



DISASTER RISK REDUCTION AND EDUCATION

Outcomes for children as a result of DRR activities
supported by the EEPCT programme

June 2012

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1 INTRODUCTION

1.1 The impact of disasters on education

The total number of people affected by disasters resulting from natural hazards has tripled throughout the past decade, with an average of 211 million people directly affected each year as a result of damages to homes, property, crops, livestock and infrastructure; children typically represent 50 to 60 per cent of all those affected.¹ Disasters also seriously affect education systems, schools, teachers and children. The number of people affected indirectly is much greater as many more are displaced. Furthermore, climate change has been recognized as a key driver of disaster risk. Evidence suggests that currently 7 out of every 10 disasters are climate-related.² Studies on disaster trends and the likely consequences of climate change suggest that every year, 175 million children are likely to be affected by climate-related disasters alone.³

Education service delivery has increasingly been integrated into the humanitarian and development response to disasters in a number of contexts around the world.⁴ The scale and nature of natural disasters, however, continue to pose a threat to progress towards achieving the Millennium Development Goals (MDGs), including those related to education.

In addition to the increasing number of disasters caused by natural and geophysical hazards worldwide, the food, fuel and financial crises have exacerbated pressures on national education budgets and on households already struggling to access basic services. Already weak, resource-constrained governments that struggle to meet the challenges posed by conflicts and disasters may be forced to curtail service provision. The impact may also further limit school attendance as families face increasingly tighter household budgets.

1.2 Education in Emergencies and Post-Crisis Transition programmes

The Government of the Netherlands provided a grant of US\$201 million (2006–2011) for UNICEF's Education in Emergencies and Post-Crisis Transition (EEPCT) programmes, which has significantly raised the profile of EEPCT and has helped countries on a sustainable path towards quality basic education for all. The core of the programme is intended to improve in a wide range of affected countries both the effectiveness and efficiency of educational response,

¹ Aguilar, L., M. Blanco and I. Dankelman. 2006. "The Absence of Gender Equity in the Discussions on the International Regime on Access and Benefit Sharing." Discussion document for the Eighth Meeting of the Conference of the Parties to the Convention on Biological Diversity. Gland: International Union for Conservation and Nature.

² Centre for Research on the Epidemiology of Disasters (CRED).

³ International Save the Children Alliance, 'In the Face of Disaster: Children and climate change', International Save the Children Alliance, London, May 2008, p. 2.

⁴ Barakat, Sultan, and Frank Hardman, 'Final Report: Programme Review and Evaluability Study (PRES) – UNICEF's Education in Emergencies & Post-crisis Transition (EEPCT) Programme' PRDU, University of York, April 2010.

including sudden emergencies, chronic emergencies and countries in transition from a post-crisis state to a development phase.

There are four specific goals:

- Improved quality of education response in emergencies and post-crisis transitions;
- Increased resilience of education service delivery (that also reduces the risks of slippage and promotes 'turnaround') in chronic crises, arrested development and deteriorating contexts;
- Increased education-sector contribution to better prediction, prevention and preparedness (the 3Ps) for emergencies due to natural disasters and conflict; and
- Evidence-based policies, efficient operational strategies and fit-for-purpose financing instruments for EEPCT situations.

Through the goals of the programme, 20 out of 42 EEPCT countries have mainstreamed disaster risk reduction (DRR) activities into their education sector plans. DRR in education directly addresses risk factors that greatly contribute to communities' vulnerabilities in the face of disasters, including poor building quality, limited understanding and awareness of risk, and a lack of capacity to prepare for, prevent and respond to hazards. Many country offices have worked in partnerships at the global, regional and country levels on initiatives such as: systematic national capacity development (individual and institutional capacities for emergency preparedness, contingency planning and early warning), school-based DRR and preparedness, and safe school construction.

1.3 Aim of this study

The aim of this study was to assess and document the outcomes for children as a result of the DRR activities supported by the EEPCT programme.

The EEPCT programme has implemented a wide range of activities, across many countries, and in many different disaster contexts. The programme has contributed to risk reduction both by ensuring that children have access to education in disasters and complex emergencies, and also by integrating knowledge on how to reduce risk and vulnerability into education programmes.

This study used two country case studies, in the Philippines and Peru, as well as a wider consultation exercise in Africa, Asia and South America, to gather information on the outcomes for children as a result of these activities. A brief overview of disaster risk and EEPCT activities undertaken in the Philippines and Peru is provided in Boxes 1 and 2 below. Further details can be found in the two country reports that complement this summary report (see Case Study A – the Philippines, and Case Study B – Peru).

It is very important to note that the evidence presented is based on the research conducted within this study – it is by no means meant to be fully representative. A key lesson or success factor in one country may not hold true in another country. Nonetheless, it is intended that this research will provide views and lessons that can be applied in a variety of contexts.

It should be noted that the focus of this report is specifically on disaster risk associated with natural hazards such as floods, typhoons and earthquakes. However, conflict was also an important category of risk in the EEPCT programme, and therefore where findings were reported in relation to reducing risk as relevant to conflict, this is also reported here.

Box 1: Summary of disaster risk and EEPCT activities in the Philippines

The Philippines is one of the most disaster-prone countries in the world, experiencing typhoons and tropical storms, flooding, landslides, earthquakes, tsunami and volcanic eruptions. Of the natural disasters, typhoons in particular affect the Philippine population on a repeated basis. Each year, the country averages 20 typhoons, with five or six causing significant damage. In addition to natural disasters, certain regions within the Philippines face instability from armed groups and conflicts – the Philippines is host to Asia's two longest-running armed conflicts.

In 2006, the Philippines was buffeted by a particularly difficult and damaging typhoon experience, culminating with Super Typhoon Reming. Just in Albay – the hardest-hit area – 702 out of 704 schools were seriously damaged, affecting 350,000 children. In addition, about 21,500 preschool children were affected.

Funding commenced in 2007, immediately following Typhoon Reming, and hence at the outset EEPCT was largely directed towards a response to a specific emergency. The programme focused on the repair and reconstruction of school buildings and day-care centres in the Bicol Region while seeking to 'build back better'. Construction included multi-purpose school buildings and evacuation centres. This work was supplemented by non-structural activities that included a DRR pilot project in six elementary and high schools.

Before the pilot project could be scaled up, thousands of people were displaced by the complex emergency in Mindanao. EEPCT programming was re-directed from its focus in Albay to respond to this new crisis, through the establishment of temporary learning centres and associated support.

Upstream activities that were intended to help foster improvements in education in emergencies were largely targeted at establishing national and sub-national education clusters. The clusters were able to improve coordination, contingency planning and advocacy through support to school-level actions.

Box 2: Summary of disaster risk and EEPCT activities in Peru

The diverse geography of Peru is characterized by a high potential for natural dynamics to become hazards: seismicity and active volcanoes, hydro-meteorological conditions and climate variability, steep slopes and unstable soils are combined with rains to generate landslides, and extreme events of water shortages become droughts. It is also a country that is highly urbanized (75 per cent of the population lives in urban areas), with overall poverty estimated at 35 per cent. The study focused on EEPCT activities in relation to earthquakes and tsunamis – 72 per cent of the population is at high seismic risk, and Peru's coastline along the Pacific Ocean not only houses the majority of the population, but has the highest risk of occurrence of tsunamis.

Disaster risk management is treated as a high priority at the national level, in large part due to the high visibility and economic impact of recent disasters. The National Institute for Civil Defence (INDECI) and the Ministry of Education (MINEDU) are both active on disaster risk and education, complicating coordination on this theme. The core national curriculum that is used by schools does include a theme on environmental education, which is underpinned by three topics – eco-efficiency, health and risk management.

EEPCT funding has specifically been used to co-finance the DIPECHO (Disaster Preparedness 'European Commission's Humanitarian aid and Civil Protection Directorate General') IV programme in Peru. The overall goal of the DIPECHO work is "strengthening alliances to ensure education in emergency situations and to promote a culture of prevention in the most vulnerable communities in South America," and this funding has been key in supporting the development of tools and training in both of the relevant ministries. Activities have primarily taken place at a national level, such as by strengthening capacities, providing training, and supporting the development of tools and guidance notes for integration into the core curriculum. There have also been local activities through the support of pilot schools in two districts, where teachers were trained on DRR and provided with supporting materials. The project was part of a wider regional initiative, and therefore lessons were also shared across countries.

2 APPROACH TO RESEARCH

2.1 Methodology

The methodology can be described in three phases:

Phase 1: Preparation

The preparation phase included all activities necessary to prepare for the two field trips, including:

- An initiation meeting between the consultants and relevant UNICEF staff to discuss the draft work plan, clarify objectives and discuss logistics;
- Review of relevant literature on education and disasters, and project documents – both for the programme as a whole as well as for the two country studies.
- Development of research tools, including semi-structured interview questions and focus-group discussion questions to support the two country studies.
- Development of operational plans for each of the country studies, detailing objectives of the field work, logistics for the field trip and a detailed itinerary.

Phase 2: Fieldwork

- Detailed data were gathered during field trips to Peru (2 October to 8 October 2011) and the Philippines (6 November to 16 November 2011). Each of the field trips consisted of consultation with relevant stakeholders, including government ministries, donors and non-governmental organizations (NGOs) at the national level; as well as site visits to areas receiving support under the EEPCT programme. Further details can be found in the two country reports that follow this summary report (see Case Study A – the Philippines, and Case Study B – Peru at the end of this document).

Phase 3: Analysis and reporting

- Data gathered in the field were assimilated and analysed. The information gathered on outcomes for children was structured and categorized, using several cross-cutting lenses to draw lessons on the different types of outcomes for children (physical, educational, economic and psychosocial), where these activities take place (at the national, sub-national and community levels), as well as on ways in which outcomes can be leveraged. Furthermore, where possible, quantitative data on outcomes were highlighted.

2.2 Research tools

2.2.1. Country study tools

Each of the country studies used a combination of semi-structured interviews and focus groups at national, sub-national and community levels to gather data on the outcomes of the EEPCT activities.

The fieldwork specifically aimed to gather data on the outcomes of the programme, categorized into the four categories indicated in the terms of reference, namely physical, educational, economic and psychosocial. Country study tools were used to structure discussion, and included:

1. **Semi-structured interview questions** around the four outcome themes, and also relating to operational issues, successes and barriers to the programme achieving the desired outcomes. The intention was to use the questionnaire to guide discussions, and make sure that all areas were covered to some degree, but allowing flexibility for the conversation to evolve.
2. **Focus-group discussion questions.** As above, the intention was to create a list of questions to guide discussion with communities, but because community members are direct beneficiaries, a separate questionnaire was developed for this group.

2.2.2. Programmatic review

In addition to the two case study countries, 19 other countries implemented EEPCT activities related to DRR, and the programmatic review was used to gather data from a broader range of countries, especially including representation in Africa. Because of the diversity of activities implemented across countries, phone interviews were attempted with the regional coordinators for Africa, Asia and South America, as well as a selection of six to eight country representatives from across these three regions. Country representatives were identified in consultation with regional coordinators, representing a range of programmes that have found both success and difficulty in implementing DRR in their EEPCT programming. Annex A contains the names and countries of those interviewed as part of the programmatic review.

2.3 Study limitations

It is important to view the findings in this report within their overall context. The key messages are based on experiences in two countries, and seven phone calls with regional and country leads. The EEPCT programme covered such a wide range of activities and countries, and therefore it is not assumed that these findings are applicable in all contexts, but rather it is hoped that they provide a snapshot of information to further the discussion on integration of DRR into education.

The following limitations are important to note:

- In the study countries, it was not possible to verify all outcomes for children as a result of programme activities, because no major disaster events had occurred to test the potential outcomes. In the Philippines, however, there were examples of localized, hazard-related events occurring during or after the EEPCT interventions in targeted schools. This provided a better sense of probable outcomes if a major disaster were to occur. Across study countries in general, it was clear that change was occurring, and likely outcomes could be projected and documented.
- The country studies were limited in length to the amount of time that the country teams were available to conduct the visit, but in neither case was this a limiting factor, as the study teams were able to meet with all stakeholders. The only exception to this was in the Philippines, where it was not possible to visit temporary learning centres in Mindanao Province on account of security risks.
- It was not possible to reach all of the targeted UNICEF officers for the programmatic review, mostly due to UNICEF staff feeling that they had time pressures that would not allow for an interview. However, the vast majority were available for phone conversations with the study team.

3 DELIVERING OUTCOMES FOR CHILDREN

3.1 Introduction

Disasters can have a significant impact on education, and often result in the damage or destruction of school facilities, the prolonged disruption of education, limited access to schooling, and decreased education quality.

Education and DRR can result in outcomes for children in a number of ways:

- Programme activities that ensure continuity of education (where children would not have had a chance to go to school otherwise, due to destruction of buildings or displacement, for example) can contribute to the resilience of children in the longer term by ensuring that development outcomes from education are not interrupted; and
- DRR can be integrated into education to help teach children about how to identify and respond to risk in their communities. Importantly, this knowledge is often passed on to the wider community and hence the benefits reach beyond the children themselves.

The resulting benefits can be wide-ranging, and include:

- Reduced death and injuries in disaster events due to safer schools buildings, better preparedness, and increased capacity and knowledge regarding what to do in an emergency;
- Increased school attendance and learning, leading to longer life-term earnings, especially for girls;
- Reduced maintenance costs for better buildings; and
- A greater sense of security and confidence.

Within the EEPCT programme, there has been a wide range of activities, some of which are emergency focused, but many of which also reduce disaster risk, such as capacity building at a national level as well as school-based DRR and preparedness. The activities under the EEPCT closely align with the three commonly considered 'pillars' of DRR and education, namely: 1) ensuring safer schools; 2) teaching and learning to increase knowledge and education; and 3) education on disaster management.

The following sections present the findings from the two country case studies and the interviews with country and regional leads, to identify the ways in which the EEPCT programme is delivering outcomes for children through its DRR activities. It is structured as follows:

- Section 3.2 examines the evidence from the study – **what** are the impacts and outcomes for children as a result of the DRR activities in the EEPCT programme?
- Section 3.3 looks at the evidence on **how** these outcomes are being delivered. What are the factors for a successful outcome?

The main findings from the full range of interviews are summarized here. Full reports on the Philippines and Peru can be found at the end of this report.

3.2 The evidence: What outcomes are being delivered for children?

Across the countries surveyed, activities typically focused on either downstream service delivery, or upstream capacity building and strengthening. On the one hand, in fragile nations, especially those with complex emergencies, where education authorities may be non-functioning, UNICEF typically has to focus on downstream service delivery, e.g., provision of temporary school infrastructure, school kits, etc., in temporary camps.

By contrast, in countries with more chronic disasters or in transition from a post-crisis state to a development phase, the focus seems to be more on upstream awareness raising and capacity building, typically working at the national level with activities such as systems strengthening, curriculum reform, and development of guidance and manuals to integrate DRR. Upstream activities were usually complemented by some form of downstream service delivery, for instance through the initiation of pilot schools.

On the one hand, downstream activities are where the impacts and outcomes for children are evident – and where schools are directly bringing benefits to their communities. However, these activities are not sustainable, nor can they be scaled up, without a strong enabling environment. Hence the upstream activities are essential to ensure a sustainable and effective programme of education and DRR, even though the impacts on children are not immediately evident.

The evidence from the research found that the integration of DRR into EEPCT activities has resulted in the following outcomes for children:

Children are more prepared for disasters.

In the pilot schools where DRR has been integrated into the school curriculum and applied through focused training sessions, children of all ages (from preschool through to mature students) have a much greater understanding of disaster risk and what to do in an emergency. Furthermore, there was ample evidence that they are taking what they learn and proactively applying it to their community. The evidence for this was very strong and consistent, and included:

- In Peru, where there is seismic risk, preschool children follow evacuation drills, and move to designated evacuation points away from the walls of the building and into an open area (schools are built around open courtyards that are designated as safe zones). Likewise, in the Philippines, children in elementary and high school practice evacuation drills in the event of fires or earthquakes.
- In Albay Province, the Philippines, where the dominant risk is on account of typhoons and volcanic eruption, children prepare emergency bags (containing flashlights, batteries, radios and first-aid kits) at home ahead of evacuation.

- In Peru, for example, one child went home and began marking safe zones in her family's apartment (in relation to seismic risk) following the integration of the DRR curricula. The family lived on an upper floor, and as a result of the daughter's activities, the parents approached the school to ask for more information about the best way to exit the building from an upper floor in the case of an emergency.

Box 3: Reducing loss of lives

Greater preparedness should result in a reduction in loss of lives (particularly in earthquake-prone areas) and injuries, although some inconsistencies regarding what to do during an earthquake were evident in the Philippines. It was not possible to directly document these outcomes in the study countries, because they have not yet experienced a major disaster since the programme was implemented.

While it is not possible to value the loss of a life, and all that it encompasses, that lost life can be thought of at its most basic level in terms of lost income for a family. When set against the cost of DRR measures that could protect lives, this type of measure can present a very powerful argument for investment.

As an example, in Peru, with an average gross national income (GNI) per capita of US\$9,070 and a life expectancy of 74 years, the loss of a 10-year-old would equate to a loss of US\$589,550 in lifetime earnings. The GNI per capita in the Philippines is US\$3,950, and average life expectancy is 68 years. Therefore, the loss of one child aged 10 results in a loss of lifetime earnings of US\$229,100 per child.⁵ To give a sense of the magnitude of a loss of life in an economic analysis, the total funding under the EEPCT in the Philippines was equivalent to approximately US\$3.5 million, which would be justified on a purely *financial* basis if 14 children were protected as a result of project activities – for example, through more effective evacuation knowledge. As a percentage of the 88,000 children who benefited from this funding, this represents well less than 1 per cent of project beneficiaries, and of course this analysis does not include the myriad of other benefits that can come about as a result of the EEPCT funding.

⁵ Note that this calculation does not include discounting to account for social preferences for time, but rather is a very simple calculation to give a sense of the economic argument for investing in DRR.

Children are proactively identifying and addressing risk in their communities.

Through the EEPCT programme children are learning more about what risk means, and importantly are being empowered to react in an effective way. One interviewee pointed out that children are often taught about hazards, just not what to do about them, and this is being transformed through the EEPCT activities.

- In Peru, students in a secondary school in Callao used their education on disaster risk to identify ways that they could reduce risk in their community. Child-led initiatives included lobbying the Government to make the escape route for tsunami safer, and identifying and engaging with a preschool across the street that was also at high risk from tsunami (the youth approached the school and helped them to develop a contingency plan similar to their own).
- In the Philippines, children have identified hazards outside of the school premises. For example, of their own accord, children in elementary school determined safety levels for the crossing of streams that can become dangerous to cross. They decide when it is better to take a different route. Children have also helped to improve safety in the home, such as by suggesting the movement of furniture from passageways to aid the ease of an emergency exit from the building, and by ensuring that parents switch off electrical items at night to avoid a fire.

Children are learning how to identify and address a variety of forms of risk outside of disasters, such as road safety and household fires.

While the evidence is qualitative in nature, there is no doubt that this kind of awareness should reduce childhood accidents. Examples include:

- Numerous examples were provided in Peru of school children beneficiaries telling community members where to cross the road, and identifying safe evacuation routes for tsunami.
- In the Philippines, children at an elementary school raised the alarm when they discovered a fire, and organized themselves in a line passing water containers one to the other in readiness to douse the flames. In another case, a 10-year-old girl was able to apply her first-aid skills to help a badly injured 4-year-old girl. Both examples indicate a sense of preparedness and an ability to handle an emergency situation.
- There were also examples of children extending their knowledge beyond risk to a greater understanding of factors that build resilience – for example, learning about nutrition in Peru.

Children are being provided with the opportunity to continue their education during emergencies, where they wouldn't have access to school otherwise.

In countries with emergency situations there was a greater focus on ensuring continuity of education, where children would have received none otherwise, and the schools often also provide a safe place against secondary risks.

- In Uganda, for instance, floods often hit at exam time. UNICEF has been working with the Government to ensure that exams can still take place. Where exam committees cannot reach communities that are typically cut off, these communities are relocated to higher ground, and UNICEF provides tents and supplies for temporary schools.
- In the Philippines, UNICEF played an important role in re-establishing a functioning school system in the wake of a devastating typhoon while simultaneously seeking to ensure that the schools are better able to withstand any future impacts.

Box 4: The economics of education

In quantitative terms, a loss of education directly impacts on future earnings. The Copenhagen Consensus report on education reviewed studies on the economics of education, and found that private returns, estimated as the percentage increase in annual earnings obtained from an additional year of schooling, are almost universally positive. It also found that in all but a handful of countries, estimated returns to schooling are higher for girls than for boys, and hence have an important gender impact. Further, both theoretical arguments and empirical evidence support the view that interventions early in life will have the highest returns.⁶ The EEPCT programme as a whole has increased access to education for 5.5 million children, and given the evidence, will likely be yielding more benefit than cost.

Children feel more secure and confident.

Children consistently felt empowered and aware, and it was clear that the activities will contribute to a reduced psychosocial impact – to the extent that they can – in the event of an emergency. While the focus of this report is on natural disasters, many countries were also addressing risk from conflict, and gave examples of ways in which children were being protected through peace-building activities (these are summarized in Box 5 below).

⁶ Orazem, Peter F., Paul Glewwe and Harry Patrinos, 'The Challenge of Education: The Copenhagen Consensus 2008 Challenge Paper on Education', Copenhagen Consensus Center, Frederiksberg, Denmark, April 2008.

Box 5: Peace-building activities

Many countries gave examples of peacebuilding activities contributing to children's safety within the context of risk from conflict or complex emergencies, including:

- For example, in 2010, codes of conduct for teachers were developed and implemented in the Democratic Republic of the Congo and Sierra Leone. An evaluation of the Democratic Republic of the Congo initiative found that 92 per cent of children reported their teacher did not use corporal punishment.
- In the Philippines, UNICEF is building on its experience supporting the delivery of education in the context of a complex emergency where schools are sometimes attacked, by advocating for schools to be treated as 'zones of peace'. Also in the Philippines, UNICEF has supported the establishment of temporary learning centres for displaced children in areas of conflict and insecurity. In one case, this opened the opportunity for children to attend school for the very first time, even at the age of 14.
- To address post-election violence and strikes in school, Kenya initiated peace clubs in secondary schools and supported the Ministry of Education in developing a National School Council programme. To date, 18 per cent of schools have adopted school councils and report a reduction in strikes and violence, creating a safer and more secure environment for the children.
- Conflict was a key issue for UNICEF Nepal – children couldn't go to school due to the insecurity. UNICEF worked with local people to engage with criminal/rebel groups through dialogue, discussion and building trust. UNICEF Nepal used the rights of a child as a basis for discussion, and as a result, schools were made neutral. It also prepared a code of conduct – children would hold teachers accountable if they weren't at school on time, and as a result, children felt empowered and the quality of education improved.
- In Nepal, one of the biggest successes was working within conflict-affected areas to designate schools as neutral territory, and this was an emerging theme for work in the complex emergency context of Mindanao Province in the Philippines.

The following outcomes do not benefit children directly, but are key benefits of the overall programme and its ability to contribute to wider resilience:

Communities have access to evacuation facilities as a result of new buildings in the Philippines.

In Albay Province, the Philippines, the majority of EEPCT funding went towards the repair and reconstruction of schools damaged by Typhoon Reming in 2006. New construction included buildings (one per school) that serve as both classrooms and evacuation centres. Such buildings are known as Learning and Public Use School (LAPUS) buildings and were designed to conform to DepEd standards and specifications for classrooms, but with an emphasis on greater hazard resistance, particularly typhoons, and flexibility in purpose. Since construction, some of these buildings have been used by evacuees. For example, communities living in close proximity to the Mayon Volcano used school-based evacuation centres for two months. While this overlapped with Christmas holidays, there was a period of about one month when the

school and evacuation centre were operating concurrently. This had little interruption to education on account of teachers and children adapting to the circumstances, such as by making use of tents, or gathering under trees to hold classes. In another example, localized flooding resulted in the use of LAPUS building classrooms by evacuees, but this coincided with the school being suspended on account of the flood disruption. Evacuees using LAPUS buildings have access to WASH facilities, thereby helping to ensure that good health and nutrition levels are maintained.

An analysis of the costs of the school buildings actually shows that the LAPUS building is less expensive. While the initial construction cost of the higher-quality LAPUS building is greater than a standard DepEd building, when the maintenance costs and likely reduction in damage losses – due to winds/storms/rain – are factored in, the LAPUS building is overall less expensive. It should also be noted that where LAPUS buildings include an optional kitchen/bathroom, compared with a DepEd building (that has no such facilities), the LAPUS building is more costly overall. However, the benefits from improved health and evacuation capacities will most likely outweigh this additional cost.

Communities are more aware and knowledgeable about DRR, as they learn through their children.

Most people interviewed consistently cited the benefit of educating children on disaster risk, because they carry that knowledge home and therefore the benefits of risk reduction and management measures are spread to the rest of the community.

- In Peru, there was such interest in the education that the children were receiving, that one particular school hosted a workshop for parents on risk management, where parents were taught about the relevant risks in the area, and what to do about them – for example, designating safe zones in the home and what to pack and have ready to go by the door in the event of an earthquake.
- In the Philippines, a small DRR pilot among six schools included a school-community DRR workshop that culminated in the formation of a School Disaster Risk Reduction and Management Council comprising children, teachers, parents and local government officials. This was an extension of the decentralization of the nation's disaster councils across tiers of government from national to local level. Through this type of community facing work, EEPCT helped to strengthen DRR awareness within the community while strengthening community recognition of schools and children as critical aspects of disaster planning.
- UNICEF East Asia and Pacific Regional Office (EAPRO) cited that passing of knowledge to the rest of the community was a consistent outcome across the region.

The following example, taken from a 2010 evaluation of the EEPCT programme, highlights many of the outcomes that can be realized as a result of integration of education and DRR, for both children and the wider community:

Box 6: Bangladesh participatory vulnerability assessment

The North Adampur Government Primary School, in Pathuakhali District, was severely affected by Cyclone Sidr in 2007, when the school's roof was torn off and the windows were smashed by the cyclone, and by Cyclone Aila in 2009. Grade five student, Jharna Islam (aged 11), remembers when Cyclone Aila hit: "My school and home were flooded, and school was closed for about a week. I stayed at home and helped my mother collect enough food for our family." The area also floods two or three times a year, washing away roads, destroying crops and inundating the school's playground and classrooms.

Through the EEPCT programme, UNICEF supported the North Adampur school community in taking control of disaster preparedness and recovery. About 35 parents, teachers, community members and students participated in participatory vulnerability assessment training, with UNICEF support. Through this process, the community identified the school's specific needs and developed a local-level, budgeted action plan to strengthen resilience to future disasters so that children could return to school more quickly.

The school's plan was ambitious. Key improvements identified by the local community included raising the playground and repairing the access road so they did not flood so easily. Other work included installing a tube well, plastering walls, and repairing windows, doors, toilets and the roof to make the school stronger. Because the school was identified as one of the most vulnerable in the EEPCT programme, a grant of 75,000 BDT (US\$1,100) was provided to implement its contingency plan.

Due to its involvement in the planning process, the school community felt empowered to take ownership of the school's problems and attempt to solve them. First, teachers and the school management committee contributed 5,000 BDT (US\$70) towards the action plan. Then they began to raise funds, mainly with local government, using some of the negotiation and communication skills they learned during the vulnerability assessment training. "We learned that it's important to approach government several times if they initially refuse," said assistant teacher Master Mohiuddin.

The tactics proved to be extraordinary successful: The school community raised almost 200,000 BDT (US\$2,870), mostly from civil and elected officials from the sub-district. Most of the local community members and parents were too poor to donate money, but they were able to volunteer their labour.

3.3 The evidence: How are outcomes being delivered for children?

The evidence clearly suggests that children and their communities are benefiting from the DRR activities initiated under the EEPCT programme, and it is highly likely that the investments are

yielding greater benefits than the cost, given the outcomes related to saving lives and increasing education days.

However, the outcomes from a set of activities will not be the same in every context and population. And while the analysis looked largely at examples that were successful, clearly there will also be examples of interventions that have not delivered their expected returns. This section seeks to answer the following questions: How have outcomes for children been achieved? What has contributed to success?

The analysis uses UNICEF's four DRR goals, which have been adapted from the Hyogo Framework for Action priorities to apply more specifically to children, to gather data along the following four themes:

- How has DRR for children and women become a national and local priority?
- How are the different risks faced by girls, boys and women identified and addressed?
- How are safer and more resilient conditions for girls, boys and women promoted?
- How have humanitarian preparedness, response and early recovery been strengthened?

The findings are presented below, according to each of these themes, and highlight both strengths and weaknesses from the evidence gathered.

How has DRR for children and women become a national and local priority?

- **A strong advocator was identified and engaged in the process** – In order to progress DRR within the education sector, at either a national or a local level, a strong advocator had to be identified, engaged in the process and supported to leverage DRR. UNICEF EAPRO identified that a strong champion at the national level was a key ingredient for success. At a local level, the schools that were implementing change had a strong advocator – in some cases, teachers advocated with principals for a DRR curriculum, and others described a principal who drove the process and got the teachers on board. The municipal government in Peru also described how the head of their network of schools was very determined to see DRR placed on the agenda and results delivered. In the Philippines, the provincial DRR focal point from DepEd demonstrated interest, enthusiasm and commitment – indeed he joined the fieldwork and contributed to discussion with children very engagingly. There were also many schools that did not want to engage in the process, and this was consistently cited as being due to 1) a lack of an advocate within the school environment and 2) a lack of concern over disaster risk (which will be discussed in further detail below). A lack of resources or capacity was often highlighted at a secondary school level, where teachers were more pressed for time, and lacked the capacity to take on what was seen as yet another issue to integrate into their curriculum.
- **Entry points for DRR within the education sector were leveraged to raise awareness and engagement.** Every country interviewed identified different entry points for engaging with the subject of DRR and education. It was often described that a certain entry point

resonated with a specific cultural context or set of beliefs, and this could then be used to leverage an understanding of the importance of disaster risk management as a priority issue. For example:

- In Peru, at a national level, the training on Inter-Agency Network for Education in Emergencies (INEE) standards was defined as a key turning point for raising awareness on the subject and securing commitment to DRR as a priority issue in education. At a local level in Peru, teachers really understood the importance of the rights of a child.
- In the Eastern and Southern Africa region (ESARO), a key finding was that a capacity development approach through regional training proved very successful in galvanizing commitment from Ministries of Education.
- In Uganda, the life skills curriculum was key; teachers and parents understood the importance of life skills, and this was used as an entry point for teaching DRR and ensuring its place as a priority issue.
- In Nepal, progress was achieved by discussions around the rights of a child, which led to the establishment of codes of conduct, where students could hold their teachers to account for attendance.
- In Albay Province, the Philippines, the programme has encouraged schools to utilize the annual process of developing a 'school improvement plan' to integrate improvements regarding safety. 'Beautification' days, which involve children cleaning and maintaining school premises, were also regularly used as good opportunities to highlight and improve safety within a school.
- CARE in Peru explained that communities didn't respond if you talked about disasters – this implied an infrequent event that they didn't want to bother with. By contrast, if you talked about climate change, through the lens of the changes that they could see around them, they were much more interested and ready to engage.

In contrast to the above point, UNICEF Angola expressly had to stay away from entry points having to do with disaster. Due to the long-running conflict, stakeholders did not want to speak about emergencies, disasters or risk, and rather the focus had to be on peace and moving forward. UNICEF Angola explained that this made it harder to find ways to introduce DRR as a concept, even though its aim is to ultimately lead to a more stable future. In light of the hardships faced by children in the conflict-affected province of Mindanao, the Philippines, it was apparent how much harder it was to consider natural hazard risk in comparison with work in peaceful Albay Province. This was even despite the occurrence of flooding disrupting education in temporary learning centres and contaminating drinking water.⁷

⁷ The occurrence of a major flood disaster affecting northern Mindanao shortly after the fieldwork for this study, and at the very end of the EEPCT funding period, will no doubt influence how natural hazard risks are considered in education planning in the future for this province.

- **Awareness raising needs to target the right people to build advocacy.** Where a strong advocator does not already exist, awareness raising needs to be 'smart' and target the right people who will engage and move the agenda forward. The entry points listed above can be used to build awareness, but clearly there is a lot of differentiation between what works in different contexts. Similarly, strong advocators at a national level are likely to have a strong interest in reducing disaster risk, and could be in the office of the President, Ministry of Education or Department of Emergencies.
- **DRR becomes a local priority when local people are engaged and given ownership of the process.** UNICEF Nepal highlighted the importance of targeting communities through local people who are trained, rather than outsiders. The use of codes of conduct with teachers was also very successful. Teachers and students effectively designed a memorandum of understanding for each of their respective responsibilities, and as a result teacher attendance at school increased. One teacher explained that his students would hold him to account, per the terms of the code of conduct. He got a lot of respect from the community for following the code of conduct, and as a result he began to realize the difference that he could make within the community.
- **Structural/systemic change at a national level is essential for maintaining the prioritization of DRR and education.** Government is subject to high levels of political turnover. Each new government brings new staff, and as a result a strong advocator in the ministry may not be there from one government to the next. Therefore, there must be a focus on structural or systemic change, to ensure that DRR is part of the education curriculum and the safe hazard-resistant design of school buildings and that it will persist beyond changes in government.
- **A key role for UNICEF has been to create the link between national disaster management offices, and the Ministry of Education.**⁸ This was a point raised by the regional lead for UNICEF Asia. It was also clearly reflected in the Peru case study, where there was a lot of overlap between the education modules created by the national disaster-management office (focused on emergencies) and the wider education curriculum, which was focused more on a holistic perspective on disaster risk. UNICEF had played a key role in helping to bring the two ministries into closer engagement with one another, and a key recommendation coming out of the study was to step up the coordination and explicit mandates between the two.

⁸ This is a common theme outside of the EEPCT programme as well. For example, a key role of UNICEF's DRR programme in Kazakhstan has been to create stronger linkages and coordination between the Ministry of Education and the Ministry for Emergency Situations. See United Nations Children's Fund, *Working Together Before Disasters Strike: An innovative practice on disaster risk reduction and education in Kazakhstan*, UNICEF CEE/CIS, 2011.

How are the different risks faced by girls, boys and women identified and addressed?

- **Risk assessment was one of several factors that influenced programme activities.** Generally speaking, there seemed to be a reasonable level of risk data available in the countries interviewed, and risk/hazard maps were included in programme design. However, other factors such as government direction, capacity issues, and willingness of local leaders to engage on DRR and education, influenced the choice of location for project activities. There was also a sense that risk was implicit – because the EEPCT programme was targeting emergency and post-crisis transition situations, it was by default focused on vulnerable groups.
- **In terms of engaging on risk within the community, it is not clear that a comprehensive risk assessment was used to design project interventions.** One of the key criteria used by DepEd in Albay to select schools suitable for the building of classrooms that can double as evacuation centres was based on schools that had been designated as centres for evacuation in areas of high risk. However, this was often justified with reference to damage sustained to these schools in Typhoon Reming, not from a multiple hazard perspective that would be mindful of seismic, volcanic, flood and other hazards the region is exposed to. Furthermore, nearly all of the schools in Albay were seriously damaged in the typhoon, so it is hard to imagine how some can be considered more at risk than others in this regard. The dominance of focus on the typhoon threat – which is certainly very high, with 20 typhoons a year – overshadows consideration of others. For example, it is not clear whether the reinforced concrete structure that is intended to offer greater protection against damage in strong winds is also capable of withstanding an earthquake. Any collapse of a concrete roof is likely to be more dangerous than a collapse of a corrugated iron one. Additionally, at least one of the schools with an EEPCT-funded LAPUS building was situated in an area that subsequently flooded. A comprehensive risk assessment would help to weigh up such concerns and provide a basis for fully informed decision-making.

Beyond an awareness of a major hazard threat, a proper consideration of vulnerabilities and capacities in relation to a hazard was lacking. In terms of vulnerabilities, there appears to be an emphasis upon issues to do with ‘exposure’ to hazards, as highlighted above. Less attention is focused on ‘susceptibility’ of groups to suffer as a consequence of any impact, how this changes depending upon the individual and community, and why this is the case. This seriously impedes the ability to design and implement a fully effective and comprehensive DRR initiative.

- **School-led programmes to identify and address risk were not as prevalent.** Examples of schools using the DRR curriculum to proactively gather data on risk and identify community-level measures to address risk were not as advanced. However, there were signs that communities are thinking about risk more generally and acting on this – for example, in Peru, one of the pilot secondary schools had identified safer escape routes for

evacuation, and advocated with government to change the official plan. These types of initiatives can form the bedrock for wider risk assessment at a community level.

- **Risk reduction measures can sometimes compete with each other.** The programme aimed to reduce risk to children, specifically through education. In the Philippines, some school buildings were rebuilt to a high standard, such that they could be used both as an evacuation centre and also to provide education. These two goals compete with each other. The ideal is to provide schools that can still act as schools in emergencies. Yet on account of the multi-purpose nature of classrooms that double as evacuation centres, the buildings were built to a much higher standard than a typical classroom. For example, they include toilets, kitchens and other additional facilities. So children received some educational benefits from the multi-purpose buildings during normal times, but then did not receive benefits during an emergency. Indeed, education could be harmed if evacuation centres are used for anything other than the intended limited three-day time period.

How are safer and more resilient conditions for girls, boys and women promoted?

- **Safer and more resilient conditions are promoted by communities when the approach to education is creative and holistic.** The majority of countries interviewed cited the need to think of education outside of the classroom, and to be creative in order to keep children engaged and interested. Examples of initiatives undertaken within the EEPCT programme include the promotion of a 'risk land' game, and banners promoting DRR messages at community sports events. It was also apparent how other agencies, such as Save the Children in the Philippines, have developed excellent resources and facilitated creative activities. This highlights an importance regarding the sharing and coordination among development actors.
- **DRR needs to be integrated, rather than added on to the curriculum.** Safer and more resilient conditions only come about when communities actively engage with DRR. While modules on disasters, and ways to respond to them, were commonplace, these were often seen as another subject being pushed through the schools. Albay Province in the Philippines was the exception – here DRR training was received enthusiastically by children and others, possibly largely on account of the regularity of disaster events. Nevertheless, where DRR education was integrated into the existing curriculum, teachers were far more likely to take it on board and teach it in their classrooms. UNICEF Asia described integration of DRR as an 'art' – one has to find the entry points in the existing curriculum, through environment or science, for example, and then blend preparedness and DRR into what is there. Most students already learn about hazards, just not what to do about them. A similar story was told in Peru – there were a multitude of modules, teacher guides and trainings on DRR, and teachers often found this overwhelming. By contrast, there was a specific curriculum on environmental education, and a chapter on DRR had been integrated into it, and this was by far referenced as the most successful tool.

- **Preschool/primary school seem to be the best starting point for building resilience.** Many commented that when children of a young age are taught life skills regarding DRR, they integrate them much more into their daily lives. Similarly, it was found that teachers are more open to teaching disaster management at this level, because there is typically one teacher per homeroom, who teaches a variety of subjects, and is willing to add in disaster concepts to their daily routine. By contrast, at a secondary level, teachers are typically specialized into subjects, and therefore integration of DRR concepts is a harder task. This does not mean that DRR should not be integrated into secondary school, especially as older children can be involved in DRR in different ways.
- **A key barrier to building resilience is attitude.** UNICEF Uganda described a common theme – a key barrier to building resilience is people’s attitudes to risk. In the case of Uganda, people are resigned to hazards simply being the way life is – implying a fatalistic view that drives people to feel that they can’t change things. By contrast, in Albay Province, the Philippines, people have many experiences related to disaster, and this is a catalyst for DRR action. In other countries, there was a sense that hazards were not a big deal, not something that affected the community on a regular basis, or something that they would deal with when it happened.

How have humanitarian preparedness, response and early recovery been strengthened?

- **The DRR curriculum has reinforced the need for regular evacuation drills.** In Peru, evacuation drills are required by the Government, nationwide, on a regular basis, due to the high risk of earthquake and tsunami, although not all areas follow this requirement, or may do it less frequently. However, observation and evidence in study sites seemed to suggest that schools that had implemented the DRR curriculum had a reinforced understanding of the importance of these preparedness plans and drills, as a part of regular life.
- **While preparedness plans have been developed, it is hard to ensure that they are implemented.** A key activity under the EEPCT has been support to the development of preparedness plans at a national and at district/local level, specific to the education sector, or integrating education preparedness plans into wider plans. However, UNICEF Uganda described difficulties in actually implementing these plans – the status quo is to call in help both nationally and internationally. They also cited difficulty in funding preparedness plans. The evidence from other countries was not conclusive, although it was common for preparedness plans to have been created but not yet implemented – but this may have been simply a matter of time.
- **Emergencies are a key entry point for DRR.** Those areas where EEPCT activities had been most successful were typically the places at highest risk from an emergency. For example, in Peru, the schools that had proactively implemented the DRR curriculum were those that were closest to the sea and where awareness was very high around tsunami risk.

These schools were engaging with the curriculum out of a need to be better prepared – they wanted to know what tools were available to them in an emergency. The schools were also integrating the aspects of the curriculum that pertained to wider risk reduction. When asked why other schools were not so engaged in the process, many of the schools were further inland, and therefore the sense of urgency was not as high. In the Philippines, EEPCT programming was directed initially to respond to the devastation to the education sector in Southern Luzon on account of a major typhoon, and then redirected to respond to a complex emergency in Mindanao Province. In both cases, UNICEF sought to introduce longer-term approaches to deal with risk factors and capitalized on the increased sense of relevance stemming from damage caused.

- **Flexibility of funding was a key success factor for the EEPCT programme, particularly in emergencies.** Many of the research participants described the importance of the flexibility of the Dutch funds, echoing findings from previous evaluations of the programme. This flexibility was particularly important in emergency contexts, where UNICEF found that they needed to be able to respond in the most appropriate way according to the context, in order to ensure that education was part of response and early recovery.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The evidence gathered during the course of this research clearly points to positive outcomes for children as a result of the integration of DRR into education. While it was not always possible to document the specific outcomes, for example, in the two country case studies where disasters had not struck since the time of implementation, it was very clear that significant change has occurred at both the national and the local levels, which is leading to increased education and greater preparedness and resiliency among communities. Specific outcomes documented included greater preparedness among children, the ability to identify and address risk outside of disasters, continuity of education, and a greater sense of security and confidence. Further outcomes at the community level include safer school buildings and greater awareness of risk management.

Clearly, outcomes are important, but there is also a growing trend to redesign evaluations to focus not only on inputs-outputs-outcomes, but also on the changes in decision-making processes that have facilitated the outcomes; in other words, *how* results are being achieved.⁹ This study found that there were quite a lot of lessons to be learned about how outcomes for children were being achieved. These lessons could be categorized in terms of where a country

⁹ Villanueva, Paula Silva, 'Learning to ADAPT: Monitoring and evaluation approaches in climate change adaptation and disaster risk reduction – Challenges, gaps, and ways forward' Strengthening Climate Resilience Discussion Paper 9, IDS, Brighton, 2011.

was in terms of its engagement on the subject of DRR and education, with two main categorizations being evident:

- *Downstream versus upstream work:* In fragile nations, especially those with complex emergencies, where education authorities may have limited capacity, UNICEF has to focus on downstream service delivery – in these cases, outcomes were being achieved through a focus on building local prioritization, using entry points such as codes of conduct. The main focus is on ensuring continuity of education, with less focus on risk reduction. By contrast, countries that are in a post-crisis transition state tended to focus on upstream awareness raising and capacity building, typically working at the national level with activities such as systems strengthening, curriculum reform and development of guidance and manuals to integrate DRR. Here, outcomes were being achieved through a broader approach to creating an enabling environment for education and DRR.
- *Level of engagement on DRR issues:* Many of the countries interviewed had more limited experience at a national/institutional level on education in emergencies and DRR. Many were still at the stage where initiatives were needed to raise government awareness and capacity, engage stakeholders, and find entry points for curriculum development. Several interviewees highlighted that they had only just reached the point where they were able to begin to roll out pilot projects. This was reflected in an ESARO evaluation, where they state:

“It is important to recognise country contexts which have more limited education in emergencies experience and lack of or weak coordination structures for education in emergencies. In these cases, capacity development efforts may be premature without the requisite structures and endorsement in place. In several ESARO countries, national ‘sensitisation workshops’ were conducted to provide orientation on the importance of education in emergencies preparedness and response before capacity development activities and work on systems and planning were initiated.”

The approach is sound – many activities focused on building the bedrock for further action. However, it also meant that progress on integrating DRR into education and delivering outcomes for children was often still at a stage where the outcomes were not yet evident. And this was particularly true in countries facing complex emergencies, such as Angola, and in Mindanao in the Philippines, where work on natural hazard risk was much harder to introduce. In the case of Angola, the Government explicitly wanted a focus on peace and progress, not disaster risk. In Mindanao, the focus of most effort was on the conflict, despite significant levels of natural hazard risk. Indeed, during the course of this study, the province suffered the consequences of Typhoon Washi. The unprepared and worse-affected communities, in the vicinity of the UNICEF target areas, were hit hard and 1,000 people lost their lives.

There was also a lot of discussion around the role of UNICEF – several stakeholders commented that the key strength of UNICEF is at a national and institutional level, building the enabling environment and making major structural change to ensure long-term sustainability, to facilitate actors such as NGOs to actually implement DRR and education at a local level.

Finally, it was clear that building a culture of prevention is a process. This report has highlighted a multitude of factors that affect the implementation and scaling up of DRR and education. And there are certainly factors that can leverage and speed up the uptake of DRR within curriculum and communities. However, many respondents also talked about the ‘snowball effect’ – some growth has to be organic, through awareness raising and exposure to the benefits of integrating DRR into education, with exponential growth as more and more people are introduced to these concepts.

4.2 Recommendations

One of the key strengths of the EEPCT programme has been its flexibility, but equally this means that the range of activities being undertaken were quite different in each country, and each country was facing its own mix of hazards and conflict. Generalizing recommendations across such a mix could be misleading, especially as it was clear that something that works in one country does not always work in another. Furthermore, each country was at different stages in its education/DRR integration process – some were at the earlier stages where sensitization workshops were needed to raise the agenda at a national level, whereas others were much further along with integration at a national level and were in the process of taking the steps to roll out the concept. Therefore, the recommendation is, inherently, to continue building progress with respect to each country context.

Nonetheless, a number of recommendations can be made for leveraging successes further:

Monitor and track outcomes for children as a result of DRR and education interventions.

In many cases, respondents stated that a major disaster had not yet occurred to track the outcomes to children as a result of EEPCT-funded activities. However, it was not clear that there were any monitoring systems in place to allow a tracking of *outcomes*. Evaluation reports and discussion almost entirely focused on outputs. Monitoring was further complicated by the fact that EEPCT funds were often integrated within regional budgets, which were then dispersed to country programmes and various NGO partners. It was therefore not always possible to track what exactly was funded by the Dutch funds, and hence what outcomes could be associated with this line of funding. However, in some ways this should be irrelevant, as it highlighted an integrated and coordinated approach to education. Finally, it is very hard to identify outcomes for children as a result of national-level capacity building and training on DRR and education, and yet this work is absolutely essential to ensuring that activities at a local level can be taken to scale and sustained beyond a given government’s lifetime. Monitoring systems should be

designed to take account of specific outcomes for children, as well as structural and institutional change, as these provide a foundation for outcomes for children.

Strengthen the focus on comprehensive risk assessment to guide programme activities.

Risk assessment is the bedrock of disaster risk reduction – it is central to ensuring that DRR activities effectively target those most at risk from a full range of natural hazards. While risk assessment was used, it was not clear that it was used in a comprehensive manner to address all risks, or that it took a child-centred focus that ensures participation and hence awareness and ownership of resultant actions. For example, in Albay in the Philippines, activities were heavily dominated by structural-based responses to deal with typhoons, influenced by the opinion that any school affected in the past has in this way demonstrated its exposure and risk. While logical, this does little to consider the more subtle aspects regarding how and why schools, and the boys and girls who attend schools, may be more or less susceptible to suffer impacts in the future. Nor does it ensure that schools are fully mindful of the range of hazards that they may face. For example, some schools could also be highly vulnerable to volcanic activity, flash floods or are especially vulnerable because they are more remote and hard to access. In Mindanao in the Philippines, the emphasis had been on providing education within the context of conflict and displacement, yet the region is also vulnerable to natural hazards, as was dramatically illustrated by the devastating floods that occurred during the course of this study, in December 2011, not far from project areas, and which resulted in the loss of 1,000 lives.

It was also clear that while education was one method of achieving risk-reduction objectives, and indeed the core focus of the EEPCT, risk is multi-sectoral and requires a comprehensive approach. For example, there was almost no mention of water, sanitation and hygiene (WASH) facilities being made available (with the exception of the Philippines), or that WASH education was part of risk-reduction education (alongside nutrition, etc.). And yet WASH is consistently cited as a key factor for ensuring that children come to school – not only are they more likely to come to school if latrines are available, but also absenteeism decreases when children are healthy, and children are able to learn more when they are well. It is clear that there is a need for risk assessments that are more comprehensive – multi-hazard, multi-sectoral, and child-centred – and that are applied more systematically by UNICEF offices. A consideration of natural hazards, vulnerabilities and capacities that weighs up and debates different stakeholders' perceptions of risk leads to more effective actions. This is an area that has been identified as a priority by UNICEF headquarters in Geneva to be addressed in 2012.

Find ways to leverage the ability of children to pass information throughout communities.

A key strength of integrating disaster risk into education is that children take the information out into the wider community. So for each child educated, in theory a family is also educated as knowledge is passed along. How can this multiplying effect be leveraged?

UNICEF identifies that children can be:

- analysers of risk and risk-reduction activities;
- designers and implementers of DRR;
- communicators of risk and risk-management options; and
- mobilizers of resources and action for community-based resilience.

Certainly, the research presented here highlighted examples of children engaging on all of these fronts, but the examples were largely anecdotal. Ways to leverage children's involvement in each of these aspects of risk management should be identified and implemented.

Identify key leverage points for linking upstream capacity building and downstream service delivery to ensure that outcomes are sustained over the long term. Several respondents cited that UNICEF has a key role to play at a national level, building the enabling environment to allow NGOs to successfully implement sub-national and community-level activities. Indeed, a key finding is that structural/systemic change at a national level is essential for maintaining the prioritization of DRR and education, especially in terms of ensuring that activities are sustained beyond a government's lifetime. However, depending on the country context, it was clear that UNICEF has a unique position to be able to link policy (national) and practice (local) and contribute to sustainable change at both levels. It seemed that there was a need to clearly define UNICEF's role in education and DRR, and identify ways that UNICEF can leverage its key strengths to link policy and practice.

Specific recommendations from the Philippines case study that could also form the basis of more widespread activities include:

Unify early warning systems and drills for the entire education sector, and support coordination actions between schools and local government. It is essential that all schools are provided with the same training and support, irrespective of the sponsoring organization. This will ensure clarity, effectiveness and sustainability of evacuation procedures. Further, a school should be closely linked with local government emergency planning, and hence emergency planning should be coordinated between schools and local government.

Integrate DRR into teacher training. To help circumvent the continued need for external training inputs to maintain knowledge and awareness and keep pace with staff changes (particularly heads of schools), the integration of DRR in teacher training should be supported.

Foster climate-change links. Climate change and climate-related disasters were treated synonymously by many stakeholders. It is clear that climate change can be an effective entry point for introducing concepts on disaster risk with local communities and school personnel. Climate change also bolsters links with environment-related school activities that were often deployed as a basis for introducing DRR.

ANNEX A

Regional and country UNICEF lead officers interviewed for study

Name	Role	Region/Country
Gary Keith Ovington	Senior emergency specialist – Education & EEPCT Regional Lead	Asia
Sabina Joshi	Emergency education specialist	Nepal
Benoit d'Ansembourg	Education specialist (emergency) & EEPCT regional lead	Eastern and Southern Africa
Alvaro Fortin Anna Smeby Paulina Feijó Eneida Martins	Chief of Education section Education specialist Programme officer Education specialist	Angola
Hajara Ndayidde	Early childhood development specialist, Uganda	Eastern and Southern Africa
Andrea Berther	Education specialist (emergency) & EEPCT regional lead	West and Central Africa
Beatrice Wakimunu	Education specialist	Chad

ANNEX B

Mission agendas – Peru and the Philippines

Mission agenda - Peru

3-7 October 2011

Date/Place	Activity
3 October	Introductory meeting with UNICEF staff
Lima	Meetings with INDECI and Care
4 October	Meetings with Ministry of Education
Lima	Meeting with COOPI
5 October	School visit
Ventanilla	Meetings with Ventanilla education department
6 October	Meeting with Practical Action
Lima	Meeting with key actors advising government – specialist on formulation of national disaster plan, ex director of DIECA, etc.
7 October	School visit
Callao/Lima	Meeting with UNDP/UNESCO
	Debrief with team

Mission agenda – The Philippines

7-16 November 2011

Date/ Place	Activity
7 November	Arrive Manila, Philippines
8 November	Introductory meeting with UNICEF staff
Manila	Meeting with National Education Cluster Members
9 November	Meeting with DepED Regional Office
Albay	Visit to Busay Elementary school, Daraga
	Visit to Binitayan Elementary school, Daraga
10 November	Visit to San Jose Elementary School, Barangay Malilipot
Albay	Visit to San Francisco National High School, Barangay Malilipot
11 November	Visit to Marcial O. Ranola Memorial High School, Guinabatan
Albay	Visit to Guinobatan East Central Elementary School
	Meeting with DepED Regional Office, School Principals and APSEMO
12 November	Arrive Manila
Manila	
13 November	Arrive Davao City, Mindanao
Mindanao	
14 November	Meeting with Mindanao Education Cluster Members: DepED, Unicef, Save the Children, EQUALLS, MPC, Balay, CEMILARDEF, Kids for Peace
Mindanao	
15 November	Meeting with Save the Children and Plan
Manila	Debriefing with UNICEF staff
16 November	Departure

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