



## Summary Statistics

Indonesia

Bojonegoro District (East Java Province)

Flood (December 2007)



[http://en.wikipedia.org/wiki/East\\_Java](http://en.wikipedia.org/wiki/East_Java)

### Bojonegoro Map



[www.eastjava.com/tourism/bojonegoro/map/index.html](http://www.eastjava.com/tourism/bojonegoro/map/index.html)

## Key Findings

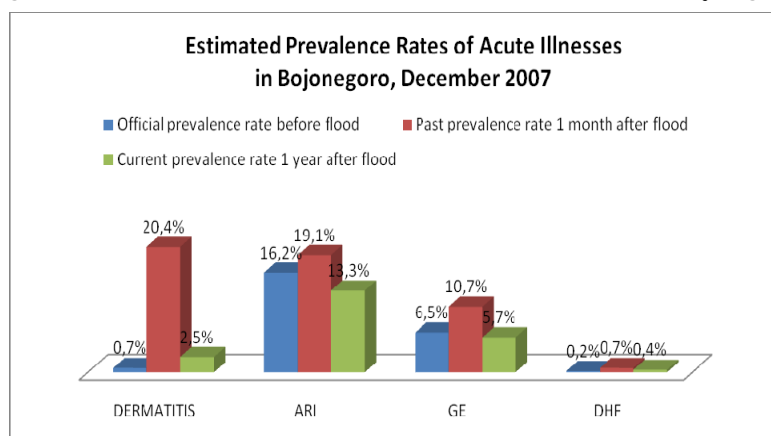
### Health Impacts

1. Prevalence rates of dermatitis, ARI, GE and DHF, 1 month after flood, were higher than official rates before flood. Prevalence rates of dermatitis, ARI and GE 1 month after flood, were also significantly higher than rates one year later (within 1 month before interview).

Table.1. Main Acute illness Reported within 1 Month after the Flood

No	Main Acute Illnesses Reported	Flooded HH Members (n=1016) %
1	Dermatitis (itch, rash, oedema, atopic dermatitis, scabies, ring worm, ulcer)	20.4
2	ARI (acute respiratory infection) symptoms	19.1
3	Fever, high body temperature, shivering	18.3
4	Headache, dizziness, migraine	14.9
5	Gastroenteritis (combination of diarrhea, dysentery, nausea/ vomiting/ gastric pain/ stomachache)	10.7
6	Muscle and joint pain	8.5
7	Stress, nervous, sad/ depression, anxiety, insomnia	3.0

Figure.1. Estimated Prevalence Rates of Acute Illnesses in Bojonegoro





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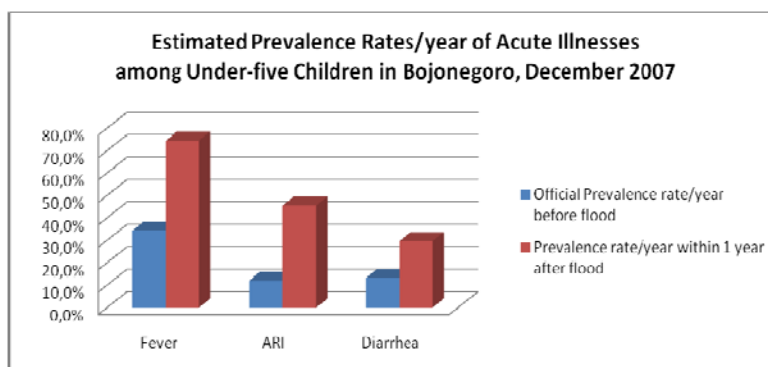


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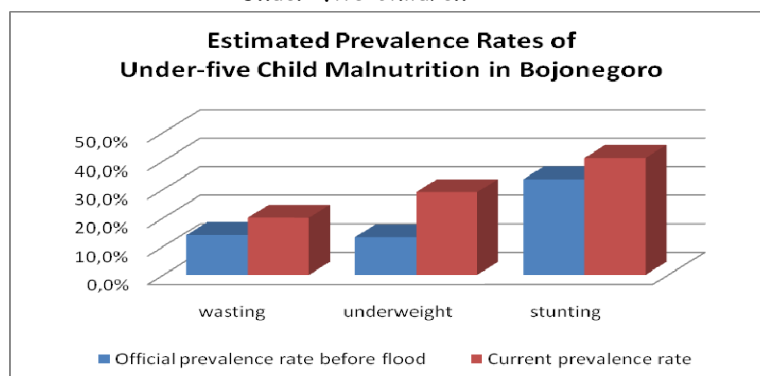
2. Among under-five children, major illnesses since flood till current were fever (prevalence rate/year: 75%), ARI (45.5%), diarrhea (29.7%) and dermatitis (15.9%). Prevalence rates/year of fever, ARI and diarrhea among flooded-household children were much higher than the estimated rates before flood.

Figure.2. Estimated Prevalence Rates/year of Acute Illnesses among Under-five Children



3. Among under-five children, the prevalence rates of underweight (29%), wasting (20%) and stunting (41%) within 1 month before interview were very high, much higher than official rates before flood, reflecting acute and chronic malnutrition problems.

Figure.3. Estimated Prevalence Rates of Malnutrition among Under-five Children





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## Key Findings

### Economic Impacts

1. The majority of flooded households reported significant impact of economic loss (comprising income loss, production loss, repairing cost of properties, or increasing monthly expenditure) as much as €636.7 per household on average, an amount which was more than 5 months of average household expenditure.

**Table.2. Estimates of Amount of Economic Loss in Flooded area (in thousands of Rupiahs/Rp.)**

No	Type of economic loss	%	Mean	Median	Min	Max
1	Production loss due to Household Industry damage	17.7	1261	1250	70	5000
2	Production loss due to Agricultural damage	31.7	3247	2000	120	20000
3	Production loss due to Livestock damage	30.9	2646	510	21	22875
4	Repairing/replacement cost of HH facility	33.7	1072	500	50	8560
5	Repairing/replacement cost of HH goods	21.4	553	400	5	2700
6	Income lost due to public infrastructure damage	12.8	372	260	20	2000
7	Increase household monthly expenditure	57.2	222	155	3	1550
<b>Total economic lost</b>		<b>87.7</b>	<b>3107</b>	<b>1350</b>	<b>8</b>	<b>28846</b>

Note: €1. = Rp. 12,947 (as per Dec 4, 2007)

2. Most of households (79%) showed their willingness to participate on the future government program to prevent flood impact. Although flooded and non flooded households showed almost same proportions of willingness, the flooded households were willing to provide higher amount of person-days to support the future program as compared to non flooded households.



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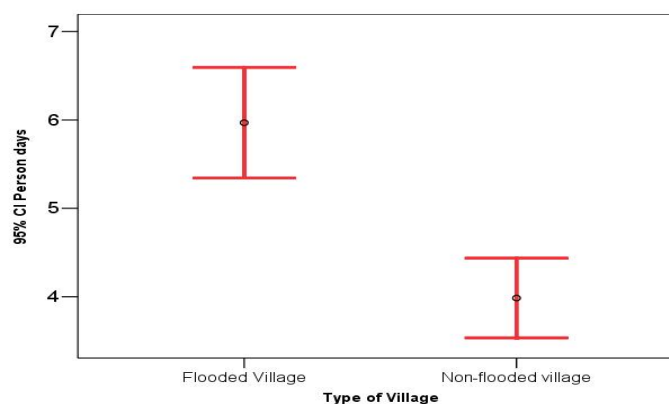
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## Key Findings

Figure.4. Number of Person-Day would be provided to participate in the government disaster management plan



- The most significant predictors of household economic loss were the highest flood level inside the house, frequency of disaster experience, educational level of head of the households, occupational type of household's head, type of the house

Table.3. Determinant of economic loss (Final Cox-regression model)

Predictor Variables	B	P-value	PR	95% CI PR
<b>Flood level inside the house (m)</b>	3.169	0.000	23.8	9.1--62.1
<b>Frequencies of disaster experience</b>	1.362	0.000	3.9	2.2--6.8
<b>Educational level of household's head</b>				
Senior school and above	2.855	0.000	17.4	5.3--57.3
Junior school	2.390	0.000	10.9	3.4--35.3
Elementary school	1.203	0.008	3.3	1.4--8.1
Not finished elementary school			1.0	
<b>Occupational type of household's head</b>				
Farmer	3.487	0.000	32.7	6.4--167.9
Labor/blue collar	2.154	0.008	8.6	1.8--41.9
Professional/white collar	1.122	0.263	3.1	0.4--21.8
Not working			1.0	
<b>Type of the house</b>				
Permanent	0.857	0.034	2.4	1.1--5.2
Semi-permanent	0.671	0.108	2.0	0.7--4.4
Not permanent			1.0	



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### Social Impacts

1. The whole aspects of social support for flood affected households showed quite low scores

Table.4. Social support received during or after Flood

Aspects of Social Support	Flooded HH n=245		
	Mean (SD)	Median	Range
Emotional support	1.6 (2.1)	1.0	0 - 10
Esteem support	2.4 (2.3)	2.0	0 - 10
Material support	1.6 (1.7)	1.0	0 - 10
Information/advice support	1.1 (1.7)	0.0	0 - 9

\* 0=None 5= moderate, 10=much

2. The sources showing the lowest scores of social support were supports from government and NGOs

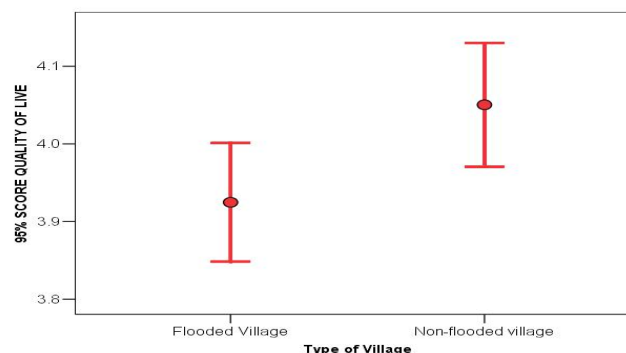
Table.5. Source of social support received during or after flood

Source of Social Support	Flooded HH n=245		
	Mean (SD)	Median	Range *
Family (spouse)	1.8 (2.0)	1.0	0 - 8
Children	1.2 (1.8)	0.0	0 - 8
Others family	1.3 (1.6)	1.0	0 - 8
Friends	1.0 (1.5)	1.0	0 - 8
Government	0.7 (1.1)	0.0	0 - 6
Non-Government Organizations	0.4 (0.8)	0.0	0 - 5
Others	0.2 (0.5)	0.0	0 - 3

\* 0=None 4= moderate, 8=much

3. Quality of life of flooded household members was in general lower than non-flooded household members, although the difference was not statistically significant.

Figure.5. Difference on score of quality of life between members of flooded households and non-flooded households





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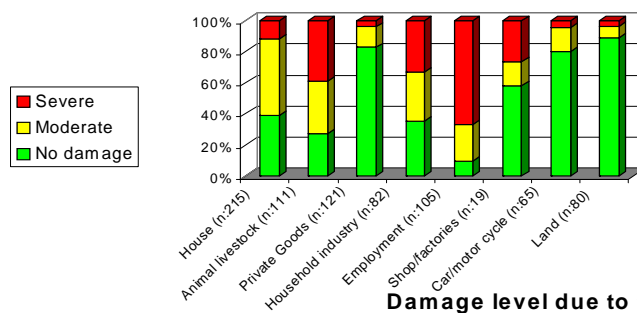
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## Key Findings

### Other findings

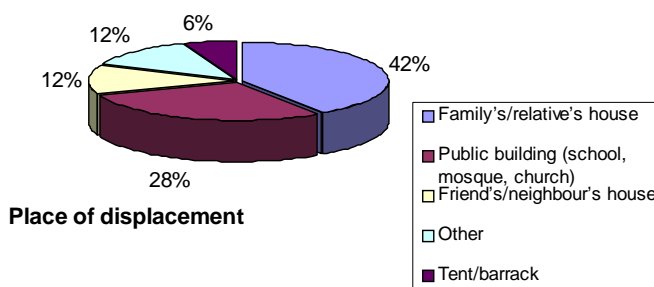
1. The three factors most severely affected due to flood were employment, household industry and animal/live stock.

Figure.6. Severity damage of several types of possessions due to flood



2. Relative/ neighbor's houses and public buildings were the main shelters for internally displaced household members

Figure.7. Proportions of shelters for displaced household members



3. Majority of household members received early warning from the head of sub-village and local government authorities

Figure.8. Proportions of type of people giving early warning

