SURVEY ACTIVITY REPORT

HEALTH, ECONOMIC & SOCIAL IMPACTS STUDY OF POST FLOOD DISASTER OF BENGAWAN SOLO RIVER IN BOJONEGORO DISTRICT, EAST JAVA NOVEMBER 2008

HRCCD
HEALTH RESEARCH CENTER FOR CRISIS AND DISASTER

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After a long and winding process of finalizing the instruments together with other country partners, finally on November 2008 MICRODIS – HRCCD University of Indonesia team went down to the community of Bojonegoro District to conduct health, social and economy survey - about eleven month after the Bengawan Solo River overflowed Bojonegoro District area - . The survey activities in Bojonegoro is briefly reported in this “Field Activity Report of Bojonegoro Flood Study” as a part of serial reports prepared by team of Health Research Center for Crisis and Disaster, Faculty of Public Health, University of Indonesia as a contractor of MICRODIS Project in Indonesia. The whole serial reports of Bojonegoro Flood Study will be prepared as serial scientific papers of Microdis project in Indonesia, and will consist of:

1. Proposal of Bojonegoro Flood Study
2. Survey Activity Report of Bojonegoro Flood Study
3. Result Report and Instrument of Quantitative Survey of Bojonegoro Flood Study
4. Result Report and Guidelines of Qualitative Approach of Bojonegoro Flood Study

Overall the field activities have been successfully done. Of course, some minor problems were encountered, but the team managed to find prompt solutions to avoid disturbances in the whole field activities process. The entire field activities - from preparing the field, interviewing data collector candidates, village mapping and listing, training, pre test, and all the data collection process - was finished in 16 days. The 13 data collectors succeeded interviewing 485 respondents and measuring anthropometric status of 69 under-five children. At about the same time, the qualitative data collector managed to conduct 7 FGD (focused group discussions) and 6 IDI (in-depth interviews). The team had also been able to collect secondary data of morbidity and mortality from District General Hospital of Bojonegoro and other secondary data from District Health Office of Bojonegoro.
The data management of both quantitative and qualitative data was conducted in University of Indonesia campus at Depok. Descriptive data analysis was started soon after the data management (including data entry, editing and cleaning) was finished. All the main survey activities and corresponding challenges and solutions together with some preliminary results of Bojonegoro Flood Study have been presented in the 3rd Kick Off Meeting in Belgium on February 25-27, 2009. Further extensive and deeper data analysis and report writing are going to be done very soon.

In this opportunity, the team would like to show the highest gratitude to the Head of Bojonegoro District Health Office, the Director of District General Hospital of Bojonegoro and all their involved staffs who have been very welcome, cooperative, and helpful in supporting the implementation of Bojonegoro Flood Survey.

HRCCD
FACULTY OF PUBLIC HEALTH,
UNIVERSITY OF INDONESIA
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The Bengawan Solo River – the longest river in Java Island flowing across Central Java and East Java Provinces - overflowed after a few days of torrential rains and resulted in huge flooding in many districts located near to the great river or its branches. Initially, portions of Central Java Province were heavily affected, in the two provinces up to 12,000 houses have been destroyed or damaged with more than 80 lives lost, 24 people reported injured and more than 50 reported missing.

At a later stage, the damages were more heavily experienced in some districts of East Java Province particularly in Bojonegoro, Ngawi, Tuban, Lamongan and Gresik. Total of 17 districts in East Java were affected. Flood had caused 30 deaths and in Bojonegoro alone, 24,573 houses have been affected by the flood.

The Bojonegoro district was the worst flood-affected area with more than half of the regency inundated with about 3 meter high flood waters within the sixteen sub-districts of Kasiman, Purwosari, Dander, Kapas, Balen, Kanor, Margomulyo, Ngraho, Tambakrejo, Padangan, Kalitidu, Malo, Trucuk, Bojonegoro, Baureno and Sumber Rejo. Close to 229.00 displaced people were occupying temporary shelters while others have been forced to stay near their devastated homes because the access to exit their villages were cut off by the flood waters. Moreover, the accessibility to Bojonegoro district general hospital was also obstructed; the hospital was flooded and surrounded by flooded area.

Floods can potentially increase the transmission of the following communicable diseases: water-borne diseases, such as typhoid fever, cholera, leptospirosis and hepatitis-A, and vector-borne diseases, such as malaria, dengue fever, yellow fever, and West Nile Fever. Other health risks posed by flooding include drowning and injuries or trauma and hypothermia. Although the communicable disease outbreaks may not always occur, the risk of transmission of certain endemic and epidemic-prone diseases can increase following natural disasters closely related to the size, health
status; living conditions of the displaced population, and the disaster management employed. Improved detection and response to communicable diseases is important in order to monitor the incidence of the diseases, to document their impact and to help to better quantify the risk of outbreaks following natural disasters.

In order to understand better and correctly the current health, economic and social status or impact after the flood and to identify problems related to the disaster management programs employed in disaster areas, a good population based survey, coupled with a good complementary qualitative study and relevant secondary data collection are really needed. From the studies, identification of the determinants of several disease outcomes occurred after the flood may also be useful for further better health promotion and prevention programs in the communities living the disaster prone areas in Bojonegoro.

2. PREPARATION, TRAINING, AND PRE-TESTING

2.1. PREPARATION

2.1.A. Proposal Development, Ethical Review And Permit

A proposal was developed to achieve the objectives inline with both Microdis goals and consensus, as well as with local specific demands and characteristics in study areas/regions. After the proposal has been finalized, UoI processed the survey permit from every level of authorities from several different governmental hierarchies from central to the lowest hierarchies in sub-district/ villages level e.g. Central (Ministry of Internal Affair, Republic of Indonesia), East Java Province, Bojonegoro District, and sub district. This is the most crucial step of survey preparation, otherwise the survey will be considered as illegal activity.

While waiting for all permits from the authorities, UoI submitted the study proposal to the Ethical Committee of Faculty of Public Health, University of Indonesia to obtain an ethical clearance. Researcher presented the proposal to the Ethical Committee members consist of 5 professors who have different expertise in research activities.
Finally, after revising the proposal based on the inputs of ethical committee, the study attained the ethical clearance.

2.1.B. Site Selection

On February and May 2008, the UoI team has made two field trips to potential study sites such as Bojonegoro and Ponorogo, East Java Provinces for Flood Disaster and Bantul, Yogyakarta for Earthquake Disaster. The objectives of these field trips were to capture the local context and significance of disaster related characteristics and problems in the local communities and to get insight about the post disaster conditions in the area based on the information from local authorities and team's direct observation.

Bojonegoro was finally selected to be the survey site in Indonesia due to the current occurrence of flood disaster (less than one year), the magnitude of disaster and its impact to the community of Bojonegoro.

2.1.C. Sample Size Estimation

To estimate the sample size, UoI team uses several health parameters (prevalence of certain diseases or health problems closely related to the type of disaster in the provincial/district level). Sample selection in this study was done through an approach of multi-stage cluster sampling. Minimal sample size for both populations (index group, i.e. the flooded population and reference group, i.e. the non-flooded population) was estimated using; 1) the equation of sample size based on a population proportion with specified absolute precision and 2) equation of sample size for hypothesis testing for two population proportions. Since this study used cluster sampling design, the minimal sample size estimate needs to be corrected by design effect (deff). Below are the equations of sampling estimation:
1. Equation of estimating sample size using a population proportion with specified absolute precision

\[ n = \frac{z_{\alpha/2}^2 \cdot P(1-P)}{d^2} \cdot \text{deff} \]

2. Equation of estimating one group sample size using Hypothesis test for a population proportion

\[ n = \left( \frac{z_{\alpha/2} \sqrt{2P(1-P)} + z_{\beta} \sqrt{P_1(1-P_1) + P_2(1-P_2)}}{(P_1 - P_2)^2} \right)^2 \cdot \text{deff} \]

Some assumptions of input parameter were used, like \( \alpha = 0.05 \), \( \beta = 0.2 \), \( \text{deff} = 2.00 \) and results from previous national survey on water-borne disease, i.e. the prevalence of diarrhea, and the respiratory diseases, i.e. the prevalence of ARI (acute respiratory infection) in East Java. The minimum sample size required for this study is 436 and could be rounded to be 500 samples. Therefore, 250 households in index (i.e. flooded) population and 250 households in the reference (i.e. non-flooded) population will be selected.

### Table 1. Estimation of Minimal Sample Size

<table>
<thead>
<tr>
<th>Acute Disease Indicators</th>
<th>Estimated proportion at baseline</th>
<th>Precision</th>
<th>Design effect</th>
<th>Sample size for estimation</th>
<th>Estimated proportion at endline</th>
<th>Power of the test</th>
<th>Sample size for hyp. Test</th>
<th>Total Sample Size</th>
<th>Total Sample Added 10%</th>
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<tbody>
<tr>
<td>ARI</td>
<td>21.80</td>
<td>10.00</td>
<td>2.00</td>
<td>132</td>
<td>3.10</td>
<td>80</td>
<td>96</td>
<td>192</td>
<td>211</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>9.60</td>
<td>10.00</td>
<td>2.00</td>
<td>68</td>
<td>1.10</td>
<td>80</td>
<td>218</td>
<td>436</td>
<td>480</td>
</tr>
<tr>
<td>Asthma</td>
<td>12.90</td>
<td>10.00</td>
<td>2.00</td>
<td>88</td>
<td>1.20</td>
<td>80</td>
<td>148</td>
<td>296</td>
<td>326</td>
</tr>
<tr>
<td>Cough</td>
<td>35.00</td>
<td>10.00</td>
<td>2.00</td>
<td>176</td>
<td>17.50</td>
<td>80</td>
<td>198</td>
<td>396</td>
<td>436</td>
</tr>
<tr>
<td>Cold</td>
<td>33.80</td>
<td>10.00</td>
<td>2.00</td>
<td>172</td>
<td>16.90</td>
<td>80</td>
<td>206</td>
<td>412</td>
<td>453</td>
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2.1.D. Sampling Procedure

As stated previously, the subjects in this study were selected randomly using multi-stage cluster sampling design. The steps of multi-stage cluster sampling protocol/mechanism are as follows:

**Phase 1: Selection of Village**

In this study, our cluster is the study village. Selection of the village as the study cluster was begun with identifying and stratifying villages based on exposed or non-exposed to flood, then a list of flooded and non-flooded villages were made together with its population. It is figured that in the December 2007 flood, out of 435 villages lies in Bojonegoro District, 167 villages were flooded (total population of 438.031) and 268 were not flooded (total population of 808.873). The list of flooded and non-flooded villages was made in the Ms Excel format, and then the file was transferred to CSURVEY to let the software select 25 cluster (villages) using PPS (probability proportionate to size). (Complete lists of selected clusters could be seen attachment 2 and 3).

**Phase-2: Selection of Rukun Tetangga (RT)**

The number of households per village in Bojonegoro is quite high, ranging from 136 to 542 households per village. The list of all households in each village was not available in the local governmental office. Since developing a complete and accurate list of households in each village was not feasible due to resource restriction of this project, the most rational alternative approach was then to select the RT (“Rukun Tetangga”) which is a smallest unit of neighborhood block within a village. Then the next phase of sampling procedure is to select the RTs within each village.

Each village has a list of RTs. One village can have 15-37 RTs and on average each RT consists of 40 households. The research team verified the list of RTs in each village, refined it and constructed the most accurate list of RT’s in each of the village. From this list, the research team randomly selected two RT’s per village.
Phase-3: Selection of Households

In the selected RTs, the simple mapping and listing of household was conducted. In the listing process, the information about flooded and non flooded status of the households was also asked. Based on the household list, 5 household per RT were randomly selected plus 1 (one) additional household as a reserve for replacement. The list of selected household with the two replacement then was distributed to the data collector personnel. In a situation where a respondent can not be interviewed after 3 times of visit in a day, then this household (where the eligible respondent was not available) will be replaced.

In brief, the sampling procedure/ mechanism of multistage cluster sampling with PPS (Probability Proportionate with Size) is conceptualized in the following diagram:

**SAMPLING PROCEDURE/ MECHANISM**

- Flooded Villages 167 (population 438.031)
- Random
- Selected 25 cluster (villages)
- Random
- Selected 2 RT per village
- Random
- Selected 5 households per RT

- Non Flooded Villages 268 (pop 808.873)
- Random
- Selected 25 cluster (villages)
- Random
- Selected 2 RT per village
- Random
- Selected 5 households per RT
2.1.E. Mapping & Listing

To know more about the study population and develop the sampling frame for Bojonegoro district, the UoI research team has searched for national data (PODES), in order to make a list of villages and the population size of every village.

In conducting survey in Bojonegoro District, for comparison, study population, as had previously been mentioned, was grouped into two categorical populations. First category is population living in villages which had suffered from December 2007 flood. This type of population, that actually lives in areas close to or surrounding of the great Bengawan Solo River has higher risk of getting negative impact due to flood. This category is then named as **index or flooded population**. Second category is population living in villages which had not suffered from December 2007 flood and thus presumed to have lower risk of getting negative impact attributed to the flood. This second category is then named **reference or non-flooded population**.

In this study, villages as cluster are considered to be our primary sampling unit. The cluster random selection will be done in proportional manner where the chance of a village to be selected is based on the size of its population. This principle is called PPS (Probability Proportionate to Size). The cluster selection with PPS will be assisted using CSURVEY software.

In the selected clusters, the simple mapping and listing of Rukun Tetangga (RT) was conducted. In the listing process, the information about flooded and non flooded status of the RT’s was also asked and verified. After constructed the most accurate list of RT’s in each of the village then the research team randomly selected two RT’s per village.

In the selected RTs, the simple mapping and listing of household (Name of the household’s head) was conducted. In the listing process, the information about flooded and non flooded status of the households was also asked. The non-flooded households were excluded as a member of the flooded village. Based on the household list, 5 household per RT were randomly selected.
The sample unit of this survey is household that consists of members who have been living in study area for at least three months before the occurrence of the huge Bojonegoro flood, i.e. 6 months before December 2007. The eligible respondent in each household is the head of households or his/her spouse.

2.1.F. Data Collector Recruitment

UoI team has developed constructive collaboration and networks with the local partner from District Health Office (DHO) to arrange and organize logistic and field preparation activities such as: facilitating local permit process, bridging local network, putting public announcement for data collector recruitment at the schools of public health in town, receiving the application, setting the data collectors training venue and meals, offering supporting staffs and potential base camp for data collector, etc.

After closing date of data collector application, researcher then flew to Bojonegoro to interview and select the potential candidate of data collectors based on the criteria that have been determined earlier together with the local partner from DHO. Initially there were 26 applicants; however, due to national recruitment test of government employee that was conducted at the same day with MICRODIS survey, 12 applicants withdrew their participations. The other 14 applicants were then accepted to join the survey.

2.2. TRAINING & PRE TESTS

Prior to survey, UoI team had done several questionnaire pre testing at one flooded area in Kampung Melayu, Jakarta. In addition to getting deeper insight of the questionnaires through pre-testing, the UoI team, during the pre-testing, has also received valuable inputs for the refinement of questionnaire from the community and the NGO specializing in assisting community for disaster preparedness. This NGO was developed by one community leader who devoted himself and his family to help his community during and after the flood.
In the field, UoI team trained 14 data collectors in three full day training program to do household adult member interview using structured quantitative questionnaires and to measure anthropometric indicators of under-five children available in the visited household. It was a two way training where an active discussion between researchers and data collectors was very much encouraged. Researchers presented the summary of study background in brief, explained the direct and indirect benefit of conducting such survey both for themselves as data collectors and their communities as the study population. Research team also emphasized the pivotal role and contribution of data collectors to the whole process and quality of the research. With respect to ethical conduct in disaster research, the team has also underlined the importance for the data collectors to preserve their empathy for the disaster victims among the study population.

There were class sessions for the first two days of training and was a try out for the third day. During the third day, interview try out together with questionnaire pre-testing were carried out. In this activity, data collectors had finally practiced the interview using the questionnaire with the local community for the first time. While the data collectors were doing the tryout of interviews under observation of the research team, the research team, at the same time, was also observing the study sites and taking the opportunity to explain the present community leader about the importance of this survey for local communities and authorities.

The try out was conducted at Kelurahan Kepatihan, Makam Sedeng RT 12/02 toward twelve households. After try out, all data collectors were headed back to the training room to discuss all the problems emerged during try out and to find solution.

On the last day of training, the data collectors were given necessary equipments for data collection such as bag pack, stationary, plastic map (to protect questionnaires from the rain), name tag, and letter of assignment from the Head of HRCCD FPH UoI. All data collectors should sign a working contract that was prepared by the research team The complete training schedule and identification of data collectors could be seen in attachments.
3. QUANTITATIVE DATA COLLECTION AND MANAGEMENT

Primary data collection started from 13 to 21 November 2009 toward 485 households in 50 villages, through structured interview, followed by anthropometric measurements of under-five children population.

All interviewers and data entry were forced to comply with the quality data assurance mechanism that was implemented in this survey. The UoI research team conducted spot-checking to ensure that the data collectors come to the designated household and hold the interview in correct manner. When the data collection was finished during the day, direct cross-check of the data by interviewers and researchers were done at evening till night in the base camp, to ensure the accuracy of recorded data. Clarification of suspected filling errors of the questionnaires or illogical or inconsistent input data in the questionnaire was done during this evening cross-check procedure. When necessary, the problematic/erroneous filled questionnaires should be clarified in the field by re-interviewing or re-questioning the respondents for particular questions/information. Number of questionnaires that had passed through researcher’s final checking reached about 50% of total questionnaire. After passing the process of spot-check and cross-check, the filled questionnaire were then entered and cleaned.

After the data entry and data cleaning process had finished, the initial data analysis was performed descriptively including presentation in form of tables and graphics, as presented in the 3rd Kick Off Meeting in Brussels, Belgium.
4. QUALITATIVE AND SECONDARY DATA COLLECTION

Qualitative data collection was done somewhat earlier than the population based quantitative survey. Qualitative data was collected through FGD (Focused Group Discussion) and IDI (In-depth Interview). FGD was also done for the purpose of capturing local important disaster and health related concepts in the community needed to construct and refine good quantitative questionnaire. Guidelines of qualitative data collection were developed to guide qualitative data collection process in the field.

During the FGD and IDI, the UoI team has got a chance to meet, discuss and interact directly with the village leader (formal and informal) and the member of the communities, especially the important key persons from various groups (male, female, religious leader, community leader, and local media). In addition to collecting relevant qualitative information, the informal meeting with key persons in the communities has simultaneously given the team an opportunity to share information on community's empowerment in disaster preparedness and management.

FGD and IDI were conducted and recorded in Bahasa Indonesia. After data collection was finished, interview transcript was performed. Then, selected scripts were translated into English.

Health system instrument that was initially planned to be administered as an individual activity was then partially inserted in two other research activities which are qualitative data collection and secondary data collection. The most underlying reason of doing so is that the impracticality of coming to the same informant with a different instruments.
4.1. IN-DEPTH INTERVIEW

Indepth interview was conducted to 6 key Informan, namely:

1. **Head of District Health Office of Bojonegoro** as the Head of Health Unit in Disaster Management Response Unit.

2. **Bupati of Bojonegoro District** as Head of Disaster Management Response Unit in District Level.

3. **General District Hospital** (RSUD Dr. R. Sosodoro Djaikusumo). This hospital was a main referral hospital during and post flood disaster. Since the head of General District Hospital was not available for the indepth interview, he was replaced by the Head of Public Relation Unit.

4. **NGO.** There was no local NGO who specialized in dealing with flood disaster management response unit especially in health area. The most active and remembered NGO who involved in the disaster management system was Mer-C where the head quarter located in Jakarta. The informant from Mer-C is the Field Coordinator of Medical Unit.

5. **Local Mass Media,** the selected informant was the Editor in Chief of the most influence local newspaper in the district called Radar Bojonegoro. This newspaper is the member of Jawa Post Group (the biggest newspaper company in East Java Province).

6. **Religion Leader,** the selected informant is a Kyai (Moslem Religion Leader). This informant was selected to identify whether there’s such belief based on religion that influencing the people’s way of thinking. In addition to that, this informant can provide information about his role to the community during and right after flood disaster. We only selected a Moslem religion leader because of the majority religion in Bojonegoro District is Moslem.

4.2. FOCUSED GROUP DISCUSSION

In the research proposal, it was planned to conduct FGD to both flooded and non flooded common villagers. However, after further discussion then it was decided to perform FGD only to the flooded common villagers (exposed “index” villagers) under
consideration that non exposed “reference” villagers will not provide much information regarding the occurrence of Bengawan Solo River flood.

The Focus Group Discussion of common villagers was conducted to 4 groups, specifically:

1. **Group of Younger Women with under five children – from 2 flooded villages**
   The average age of participants in this group is 37 y.o. with education level range from Elementary School up to High School. Most of their occupation are housewives and have been living in their village from 16-40 years.

2. **Group of Older Women from 2 flooded villages**
   The average age of participants in this group is 48 y.o. and average level of education is Elementary School. Most of their occupation are housewives and have been living in their village from 25 – 55 years.

3. **Group of Younger Men from 2 flooded villages**
   The age range of participants in this group is 29 to 40 y.o. with level of education from Elementary School up to High School. Their occupation varies from farmer, entrepreneur, to government employee. They have been living in their village from 9-37 years.

4. **Group of Older Men from 2 flooded villages**
   The age range of participants in this group is 49 to 55 y.o. The average level of education is Elementary School. Their most occupation is farmer. They have been living in their village from 29-50 years.

The other three FGD was conducted to two groups of health personnel and one group of Community Leader

5. **Group of Village Midwives (representative from 6 flooded village with the criteria of severe and less severe)**
   The member of the group is all female with age range of 27 to 30 y.o. In average, their level education is Diploma 3 and has been serving as village midwives from 3-18 years long.
6. Group of Head of Community Health Center (representative from 6
flooded village with the criteria of severe and less severe)
The member of this group are combination of female and male general practitioner
who has been service from 2 to 10 years long.

7. Group of Community Leader (Secretary of Village from 6 flooded
village in Kanor Sub District)
The member of this group is the Secretary of Villages. They are representing the most
severe impacted Sub District namely Kanor Sub District. The average education level
of this group is High School with age range of 35 to 59 y.o. They have been holding
this position from 4 to 31 years long.

4.1.3. SECONDARY DATA COLLECTION & MANAGEMENT
Some questions in health system instrument were responded using the secondary data/
profiles collected from District Health Office and General District Hospital.

In addition to institutional profiles, two year periodic data on mortality and morbidity
of out-patient and in-patient (Year 2007 and 2008) were collected from the
Bojonegoro District General Hospital as the main referral hospital at the District of
Bojonegoro. The morbidity data was taken from the monthly recapitulation report of
the Hospital, sent to the Ministry of Health Republic of Indonesia, in Jakarta While
the mortality data was taken from the Doctor’s Death Certificate. In this certificate
there is information about date of death, place of death, cause of death, and
demography information about the deceased.

The morbidity and mortality data was input in the excel document and then secondary
data matrix was developed. The figures from secondary data will be inserted in the
quantitative report as necessary.
5. CHALLENGES AND ACHIEVEMENTS

5.1. CHALLENGES

The research team did find some challenges during the study implementation, especially during the data collection activities in the field. Below is the list of several main problems encountered, together with the solution and measures taken to solve the particular problems.

a. Although UoI have requested, UoI did not receive interviewer guidelines from Microdis Economic and Social Working Group, responsible in developing the economic and social sections of the questionnaire. Thus, to solve this, we made the corresponding guidelines based on our own perception and experience.

b. There were 3 of 25 clusters listed as flooded village, while they were actually not completely flooded (only rice plant). The solution was replacing randomly with 3 completely flooded villages.

c. As previously noted, due to civil servant recruitment test in the Provincial level, 12 out of 26 applicants withdrew their application to involve in the study as data collector. There was no other choice than hiring all 14 left candidates (12 interviewers and 2 anthropometric measurers).

d. During the training we found out that not all of the data collectors have got experience in conducting survey in the community. Putting together an experienced interviewer with an inexperienced one as a pair was the solution for this problem. Closely related with this problem, one interviewer still had difficulties in understanding the questionnaire when the data collection has begun. This is her first time in interviewing study subject. The research team then had to put more effort in supervising and monitoring this person during the data collection process.

e. Concerning some local specific data, difficulties were found when respondents reported the some data dimension (e.g. length of the land or cultivated areas) using local traditional measurement units. Researchers had tried to convert those various local/traditional measurement units of the land or cultivated area to an
approximate value of an standard international measurement units, although it may not so precisely the same.

f. There’s a common religious tradition of Bojonegoro people that on every Friday there is a Qur’an collective reciting. On one Friday during the data collection activity, data collectors requested a day break so they could join the collective Qur’an reciting with their big family. Since one data collector has been fired earlier and had caused some delays, the researcher tried to give understanding that this survey cannot afford anymore delays. The researchers were very aware that this was a very sensitive issue. Fortunately, all data collectors understood and accepted the urgency of data collection, such that they did not mind to cancel their participation in this religious activity gathering in that day. Instead they recited the Qur’an individually after the re-check and cross-check process.

g. Supervising the interviewer to control the data collection process is also a crucial challenge. In our case, one interviewer seriously violated interview guideline and instruction. This problem was identified when this person was not able to submit the re-checked and cross checked filled questionnaires on the first day. Consequently, hard measure was taken to avoid further problem, by firing this problematic interviewer. The research team had also given explanation to other interviewers why such action should be taken to avoid misunderstanding and prevent similar violation among all data collectors. At the same time the team had to modify the data collection strategy to avoid any delay because of losing interviewer.

h. In some cases, spot checks did not function well, due to language and communication gap. The Team then had to increase the frequency of spot checks from about 5% to be 7%.

i. Some respondents were not available at the time of interview. The interviewer should try to visit until 3 times. In the case that the eligible respondents were still not available for interview after the third visit in a day, the interviewer should replace him/her with another candidate. For anticipating the respondent replacement, the research team has added two substitute respondents or households per RT in the sampling frame.

j. Among 145 under-five children in our list, only 69 under-five children were succeeded to be measured due to unavailability of under-five children for
anthropometric measurement and limitation of anthropometric personnel to cover all wide study areas. The team had no choice than just collected anthropometric information from all the 69 available children.

k. With respect to qualitative data collection, the team had difficulties in arranging suitable time with the key informant for in-depth interview schedule. For this particular problem we did revisiting the informant or replacing the informant if he/she was not available in the second visit.

l. Also related with the qualitative study, DHO invited the head of CHC and midwives for FGD in the DHO office. The team was aware that inviting the head of CHC and midwives for FGD in DHO office will inhibit the true and honest expression of the informant, because of their occupational relationship with the DHO office. Therefore, the team had to remove the place of FGD from DHO to research head quarters in the field.

5.2. ACHIEVEMENT

The points of achievement of UoI team in this particular flood study implementation in Bojonegoro district, especially in relation to field activities, are as follows:

a. Has conducted 3 pre-testing of questionnaires (two in Jakarta and one in Bojonegoro)

b. Has produced final refine comprehensive integrated questionnaire in Bahasa and English versions, comprising the health, economic and social sections, with main focus is in health.

c. Has produced qualitative guideline for 15 informants with different focus of interest

d. Has produced both interviewer manual and field protocol

e. Has produced the data quality control guideline

f. Has produced a data entry template both for survey data and secondary data.

g. Has collected quantitative data from 485 respondents in 9 days of data collection

h. Has collected primary data from anthropometric measurement of 69 under-five children in the study population

i. Had collected qualitative data from 15 data collection activities in 8 days

j. Had collected two-year serial data of mortality and morbidity in district hospital
k. Has created and developed good networking with local partners at provincial and district level of authorities.

l. In general, the processes of survey from beginning until the end were going very well.
6. GENERAL CONCLUSION AND PRELIMINARY OBSERVATIONS FROM THE FIELD

1. Although flood strikes Bojonegoro almost every year, there was no standard operational procedure specifically designated for flood disaster management response both from local government (for operational procedure in general) and also from Health District Office (for health sector). As consequences, the coordination among stakeholders in every level of government hierarchy in regards to flood disaster management response is still weak.

2. Even though the Management Response Unit, namely the SATLAK PB (Satuan Pelaksanaan Penanggulangan Bencana) in district level has been established since 1995, there has been no community participatory program launched by this unit in relation with long term and comprehensive prevention, preparation, mitigation program during and post disaster. As consequences, the communities do not aware about the importance of disaster management mechanism and do not feel attached and involved with the disaster prevention program done by the local government in their areas.

3. In fact, the local (district) government had already had a community’s participatory program to prevent future flood, however this program has not been well implemented and moreover some communities consider that this program is an unmet need program. This consideration has made the community reluctant to be involved in the program.

4. The prevention structural approaches that were taken by local government have not yet been optimal to prevent future flood strike in Bojonegoro. The flood prevention program was focused only in repairing the structural damages due to the previous flood.
5. The facility in the community health service in term of flood disaster management response is not sufficient. There’s no rubber boat, no electricity generator, and no spare medication stock during the time of flood season.

6. Despite all the above points, during the field activity it was observed that several key positions in local government hierarchies were quite recently hold by some new progressive officers. Several positive actions/idea have been planned to improve the quality of disaster management response especially in health sector and some of it are about being executed as response of the big flood in 2007.

REFERENCES

1. Indonesia: Floods and Landslides in Central Java and East Java Provinces OCHA Situation Report No. 4. (www.reliefweb.int)
3. Information Bulletin International Federation of Red Cross and Red Crescent Societies, Indonesia Floods and Landslides, 5 January 2008
ATTACHMENT 1: ETHICAL CLEARANCE

UNIVERSITAS INDONESIA
FAKULTAS KESEHATAN MASYARAKAT
KAMPUS BARU UNIVERSITAS INDONESIA DEPOK 16424, TELP. 7894975, FAX. 7863472

KOMITE ETIK PENELITIAN KESEHATAN - FKMUI

SURAT KETERANGAN
Nomor : C2./KE/12/08

Setelah menelaah usulan dan protokol penelitian di bawah ini, Komite Etik Penelitian Kesehatan Fakultas Kesehatan Masyarakat Universitas Indonesia, menyatakan bahwa penelitian dengan judul :

"Dampak Kesehatan Akibat Bencana Alam Gunung Meletus dan Banjir di Jawa Timur"

Lokasi : Kabupaten Bojonegoro dan Kabupaten Kediri, Jawa Timur
Waktu Penelitian : November 2008
Responen/Subjek penelitian : Non penderita
Institusi Pelaksana : Health Research Center for Crisis and Disaster (HRCCD)
Tim Peneliti : Dr. Mondastri Korb K. Sudaryo, MS, DSc

Telah melalui prosedur kajet etik dan dinyatakan layak untuk dilaksanakan

Demikian surat keterangan lolos kajet etik ini dibuat untuk diketahui dan dimaklumi oleh yang berkepentingan.

Depok, 18 Desember 2008
 Sekretaris Komite Etik Penelitian FKM-UI

Prof. Dr. dr. Sudijanto Kamso, SKM
NIP 140 052 213
ATTACHMENT 2:
PERMIT FROM MINISTRY OF INTERNAL AFFAIR, REPUBLIC OF INDONESIA

DEPARTEMEN DALAM NEGERI REPUBLIK INDONESIA
DIREKTORAT JENDERAL KESATUAN BANGSA DAN POLITIK
Jalan Medan Merdeka Utara No.7 Telp. 3450038 Jakarta 10110

SURAT PEMBERITAHUAN PENELITIAN
(SPP)

NOMOR: 440.02/1000,201

MEMBACA:
Surat Kepala Health Reseatch Center for Crisis and Disaster 
Nomor: 060/HRCDD/K/VIII/2008 Tanggal 19 Agustus 
2008 Perihal Permohonan Ijin Penelitian.

MENGINGAT:
1. Keputusan Menteri Dalam Negeri Nomor: 130 Tahun 
2003 tentang Organisasi dan Tatakerja Departemen 
Dalam Negeri.
2. Surat Keputusan Menteri Dalam Negeri Nomor: 
SD.6/2/12 Tanggal 5 Juli 1972 tentang Kegiatan Riset 
dan Survei diwajibkan melapor diri kepada Gubernur 
Kepala Daerah atau Pejabat yang ditunjuk.
Tahun 1981 tentang Surat Pemberitahuan Penelitian 
(SPP).

MEMPERHATIKAN:
Proposal Penelitian Ybs.

MEMBERITAHUAN BAHWA:

NAMA: Dr. Mondastro K. Sudaryo, MS, DSc
ALAMAT: Kampus UI Depok 16424
PEKERJAAN: Peneliti
KEBANGSAAN: Indonesia
JUDUL PENELITIAN: "Studi Dampak Kesehatan Pasca Bencana Alam Gunung 
Meletus dan Banjir"
BIDANG: Kesehatan
DAERAH: Provinsi Jawa Timur
LAMA PENELITIAN/ 
KEGIATAN: Oktober s/d Desember 2008.
PENGIRIMAN PESERTA: Melody Farenti Prameswari, S.Sos, MKM; Eko Setyo Pambudi, 
S.Sos, Mikes; Reni Mahkota, SKM, M.Epid dan Dra. Evi 
Martha, M.Kes
PENANGGUNG JAWAB: Dr. Mondeastro K. Sudaryo, MS, DSc
SPONSOR: -
MAKSID DAN TUJUAN: Mengukur besarnya masalah atau dampak akibat bencana 
alam, yang meliputi berbagai aspek, khususnya dalam aspek 
kesehatan dan memperkuat program kebijakan dan strategi 
untuk mitigasi dan penanggulangan masalah kesehatan 
akibat bencana alam di masyarakat.
AKAN MELAKUKAN PENELITIAN DENGAN KETENTUAN SEBAGAI BERIKUT:

1. Sebelum melakukan kegiatan Penelitian harus melaporkan kedatangannya kepada Gubernur Cq Kabag Kesatuan Bangsa dan Perlindungan Masyarakat/ Badan Informasi, Komunikasi dan Kesbang setempat dengan menunjukkan surat pemberitahuan ini.

2. Tidak dibenarkan melakukan Penelitian yang tidak sesuai/tidak ada kaitannya dengan judul penelitian dimaksud.

3. Harus mentaati ketentuan perundang-undangan yang berlaku serta mengindahkan adat isiladat setempat.

4. Apabila masa berlaku Surat Pemberitahuan ini sudah berakhir, sedangkan pelaksanaan penelitian belum selesai, perpanjangan penelitian harus diajukan kembali kepada instansi pemohon.


Dikeluarkan di Jakarta
Pada tanggal, 22 Agustus 2008

A.n. MENTERI DALAM NEGERI
DIREKTUR JENDERAL
KESATUAN BANGSA DAN POLITIK
Ub.
SEKRETARIS,

Ir. SUIWARNO PUTRA RAHARDJO, M.Si
Pembina Utama Madya
NIP. 010 183 397

Tembusan Kepada:

2. Yth. Kepala Health Research Center for
   Crisis and Disaster di Depok.
ATTACHMENT 3:
PERMIT FROM PROVINCIAL LEVEL OF EAST JAVA PROVINCE

PEMERINTAH PROPINSI JAWA TIMUR
BADAN KESATUAN BANGSA
JALAN PUTAT INDAH NO. 1 TELP. (031) – 3677935, 3681297, 3675453
SURABAYA (68189)

Surabaya, 25 September 2008

Kepada:

BUPATI/WALIKOTA
Up. Kabakesbang dan Linmas
di
JAVA TIMUR

U.P.

Memperhatikan Surat

Tanggal: 22 Agustus 2008
Nomor: 450.02/1002.DI

Nama: Dr. MANDASTRI K. SUDARYO, MS, DSc
Alamat: Kampus UI Depok 16424
Penerbit: Indonesia
Kabupaten: Penelitian Survey/Research
Penelitian:

Studi Dampak Kesabotan Pasca Banjir Alam Gunung Meletus

Pembimbing:
Nama: Dr. Mandastrk. S. Sudaryo, MS, DSc
Fasilitas: Fakultas Ilmu Kedokteran
PANGGUNG JAWAB
Nomor: Kep 293/04/2008

Paserta:
Nama: Neidy Parenti Prameswari, S.Sos., M.Kim.
Eko Setyo Pembudi, S.Sos., M.Kes
Rendi Muhikta, S.E., M.Epid dan
Dra. Evi Kartika, M. Kes.

Waktu:
Tanggal: Oktober s/d Desember 2008
Lokasi:
Kabupaten: Kota di Jawa Timur

Peraturan tentang perubahan dan peraturan daerah yang berlaku di wilayah tersebut
Dalam hal ini tergantung pada kebijakan.

S.A.K.E.
BADAN KESATUAN BANGSA
PEMERINTAH JAWA TIMUR
Kabupaten

Plt. Plt. S. K. S. WAVARIO, M. SI
Pembina
No. 516 063 253
ATTACHMENT 4:
PERMIT FROM DISTRICT LEVEL OF BOJONEGORO DISTRICT

PEMERINTAH KABUPATEN BOJONEGORO
BADAN KESATUAN BANGSA DAN PERLINDUNGAN MASYARAKAT
Jl. Trunojoyo No. 12 Telepon (0353) 881826-151
BOJONEGORO

Bojonegoro, 28 Oktober 2008

Kepada Yth :

Sdr. Kepala Dinas Kesehatan Kab. Bojonegoro
di BOJONEGORO

SURAT-PENGANTAR
Nomor: 072 / 473 / 204.412 / 2008

Dalam rangka pelaksanaan Survey / Research / Penelitian / KKN / KKL / PKN / PKL / di wilayah Kabupaten Bojonegoro


Dengan ini diberikan kesempatan melakukan penelitian di Wilayah Kabupaten Bojonegoro guna sepertingi selanggarmana perihal permohonan u/s tersebut diatas.

Kepada:
1. Narita
2. Almarat
3. Pekentaan
4. Menegur jawab
5. Penyerta

Dr. Mondastri K, Sudaryo, MS, Dsc
Kampus UI Depok 16424

Dr. Mondastri K. Sudaryo, MS.Dscp
- Melody Farenzi Prameswari, S.Sos, MKM
- Eko Suryo Pambudi, S.Sos, MKes
- Reni Mahkota, S.KM, M.Pidj
- Dra. Evi Martha, M.Kes

6. Judul :
"Studi Dampak Kesehatan Pasca Bencana Alam Gunung Meletus dan Banjir di Jawa Timur"

7. Waktu :
Oktober hingga Desember 2008

Dengan keutamaan sebagaiman berikut:

Dalam jangka waktu 14 – 24 jam dibaca dan diambil yang ditinggal akan dipahami dan keutamaan kepada Kepala/Pejabat/Keikutotoan yang

1. Menerima keutamaan yang berada dalam halaman ini sendiri.
2. Menerima undangan kepada yang berada dalam halaman ini sendiri.
3. Menerima undangan kepada yang berada dalam halaman ini sendiri.
4. Menerima undangan kepada yang berada dalam halaman ini sendiri.
5. Menerima undangan kepada yang berada dalam halaman ini sendiri.
7. Menerima undangan kepada yang berada dalam halaman ini sendiri.

Plimet / Kepala Badan Kesatuan Bangsa Dan Perlindungan Masyarakat Kab. Bojonegoro

Survey Activity Report – Bojonegoro Flood Study, Indonesia
November 2008
Page 29 of 35
ATTACHMENT 5:
AGENDA OF DATA COLLECTOR TRAINING OF HEALTH, SOCIAL, AND ECONOMIC IMPACT STUDY DUE TO FLOOD DISASTER AT BOJONEGORO DISTRICT MICRODIS - HRCCD UI

Place: Meeting Room, Bojonegoro District Health Office
Data: 10-12 November 2008

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<tr>
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<td>Monday, 10 November 2008</td>
<td>Brief explanation about Health, Social, and Economics Impact Study due to Flood Disaster at Bojonegoro District</td>
<td>Dr. Mondastri K. Sudaryo, MS, DSc.</td>
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<td>Introduction</td>
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<td>13.00</td>
<td>Understanding Questionnaire + Discussion (part one)</td>
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<td>15.00</td>
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<td>Tuesday, 11 November 2008</td>
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<td>Try out findings and problems discussion</td>
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<td>17.00</td>
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<td>18.00</td>
<td>All data collectors headed to basecamp</td>
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ATTACHMENT 6:  
LIST OF SELECTED FLOODED POPULATION

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**ATTACHMENT 7:**
**LIST OF SELECTED NON-FLOODED POPULATION**

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<th>No</th>
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<td>Drs. H. Suyoto, MSi.</td>
<td>(0353) 881826</td>
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<td>Drs. H. Setyo Hartono</td>
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<td>dr. Anik Yuliarsih, MSi</td>
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<td>Ms. Ratna</td>
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<td>Mr. Ali Safaat</td>
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<td>Mr. Makan Ali</td>
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# ATTACHMENT 9:
## LIST OF FIELD TEAM MEMBER

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