Online Appendix - NOT FOR PUBLICATION

A. Proposition Proofs

Proof of Proposition 1: The expected value of lottery x is given by:

$$\frac{1}{2}u_i\left(x_{i,HIGH}|\gamma_i\right)+\frac{1}{2}u_i\left(x_{i,LOW}|\gamma_i\right)$$

x_i is optimal for i is her first-order condition holds:

$$\frac{\partial}{\partial x}u_i\left(x_{i,HIGH}|\gamma_i\right)\frac{\partial x_{i,HIGH}}{\partial\tilde{x}}+\frac{\partial}{\partial x}u_i\left(x_{i,LOW}|\gamma_i\right)\frac{\partial x_{i,LOW}}{\partial\tilde{x}}=0$$

where $\frac{\partial x_{i,HIGH}}{\partial\tilde{x}}$ and $\frac{\partial x_{i,LOW}}{\partial\tilde{x}}$ give the marginal change in $x_{i,HIGH}$ and $x_{i,LOW}$ as i chooses a marginally riskier lottery $\tilde{x}$ in X. Because $E\left[\tilde{x}\right]$ is increasing in the riskiness of $\tilde{x}$, and $u_i\left(x|\gamma_i\right)$ is increasing in x, it must be that $\frac{\partial x_{i,HIGH}}{\partial\tilde{x}}>0>\frac{\partial x_{i,LOW}}{\partial\tilde{x}}$ and $|\frac{\partial x_{i,HIGH}}{\partial\tilde{x}}|>|\frac{\partial x_{i,LOW}}{\partial\tilde{x}}|$. By the implicit function theorem:

$$\frac{\partial x}{\partial\gamma_i}=-\frac{\frac{\partial}{\partial\gamma_i}\frac{\partial}{\partial x}u_i\left(x_{i,HIGH}|\gamma_i\right)\frac{\partial x_{i,HIGH}}{\partial\tilde{x}}+\frac{\partial}{\partial\gamma_i}\frac{\partial}{\partial x}u_i\left(x_{i,LOW}|\gamma_i\right)\frac{\partial x_{i,LOW}}{\partial\tilde{x}}}{\frac{\partial}{\partial x}\left(\frac{\partial}{\partial x}u_i\left(x_{i,HIGH}|\gamma_i\right)\frac{\partial x_{i,HIGH}}{\partial\tilde{x}}+\frac{\partial}{\partial x}u_i\left(x_{i,LOW}|\gamma_i\right)\frac{\partial x_{i,LOW}}{\partial\tilde{x}}\right)} \tag{1}$$

By $\frac{\partial}{\partial\gamma_i}\frac{\partial}{\partial x}u_i\left(x|\gamma_i\right)\leq 0$ and $\frac{\partial}{\partial\gamma_i}\frac{\partial^2}{\partial x^2}u_i\left(x|\gamma_i\right)\leq 0$, we have:

$$\frac{\partial}{\partial\gamma_i}\frac{\partial}{\partial x}u_i\left(x_{i,HIGH}|\gamma_i\right)\frac{\partial x_{i,HIGH}}{\partial\tilde{x}}<-\frac{\partial}{\partial\gamma_i}\frac{\partial}{\partial x}u_i\left(x_{i,LOW}|\gamma_i\right)\frac{\partial x_{i,LOW}}{\partial\tilde{x}}<0.$$

Thus the numerator in (1) is negative. The denominator in (1) is negative by x an optimal lottery in X (i.e. by the second-order condition at x). Together these imply $\frac{\partial x}{\partial\gamma_i}<0$.

Proof of Proposition 3:

$$\Delta^{D*}=u\left(x^{P*}_{i,HIGH}|\gamma\right)-E_{\tilde{x}_{-i}}\left[u\left(\frac{\tilde{x}^{P*}_{i,HIGH}+\sum_{j\in P}\tilde{x}^{P*}_{j}}{n}|\gamma\right)\right]$$

$$=E_{\tilde{x}_{-i}}\left[u\left(\tilde{x}^{P*}_{i,HIGH}|\gamma\right)-u\left(\frac{\tilde{x}^{P*}_{i,HIGH}+\sum_{j\in P}\tilde{x}^{P*}_{j}}{n}|\gamma\right)\right]$$

We have $x^{P*}_{i,HIGH}\geq\frac{x^{P*}_{i,HIGH}+\sum_{j\in P}\tilde{x}^{P*}_{j}}{n}$ for all outcomes of $\tilde{x}_{-i}$. With $\frac{\partial}{\partial\gamma_i}\frac{\partial}{\partial x}u_i\left(x|\gamma_i\right)$, it follows that expression within the expectation is decreasing in γ for all realizations of $\tilde{x}_{-i}$. Thus, the expectation Δ^{D*} is decreasing in γ.

Proof of Proposition 4: We show the result for $\delta=0$; the result remains for positive δ sufficiently small by continuity of expected utility in δ. Take lottery x a mean preserving spread of lottery $\tilde{x}'$. Δ^{D*} increases when moving from lottery $\tilde{x}'$ to $\tilde{x}$ if and only if:

$$u\left(x_{HIGH}\right)-E\left[u\left(\frac{x_{HIGH}+\sum_{j\in P}\tilde{x}}{n}\right)\right]>u\left(x^{'}_{HIGH}\right)-E\left[u\left(\frac{x^{'}_{HIGH}+\sum_{j\in P}\tilde{x}'}{n}\right)\right]$$

$$\Leftrightarrow u\left(x_{HIGH}\right)-u\left(x^{'}_{HIGH}\right)>E\left[u\left(\frac{x_{HIGH}+\sum_{j\in P}\tilde{x}}{n}\right)\right]-E\left[u\left(\frac{x^{'}_{HIGH}+\sum_{j\in P}\tilde{x}'}{n}\right)\right]$$

$$\Leftrightarrow u\left(x_{HIGH}\right)-u\left(x_{HIGH}^{'}\right)>E\left[u\left(\frac{x_{HIGH}}{n}+\frac{n-1}{n}\frac{\sum_{j\in P}\tilde{x}}{n-1}\right)\right]-E\left[u\left(\frac{x_{HIGH}^{'}}{n}+\frac{n-1}{n}\frac{\sum_{j\in P}\tilde{x}^{\prime}}{n-1}\right)\right]$$

By lottery $\frac{\sum_{j\in P}\tilde{x}}{n-1}$ a mean-preserving spread of $\frac{\sum_{j\in P}\tilde{x}^{\prime}}{n-1}$ and u concave, the above inequality is implied by:

$$u\left(x_{HIGH}\right)-u\left(x_{HIGH}^{'}\right)>E\left[u\left(\frac{x_{HIGH}}{n}+\frac{n-1}{n}\frac{\sum_{j\in P}\tilde{x}^{\prime}}{n-1}\right)\right]-E\left[u\left(\frac{x_{HIGH}^{'}}{n}+\frac{n-1}{n}\frac{\sum_{j\in P}\tilde{x}^{\prime}}{n-1}\right)\right]$$

This inequality holds if it is true for all realizations $m^{'}\equiv\frac{\sum_{j\in P}x^{\prime}}{n-1}$, that is if:

$$u\left(x_{HIGH}\right)-u\left(x_{HIGH}^{'}\right)>u\left(\frac{x_{HIGH}}{n}+\frac{n-1}{n}m^{'}\right)-u\left(\frac{x_{HIGH}^{'}}{n}+\frac{n-1}{n}m^{'}\right)$$

We have the ordering $x_{HIGH}>x_{HIGH}^{'}\geq m^{'}$. Now, in the limit $\gamma=0$, the inequality is:

$$b\left(x_{HIGH}-x_{HIGH}^{'}\right)>b\left(\frac{x_{HIGH}}{n}+\frac{n-1}{n}m^{'}\right)-b\left(\frac{x_{HIGH}^{'}}{n}+\frac{n-1}{n}m^{'}\right)=\frac{b}{n}\left(x_{HIGH}-x_{HIGH}^{'}\right).$$

Therefore, the inequality holds for all $n>1$ and γ sufficiently small by continuity.

Proof of Proposition 5:

$$\Delta^{D*}=u\left(x_{i,HIGH}^{P*}|\gamma\right)-E_{\tilde{x}_{-i}}\left[u\left(\frac{x_{i,HIGH}^{P*}+\sum_{j\in P}\tilde{x}_{j}^{P*}}{n}|\gamma\right)\right]$$

$$=u\left(x_{i,HIGH}^{P*}|\gamma\right)-E_{\tilde{x}_{-i}}\left[u\left(\frac{x_{i,HIGH}^{P*}}{n}+\frac{n-1}{n}\frac{\sum_{j\in P}\tilde{x}_{j}^{P*}}{n-1}|\gamma\right)\right]$$

$\frac{\sum_{j\in P\setminus i}\tilde{x}_{j}^{P*}}{n-1}$ gives a mean-preserving spread of $\frac{\sum_{j\in P^{\prime}}\tilde{x}_{j}^{P*}}{n^{\prime}-1}$ for any $n^{'}=|P^{\prime}|>n=|P|$, and thus $\frac{x_{i,HIGH}^{P*}}{n}+\frac{n-1}{n}\frac{\sum_{j\in P\setminus i}\tilde{x}_{j}^{P*}}{n-1}$ second-order stochastic dominates $\frac{x_{i,HIGH}^{P*}}{n^{\prime}}+\frac{n^{\prime}-1}{n^{\prime}}\frac{\sum_{j\in P^{\prime}\setminus i}\tilde{x}_{j}^{P*}}{n^{\prime}-1}$, which implies $E_{x_{-i}}\left[u\left(\frac{x_{i,HIGH}^{P*}}{n}+\frac{n-1}{n}\frac{\sum_{j\in P}\tilde{x}_{j}^{P*}}{n-1}|\gamma\right)\right]$ is increasing in n. By u concave, Δ^{D*} is decreasing in n.

B. Village Level Elevation and Flood Simulation Exercise

We conducted a flood simulation exercise for the affected districts using information about the elevation, the location of the waterways and the location of the villages in our sample.

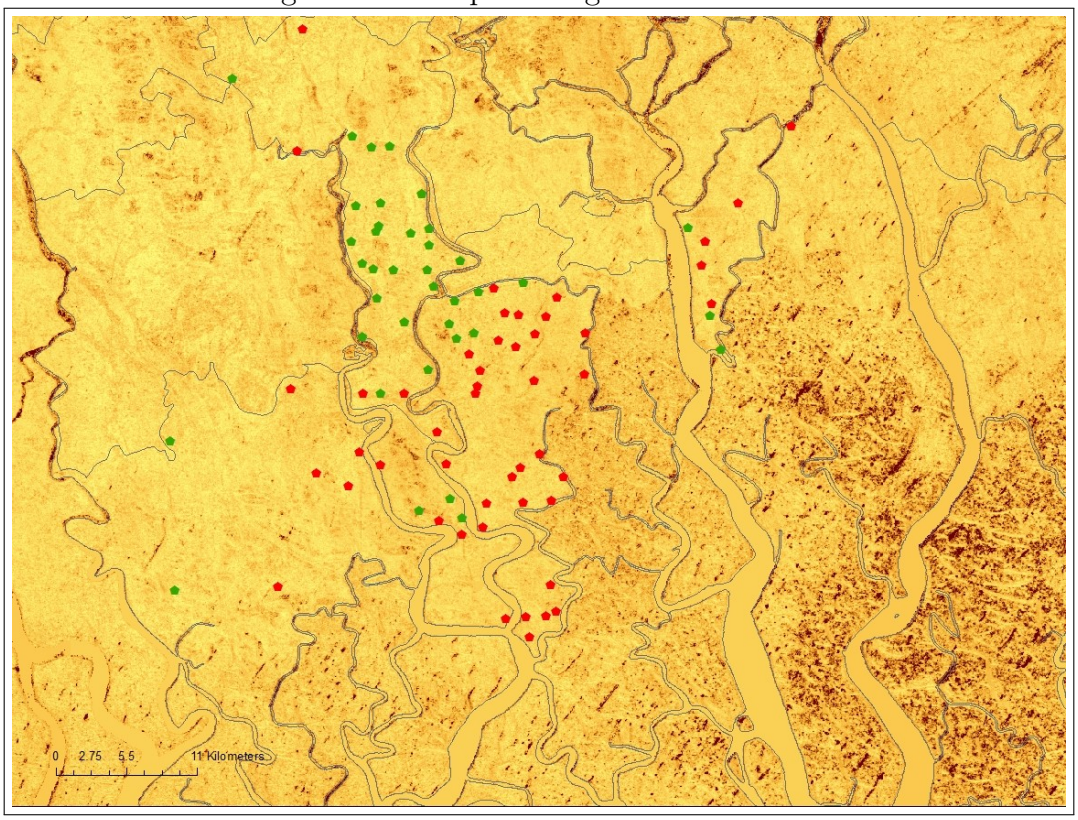
In the first step we downloaded the necessary digital elevation model (DEM) files. We manually selected and downloaded the following 9 Shuttle Radar Topography Mission (SRTM) tiles from http://dwtkns.com/srtm30m/:

- N23E090.hgt
- N23E089.hgt
- N23E088.hgt
- N22E090.hgt
- N22E089.hgt
- N22E088.hgt
- N21E090.hgt
- N21E089.hgt
- N21E088.hgt

For the processing and simulation we used an Ubuntu 18.04 docker container with GDAL, where we merged the 9 individual files and filled sinks with the SAGA Sink Fill tool.

Figure B1 shows the locations of the treatment and control villages overlapped with a digital elevation model of the area. The mean elevation of the treatment villages is 9.04 meters, whereas the mean elevation of the control villages is 9.25 meters.

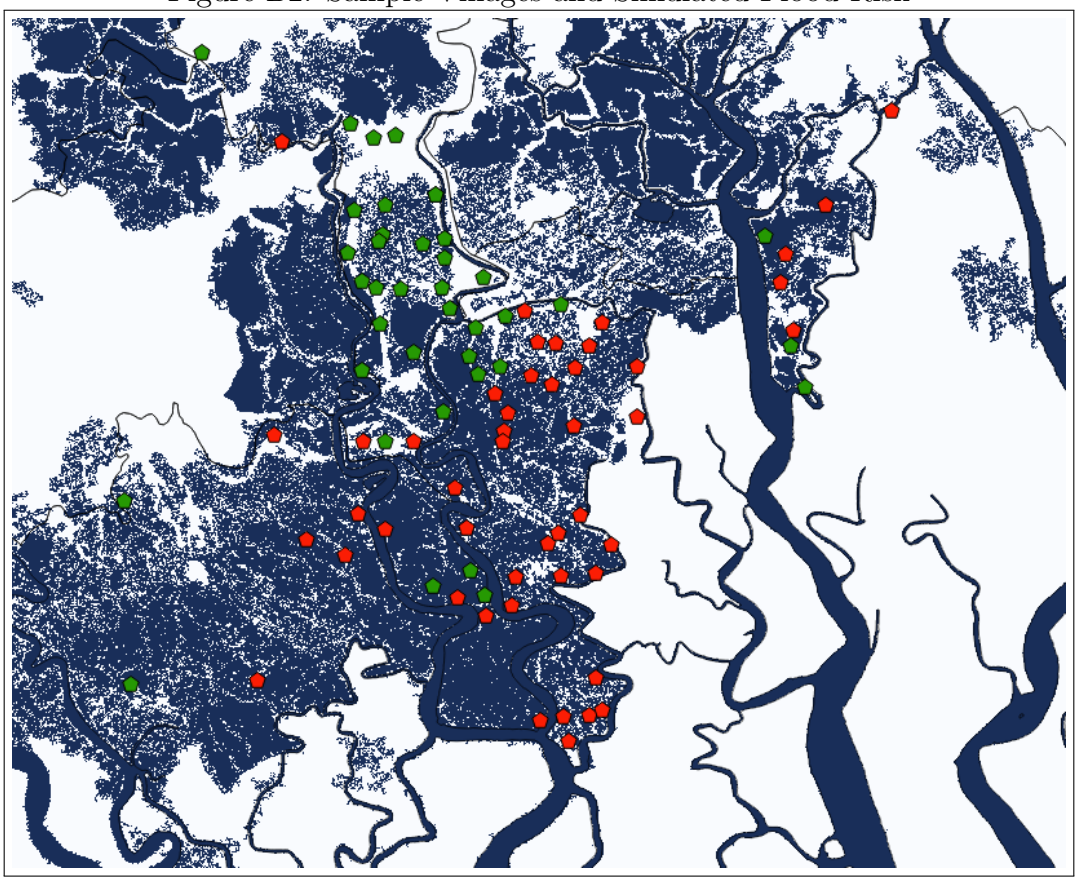
Figure B1: Sample Villages and Elevation



Note: This figure displays the location of the treatment (red (black in B&W)) and control (green (gray)) villages and the inundated area from a flood risk simulation. Blue areas indicate flooded areas.

For the flood simulation exercise we assumed an increase in the water level by 2 metres. A visualisation of the results has been added to the appendix (Figure B2). We then use these pixel level results to calculate the fraction of the (simulated) inundated areas in the control and treatment villages differ.

Figure B2: Sample Villages and Simulated Flood Risk



Note: This figure displays the location of the treatment (red (black in B&W)) and control (green (gray)) villages and the elevation. Lighter orange indicates lower lying areas, darker orange/brown indicates elevated areas.

The results are presented in Table 3 in the main text.

C. Additional Information about the Field Experiment

Disaster Total

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	17.50%	15.00%	15.00%	13.75%	21.25%	17.50%	100.00%
B	8.99%	15.73%	20.22%	20.22%	22.47%	12.36%	100.00%
C	3.70%	7.41%	19.75%	37.04%	14.81%	17.28%	100.00%
D	5.00%	7.14%	9.29%	27.14%	42.14%	9.29%	100.00%
E	2.01%	3.52%	4.52%	24.12%	44.22%	21.61%	100.00%
F	4.62%	4.62%	4.62%	9.23%	29.23%	47.69%	100.00%
Total	5.96%	7.95%	10.86%	23.09%	32.87%	19.27%	100.00%

Non Disaster Total

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	7.04%	9.86%	18.31%	25.35%	25.35%	14.08%	100.00%
B	2.53%	17.72%	27.85%	21.52%	18.99%	11.39%	100.00%
C	0.93%	4.67%	29.91%	33.64%	23.36%	7.48%	100.00%
D	2.63%	6.58%	19.08%	32.24%	31.58%	7.89%	100.00%
E	2.92%	5.11%	10.22%	24.09%	43.07%	14.60%	100.00%
F	0.00%	9.38%	9.38%	15.63%	43.75%	21.88%	100.00%
Total	2.77%	7.96%	19.55%	27.34%	30.97%	11.42%	100.00%

No Group Total

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	7.14%	21.43%	21.43%	35.71%	3.57%	10.71%	100.00%
B	2.38%	26.19%	19.05%	16.67%	26.19%	9.52%	100.00%
C	0.00%	11.36%	20.45%	40.91%	20.45%	6.82%	100.00%
D	7.58%	7.58%	18.18%	16.67%	42.42%	7.58%	100.00%
E	3.33%	3.33%	8.33%	30.00%	38.33%	16.67%	100.00%
F	3.85%	3.85%	3.85%	19.23%	57.69%	11.54%	100.00%
Total	4.14%	11.28%	15.41%	25.94%	32.71%	10.53%	100.00%

Forced Group Total

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	11.11%	9.26%	12.96%	18.52%	31.48%	16.67%	100.00%
B	10.91%	5.45%	23.64%	20.00%	25.45%	14.55%	100.00%
C	5.36%	1.79%	30.36%	23.21%	23.21%	16.07%	100.00%
D	2.60%	3.90%	16.88%	31.17%	35.06%	10.39%	100.00%
E	3.31%	4.64%	6.62%	21.19%	43.71%	20.53%	100.00%
F	6.90%	3.45%	13.79%	17.24%	17.24%	41.38%	100.00%
Total	5.69%	4.74%	15.17%	22.51%	33.65%	18.25%	100.00%

Forced Group Disaster

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	17.65%	11.76%	11.76%	5.88%	35.29%	17.65%	100.00%
B	20.83%	0.00%	20.83%	20.83%	25.00%	12.50%	100.00%
C	17.65%	5.88%	17.65%	29.41%	5.88%	23.53%	100.00%
D	3.57%	3.57%	10.71%	46.43%	28.57%	7.14%	100.00%
E	3.53%	3.53%	3.53%	21.18%	43.53%	24.71%	100.00%
F	10.00%	0.00%	10.00%	10.00%	20.00%	50.00%	100.00%
Total	8.90%	3.66%	9.42%	23.04%	32.46%	22.51%	100.00%

Forced Group Non Disaster

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	8.11%	8.11%	13.51%	24.32%	29.73%	16.22%	100.00%
B	3.23%	9.68%	25.81%	19.35%	25.81%	16.13%	100.00%
C	0.00%	0.00%	35.90%	20.51%	30.77%	12.82%	100.00%
D	2.04%	4.08%	20.41%	22.45%	38.78%	12.24%	100.00%
E	3.03%	6.06%	10.61%	21.21%	43.94%	15.15%	100.00%
F	0.00%	11.11%	22.22%	33.33%	11.11%	22.22%	100.00%
Total	3.03%	5.63%	19.91%	22.08%	34.63%	14.72%	100.00%

Public Defection Total

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	21.05%	13.16%	13.16%	10.53%	23.68%	18.42%	100.00%
B	3.03%	15.15%	30.30%	24.24%	15.15%	12.12%	100.00%
C	2.08%	6.25%	22.92%	39.58%	16.67%	12.50%	100.00%
D	5.33%	9.33%	6.67%	36.00%	33.33%	9.33%	100.00%
E	0.00%	6.67%	8.33%	18.33%	46.67%	20.00%	100.00%
F	0.00%	10.71%	3.57%	3.57%	28.57%	53.57%	100.00%
Total	4.96%	9.57%	13.12%	24.82%	29.43%	18.09%	100.00%

Public Defection Disaster

Gamble Choice Stage 1	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	28.00%	12.00%	12.00%	8.00%	24.00%	16.00%	100.00%
B	6.67%	20.00%	13.33%	26.67%	20.00%	13.33%	100.00%
C	0.00%	4.17%	25.00%	41.67%	8.33%	20.83%	100.00%
D	9.76%	9.76%	2.44%	21.95%	46.34%	9.76%	100.00%
E	0.00%	5.26%	10.53%	10.53%	50.00%	23.68%	100.00%
F	0.00%	8.70%	4.35%	4.35%	30.43%	52.17%	100.00%
Total	7.23%	9.04%	10.24%	18.07%	33.73%	21.69%	100.00%

Public Defection Non Disaster

Gamble Choice Stage	Gamble Choice Stage 2 A	B	C	D	E	F	Total
A	7.69%	15.38%	15.38%	15.38%	23.08%	23.08%	100.00%
B	0.00%	11.11%	44.44%	22.22%	11.11%	11.11%	100.00%
C	4.17%	8.33%	20.83%	37.50%	25.00%	4.17%	100.00%
D	0.00%	8.82%	11.76%	52.94%	17.65%	8.82%	100.00%

E	0.00%	9.09%	4.55%	31.82%	40.91%	13.64%	100.00%
F	0.00%	20.00%	0.00%	0.00%	20.00%	60.00%	100.00%
Total	1.72%	10.34%	17.24%	34.48%	23.28%	12.93%	100.00%

Private Defection Total

Gamble Choice Stage 1	Gamble Choice Stage 2						
	A	B	C	D	E	F	Total
A	9.68%	9.68%	22.58%	16.13%	25.81%	16.13%	100.00%
B	5.26%	23.68%	23.68%	23.68%	13.16%	10.53%	100.00%
C	0.00%	5.00%	27.50%	40.00%	17.50%	10.00%	100.00%
D	0.00%	6.76%	16.22%	33.78%	36.49%	6.76%	100.00%
E	1.54%	1.54%	4.62%	30.77%	46.15%	15.38%	100.00%
F	0.00%	7.14%	0.00%	0.00%	35.71%	57.14%	100.00%
Total	2.29%	8.02%	16.03%	28.63%	31.30%	13.74%	100.00%

Private Defection Disaster

Gamble Choice Stage 1	Gamble Choice Stage 2						
	A	B	C	D	E	F	Total
A	15.79%	10.53%	21.05%	5.26%	26.32%	21.05%	100.00%
B	10.53%	10.53%	21.05%	21.05%	21.05%	15.79%	100.00%
C	0.00%	0.00%	26.32%	31.58%	21.05%	21.05%	100.00%
D	0.00%	5.41%	8.11%	32.43%	40.54%	13.51%	100.00%
E	2.22%	2.22%	2.22%	31.11%	44.44%	17.78%	100.00%
F	0.00%	11.11%	0.00%	0.00%	22.22%	66.67%	100.00%
Total	4.05%	5.41%	11.49%	25.00%	33.78%	20.27%	100.00%

Private Defection Non Disaster

Gamble Choice Stage 1	Gamble Choice Stage 2						
	A	B	C	D	E	F	Total
A	0.00%	8.33%	25.00%	33.33%	25.00%	8.33%	100.00%
B	0.00%	36.84%	26.32%	26.32%	5.26%	5.26%	100.00%
C	0.00%	9.52%	28.57%	47.62%	14.29%	0.00%	100.00%
D	0.00%	8.11%	24.32%	35.14%	32.43%	0.00%	100.00%
E	0.00%	0.00%	10.00%	30.00%	50.00%	10.00%	100.00%
F	0.00%	0.00%	0.00%	0.00%	60.00%	40.00%	100.00%
Total	0.00%	11.40%	21.93%	33.33%	28.07%	5.26%	100.00%

Table A1: Sampling for Risk Taking/risk-sharing Game:

Type of Game	*Disaster Area*		*Non-disaster Area*		*Total*	
	Village	Sample	Village	Sample	Village	Sample
2.1 (General Group)	8	196	8	232	16	428
2.2 (Private Group)	5	148	4	115	9	263
2.3 (Public Group)	5	166	4	116	9	282
3 (Control, single)	6	149	5	117	11	266
total	24	659	21	580	45	1239

Instruction for the local experimental assistants/survey enumerators

Please note that the purpose of study is to learn about human behaviour. The participants in the survey will receive 150 Taka as a courtesy and compensation for their time. In addition to answering survey questions, participants will take part in economic decision making experiments, whereby they will get opportunity to earn additional money. It is important that participants do not discuss the money earned in the experiment with other villagers as this might create unnecessary problem on the part of researchers for continuing the study.

Design of the study:

- From each village, we select only those households who were interviewed (randomly0 in our 2010 Aila/early 2011 school survey.
- The survey will take place at early morning.
- The economic experiments will be played on the same day.
- Each enumerator will interview 2 households/day.
- After the survey is complete, the enumerators will inform the interviewee household member that as a part of the study her/his financial decision making behaviour will be investigated through simple experiments using lottery procedure. In such experiments the interviewee will be given the opportunity to earn additional money. This will be conducted in a particular location to be confirmed at the time. In the event the interviewee is unable to come for experiments, an adult (over 18 years) representative from the same household (male/female) will be invited to participate in the economic experiment. The survey participation fee and any money earned during the experiment will all be given cash to participants once everything is completed.

Note: if there are other people whom we did not survey in 2010/2011 but want to participate at the experiment/answer survey, we politely tell them the following "We are very sorry. Our sirs (researchers) randomly selected these households from the census/voter list and we are not allowed to interview anyone BUT the household in the given list".

First Experiment: This experiment will be played individually **by all participants in 24 disaster affected (treatment) villages and 21 non-affected (control villages for school project) villages**. The experiment will be played just after lunch. Here each enumerator will conduct the first experiment with the households/individuals whom they surveyed. These villages will be selected (randomly) from our list of 50 Aila (treatment) village and 33 school project (control) villages. Once the villages have been selected, assign the name of villages for the enumerators.

First, each participant plays the Decision-making Experiment I, individually and winnings will be distributed at the end of first round of play.

(Note: we will actually not pay them at this stage. Enumerators will tell the participants that this money will be paid at the end of the day when all experiments are complete and all decisions are recorded)

At the end of the first experiment, participants will be told to take an hour break and play the same experiment for a second time. They will be informed before the break (and after the first experiment) that they can if they wish form groups with other participants and that those in a group will share second round of experiment winnings equally. There will be no restrictions on the size or composition of groups. They can play alone or form group with as many people as they want. But they will have to form the group with people who played the first experiment. No new participants will be allowed for this experiment. All the people in experiment 1 will play the experiment 2.

Before taking break for the 2nd round and before they play the 2nd experiment, participants will attend a short training session during which they will be shown how group formation secure some earning for everyone and how and to what extent the grouping arrangements will be enforced.

Before the start of the 2nd experiment after the break, participants will be asked to declare whether they have formed a group or not and if yes with whom. Participants in a group have to register together and their intention to form a group is recorded by the enumerators. After all groups will have to be declared and agreed on, each participant will proceed to make similar decision making task individually and privately.

Risk-sharing experiment:

Experiment 2, Type 1: (8 disaster affected villages, and 8 non-disaster affected village): At the end of play, winnings are calculated, pooled and shared equally for those in groups, and privately distributed to all participants. Once participants have declared a group, they cannot subsequently change their mind, i.e., they cannot refuse to share their earning from the 2nd round with others in their group. So, regardless of the individual earning amount in the second round, everyone's earning amount will be pooled and then shared equally. These villages will be selected from 24 Aila villages and 21 control villages which have been (randomly) chosen to play experiment 1

Experiment 2, Type 2: (DIFFERENT 5 disaster affected villages, and DIFFERENT 4 non-disaster affected village): Same procedure as above. That is, they will be asked to form group. They can play alone or play with as many participants as they want. However, under treatment 2, after having made individual choice and subsequent individual earnings (but not those of others in their group), participants are allowed to opt out of their sharing groups *in secret by telling to enumerators*, i.e., they can decide to keep their individual winnings and leave the group.

Remember they could decide whether to stay or to opt out only *after* learning the outcome of their own choice (but without knowing other group members'' choice or earning of others') and while alone with the enumerator. If they opt to do so, they do not receive a share of the winnings of others in their group. For those in the group who did not quit knowing own earning and stayed in the group, the rest of the gains within the group will be pooled and divided equally between the remaining group members. After experiment 1, type 1 is being played, this experiment will be played in 5 Aila villages and 4 non-alia villages selected for experiment 1, but were not played in experiment 2, type 1.

Experiment 3, Type 3: (DIFFERENT 5 disaster affected villages, and DIFFERENT 4 non-disaster affected village): Treatment 3 is similar to treatment 2 above. This experiment will be played in the remaining 5 Aila villages and 4 non-alia villages. Participants will be told that that they could *publicly* opt out of their sharing groups (after seeing the outcome of his/her own experiment but not the others). The difference with treatment 2 is that if participants want to keep their individual winnings after playing his/her own 2nd experiment; participants will have to declare the decision of leaving the group *publicly in front of everyone* participating in the same experimental session.

Control: (DIFFERENT 6 disaster affected villages and DIFFERENT 5 non-disaster affected village): Here we will not play any risk-sharing experiment. Instead, enumerators will tell the interviewees after the first round experiment that we will play the same game once more. The same experiment will be played individually, and exactly the same way as the first round (experiment 1). Each person will get the money based on his/her winnings from the experiment. They will not form the group with others and will not share the money with others.

Small survey: Each participant will answer a small survey at the end of both experiments to understand the relationship among the members who form group. If someone did not form group but participated in the experiment, we still need to ask him to answer the relevant part of the survey.

Pay the participation fee and any additional money people earn in the experiment only after the experiment and the surveys are all over.

Participation fee: Everybody who will participate in survey and experiment (all rounds, morning and afternoon) will be paid 150 Taka as participation fee.

All earnings and payments, separately for each round, should be recorded against individual ID from the household survey questionnaire so we are able to match these people with their responses in the household survey

Preparation for the next Day:

At the end of the first day, enumerators will go to the nearby villages chosen beforehand for survey and experiment scheduled in the next day. On that evening/afternoon, enumerators will go to all the households in that village to identify the households surveyed in 2010 and to tell them that they will come next day for survey and the experiment. Households will also be told that they will also be paid for their time in the survey and they will get the opportunity to earn additional money in simple decision making experiment. They will confirm the participation of an adult member of the respective household for survey and experiment in the next day. Inform that we need an adult person who would respond to survey and play the experiment, and the participants will need to be available for the entire day.

Instruction for risk game

Here we are interested to learn about human behavior, in particular how people make decisions/choices facing uncertain monetary prospects

We will ask you some questions and give you opportunity to choose from alternative financial outcomes whereby you choose between a guaranteed earning versus a series of lottery. You will actually be paid in cash at the end of our survey, whatever you earn as consequences of your choice.

Now I will ask you to choose between two different monetary outcomes for you involving chances similar to tossing a coin. ***[Interviewer: show a coin toss to the subject.]*** For example, if we toss a coin the chance of turning Head is exactly equal to the chance of turning Tail. Can you tell me what the chance of turning out Head is, if you toss a coin? [If the respondent's answer is wrong then clearly explain to her the right answer.]

1. The respondent answered correctly that the chance is 50%.
2. The respondent was explained the right answer and understood well

The respondent was explained, but still could not understand.

Now, suppose you are given the following six options. ***[Interviewer: show PICTURE]*** Which option would you choose? YOU WILL ACTUALLY BE PAID THE FINAL EARNING FROM YOUR CHOICE .Circle ONE option you like:

1) You get 100 taka for sure!
2) A coin is tossed and if it is head you get 200 taka and if it is tail you get 80 taka
3) A coin is tossed and if it is head you get 250 taka and if it is tail you get 70 taka
4) A coin is tossed and if it is head you get 300 taka and if it is tail you get 60 taka
5) A coin is tossed and if it is head you get 350 taka and if it is tail you get 50 taka
6) A coin is tossed and if it is head you get 400 taka and if it is tail you get zero taka

Before you make your actual choice, for your understanding let us practice each of the options above by tossing coins. [Enumerator ensures that respondents clearly understand what it means by 50-50 chance of turning head and tail when tossing a coin.]

ফ্লিপ চার্ট

১

১ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ১০০ টাকা

১

১ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ১০০ টাকা

২

২ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ২০০ টাকা

২

২ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ৮০ টাকা

৩

৩ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ২৫০ টাকা

৩

৩ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ৭০ টাকা

৪

৪ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ৩০০ টাকা

৪

৪ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ৬০ টাকা

৫

৫ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ৩৫০ টাকা

৫

৫ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ৫০ টাকা

৬

৬ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ৪০০ টাকা

৬

৬ নং পছন্দে মুদ্রার সামনের পিঠ শাপলার জন্য বরাদ্দ ০০ টাকা

শুধু মাত্র গবেষণা কার্যে ব্যবহার্য্য

INCOME SHARING EXPERIMENT

Control group statement: In the afternoon we will give you similar second round opportunity to earn money using the same procedure as in the first round.

>>>>>>>introduce the similar choice context and pictures and remind that we will ask the same questions again in the second round>>>>>>>>>

>>>>>>>>choice context and pictures>>>>>

Treatment 1:
In the afternoon we will give you similar second round opportunity to earn money using the same procedure as in the first round.

In this second round, you will be asked first to form your income sharing group, whereby group earnings (sum of group member's private earning) will be shared equally by all members.

The group can consist of single person or as many person as you like. You are free to choose your group MEMBERS (FROM your family, friends, relatives, neighbors, and other villagers. please keep in mind that when you will form your group you are actually agreeing to share the total group income among group members, no matter what each member earn from their own choice as in the first round.

>>>>>>>introduce the similar choice context and pictures and remind that we will ask the same questions again in the second round>>>>>>>>>

Choice context and pictures

TREATMENT 1 group statement: Like the first round, all group members' private choices AND EARNINGS will be recorded by our enumerators. Then we will calculate total group earnings, which will be later divided equally among group members. So it does not matter what one member earn from his private choice, **all will earn equal amount at the end**. However, if total earning of group members is zero then none gets any money. Similarly if all but one members private earning is zero then the only earners income will be divided among everybody in the group. this we essentially call income sharing group allowing losers to be compensated by gainers income and this is done by dividing total income equally among all group members. Once participants have declared a group, they cannot subsequently change their mind, i.e., they cannot refuse to share their second day winnings with others in their group. So, regardless of the outcomes of all their gambles, their winnings are pooled and shared equally.

>>>>>>>introduce the similar choice context and pictures and remind that we will ask the same questions again in the second round>>>>>>>>>

>>>>>>>>choice context and pictures>>>>>

For example, if three of you form a group and whatever each of you earn as a result of your own choices will be first put in a fund and then be distributed to you all equally, no matter how much you earned from your individual choice. If person 1 earns 200 Taka, Person 2 earns 400 Taka and Person 3 earns nothing from their individual choices- then we will sum all three earnings and divide them equally to each so that each gets about 200(600 divided by 3)!
So remember when you will form group, you are committing to each other to the effect that no matter how much you earn individually from your choice, all of your total learning will be shared equally even if some of you earn more than others or some of you earn nothing out of your individual choices. Please note that group members will have to accept that the total all members earnings will be divided by the number of members so that each gets equal share of total earning from our experiment today.

TREATMENT 2 STATEMENT

Treatment 2 group statements: Like the first round, all group members private choices AND EARNINGS will be recorded by our enumerators. Then we will calculate total group earnings, which will be later divided equally among group members. So it does not matter what one member earn from his private choice, all will earn equal amount at the end. However, if total earning of group members is zero then none gets any money. Similarly if all but one members private earning is zero then the only earners income will be divided among everybody in the group. This we essentially call income sharing group allowing losers to be compensated by gainers income and this is done by dividing total income equally among all group members.

>>>>>>>introduce the similar choice context and pictures and remind that we will ask the same questions again in the second round>>>>>>>>>
>>>>>>>>choice context and pictures>>>>>

For example, if three of you form a group and whatever each of you earn as a result of your own choices will be first put in a fund and then be distributed to you all equally, no matter how much you earned from your individual choice. If person 1 earns 200 Taka, Person 2 earns 400 Taka and Person 3 earns nothing from their individual choices- then we will sum all three earnings and divide them equally to each so that each gets about 200(600 divided by 3)!

It is important for you to note that firstly we will record everyone's private choice and income from the choice. Then tell privately everyone in the group about their private income. Once everyone knows the income from his choice, we will allow if one or more person to **secretly quit** his group in case if he wishes not to share income and thus quit his group. You will not know who in your group quit in this way. In that case the remaining group members' income (if any) will be totaled and be divided equally among them.

So it is important for you to remember when forming a group that someone (or more than one) may QUIT the group taking his individual income earned from his private choice in the experiment and not sharing with other group members. In that case, the remaining group members' earning will be shared equally among them. Although you would not know if anyone has quit as it will be kept confidential, you should be prepared mentally that it might happen in your group that someone would want to quit.

TREATMENT 3 group statement: Like the first round, all group members private choices AND EARNINGS will be recorded by our enumerators. Then we will calculate total group earnings, which will be later divided equally among group members. so it does not matter what one member earn from his private choice, all will earn equal amount at the end. However, if total earning of group members is zero then none gets any money. Similarly if all but one members private earning is zero then the only earners income will be divided among everybody in the group. This we essentially call income sharing group allowing losers to be compensated by gainers income and this is done by dividing total income equally among all group members.

>>>>>>>introduce the similar choice context and pictures and remind that we will ask the same questions again in the second round>>>>>>>>>
>>>>>>>>choice context and pictures>>>>>

For example, if three of you form a group and whatever each of you earn as a result of your own choices will be first put in a fund and then be distributed to you all equally, no matter how much you earned from your individual choice. If person 1 earns 200 Taka, Person 2 earns 400 Taka and Person 3 earns nothing from their individual choices- then we will sum all three earnings and divide them equally to each so that each gets about 200(600 divided by 3)!

It is important for you to note that firstly we will record everyone's private choice and income from the choice. Then tell privately everyone in the group about their private income. Once everyone knows the income from his choice, we will allow if one or more person to **publicly quit** his group in case if he wishes not to share income and thus quit his group. As such decision has to be made in front of everyone in the group /present people You will be able know who in your group quit in this way. In that case the remaining group member's income (if any) will be totalled and be divided equally among them.

So it is important for you to remember when forming a group that someone (or more than one) may QUIT the group taking his individual income earned from his private choice in the experiment and not sharing with other group members. In that case, the remaining group members' earning will be shared equally among them. Although you would eventually get to know who quit the group, you should be prepared from the beginning in forming group that it might happen in your group that someone might quit without sharing income from private choice.

Table C1: Payoffs of lottery game

Lottery game option	Frequency	Share (%)	Low payoff	High payoff
1	151	12.2	100	100
2	168	13.6	80	200
3	188	15.2	70	250
4	293	23.7	60	300
5	337	27.3	50	350
6	97	7.9	0	400

D. Robustness Test - Balanced Sample

Table D1: Descriptive Statistics - Balanced Sample

	Non-Disaster			Disaster				
Variable	**Obs.**	**Mean**	**Std. Dev.**	**Obs.**	**Mean**	**Std. Dev.**	**Diff.**	**Std. Error**
Head Age	325	39.01	8.16	545	39.10	11.79	0.089	(0.68)
Head Edu.	325	3.93	4.01	541	3.60	3.96	-0.33	(0.28)
Head Sex	325	0.51	0.50	545	0.47	0.50	-0.044	(0.035)

Table D2: Group Size conditional on Group Formation - Balanced Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Disaster	-0.77***	-0.76***	-0.80***	-0.80***	-0.80***	-0.81***	-0.76**	-0.76**
Village	(0.23)	(0.24)	(0.25)	(0.26)	(0.26)	(0.24)	(0.30)	(0.31)
Age		0.0046	0.0046	0.0044	0.0044	0.0059	0.0036	0.0033
		(0.0067)	(0.0067)	(0.0067)	(0.0067)	(0.0067)	(0.0064)	(0.0063)
Female		0.15	0.16	0.16	0.16	0.14	0.13	0.13
		(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.15)
Education		0.027	0.028	0.028	0.028	0.027	0.026	0.026
		(0.020)	(0.020)	(0.020)	(0.020)	(0.019)	(0.017)	(0.017)
Household		0.01	0.01	0.01	0.01	0.00	-0.00	0.00
Size		(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Log (household								
income)		-0.01	-0.01	-0.02	-0.02	-0.07	-0.03	-0.03
		(0.16)	(0.15)	(0.15)	(0.15)	(0.14)	(0.13)	(0.13)
Risk Love				-0.086	-0.086	-0.076	0.015	0.23
				(0.11)	(0.11)	(0.11)	(0.11)	(0.20)
Winner R1						-0.62***	-0.63***	-0.50**
						(0.15)	(0.15)	(0.18)
Private							0.28	0.29
Defection							(0.26)	(0.26)
Public							0.62*	0.63*
Defection							(0.32)	(0.32)
Risk love ×								-0.34
Winner R1								(0.31)
N	677	670	670	670	670	670	670	670
Adj. R^2	0.054	0.052	0.051	0.050	0.050	0.081	0.097	0.098

Notes: Probit regressions, marginal effects reported. Standard errors are clustered at the village level. ***, **, * indicate significance at the 1, 5 and 10%-level.

Table D3: Probability of Defection in Risk Sharing Commitment - Balanced Sample

	(1)	(2)	(3)	(4)	(5)
					Round 2 Winners only
Disaster	-0.19***	-0.23***	-0.22***	-0.22***	-0.28***
	(0.029)	(0.034)	(0.042)	(0.041)	(0.061)
Age		-0.001	-0.001	-0.001	-0.001
		(0.001)	(0.001)	(0.001)	(0.001)
Female		0.021	0.014	0.044	-0.004
		(0.033)	(0.043)	(0.042)	(0.058)
Education		0.005	0.005	0.004	0.001
		(0.003)	(0.003)	(0.003)	(0.007)
Household size		0.014	0.015	0.016	0.030
		(0.014)	(0.014)	(0.013)	(0.020)
Log (HH income)		-0.082**	-0.082**	-0.084**	-0.13*
		(0.034)	(0.034)	(0.033)	(0.073)
Risk love	0.070**	0.018	0.020	0.10	0.098
	(0.031)	(0.024)	(0.026)	(0.071)	(0.091)
Risk love × Winner R1				-0.12	0.043
				(0.010)	(0.14)
Winner R2	0.12***	0.12***	0.12***	0.15***	
	(0.04)	(0.03)	(0.03)	(0.04)	
Private Defection	0.053*	0.067	0.056	0.053	0.075
	(0.031)	(0.043)	(0.054)	(0.055)	(0.071)
District Dummy	*No*	*No*	*Yes*	*Yes*	*Yes*
N	326	323	323	323	181

Notes: Probit regressions, marginal effects reported. Standard errors are clustered at the village level. ***, **, * indicate significance at the 1, 5 and 10%-level.

E. Additional Robustness Tests and Descriptive Statistics

Table E1: Main Results - Alternative Weighting in the Exposure Index

	(1)	(2)	(3)	(4)
Disaster Village	0.150***	0.120**	0.110**	0.170***
	(0.043)	(0.045)	(0.052)	(0.060)
Age of Respondent		-0.000	-0.000	-0.000
		(0.002)	(0.002)	(0.002)
Female		-0.066*	-0.066*	-0.068**
		(0.034)	(0.034)	(0.034)
Education		0.012***	0.012***	0.011***
		(0.004)	(0.004)	(0.004)
Household Size		0.002	0.002	0.003
		(0.012)	(0.012)	(0.012)
Log(HH Income)		-0.064**	-0.063**	-0.057*
		(0.031)	(0.031)	(0.031)
District Dummy			-0.013	-0.011
			(0.041)	(0.040)
Exposure Index				-0.11**
				(0.052)
N	1232	1221	1221	1221

Notes: Probit regressions, marginal effects reported. District Dummies included. Standard errors are clustered at the village level. ***, **, * indicate significance at the 1, 5 and 10%-level.

Table E2: Social Networks of Participants - Disaster and Non-Disaster Villages

Variable	**Mean**	**SD**	**Mean**	**SD**
	Disaster		**Non-disaster**	
Have relatives in group	0.574	0.495	0.545	0.499
Have near neighbours in group	0.738	0.44	0.848	0.36
Have distant neighbours in group	0.112	0.316	0.058	0.235
Have friends in group	0.016	0.124	0.013	0.115
Average time for visiting group members	7.163	5.169	6.387	3.082
Talk regularly with at least 1 group member via phone	0.549	0.498	0.603	0.49
Have joint work with at least 1 group member	0.657	0.475	0.652	0.477
Talk abt. financial crisis with at least 1 group member	0.673	0.47	0.704	0.457
Lend to at least 1 group member	0.433	0.496	0.464	0.499
Borrow from at least 1 group member	0.401	0.491	0.408	0.492

Notes: This table shows descriptive statistics (mean and standard deviation)for ten measures of participants' social networks in disaster and non-disaster villages.