



Knowledge, Attitudes and Perceptions to Natural Disasters.



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1. INTRODUCTION

UNICEF engaged CAMP Kuhiston in the implementation of a baseline and an end-of-action survey in DIPECHO VI project target schools, in order to identify the initial levels of knowledge attitudes and perceptions to natural disasters, and subsequently the impact of the project. This activity was funded by ECHO within the DIPECHO VI Action Plan implemented by UNICEF. This intervention aimed to assess the level of DRR (Disaster Risk Reduction) knowledge of schoolchildren and teachers at the initial stage of the DIPECHO VI project, and subsequently how this knowledge may have changed at the final stage of the project, after the training. Sixteen schools were selected for the project in four different districts of Tajikistan. These schools received training sessions for teachers and children, however an additional eight "reference" schools were assessed as the control groups.

The purpose of the assessment was to evaluate the knowledge of the teachers and children in the project target schools, as baseline data for further evaluation of the DIPECHO VI intervention (hereafter referred to as 'project schools'). It aimed to measure the impact of UNICEF's interventions under DIPECHO VI with concrete, evidence-based data through identifying changes in knowledge, attitudes, practices and behaviour of the children and teachers.

UNICEF Tajikistan, conducted specific activities to strengthen various aspects of school safety, including knowledge and skills of children, school-based disaster management and non-structural mitigation, where applicable. Before any of the planned activities were conducted, it was important to collect concrete data on the above in order to help establish a baseline against which the impact of the project activities could later be measured against, and to help inform and shape the specific preparedness and risk reduction interventions in schools.

Both the baseline and end-of-action surveys were completed in all 16 project target schools, as well as the 8 reference schools.

Two CAMP staff conducted surveys in project target schools located in Kulyab, Rasht, Tojikobod and Ayni. The methodology was based on a knowledge, attitudes and perceptions analysis (Similar to a standard KAP analysis but looking at perceptions and school information rather than practice). Children were assessed in groups through a series of questions and by identifying natural disasters from pictures, whilst the teachers were interviewed face-to-face. Children from various age groups participated in all the schools.

A baseline assessment was undertaken in November 2010, and the end-of-action survey during May and June 2011. Both surveys were designed to assess differences made in the knowledge, attitudes and perceptions of the school children and teachers, before and after they had received training on the issues of disaster preparedness. The assessment also aimed to compare these differences to the results from reference schools which were not covered by DIPECHO VI project.

2. METHODOLOGY

Before commencement of the activities in the field, two meetings were organised between UNICEF and CAMP staff to approve the data to be collected. During these meetings, school selection, survey methodology, and the best way to work with the local education and emergency departments in each region were discussed. The same methodology was applied in all schools, for both the baseline and end-of-action surveys.

Table 1. Numbers of participants in each survey.

	Teachers		Children	
	Project	Reference	Project	Reference
Baseline Survey	161	77	907	427
End-of-Action Survey	155	69	925	412

Table 2: A list of the names of the schools used in the survey

District	Project Schools	Reference Schools
Rasht	8	9
	13	48
	22	
	25	
Tojikibod	1	2
	4	3
	6	
	16	
Ayni	8	33
	10	47
	18	
	40	
Kulyab	5	12
	11	14
	23	
	36	

2.1 Teachers

Project schools & Reference schools

In each school around ten teachers from different classes, participated in a one-to-one interview with CAMP staff. They were asked a series of structured questions to assess their knowledge, attitudes and perceptions towards natural disasters. They were asked not to share information with their colleagues until everyone had been interviewed to avoid biasing any results (See Annex 1).

2.2 Children

Project schools & Reference schools

CAMP staff used a two part assessment to evaluate the level of the schoolchildren's knowledge about natural disasters.

The first part included a group exercise, asking the children to identify the type of natural disasters in photos. The names of various natural disasters were written on a piece of paper and hung on the wall in different locations. The moderator held up a photo of a specific natural disaster, and asked the children to go and stand next to the piece of paper with the name of the natural disaster they believe to be displayed in the photograph held up by the moderator, without talking to each other. The moderators then recorded the numbers of children who stood by each name.

In the second part of the assessment, the class of children were asked a series of questions with Yes/No answers. Children were asked to put their hands up, without talking to each other to answer each question. The moderator asked specific questions to check the children's understanding of each question before moving on to the next (See Annex 2).

3. ANALYSIS

It should be noted that against the original aims of the project, some teachers from the reference schools were actually invited to attend the training held in the project schools, thus meaning that all the reference schools could not be treated as proper controls. However, the results from all schools surveyed are discussed below. For ease of reading the sections are divided into knowledge, attitudes and perceptions (including school preparedness).

3.1 KNOWLEDGE OF DRR

3.1.1 Knowledge of Teachers

Project Schools:

The results of the baseline assessment for the project schools demonstrated that the teachers had limited knowledge of natural disasters that occurred in their villages, including environmental and man-made factors could impede them happening. Teachers were able to name an average of three factors for these questions, which included disasters that had happened in other communities. However there was very limited understanding of the types of secondary impacts from natural disasters. Over 80% of the teachers in the project schools knew the emergency alarm signal, and where the safe haven for the school was located. Most of the teachers (>95%) also claimed to know about administering first aid, and where the first aid facilities were located. Around 90% of teachers knew which authority to contact in the event of an emergency, but about a third did not know how they would contact them. 79% claimed to have an evacuation plan in place in their school.

Table 3: Results of the Teachers' knowledge based questions

Yes/No Questions (% yes)	Project schools		Reference schools	
	Baseline	End-of-action	Baseline	End-of-action
5. Location of emergency alarm.	80.7	98.1	84.2	100.0
6. Location of safe haven.	95.7	100.0	84.2	100.0
7. Have some first aid knowledge.	95.0	100.0	100.0	97.1
8. What to do in event of an earthquake.	96.9	100.0	94.7	100.0
9. Location of nearest medical facilities.	100.0	100.0	100.0	100.0
10. Previous training on natural disasters (ND).	68.9	91.0	73.7	85.5
11. Have organised an evacuation procedure.	65.8	90.3	42.1	82.6
13. Which emergency services to contact.	92.5	98.7	89.5	97.1
14. Have contact details of emergency services.	72.7	96.1	68.4	95.7

Reference Schools:

The results from the baseline assessments for the reference schools were quite similar to those for the project schools, with similar numbers of teachers able to name types of natural disasters and the probable contributing factors. Nearly 85% could also identify the emergency alarm and knew the location of the safe haven. Nearly 100% of teachers knew about first aid and the location of the first aid facilities. Around 90% of teachers knew which emergency authority to contact, but only two thirds would know how to contact them. 58% of teachers had not been involved in an evacuation exercise, but 89% claimed to have an evacuation plan in place in the reference schools.

Comparative Analysis: Project Schools:

The results of the baseline assessment have shown that all the teachers of the project schools knew the location of the nearest medical facilities, and obviously there was no change after the training. There was an overall increase of 24% points in the teacher's knowledge at the end-of-action survey in the project schools. More teachers (an increase of 17% points) were able to identify the emergency alarm correctly. After the training there was a 25% point increase in the number of teachers who had organised an emergency evacuation, and knew the contact details for the emergency services. After the end-of-action survey in the project schools, 100% of participants reported knowledge of what to do in the event of an earthquake, where the safe haven was, and having some first aid knowledge (See Table 8). 90% of teachers reported receiving the training on natural disasters at the end-of-action survey in the project schools. There was an increase in knowledge of 46% points of teachers being able to name different types of natural disasters, factors that contribute to them and secondary impacts. The biggest increases were in teachers being able to name secondary impacts of natural disasters (77% points) as well as the social and man-made factors that can contribute to these in the project schools (60% points). (See Table 3).

Comparative Analysis: Reference Schools:

From the results of questions 5-14 there was an average overall increase of 19% points in the teacher's knowledge between the baseline and end of action surveys in the reference schools. The identification of the emergency alarm, and the safe haven, both increased by 15% points, raising the total to 100%. 100% of teachers stated that they know what to do in the event of an earthquake after the end-of-action survey in the reference schools. The number of teachers that had organised an emergency evacuation doubled to 80% between the baseline and end of action survey. Awareness of the contact details for the emergency services also increased by nearly a third in the reference schools.

The questions looking at depth of knowledge (1-4 and 12) showed a smaller increase in knowledge at the end of action survey of 30% points in the reference schools. The greatest increases in knowledge were being able to name secondary impacts of natural disasters (52%) and also in naming environmental factors that can contribute to them (47%) in the reference schools.

Table 4. Results from teacher's survey of questions demonstrating depth of knowledge, shows average number of answers given.

	Project Schools			Reference	School	
	Baseline	End-of-action	% Increase	Baseline	End-of-action	% Increase
1. How many different natural disasters do you know?	3.4	4.6	34.5	3.1	4.0	26.9
2. Name environmental factors that can cause a natural disaster	2.3	3.6	59.2	2.2	3.3	46.9
3. What social / man-made factors can cause a natural disaster?	2.1	3.4	60.3	2.4	3.1	27.8
4. Name towns that have had a natural disaster	4.1	4.1	8.6	3.9	3.9	8.0
12. Name any secondary impacts from a natural disaster	1.79	3.2	77.3	1.9	2.86	52.0
Average number of answers.	2.8	3.8	46.0	2.7	3.4	30.3

N.B. Table 4 shows results from questions that asked participants to name factors/impacts from natural disasters (i.e. not yes/no questions), so answers are the average number of factors named. The % increase column shows differences in the number of answers given for these questions. E.g. for Question 1, participants could name an average of 3.4 types of NDs, increasing to 4.6 at the end-of-action survey, a percentage increase of around 35%.

In the baseline survey of project schools, the children had a reasonable ability to identify correctly the natural disaster when shown a photograph, but demonstrated very limited knowledge with regards to their knowledge around recognising the emergency alarm signal, and locating the safe haven for their school. Most of the children in the project schools struggled to differentiate between the pictures of floods and mudflows. However, over 90% correctly recognised avalanches, earthquakes and fires (See Table 6), with 40% identifying earthquakes as the biggest hazard to their school (See Table 7). Just over half of children had not received any previous training about natural disasters before (See Table 5). Only around 20% knew what the emergency alarm was in Kulyab and Tojikobod, increasing to 30% and 54% respectively in Rasht and Ayni. On average 40% of children knew the location of the safe haven, this increased to over half in Rasht. Around two thirds of children knew the steps to follow in the event of an earthquake, this figure being particularly low in Ayni. An average of 60% knew the location of the nearest medical facilities, this figure was over 70% in Rasht, but only 35% knew how to contact the emergency services in their district. This figure was a little lower in the Tojikobod district, but higher than the average in Kulyab, being around 50%.

3.1.2 Knowledge of Children

Project Schools:

Table 5. Results from baseline and end-of-action surveys of children in project schools by district (% yes answers).

District	Ayni	Ayni	Rasht	Rasht	Kulyab	Kulyab	Tojikobod	Tojikobod
Project Schools	Baseline	End of Action	Baseline	End of Action	Baseline	End of Action	Baseline	End of Action
1. Have you been taught about natural disasters before?	56.9	96.9	40.2	95.7	36.3	92.6	39.1	96.4
2. What is the emergency alarm is in your school?	53.9	96.4	30.1	89.3	18.4	87.2	21.3	95.0
3. Do you know where the safe haven is in your school?	34.8	100.0	52.3	90.9	41.6	96.5	40.1	97.3
4. If there is an earthquake would you go outside?	77.9	82.0	64.8	85.4	62.4	88.8	64.4	87.3
5. Do you know where the nearest medical facilities are?	63.7	99.0	70.7	94.9	59.6	97.6	52.0	98.6
6. Do you know what number to call in an emergency?	37.3	90.2	36.7	83.8	49.0	80.2	19.3	89.5
7. Are natural disasters more dangerous than cars?	58.3	75.3	75.4	78.7	60.4	87.2	64.9	83.2
8. Do you think natural disasters can be prevented?	36.8	76.3	47.7	79.1	31.8	67.8	44.6	68.6
9. Do you discuss natural disasters at home?	55.9	94.8	63.3	90.9	60.0	86.0	54.0	92.7
Average %	52.8	90.1	53.5	87.6	46.6	87.1	44.4	89.8

Table 6. Project schools - % of children correctly identifying photos of natural disasters.

Photos	Baseline	End-of-Action	% points increase
Flood	44.0	98.0	54.0
Rock fall	91.7	97.8	6.1
Avalanche	95.7	98.9	3.2
Landslide	71.8	98.1	26.3
Mudflow	52.3	99.5	47.2
Earthquake	95.1	100.0	4.9
Fire	95.6	99.4	3.8
Average %	78.0	98.8	20.8

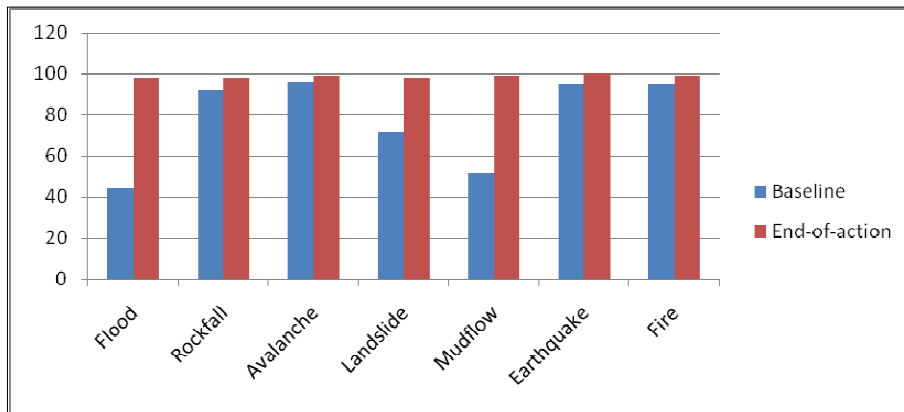


Figure 1. Project schools - % of children correctly identifying photos of natural disasters.

Reference Schools:

During the baseline survey of the reference schools, over 90% of children were initially able to identify rock falls, avalanches, earthquakes and fires correctly. The majority of children had not received any previous training about natural disasters before, with the notable exception of the reference schools located in Rasht, where 80% reported receiving prior training (See 'Limitations' section). Around 70% of children could not identify the emergency alarm, with the exception again of the Rasht schools. Awareness of the safe haven also fluctuated, being nearly 70% in Rasht, and as low as 24% in Kulyab. Rasht and Kulyab districts demonstrated a better knowledge of the steps to be taken during an earthquake (around 85-90%). They also scored better in knowing what emergency numbers to call. In Kulyab only 41% of children knew where the nearest medical facilities were located; this was between 56-76% in the other regions.

Table 7. Results from baseline and end-of-action surveys of children in reference schools by district (% yes answers).

District	Ayni		Rasht		Kulyab		Tojikobod	
Reference schools	Baseline	End of Action	Baseline	End of Action	Baseline	End of Action	Baseline	End of Action
1. Have you been taught about natural disasters before?	31.5	100.0	80.0	80.5	13.4	64.9	20.7	74.8
2. What is the emergency alarm is in your school?	28.3	82.9	58.8	80.5	26.9	70.2	29.3	81.5
3. Do you know where the safe haven is in your school?	48.9	78.9	68.2	89.7	23.9	83.3	50.9	91.1
4. If there is an earthquake would you go outside?	40.2	71.1	10.6	86.2	15.7	76.3	41.4	80.0
5. Do you know where the nearest medical facilities are?	73.9	94.7	76.5	95.4	41.8	94.7	56.0	100.0
6. Do you know what number to call in an emergency?	28.3	73.7	52.9	70.1	45.5	82.5	12.9	84.4
7. Are natural disasters more dangerous than cars?	48.9	75.3	72.9	74.7	47.8	80.7	65.5	63.0
8. Do you think natural disasters can be prevented?	28.3	60.5	22.4	43.7	18.7	55.3	51.7	72.6
9. Do you discuss natural disasters at home?	79.3	85.5	80.0	75.9	18.7	76.3	69.8	82.2
Average %	45.3	80.3	58.0	77.4	28.0	76.0	44.3	81.1

Table 8. Reference Schools - % of children correctly identifying photos of natural disasters.

Photos	Baseline	End of Action	% points increase
Flood	52.5	82.5	30.0
Rock fall	87.6	98.6	11.0
Avalanche	92.3	98.1	5.8
Landslide	80.3	95.7	15.4
Mudflow	38.2	87.7	49.5
Earthquake	100.0	94.5	-5.5
Fire	100.0	94.5	-5.5
Average %	78.7	93.1	14.4

Comparative Analysis: Project Schools:

For the end-of-action survey of project schools there was an average increase of 20% points in children identifying the correct photos of natural disasters. This brought the correct identification of each disaster to over 97% of children for all disasters after the training. The most noticeable increases in knowledge were in identifying the floods and mudflows correctly, by around 50% points. The level of knowledge about the steps to be taken during disasters also increased after the training. Over 90% of children could subsequently name where the nearest medical facilities were, as well as the location of the safe haven, and what the emergency alarm was. More than 90% of children reported discussing natural disasters with their family, an increase of over a third. More children (an 18% points increase) reported knowing how to go outside in case of an earthquake, bringing the total to around 90% in the project schools. After the training, the children in the project schools demonstrated an increase in knowledge of around 20% points in correctly identifying the natural disasters. The most noticeable increases were in identifying the floods and mudflows correctly, with correct identification increasing by around 50% points.

Comparative Analysis: Reference Schools:

The results from the end-of-action survey of reference schools showed an overall increase of 14% points in correctly identifying pictures of natural disasters after the end of action survey. This was particularly noticeable in identifying mudflows correctly, where over half as many more were able to identify these correctly at the end of action survey. The correct identification of a picture of a *flood* also increased by 30% points. Interestingly the correct identification of fires and earthquakes decreased a little but only by 5% points from an initial 100% rate of correct identification.

Regarding the children’s levels of knowledge in the reference schools at the end-of-action survey, more were able to identify pictures of natural disasters correctly, especially floods and mudflows. Interestingly the correct identification of fires and earthquakes decreased a little but only by 5% points from an initial 100% rate of correct identification.

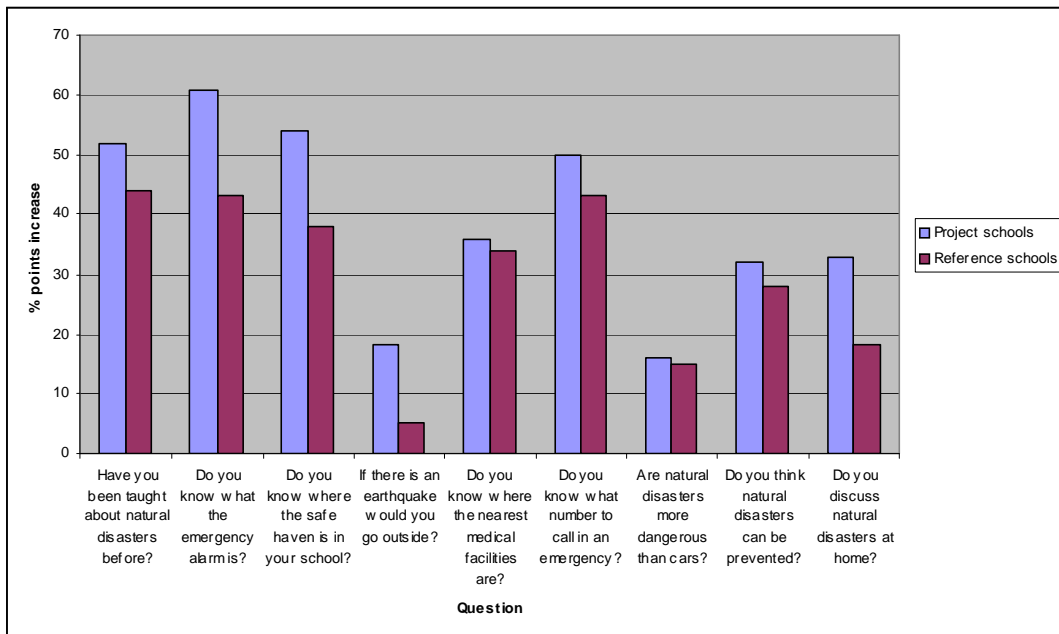


Figure 2. Overall percentage points increase of children’s knowledge between the baseline and end-of-action survey in project schools and reference schools in all districts.

3.1.3 Summary of Knowledge Results

From the initial baseline survey it was shown that all the children held a basic knowledge of understanding of natural disasters within their community, and were able to identify different types of natural disasters. However, there was frequently some confusion by the children between floods and mudflows. The teachers however, were generally aware of the emergency signal and where the safe haven was located, but it appeared that this information was not being passed onto the children. All the teachers expressed a desire for further training on disaster preparedness. There was a lack of any training materials about natural disasters in the schools during the baseline survey. Most teachers were of the opinion that both the community and the local government held joint responsibility for the prevention of natural disasters. Many participants stated that natural disasters could not be prevented, and had a very poor understanding of the causes/triggers. There were also regional differences noted with better understanding of the some of the issues shown by children in the Rasht district compared to the other regions surveyed.

From the end-of-action survey there was a 24% point average increase in the level of the teacher's knowledge after the training in the project schools. There was also an increase in the numbers of teachers reporting that their school had subsequently taken actions to help make the school a safer place. From the end of action survey of the reference schools, there was also an increase in the teacher's level of knowledge since the baseline survey. However, there was less evidence of teachers taking any actions to help mitigate the effects of natural disasters, with the notable exception of twice as many teachers reporting having a delegated person to take a lead in disaster preparedness.

From the results of the questions that gauged teacher's depth of knowledge, and weren't just yes/no answers, there is clear evidence of the training increasing these levels of knowledge. E.g. how many different natural disasters can you identify? The answers to these questions demonstrated a 50% points greater increase in knowledge in the project schools compared to the reference schools at the end of action survey. There was also a reduction in the number of emergency exits reported in the schools; again possibly due to teachers increased understanding of what constitutes a safe exit.

In terms of knowledge about what actions to take in the event of a natural disaster there was an overall increase in knowledge at the end-of-action survey. Around 40% points more children reported knowing what the emergency alarm was and where the safe haven was, as well as what number to call in an emergency. A third more were able to recall where the nearest medical facilities were located. 5% points more also knew to go outside in the event of an earthquake. In the questions that tested children's knowledge there was an overall increase of 40% points in knowledge in the project schools at the end-of-action survey, compared to the reference schools, which had an increase in knowledge of 30% points at the end-of-action survey (See Annex 5).

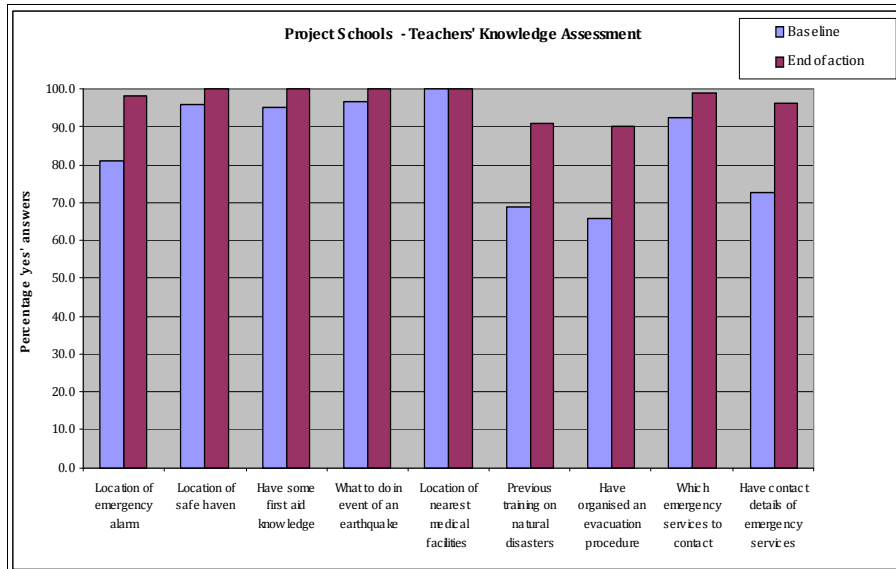


Figure 3. Project schools; Results from teacher's survey comparing baseline and end-of-action results from a sample of the questions in Table 8.

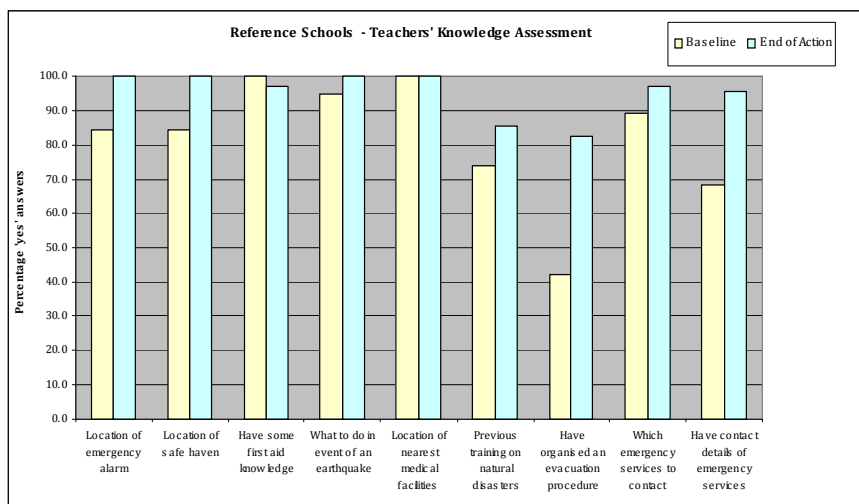


Figure 4. Reference schools; Results from teacher's survey comparing baseline and end-of-action results from a sample of the questions in Table 8.

3.2 ATTITUDES TOWARDS DRR

3.2.1 Attitudes of Teachers

Project Schools:

From the baseline survey of project schools, around a third of the teachers had not received any previous training on DRR. All the teachers expressed a wish to receive more training on DRR, and all agreed that children should be taught more about natural disasters. After the end-of-action survey all teachers felt that the school has a responsibility to teach children about natural disasters. After the training was completed 90% of project schools reported having appropriate training materials to teach children about natural disasters, which is an increase of 20% points from the baseline survey.

Table 9: The results of the attitude questions for teachers

Yes/No Questions (% yes)	Project schools		Reference schools	
	Baseline	End-of-action	Baseline	End-of-action
15. Have materials to teach about natural disasters.	67.7	89.0	31.6	82.6
16. School has taken action to prevent a natural disaster.	73.3	88.4	84.2	92.8
17. School has a responsibility to teach children about ND.	99.4	99.4	100.0	100.0

Reference Schools:

The results for the reference schools in the baseline survey were very similar in that most teachers wanted more training on DRR and felt that children should be taught more about natural disasters. After the end-of-action survey in the baseline schools, 50% more teachers reported having some materials and resources to teach children about natural disasters, and there was an 8% increase in teachers reporting having taken action to prevent natural disasters.

Comparative Analysis:

During the baseline survey of project and reference schools, over 70% of teachers felt that natural disasters were both a joint government and community problem. However, by the end-of-action survey of project schools and reference schools, only two thirds of interviewees subsequently felt that natural disasters were both a joint government and a community problem. In the reference schools, around 40% felt that they were just a community problem, and around 30% in the project schools.

3.2.2 Attitudes of Children

Only a small part of the survey looked at children's attitudes, i.e. how much they discussed natural disasters at home, and it was promising that there was a significant increase in the project schools of around 30% points, of children reporting discussing natural disasters at home since the training.

3.2.3 Summary of Attitude Results

Overall there was shown to be an average 18% point increase in children discussing natural disasters at home between both the project and reference schools across all the districts. This would help to disseminate the information they learned to a wider audience within their villages. The results also demonstrate an increase in the number of reference schools having more materials to teach children about natural disasters. It was also interesting to note that after the training more teachers felt that natural disasters were just a community problem, and less felt that they were a joint problem between the communities and government.

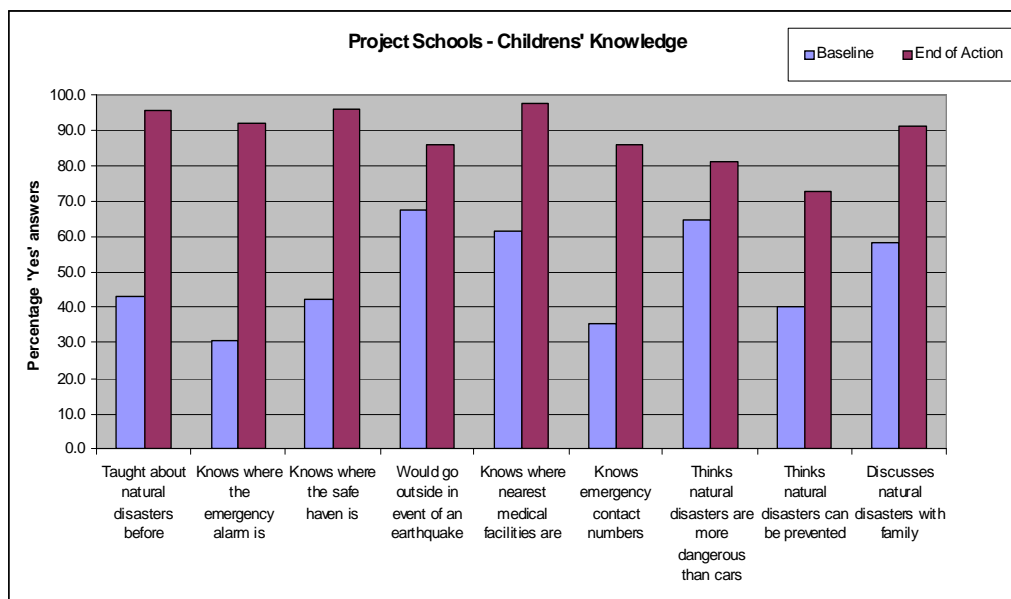


Figure 5. Results from children’s survey of project schools demonstrating level of knowledge before and after the training.

3.3 PERCEPTIONS/SCHOOL PREPAREDNESS ABOUT DRR

3.3.1 Perceptions of Teachers

Project Schools:

During the baseline survey of project schools, 89% of teachers did not understand the difference between structural and non-structural safety, and over two thirds of teachers thought that natural disasters couldn't be prevented. One third had not been involved in any evacuation exercise. During the baseline survey of reference schools, the results were very similar with over two thirds of teachers thinking that natural disasters couldn't be prevented and most not understanding the difference between structural and non-structural safety.

Table 10. Results of 'yes' answers from teacher's surveys at project and reference schools.

Yes/No Questions (% yes)	Project schools		Reference schools	
	Baseline	End-of-action	Baseline	End-of-action
20. The school is in a safe place.	69.8	72.7	78.9	89.9
21. There an allocated responsible person.	59.1	83.1	42.1	89.9
22. School has an evacuation plan.	79.0	85.0	89.5	85.5
23. Conducts regular risk assessments for ND.	56.6	49.0	63.2	56.5
24. Has an emergency supply kit in their school.	76.1	95.5	63.2	88.4
26. Co-ordination mechanism with emergency services.	85.4	94.8	100.0	98.6
27. School meets national building standards.	76.7	77.3	100.0	84.1

During the end-of-action survey of project schools, 88% of teachers reported taking action to help prevent disasters after the training, which is an increase of 15% points. These actions included planting trees and clearing mudflow channels to help prevent floods. Around 70% of interviewees replied that their school was in a safe location after the training, and around three quarters of teachers reported that their school met national building standards.

More teachers in the project schools (24% points) reported having a designated person responsible for emergency preparedness after the training. The number of schools with an emergency supply kit in place increased by around one fifth, and the ability of teachers to recognise emergency exits increased by 15% points.

More project schools (an increase of 10% points) reported having a co-ordination mechanism in place with local emergency services after the training. Teachers reported that they had invited representatives from these services to visit their schools, and together they had made plans about what to do in the event of an emergency.

More teachers in the project schools (a 60% points increase) understood the difference between structural and non-structural safety after the training. Two thirds of interviewees felt that natural disasters were both a joint government and a community problem, but less teachers (8% points) felt that the school received enough governmental support to help prevent natural disasters after they had participated in the training.

Reference Schools:

The percentage of teachers that reported having a delegated emergency person more than doubled after the end of action survey to around 90% in the reference schools. The numbers of teachers reporting having an emergency supply kit in school increased as well, by 25% points after the end of action survey in the reference schools.

Interestingly 55% more teachers reported understanding the difference between structural and non structural safety after the end of action survey, and over 40% more considered their school structurally and non-structurally safe on the second survey of reference schools. More emergency exits were identified, and around 90% of participants perceived their school to be in a safe place after the end-of-action survey of reference schools, an increase of 11% points.

In the reference schools, the number of teachers reporting having an emergency evacuation plan actually decreased by 4% after the end-of-action survey, and less reported having any co-ordination mechanism with the local emergency services (2% points decrease). Fewer teachers also felt that their school met national building standards. More than 40% points more felt that the government didn't provide enough support to prevent natural disasters after the end of action survey.

3.3.2 Perceptions of Children

Project Schools:

At the baseline survey of project schools, two thirds of children considered that natural disasters could not be prevented. This was similar in the reference schools. In the end-of-action survey of project schools, over 70% subsequently thought that natural disasters could be prevented, and nearly 100% reported having received the training, indicating a good attendance rate. In all these schools also, earthquakes were the biggest perceived threats before and after the end of action surveys by around half the children, but around a third perceived fires as one of the biggest threats.

Table 11. Project schools - What children perceive is the biggest hazard to their school.

% of children	Landslide	Flood	Avalanche	Rock fall	Earthquake	Fire	Mudflow	N/A
Baseline	0.2	0.6	0.6	1.2	41.7	27.0	19.5	0
End-of-action	0.3	4.5	2.2	3.9	64.7	27.2	5.5	1.0

Table 12. Reference schools - What children perceive is the biggest hazard to their school.

% of children	Landslide	Flood	Avalanche	Rock fall	Earthquake	Fire	Mudflow	N/A
Baseline	0.2	0.2	0	0.2	42.9	33.0	19.7	3.7
End-of-action	0.2	2.7	0.2	1.5	52.1	29.8	10.7	2.9

3.3.3 Summary of Perception Results

Overall, there was an increase in project schools allocating a designated person to take a lead in natural disasters, as well as an increase in schools preparing an emergency evacuation plan, and having an emergency supply kit in place. More schools also reported having some coordination in place with the local emergency services. After the training more teachers felt that the government should do more to prevent natural disasters. Fewer teachers also thought that natural disasters could be prevented at the end-of-action survey in the project schools.

The children's baseline perceptions of the biggest hazard to their villages were earthquakes (42%), followed by fires (27%) and mudflows (20%). After the training, these perceptions had changed, meaning fewer children felt mudflows were a risk (6%) and even more felt that earthquakes were the main hazard (65%). Their perception about the risk posed by fires remained unchanged at 27%.

4. LIMITATIONS

It was noted by the moderators that if the teacher remained in the classroom for the children's survey, that the children tended to follow each other more, rather than think for themselves. This could have affected the results slightly. Although exact data is not available on the impact of the age of the children on the survey results, as noted above, younger children would follow each other more, rather than think for themselves. The moderators' general comment was from observations only, was that they felt there was little influence of age in determining if children answered correctly or not.

Удалено:

The baseline report for this project notes that reference schools in Rasht have received previous training in natural disasters from organisations such as CoES, Mercy Corps and Welt Hungerhilfe.

Many teachers did not actually understand the difference between structural and non-structural safety at the baseline survey, so would not be able to answer this question correctly. In order to collect the relevant information from the large numbers of participants, some questions did not go into great detail, for example, teachers were asked if they knew any first aid, but not exactly what techniques they knew.

Regarding the results from the reference schools, completing the survey alone increased teacher's knowledge by 30%. When asked about possible reasons for the increase in knowledge shown by the reference schools during the writing of this report, it was reported by UNICEF that when they completed the training, 3-5 teachers from the reference schools had actually been invited to attend the training held at the project schools. It was thus not possible to compare the results from the reference schools as control data. This would however, explain some of the results where there was a significant increase in knowledge shown in the reference schools. It is also possible that due to the nature of some the questions in the questionnaires, this would prompt people to investigate further, e.g. "Do you have a coordination mechanism with the local fire department and medical centre" is very suggestive that this would be a good idea to arrange.

After talking to several teachers at the reference schools about the results, it became evident that the teachers were 'inspired' by just completing the baseline survey, to take some actions to increase their knowledge about disaster preparedness. For example, many teachers subsequently practiced an evacuation exercise after they had been asked about it in the baseline survey.

5. OVERALL SUMMARY OF STUDY FINDINGS

Overall the surveys revealed an increase in knowledge and understanding about natural disasters in all (project and reference) the schools assessed. This demonstrates that the conducted DRR training sessions contributed to an improvement in the participant's knowledge and understanding of natural disasters. After the end-of-action survey, 100% of teachers in the project schools subsequently reported improved knowledge of the steps to be taken in the event of an earthquake, where the safe haven was located, and having some first aid knowledge.

The assessment process was well organised in that the same schools and classes were chosen for comparison, and this also meant that it was easy to gather the data efficiently as all the people were in one place at the same time. However as already noted above, a study comparing control schools with the project schools was not possible due to local trainers inviting teachers from the control reference schools to attend the training sessions about DRR.

Regarding the increase shown by the reference school participants, the subsequent attendance of some of these teachers at the training sessions, would help explain the increase in knowledge and understanding shown by the participants in these schools. Also CAMP assessors noted that all the questions seemed to provoke participants to think more about natural disasters, and there were many additional questions, and much interest shown by the all teachers (project and reference) participants as they completed the assessments to get more information and training in this area. So teachers that did not receive this training may have been motivated to find out more information about questions raised as a result of this survey. The teachers also appear to have disseminated the information from the training given to them down to the children in their classes.

Overall, the results of the survey are encouraging in that knowledge increased in all the schools, attitudes changed positively and perceptions about natural disasters also changed significantly.

85% of teachers in reference schools reported receiving training on natural disasters after the end of action survey, an increase of 12% points, so perhaps these teachers attended the training sessions or received information via other routes.

6. RECOMMENDATIONS

6.1 Teachers

One recommendation from the baseline report was that the man made and environmental causes of disasters were generally not very well understood, so this should have been some feedback for the content of the training. Indeed there was an increase shown in knowledge about these issues after the training. It also recommended that participants should have more information on identifying emergency alarms and safe havens, as well as how to contact the emergency services. Again the end-of-action survey showed an increase in knowledge for all of these factors.

The end-of-action survey from the project schools and the reference schools, revealed that teachers would still like more training on natural disasters. They reported being overall very satisfied with the training given to them so far, and found it very useful. However, they stated that it should be given regularly, and not just as a 'one off'. This was because of staff turnover, and to help them keep their knowledge up to date.

The majority of teachers also reported that they found the visual aids given to them by the trainers very useful; brochures and posters that they could put up in the school and use to help teach the children about DRR. Therefore, UNICEF should consider the production of materials that can be used by teachers, this should be designed to meet the needs of all the age groups. UNICEF failed to fully utilise the materials already produced through the previous 5 DIPECHO rounds and there was limited use of materials from other stakeholders in DIPECHO 6. UNICEF should embark on a programme in collaboration with other stakeholders on the standardization and distribution of relevant materials. This can be taken further in that any knowledge gained through the implementation of DIPECHO rounds should be institutionalized so it can be accessed and used by all interested parties. There is a clear gap in knowledge management facilitation between collaborating partners.

As part of the training they received, the children and teachers were able to practice a simulation emergency drill, which involved recognising the emergency alarm and going out to the safe haven. This practical aspect helped increase their knowledge about what to do in the event of an emergency, improving their knowledge of DRR. This is a relatively simple exercise that is a critical part of the results chain when building the knowledge and capacity of the teachers and children respectively. This activity should be continued in conjunction with continued capacity building and awareness raising. It also should be incorporated at the community level whereby parents and other members of the community not only participate but also learn from the experience. It is also critical that the Committee of Emergency Situations is involved and can provide effective feedback on the effectiveness of the emergency drill.

After the training in the reference schools, less teachers thought that the government provided enough support in preventing natural disasters, perhaps demonstrating an increased awareness of the role that central government could play in supporting the local population in prevention measures against natural disasters. In further programmes there should be improved involvement of local and government officials from the Ministry of Education so that the teachers can provide feedback to the government possibly through a roundtable event or conference, the government can take ownership of the work already accomplished and see how teachers and the government can combine to continue and improve the capacity building of teachers in schools. This should not be restricted to the project schools, but those teachers already trained should be utilised to conduct trainings in other schools in their districts.

6.2 Children

The children also reported that they enjoyed the training especially the practical parts, and the results of the end-of-action survey demonstrates their increase in knowledge as a result of this. Therefore this practical aspect appears to be a vital part of consolidating the knowledge and practice of both teachers and children. It is important to keep the training interactive and interesting, the children responded well to visual aids such as posters and photographs. The children also found the posters a good way to help them understand and remember many of the concepts taught to them. There is scope for the older children to share their knowledge and experience with the younger children, therefore taking some of the reliance off the teacher-student relationship. Older children could be used to coach the younger children on some of the key aspects of natural disaster management, and provide support during the emergency drills. This could even be developed into cross school exchanges and children conferences to discuss and debate the issue and actions required.

6.3 Training and Materials

The most significant changes seen in both the project and reference schools at the end-of-action survey was in some disaster preparedness aspects, i.e. most participants subsequently reported knowing the alarm signal, the location of the safe haven, having some first aid knowledge, what to do in the event of an earthquake, and where the nearest medical facilities were. However, based on the comments of the teachers it appears that there would need to be some arrangement in place to repeat this training regularly to ensure that the information is consolidated. Perhaps other members of the community/villages could also be included in the training as well to help disseminate the knowledge even further.

Areas that showed slightly less improvement included the following; organising an evacuation procedure/plan, having the contact details of emergency services and having an allocated person to take responsibility for disaster preparedness. Most schools reported having an emergency supply kit, however, perhaps practice evacuations need further facilitation from an outside source such as CoES or NGO's and/or the reinforcement of making someone responsible to help with this as way of ensuring it is sustainable and not forgotten. A strong recommendation is that a standardized poster is completed and displayed in key locations that provides key information on but not limited to:

- Who is responsible for DRR in the school
- Contact Phone Numbers of the emergency services

- Location of Safe haven during school and possible outside of school

- The location of the alarm signals

- Diagrams and maps showing evacuation routes, and safe havens

- Identified areas of high risk

Talking again to the CAMP assessors, their experience of this type of work in other areas of the country, has shown that simple posters with clear information on can be very effective. This would have to updated and kept current.

There also had to be provision for the replacement and maintenance of the contents of the emergency supply kit in the longer term. This also raises the issue of the adoption of slightly more complex emergency equipment such as hand held water pumps that could be utilised by the teachers. The teachers and the government representatives should be aware as to where this equipment is available and aid facilitation within the government to allocate budget to purchase these materials.

6.4 Role of external agencies

Having a co-ordination mechanism with the local emergency services (e.g. police, fire, Committee of Emergency Services (CoES)) also shows some room for improvement; perhaps more assistance would be required from an external body such as NGO to facilitate this. Details are not available as to how many schools actually had meetings etc with the emergency services in question to actually have a specific joint plan in place. The Emergency Services should be aware and have copies of, evacuation plans for schools for allow them to review, and reference in the eventuality of an incident. CoES should incorporate school evacuation plans and drills into community and district level exercises.

It may also be the case that outside expertise (e.g. CoES, NGOs) is required to assess if the school buildings themselves meet safe building standards, and carrying out a risk assessment to look at fire exits and any other hazards in the building and the surrounding area. Perhaps this would also be an area for investment in conjunction with the practical training. There is clear lack of depth of knowledge on the structure mitigation measures within schools, and a formal assessment may lead to further structural measures to be undertaken such as the construction of fire doors, emergency exits, safe routes from floors above ground level etc. This should be developed as a standard methodology that can be used in all school building within the country that further down the line can be endorsed by the government and implemented in the entire country. An example to help clarification is that UK fire regulations state that no person shall be more than 18m from a fire door within their place of work, this example maybe unrealistic at present but there is no reason why a set of guideline could not be produced for schools to minimize the risk.

There is also scope that all the information and experiences of the DIPECHO programme are discussed in an open conference, whereby all those can present their information in tandem with other organisations. This would also allow those organisations not working in DIPECH but in DRR to share as well and it may help in providing a coherent approach to coordination, collaboration, planning and knowledge management for the future.

7. ANNEXES

Annex 1. Questionnaire for teachers

Name:		Date:	Ne
Village/Jamoat			
Age:	10-20 ____	21-30 ____	31-40 ____ 41-50 ____ 51-60 ____ 61+ ____
School:			
Knowledge:			
1. How many different natural disasters do you know?	Earthquake / flood/ landslide / rock fall / mudflow / avalanche / fire		
2. Name some environmental factors that can cause a natural disaster.	0 1 2 3 4 5 6 more		
3. What social / man-made factors can cause a natural disaster?	0 1 2 3 4 5 6 more		
4. Name some towns or villages that have had a natural disaster.	0 1 2 3 4 5 6 more		
5. Do you know what the emergency alarm is in your school?	Yes / No		
6. Do you know where the safe haven is in your school?	Yes / No		
7. Do you know any First Aid?	Yes / No		
8. Do you know what to do if there is an earthquake?	Yes / No		
9. Do you know where the nearest medical facilities are?	Yes / No		
10. Have you had information/ training on natural disasters before?	Yes / No		
11. Have you organised an emergency evacuation in the school?	Yes/No		
12. Can you name any secondary impacts from a natural disaster?	0 1 2 3 4 5 6 more		
13. Do you know which authority you would contact if there was a natural disaster?	Yes / No		
14. Do you have their contact details?	Yes / No		
Attitudes:			
15. Do you have good materials and resources to teach children about natural disasters?	Yes / No		
16. Has your school taken any actions to prevent a natural disaster?	Yes / No		
17. Do you think the school has a responsibility to teach children about natural disasters?	Yes / No		
18. Are natural disasters a government or community problem?	Govt / community / both?		
19. Would you like further information and training on natural disasters?	Yes / No		
School Information/Perceptions:			
20. Do you think the school is in a safe place?	Yes / No		
21. Do you have a special unit/person in your school responsible for emergency preparedness and response?	Yes / No		
22. Does the school have an evacuation plan?	Yes / No		
23. Do you conduct regular risk assessment for natural disasters?	Yes / No		
24. Do you have an emergency supply kit in your school?	Yes / No		
25. How many emergency exits do you have in the school?	0 1 2 3 4 5 6 more		
26. Do you have a coordination mechanism with the local fire department and medical centre?	Yes / No		
27. Does the building of your school meet the national building code standards?	Yes / No		
28. Do you understand the difference between structural and non-structural safety?	Yes / No		
29. Do you consider your school structurally and non-structurally safe?	Yes / No		
30. Does the school implement activities to keep the school safe?	Yes / No		
31. Do you think the school receives enough support from the government to prevent natural disasters?	Yes / No		
32. Do you think that natural disasters can be prevented?	Yes / No		

Annex 2. Questionnaire for Children

No. Children	Male:	Female:	Date:
Class No / Age			
School / Jamoat			

Photos	Landslide	Flood	Avalanche	Rock fall	Earthquake	Fire	Mudflow	N/A
Flood								
Rock fall								
Avalanche								
Landslide								
Mudflow								
Earthquake								
Fire								
What is the biggest hazard to your school?								

1.	Have you been taught about Natural Disasters before?	Yes / No
2.	Do you know what the emergency alarm is in your school?	Yes / No
3.	Do you know where the safe haven is in your school?	Yes / No
4.	If there is an earthquake do you go outside?	Yes / No
5.	Do you know where the nearest medical facilities are?	Yes / No
6.	Do you know what number to call in an emergency?	Yes / No
7.	Are natural disasters more dangerous than cars?	Yes / No
8.	Do you think natural disasters can be prevented?	Yes / No
9.	Do you discuss natural disasters at home?	Yes / No

Annex 3. Results from end-of-action survey of teachers from project & reference schools (Results which are not included in above graphs/tables).

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Question number	Project schools % yes	Reference schools % yes
18. Are natural disasters a government or a community problem?	Both : 63.2 Community: 36.8 Khukumat: 0	Both : 58.0 Community: 40.6 Khukumat: 1.4
19. Would you like further info/training on NDs?	100	100
25. How many emergency exits do you have in the school?	Average no. of exits: 5.0	Average no. of exits: 4.7
28. Do you understand the difference between structural and non-structural safety?	70.1	60.9
29. Do you consider your school structurally safe?	63.6	58.0
30. Does the school implement activities to keep the school safe?	64.3	52.2
31. Do you think the school receives enough help from the government to prevent NDs?	25.8	14.5
32. Do you think that NDs can be prevented?	7.7	1.4

Annex 4. Results from baseline survey of teacher's survey at project & reference schools.

Knowledge	Project schools, NO / YES %		Reference schools, NO / YES %	
	1. How many different natural disasters have happened in your village?	3.42		3.13
2. Name some environmental factors that can cause a natural disaster?	2.27		2.24	
3. What social / man-made factors can cause a natural disaster?	2.14		2.42	
4. Name some towns or villages that have had a natural disaster.	4.14		3.95	
5. Do you know what the emergency alarm is in your school?	19.3	80.7	15.8	84.2
6. Do you know where the safe haven is in your school?	4.3	95.7	15.8	84.2
7. Do you know any First Aid?	5.0	95.0	0	100
8. Do you know what to do if there is an earthquake?	3.1	96.9	5.3	94.7
9. Do you know where the nearest medical facilities are?	0	100	0	100
10. Have you information/ training on Natural Disaster before?	31.1	68.9	26.3	73.7
11. Have you organised an emergency evacuation in the school?	34.2	65.8	57.9	42.1
12. Can you name any secondary impacts from a natural disaster?	1.79		1.88	
13. Do you know which authority would you contact if there is a natural disaster?	7.5	92.5	10.5	89.5
14. Do you have their contact details?	27.3	72.7	31.6	68.4
Attitudes:				
15. Do you have good materials and training to teach children about natural disasters?	32.3	67.7	68.4	31.6
16. Has your school taken any action to prevent a natural disaster?	26.7	73.3	15.80	84.2
17. Do you think the school has a responsibility to teach children about natural disasters?	0.6	99.4	0	100
18. Are natural disasters a government or community problem?	Both : 70.3 Community: 24.7 Khukumat: 5.1		Both : 78.4 Community: 17.6 Khukumat: 4.1	
19. Would you like further information on natural disasters?	0.6	99.4	0	100
School Information/Perceptions:				
20. Do you think the school is in a safe place?	30.2	69.8	21.1	78.9
21. Do you have a special unit/person in your school responsible for emergency preparedness and response? (not including fire).	40.9	59.1	57.9	42.1
22. Does the school have an evacuation plan?	21	79.0	10.5	89.5
23. Do you conduct regular risk assessments for natural disasters?	43.4	56.6	36.8	63.2
24. Do you have an emergency supply kit in your school?	23.9	76.1	36.8	63.2
25. How many emergency exits do you have in the school?	4.32		3.24	
26. Do you have a coordination mechanism with the local fire department and medical centre?	14.6	85.4	0	100
27. Does the building of your school meet the national building code standards?	23.3	76.7	0	100
28. Do you understand the difference between structural and non-structural safety?	89.4	10.6	94.7	5.3
29. Do you consider your school structurally and non-structurally safe?	77.5	22.5	84.2	15.8

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30. Does the school implement activities to keep the school safe?	43.2	56.8	42.1	57.9
31. Do you think the school receives enough support from the government to prevent natural disasters?	66.5	33.5	42.1	57.9
32. Do you think that natural disasters can be prevented?	68.0	32.0	73.7	26.3

Annex 5. Overall percentage points increase of children’s knowledge between the baseline and end-of-action survey in project schools and reference schools in all districts.

	Percentage points increase	
	Project schools	Reference Schools
1. Have you been taught about natural disasters before?	52.3	43.6
2. Do you know what the emergency alarm is?	61.1	42.9
3. Do you know where the safe haven is in your school?	54.0	37.8
4. If there is an earthquake would you go outside?	18.4	5.4
5. Do you know where the nearest medical facilities are?	36.0	34.2
6. Do you know what number to call in an emergency?	50.4	42.8
7. Are natural disasters more dangerous than cars?	16.3	14.6
8. Do you think natural disasters can be prevented?	32.7	27.8
9. Do you discuss natural disasters at home?	32.8	18.0
Average % points increase	39.3	29.7

Annex 6. Results of baseline assessment for the children's survey of project and reference schools.

	Ayni	204	Rasht	256	Kulyob	245	Tojikobod	202
Children in Project Schools (907)	Yes %	No %	Yes %	No %	Yes %	No %	Yes %	No %
Have you been taught about natural disasters before?	56.9	43.1	40.2	59.8	36.3	63.7	39.1	60.9
Do you know what the emergency alarm is in your school?	53.9	46.1	30.1	69.9	18.4	81.6	21.3	78.7
Do you know where the safe haven is in your school?	34.8	65.2	52.3	47.7	41.6	58.4	40.1	59.9
If there is an earthquake do you go outside?	77.9	22.1	64.8	35.2	62.4	37.6	64.4	35.6
Do you know where the nearest medical facilities are?	63.7	36.3	70.7	29.3	59.6	40.4	52.0	48.0
Do you know what number to call in an emergency?	37.3	62.7	36.7	63.3	49.0	51.0	19.3	80.7
Are natural disasters more dangerous than cars?	58.3	41.7	75.4	24.6	60.4	39.6	64.9	35.1
Do you think natural disasters can be prevented?	36.8	63.2	47.7	52.3	31.8	68.2	44.6	55.4
Do you discuss natural disasters at home?	55.9	44.1	63.3	36.7	60.0	40.0	54.0	46.0

	Ayni	92	Rasht	85	Kulyob	134	Tojikobod	116
Children in Reference schools (427)	Yes %	No %	Yes %	No %	Yes %	No %	Yes %	No %
Have you been taught about natural disasters before?	31.5	68.5	80.0	20.0	13.4	86.6	20.7	79.3
Do you know what the emergency alarm is in your school?	28.3	71.7	58.8	41.2	26.9	73.1	29.3	70.7
Do you know where the safe haven is in your school?	48.9	51.1	68.2	31.8	23.9	76.1	50.9	49.1
If there is an earthquake do you go outside?	59.8	40.2	89.4	10.6	84.3	15.7	58.6	41.4
Do you know where the nearest medical facilities are?	73.9	26.1	76.5	23.5	41.8	58.2	56.0	44.0
Do you know what number to call in an emergency?	28.3	71.7	52.9	47.1	45.5	54.5	12.9	87.1
Are natural disasters more dangerous than cars?	48.9	51.1	72.9	27.1	47.8	52.2	65.5	34.5
Do you think natural disasters can be prevented?	28.3	71.7	22.4	77.6	18.7	81.3	51.7	48.3
Do you discuss natural disasters at home?	79.3	20.7	80.0	20.0	18.7	81.3	69.8	30.2

Annex 7. Photos, Rasht district

Work in group with children



Interview with the teacher

