster 5. Lack of people understanding on the plan of survey of mining location 6. Disaster 7. Different program for the post mining area

※ Source: The Guidebook of Yonmenkaigi System Method(2010: 17).

In the Sindumartani Yonmenkaigi workshop, as shown in <Table 6>, four groups of Management, Information, Human Resources, and Hard Logistics created 15, 16, 11, and 8 action component cards.

<Table 6> Changes in the Action Component in Sindumartani YSM

	Management (M)	Information (I)	Soft Logistics (S)	Hard Logistics (H)
Before debate	17	11	11	16
Changes to action plan components after debate				
Arrange	0	1	1	0
Add	1	2	0	0
Move	0	0	0	0
Delete	0	0	0	0
Collaborate	16	14	10	11
No change	2	5	4	11
Total movements	19	22	15	22

※ Source: The Guidebook of Yonmenkaigi System Method(2010: 18).

3. Kepuharjo Village

The workshop in Kepuharjo Village was held on August 29, 2009 in the Village Hall. 12 people participating in the workshop represents the members of Village resources and Management Institution and the villagers. Same as previous workshops in Kemiren and Sindumartani Village, the draft of SWOT analysis was made by UGM Team to be criticized by the participants. However, there was only little time to conduct analysis, less than 10 minutes, there were not many comments or additional ideas from participants for the SWOT draft <Table 7>.

<Table 7> The Result of SWOT Analysis in Kepuharjo YSM

Strengths 1. Sufficient Human Resources 2. Members have experience on mining area 3. Having conducted survey before	Weaknesses 1. Lack of knowledge on effective method for survey 2. Budgeting
Opportunities 1. Assistance from UGM, KU, and YEC 2. support from all village component	Threats 1. Uncooperative miners 2. Incidental activity in village 3. Unsupportive person/organization 4. Disaster

※ Source: The Guidebook of Yonmenkaigi System Method(2010: 19).

The objective of the field activity decided during the workshop was to conduct survey to create sand miners profile in Kepuharjo Village. The survey was planned to be conducted during September to October 2009. During the YSM, all participants could understand the YSM process in a short time, almost all participants were willing to speak out their argument to develop the action plan. They created for a total 55 action cards in the Yonmenkaigi Chart before debating <Table 8>.

<Table 8> Changes in the Action Component in Kepuharjo YSM

	Management (M)	Information (I)	Soft Logistics (S)	Hard Logistics (H)
Before debate	15	16	11	8
Changes to action plan components after debate				
Arrange	2	0	2	0
Add	1	0	1	1
Move	0	0	0	0
Delete	0	6	4	0
Collaborate	15	13	10	7
No change	5	5	1	5
Total movements	23	24	18	13

※ Source: The Guidebook of Yonmenkaigi System Method(2010: 20).

<Figure 2> Yonmenkaigi Workshop in Kepuharjo Village

※ Source: The Guidebook of Yonmenkaigi System Method(2010: 20).

4. Analysis

1) Evaluation of Facilitator(FA) of Village Workshop

The checklist as shown in <Table 9> was used to evaluate the facilitators' performance in conducting village workshop. This check consists of preparation to carry out YSM, understanding of YSM, implementation of YSM, feedback to participants after YSM workshop, and suggestion to improve YSM. The structures of items in checklist have the conception of PDCA cycle(Plan-Do-Check-Action) as shown in <Table 9> and <Table 10>.

<Table 9> The concept of evaluation for facilitator of workshop in each village

PDCA	Concept	Explanation	Max. Points
P1	Preparation	Preparation to carry out YSM(place, participants, time, etc)	20
P2	Understand of YSM	FA understands the process of YSM	10
D	Implementation	Facilitation ability in YSM workshop	40
C	Feedback	Check after YSM workshop	20
A	Suggestion	Action to improve YSM	10
Total point			100

※ Source: Study on Community Development at Mt. Merapi Area(2010: 34).

P1 means the measure of preparation situation to carry out YSM workshop. Before carry out YSM workshop, Facilitator(FA) should prepare, check, and set up many things in order to produce YSM workshop. Afterwards, FA should understands current situation in target area. P2 means how FA understands and can use YSM to introduce and teach participants. To answer the questions from participants, FA should know the processes and the characterization of YSM. D means how FA facilitates YSM workshop in order to manage a workshop. C defines how FA can continue to have the connection to a local community as a target area after YSM workshop. A means how FA can suggest participants of a local community to improve action plan based on YSM(Djoko, 2010: 35).

<Table 10> Checklist for Evaluation of Facilitaors in Workshop

P1	Preparation to carry out YSM (place, participants, time, etc)	20
P1-1	FA knows the information and the current situations of target area.	5
P1-2	FA determined the roles of staffs for YSM workshop (recorder, camera, video).	5
P1-3	FA set up a workshop place of YSM (table, chair, board, color pen, post-it, etc).	5
P1-4	FA had the meeting with the persons concerned before YSM workshop.	5

<Table 10> Checklist for Evaluation of Facilitaors in Workshop(continue)

P2	Understanding on the process of YSM	10
P2-1	FA understands the process of YSM.	10
D	Facilitation ability in YSM workshop	40
D-1	FA showed the purpose, a theme, and a goal clearly to participants.	5
D-2	FA defined each role of the four sides correctly.	5
D-3	FA could allocate the participants to each side with the appropriate role according to their interest, talent, and skill.	5
D-4	FA could allocate suitable time for each YSM process.	5
D-5	FA could communicate with the participants.	5
D-6	FA asked the participants who have not said their opinions.	5
D-7	FA could trigger and control the debating process.	5
D-8	FA could manage the determination of presenter from each side.	5
C	Check after YSM workshop	20
C-1	FA make the YSM result report.	5
C-2	FA supported Action Plan Chart to participants after YSM workshop.	5
C-3	FA checked the action plan during Field Activity.	5
C-4	FA carried out a result workshop after Field Activity.	5
A	Action to improve YSM	10
A-1	FA could suggest Action of YSM to improve a next activity.	10
Total		100

※ Source: Study on Community Development at Mt. Merapi Area(2010: 35).

The mean values of each variable(x1...x5)were obtained through calculating the average value for each variable of the total facilitators as can be seen from the following formula:

$$\bar{x} = \frac{1}{n} . \sum_{i=1}^{n} x$$

In which:

x_i refer to the value of one facilitator at a particular variable

n= total number of facilitators

Notes:

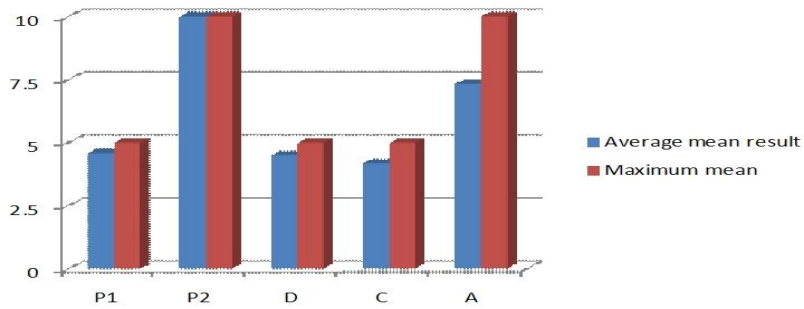
X1: P1, X2: P2, X3: D, X4: C, X5: A

The result of facilitators' evaluation based on the check-list items is shown in <Table 11>.

<Table 11> Average Mean Value of the Results by the Facilitators in Each YSM Workshop

Facilitator	P1	P2	D	C	A
FA-a	4.8	10.0	4.6	4.0	7.0
FA-b	4.5	10.0	4.4	4.3	8.0
FA-C	4.5	10.0	4.5	4.3	7.0
Average mean result	4.58	10.00	4.50	4.17	7.33
Max. Point for total question	20	10	40	20	10
Max. Mean	5	10	5	5	10

※ Source: Study on Community Development at Mt. Merapi Area(2010: 36).



<Figure 3> Facilitators' Results on YSM Procedure based on Check-list

Based on <Figure 3>, the checklist result indicates that the facilitators' performance is relatively high, where the value for each item(P1, P2, D, C, A)is more than 50% of the maximum point. The highest result is for the level of FA understanding on the YSM process. All facilitators claim that they understand the process of YSM the result of self-checklist for P2 was 10 of 10(100%) for all facilitator. The lowest result is for the facilitators' capability to suggest action of YSM to impose next participants' activity in where the average means is 7.33 of 10(73.3%). This might relate to facilitator's necessity to understand the YSM participants' feedback on both the Yonmenkaigi method itself and its implementation before suggesting the participants to conduct another YSM workshop.

2) General Characteristic of YSM Participants

According to <Table 12>, the category of participants with an educational level of secondary schol to high school is dominated in all threww villages. the YSM participants in Kepuharjo workshop had lower educational level than those in Kemiren and Sindumartani workshop.

<Table 12> General Characteristic of YSM Participants

Characteristic	Kemiren	Sindumartani	Kepuharjo
Range of age(%)			
≤ 30	30.8	0.0	41.7
31-40	23.1	33.3	41.7
41-50	30.8	55.6	16.7
> 50	15.4	11.1	0.0
Level of education(%)			
Primary school and lower education	0.0	0.0	16.7
Secondary school to High school	76.9	44.4	83.7
Diploma and higher education	23.1	55.6	0.0

<Table 12> General Characteristic of YSM Participants(continue)

Characteristic	Kemiren	Sindumartani	Kepuharjo
Level of education(%)			
Primary school and lower education	0.0	0.0	16.7
Secondary school to High school	76.9	44.4	83.7
Diploma and higher education	23.1	55.6	0.0
Main Occupation(number)	7		
Farmer			
Livestock farmer			5
Truck driver			1
Security guard			3
Tailor			1
Sand miners			1
Handyman			1
Agriculture laborer		1	
Entrepreneur		2	
Teacher		1	
Village government staff	6	5	

※ Source: Study on Community Development at Mt. Merapi Area(2010: 38).

The occupation distribution of Kepuharjo YSM participants was broader than other two YSM groups. The participants of Kemiren YSM only segregated into two types of occupations whereas for the Kepuharjo YSM, the participants were segregated into six types of occupation. Those who join the same group and have the same profession may have better communication and relationship compared to those who are not in the same profession, which furthermore lead to more dynamic group discussion during YSM workshop.

<Table 13> Number of Respondent

Village	Number		%
	YSM participants	Respondents	
Kemiren	13	5	38.5
Kepuharjo	12	5	41.7
Sindumartani	9	4	44.4
Average			41.5

※ Source: Study on Community Development at Mt. Merapi Area(2010: 39).

In order to gain deeper understanding on how the local communities perceive the YSM, a series of small focus group discussion with the YSM participants from each village was conducted on November 2009. There were 5 participants from each village involved in the discussion except for the Sindumartani where the discussion was followed by only 4 respondents due to the activities of

other YSM participants. In average the respondents comprises 41.5 percent of the total YSM participants as shown in <Table 13>.

V. Conclusion

At the beginning, several participants were confused about the YSM process, especially to fill the Yonmen Chart. However, with guidance from the facilitators, participants were thus very enthusiastic in following the YSM process, especially in debating process. Several people were really vocal which could trigger and inspire other participants to make comment on the SWOT draft and action plan components in Yonmen Chart.

During the discussion with facilitators, the respondents from all three villages informed that the YSM workshop is new experience for them, although they also claimed that the previous action plan development method which they applied, has a similar principle with YSM. The differences are only in the mechanism to address the ideas where in YSM the participants write down their ideas in a sheet of paper whereas in other method the participants directly speak out their ideaa and opinion. All respondents agreed that this mechanism give an opportunity for all YSM participants to actively involve in the decision-making process.

There are several remarks for the facilitation process of Yonmenkaigi workshop, aa follow;

1) Some facilitators have enough capacity to facilitate YSM alone, but some facilitators have not. This is related not only to the facilitators' understanding on YSM process but also to the facilitators' skill on communicating and leading the YSM workshop.

2) To improve the procedure of YSM workshop as well as to maintain the facilitating process, UGM team has used the new facilitator structure that consists of Main-facilitator and four Group-facilitators(Sub facilitator).

3) The facilitators discussed their role and position in YSM workshop, the experiences during YSM preparation workshop are also useful for the facilitators on facilitating the YSM in next workshop.

In conclusion, the YSM workshop has been applied in three local communities within MT. Merapi area to arrange a field activity. In order to understand the group dynamic and the adaption of YSM system in local community context, it is important to understand the background of participants involving in the process, keeping in mind that the YSM workshop is a group effort. To make a successful YSM workshop, the role of facilitator is not only leads and controls

an YSM workshop but also to carry out the collaborative teamwork with participants.

References

Djoko Legono. 2010. *Study on Community Development at Mt. Merapi Area.* Gadjah Mada University.

Japan Civil Engineering Consultants Association. 2006. *The Handbook of Yonmenkaigi System: The Method of Community Communication.*

Lee, Young Choel. 2010. The Fire Management of Multi-Use Facilities and Crisis Response Strategic. Korean Review of Crisis & Emergency Management. 6(1): 45-62.

Lee, Young Choel and Baiq Zurkurniyanti. 2010. *The Guidebook of Yonmenkaigi System Method.* Gadjah Mada University.

Lundgren and McMakin, 1998. *Risk Communication: A Handbook for Communicating Environmental, Safety, and Health Risks.* Battle.

Matsuda, Y., and Okada Norio. 2006. Community Diagnosis for Sustainable Disaster Preparedness. *Journal of Natural Disaster Science.* 28(1): 25-33.

National Research Council. 1989. *Improving Risk Communication.* National Academy Press.

Okada Norio. 2006. *Vital System: Community and Disaster Risk Management.* Kyoto University DPRI. 49(B): 13-136.

Research Institute of Infrastructure Management. 2008. *RIIM Report.* 6(April): 41-52.

Schwarz, Roger. 2002. *The Skilled Facilitator.* Jossey-bass.

李永哲: 인천대학교에서 “자연재해의 원인과 관리전략에 관한 연구(2007)”로 행정학박사 학위를 취득하였다. 인천대학교 위기관리연구센터 연구위원, 일본 교토대학 방재연구소 객원연구원 및 인도네시아 메라피 화산지역 프로젝트 공동연구원을 거쳐 현재 가천대학교 초빙교수로 있다. 주요관심 분야는 지역주민의 방재대책과 지방정부의 관리방안 분야이며, 주요 논문으로는 “다중이용시설의 소방안전관리와 위기대응 전략(2009)”, “일본지방자치단체의 재난관리체계와 시사점(2008)”, “한국인의 안전의식에 관한 연구: 행동변화 모델 및 안전의식 지수개발을 중심으로(2007.공저)”, “ 자연재해의 관리전략에 관한 AHP 분석(2007)” 등이 있다(leejica@naver.com).

투 고 일: 2011년 08월 26일
수 정 일: 2011년 09월 19일
게재확정일: 2011년 09월 30일

The Effect on the Facilitators of Yonmenkaigi System Method Process

- The Cases of Indonesian Mt. Merapi Area -

Young Choel Lee

Mt. Merapi of Indonesia is one of the most active volcanoes in the world. Lava dome collapse has often generated pyroclastic flows. A huge mount of pyroclastic material has sand of good quality and is popular as construction material. The sand mining has extended rapidly and become an important income source of rural areas. However, the sand mining activity is uncontrollable so far because of social problems such as complex right and interest. Improper sand mining causes serious damage to sabo facilities and the other river infrastructures. In order to cope with this problem, sand mining management system, which can be a part of non-structural disaster control measure, should be established as soon as possible. In order to improve the capacity for sand mining management at the local community level, collaborative action is necessary. The Yonmenkaigi system is one alternative that may be utilized. The Yomenkaigi System Method workshop needs facilitators to lead the process of workshop. Seven facilitator candidates had been selected to participate in the training program. After training, the Yonmenkaigi workshop conducted in three villages. The evaluation of facilitators were relatively affirmative effect to the participants, but facilitators need to lead control and collaborative team-work with participants.

Key words: sand mining, yonmenkaigi system method, facilitators