



Incorporating risk reduction into education

humanitarian aid



Fifth DIPECHO Action Plan for South America



EUROPEAN COMMISSION



Humanitarian Aid

Published: 2009

Produced within the framework of the DIPECHO San Martin *project Capacity-building at a community level in response to floods in two provinces of San Martin, Peru*

Financed by: The European Commission's Humanitarian Aid Department and Welthungerhilfe

Implemented by: Soluciones Prácticas-ITDG

Firm name: Intermediate Technology Development Group, ITDG

Address: Av. Jorge Chávez 275, Miraflores. P.O. Box 18-0620 Lima 18, Peru

Telephones: (51-1) 444-7055, 242-9714, 447-5127 Fax: (51-1) 446-6621

E-mail: info@solucionespracticas.org.pe

www.solucionespracticas.org.pe

Local counterpart: National Civil Defence Institute (INDECI)

Authors: Juvenal Medina and Wilson Sagástegui

Revision of contents: Susanne Scholaen, Pedro Ferradas, Francisco Rengifo, Carlos Frías

Production coordination: Francis Salas

Layout: Víctor Herrera, Carmen Javier

Cover photograph: DIPECHO San Martín technical team, school awareness-raising event in San Hilarión

Style correction: Mario Cossío

Translation: Doreen Fisher

Printed by: General Services

Printed in Peru, February 2009

The points of view expressed in the document do not necessarily represent the viewpoints of the European Commission.

Contents

Chapter 1: Presentation _____ **5**

1.1. Synthesis of the capitalization process _____ 5

Chapter 2: Description of the project _____ **7**

2.1. Project name _____ 7

2.2. Area and period of involvement _____ 7

2.3. Status of the problem _____ 9

2.4. Intervention proposal _____ 10

2.5. Unforeseen results _____ 11

2.6. Problems during the implementation of the project _____ 11

Chapter 3: Capitalization of experiences _____ **13**

3.1. Disaster risk reduction as a strategic educational subject _____ 13

3.1.1. Planning and application of management tools in educational institutions _____ 14

3.1.2. Application of a pilot school text _____ 17

3.1.3. Preparing the school as a platform for heightening the awareness of vulnerable communities _____ 19

3.1.4. Sanitary education _____ 22

3.2. Improvable aspects _____ 26

3.3. Essential aspects to be maintained, boosted or changed _____ 27

3.4. Challenges _____ 29

Chapter 4: Appendices _____ **31**

4.1. Project area _____ 31

4.2. Backup materials produced _____ 32

4.3. Bibliography _____ 33

CHAPTER 1

Presentation

This document describes the capitalization process of the project *Capacity-building at a community level in response to floods in two provinces of San Martin (Peru)*, implemented by Soluciones Prácticas-ITDG, the regional office of Practical Action for Latin America, with financial aid from the European Commission's Humanitarian Aid Department (ECHO) through its DIPECHO programme and Welthungerhilfe.

The focal point of the capitalization is the incorporation of the risk reduction and disaster preparedness approach into the education process, based on the production of a text for students of grades three and four of primary school and guidelines for teachers. The process involved 10 prioritized schools in the 10 provinces of San Martin and, more specifically, 15 prioritized schools in the districts covered by the project. The experience also included other actions carried out with students, teachers, parents, permanent civil defence committees and the corresponding school brigades of prioritized educational institutions.

1.1. Synthesis of the capitalization process

For project capitalization purposes, a planning workshop was held

at which a joint action plan was drawn up with the entire project team and a consultant. The purpose of the capitalization, the focal points and the actions to be carried out to obtain information were determined at this workshop. Guidelines were also prepared for individual interviews with team members, target groups and key stakeholders.

The process involved members of the project's technical team, teachers, students and authorities of educational institutions who applied and validated the basic documents, as well as experts from UGEL units and officials from the Regional Education Office of San Martin (DRE-SM), in addition to the group of representatives of local governments, leaders and members of the population.

The secondary sources used were the project's planning documents, the team's reports, bulletins, guidelines, texts, radio programmes, the media, official statistics and other documents related to risk management in education. The outcome of the capitalization process will be socialized among local stakeholders, grassroots organisations, public and private institutions involved in emergency preparedness and disaster reduction at departmental and national levels, the education sector and technical teams of other interested projects and cooperation agencies. It will also be published in the following websites:

- www.redesdegestionderiesgo.com
- www.indeci.gob.pe
- www.solucionespracticas.org.pe
- blog of the Desaprender portal www.desaprender.org/desap_blog/

CHAPTER 2

Description of the project

2.1. Project name

Capacity-building at a community level in response to floods in two provinces of San Martin, Peru.

2.2. Area and period of involvement

The project's area of involvement was the Department of San Martin in the northeast of Peru, comprised of the districts of Chipurana, Papaplaya and El Porvenir-Pelejo in the San Martin province and the districts of Picota, San Cristobal and San Hilarion in the Picota province.

The project was implemented between the 1st of September 2007 and the 30th of November 2008. The project directly benefits 7,352 people in the Chipurana, Papaplaya, El Porvenir-Pelejo, Picota, San Hilarion and Puerto Rico districts, including local and regional government authorities and officials, community leaders, students, teachers, communicators, NGO representatives and the population in general, all of them directly exposed to floods.

In the pilot districts there are 48 primary and secondary schools with approximately 6,200 pupils and 293 teachers, although they are not all situated in risk areas. As a first step, the project team identified at least 15 schools in which to carry out its activities, for the benefit of approximately 1,200 students and 90 teachers who received direct assistance, as follows:

Sector and main activities	Number of direct beneficiaries
Assistance with infrastructure	5 000
Impact and awareness-raising	7 412
Small-scale mitigation work	5 800
Mapping and computer data	2 040
Education	3 460
Early warning systems	8 642
Research and dissemination	310
Coordination facilities	20
Training and local capacity-building	2 415

2.3. Status of the problem

The department of San Martin has been affected by floods which have placed the population at risk. Continuous floods cause damages and the loss of homes, farmland and other properties, disrupting the local development process.

The communities become increasingly more vulnerable due to the inadequate occupation of the territory, an evident social frailty, a weak response capacity and little resilience due to low income levels and a high poverty rate. The situation is further aggravated by high levels of ill-health and malnutrition, as well as weak organisation and the lack of risk prevention and disaster mitigation capacities, the difficult access to certain areas during the rainy season and the lack of educational materials and early warning systems in local governments, schools and health centres.

In the annexes of the communities, river water is the only source of drinking water and the lack of basic sanitation and rain drain facilities causes cholera epidemics, dengue fever and malaria.

The institutions and organisations responsible for reducing disaster risks and dealing with emergencies in the area are very weak. Local civil defence committees are ineffective and in the majority of cases only react upon the increasingly more frequent occurrence of disasters. The school infrastructure is also inadequate. Most of the schools have been damaged by floods and have not been restored due to the shortage of funds. Students and teachers have neither the equipment nor the information to respond adequately to emergencies.

2.4. Intervention proposal

In view of this situation, the project was designed to reduce the vulnerability to disasters in the Peruvian Amazon region, improving the population's capacity to deal with floods in five municipalities of two provinces in the department of San Martin.

The purpose was to achieve the following results:

- **First result:** local governments and communities trained and producing and implementing local disaster risk reduction plans
- **Second result:** Schools promoting actions to reduce risks and help develop a disaster risk reduction culture among the population
- **Third result:** Institutions supporting disaster risk reduction and emergency response actions and members of the communities are better prepared and respond adequately to disasters and emergencies
- **Fourth result:** Systematization, dissemination and exchange of disaster risk experiences and knowledge

The across-the-board strategies applied during the development of the project considered human rights, gender and inter-cultural approaches, based on the acknowledgement and consideration of existing skills in the areas of involvement.

2.5. Unforeseen results

Below are some unforeseen results not anticipated during the implementation of the project:

- The establishment of a Sisa watershed association in the Central Huallaga area in order to develop an early warning system and disseminate the effects of watershed-focused risk management actions, since towns like San Hilarion and Puerto Rico are affected by disasters mainly associated to the dynamics of the Sisa river sub-basin
- The formation of a team of technicians specializing in the manufacture of manual water pumps and techniques for drilling wells to tap subterranean water

2.6. Problems during the implementation of the project

- The widespread nature of the work sites was overcome through training processes and the inclusion of brigades and large public awareness-raising events, plus training and apprenticeships for the population. The changeover of the project's technical staff half-way through the project caused delays in the implementation of the activities
- This situation was overcome with the quick and effective incorporation of promoters capable of meeting the project's needs
- The limited participation of the education staff at the beginning of the project was dealt with by entering into an agreement to incorporate UGEL and DRE-SM experts

CHAPTER 3

Capitalization of experiences

3.1. Disaster risk reduction as a strategic educational subject

The acknowledgement of disaster risk reduction and its adequate management as a complex and multivariable process is essential. Schools are strategic allies for promoting risk management in vulnerable communities.

This risk reduction process began with the signing of a framework cooperation agreement with the DRE-SM, based on which the active participation of teachers, students and experts from UGEL units and the regional office was promoted.

Four complementary components were identified as forming part of the incorporation of risk reduction in the educational process at a community level:

- Planning, production and incorporation of management tools in educational institutions
- Pilot application of the school text entitled *Disaster risk reduction and emergency response from educational institutions* among students of grades three and four of primary schools

- Preparing the school as a platform for heightening the awareness of vulnerable communities
- Sanitary education for local emergencies, in coordination with public institutions at local and regional levels (DIRES-SM), health centres, health workers and the community in general

3.1.1. Planning and application of management tools in educational institutions

The process of incorporating risk reduction and emergency preparedness was upheld by the fact that regional offices and UGEL units have the power to diversify the contents of their educational programmes and apply them directly in the classroom.

The project helped facilitate and organise an action plan for the design of management instruments and encouraged the practical application of the guidelines by the UGEL and the validation of these in the schools. To this end, workshops were held with UGEL experts, in which a pilot school was identified in each province.

The project was able to incorporate the risk reduction and disaster preparedness approach into the standards and guiding instruments of the Ministry of Education, including the following:

- a. Institutional education plan
- b. Curriculum of educational institution
- c. Annual work plan
- d. Disaster risk management plan of educational institutions



a. Institutional Education Plan (PEI)

The PEI provides strategic action guidelines for schools for 10 to 15 years. The development of the following steps was monitored:

- Preparation of a situational survey applying a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats)
- Outline of the mission, the institution's mandate specifying the risk reduction actions to be implemented
- Definition of the vision, specifying capacity-building and the organization of risk management units, mentioning the situation expected as a final goal of the process
- Specification of the risk management objective for the educational and management proposals
- Preparation of a draft risk management action plan

b. School Curriculum (PCIE)

Four tools were used to produce the PCIE:

- *Learning to prevent. An Indeci educational proposal*
- *Design of a national curriculum for all levels of the educational system*
- *Methodological disaster risk management guidelines for primary schools*
- *Risk management handbook for educational institutions*

All teachers should review the contents of their courses, bearing in mind the learning units and component structure, capacities, attitudes, values and indicators.

c. Annual Work Plan (PAT)

The PAT summarises the annual activities of the educational institution and establishes general and specific objectives and activities, based on the studies carried out for the PEI. It must be approved by the Parents' Association (APAFa) of each school. By including all the activities, it also considers specific aspects of each of them, such as justifications, strategies, the necessary human and financial resources, an evaluation plan and a calendar.

Example

Science and environment teachers reviewed the PCIE proposal and analysed the capacities and values of their learning units. Then they draw up a proposal with ten of the values specified in Learning to Prevent.

In a second stage, the teacher decided how to generate values, incorporating a programme without applying it. For this step, it is necessary to identify the capacities, strategy and methodology in the classroom. This is the beginning or source of motivation for the application process.

Participatory risk management activities were included, to be carried out with teachers, students and parents. The reforestation of slopes or river banks situated near schools was one of the main activities.

d. School disaster risk management plan

This contains guidelines for developing risk management in schools, implemented in the following stages:

- Determine the risk management vision and mission based on the PEI
- Prepare a brief history, geographical aspects, human potential and potential risks of the educational institution
- Organise the standing civil defence committee, the student network and school brigades
- Draw up risk management plans

3.1.2. Pilot application of the school text

The text was prepared by the project team and sent to the DRE-SM for consultation, based on a version prepared for a previous project. It was decided to apply it as a pilot project and promote its regional validation in the schools selected in coordination with the ten UGEL units in the department of San Martin.



Teacher applying the guiding text in class. Educational institution Adolfo Paredes Rengifo Picota. Photo: Technical team of DIPECHO San Martin

The text application process provided the means to facilitate coordination and collaboration between the DRE-SM, UGEL and the schools. To ease the work of teachers, a teacher's guide was applied together with this document. The application began with a workshop to introduce the guides to teachers, principals and UGEL experts, in which decisions regarding the application of the pilot project were taken. Based on this, an action, application and validation plan was prepared.

The implementation stage took four months. During this process, a team comprised of experts from the project, the DRE-SM and the UGEL monitored the classes on the application of the guiding text. Workshops were held to discuss and evaluate the experience and identify the problems encountered and the lessons obtained during the application in each school and adjustments were

made to the contents in order to obtain a final version, which was edited and published together with guiding documents that were distributed to the schools, UGEL and DRE-SM at a curriculum diversification workshop.

These materials were distributed in the workshop and delivered to the Ministry of Education's National Community Environmental Education Office (DIECA), which expressed an interest in considering them as basic documents for a national application.

3.1.3. Preparing schools as a platform for heightening public awareness in vulnerable communities

Educational and awareness-raising actions geared towards the community are promoted in schools. That is why it is important for them to have basic internal organisation systems in place, which can be achieved with capacity-building, the development of a work plan and the organisation of a dynamic team capable of implementing the work agenda.

The project began its actions in schools with a survey of their internal organisation. Once this information was obtained, adequate capacity-building actions were implemented. Together with the organisation of standing civil defence committees and school brigades, a work plan was drawn up establishing the actions to be taken both inside and outside the schools, geared towards the community.

One of the priority actions was to evaluate the vulnerability of the schools so that corrective emergency preparedness and response measures could be taken. These and other courses of action form part of the school's disaster risk management plan.

Another basic action was the implementation of school brigades, which were equipped with working materials, equipment and other inputs required for the adequate development of their operating capacity. Various actions were promoted with these organised and well-equipped teams, some inside the school and others in the community:

- The formation of student networks inside the schools in which social communication activities were planned and implemented.
- Production and broadcasting of radio programmes within the school and through local radio stations
- A school competition to produce educational materials (songs, poetry, drawing, painting, theatre, etc.) held at a regional level between 15 schools in the project area and 10 schools in other parts of the San Martin region. The contest provided a great opportunity to begin an advocacy campaign in the DRE-SM, involving all ten UGEL units in the San Martin region. The project awarded prizes for the best entries to encourage participation, talent and creativity.
- A practical training camp/workshop for school brigades on the application of emergency preparedness and response tools (EDAN, first aid, rescue work, etc.) as well as training events that ended with a practical drill.
- Awareness-raising campaigns, placard demonstrations, theatrical presentations, street parades and radio programmes aimed at vulnerable communities regarding hazards that threaten the population's safety, vulnerability, livelihoods and service infrastructure and the actions to be taken as part of the emergency preparedness and risk reduction strategy.



Awareness-raising campaigns of school brigades geared towards the vulnerable community. Papaplaya, San Martin. Photo: Technical team of DIPECHO San Martin

- Earthquake drills and flood drills in the community and in schools
- Apprenticeships in the project's different districts, so that pupils and teachers can exchange experiences
- In-service-training to exchange lessons and experiences between the San Martin project and the Cochabamba project. Two of these took place – a delegation of teachers, students and local leaders from Cochabamba visited San Martin in June 2008 and the Peruvian delegation visited Cochabamba between September and October 2008. As a result, the stakeholders involved acquired useful knowledge to complement their local actions, achievements and impacts

3.1.4. Sanitary education

The unhealthy conditions in the project's area of involvement are a very important risk variable, caused by deficient basic sanitation facilities and the lack of good quality services. This situation becomes intolerable after floods occur, magnifying the damages and impacts of the disaster. This situation requires a school-based approach, through educational actions conducted by community health workers, with the help of teachers and school brigades. Sanitary education campaigns and the application of adequate techniques will help reduce the level of infections and contamination, making the impacts of disasters more manageable.

In order to carry out sanitary education actions, arrangements were made and agreements reached with the Regional Health Office of San Martin (DIRE-SM), through a cooperation agreement regarding the actions to be taken based on an operating plan that would contribute to the sustainability of the results once the project was completed. The involvement of staff of health establishments, teachers, students, members of standing civil defence committees, school brigades of the educational institutions involved and the population in general was encouraged.

One of the first actions during the initial stage was to carry out a survey of the vulnerability of the health establishments and their capacity to deal with the demands under normal conditions and during emergency situations. Subsequently, a sanitary emergency plan was prepared in each of the districts and their annexes. These plans include local capacity-building for disaster preparedness and emergency response purposes. The following are the main actions included in the plan:

- Production of health education materials for schools, in order to teach children about the importance of hygiene through brochures, games (the mad drop), posters and a flip chart with guidelines for training workshops for teachers and students
- Simple handbooks that children can understand easily: one on how to build a homemade water filter to purify river water when floods occur; another on the use of washbasins to develop a sense of hygiene in daily activities and prevent diseases
- Dissemination of educational materials to health centres run by the Ministry of Health
- Training workshops for local technicians on making handmade water pumps and drilling wells to guarantee a safe water supply before and after floods. Two Peruvian experts trained in the mobile water and sanitation school (EMAS, Bolivia) conducted the workshops
- Training workshops and community campaigns on water filtration, chlorination and purification
- Zoonoses workshops: diseases transmitted from animals to people and techniques for preventing them, such as the eradication of bats, rats, parasites, etc.
- Mitigation actions conceived as training methods were demonstrated to complement capacity-building actions. The main actions were the dry toilets installed in schools and health centres. Dry toilets are raised constructions with two boxes in which the waste is deposited and a device that separates urine from excreta. No water is required and urine is evacuated into the ground through a different conduit. The toilet has a ventilation pipe to prevent unpleasant smells. Faeces are deposited in a box into which drying material like ashes, sand, sawdust or shavings are poured to dry the stools. Once the box is full, it is



Primary school students from the San Luis settlement in the El Porvenir district of San Martin, beneficiaries of the dry toilets installed for sanitary education purposes.
Photo: Technical team of DIPECHO San Martin

closed and sealed and the second box is used. After approximately six months, the faeces turn into lifeless dry organic matter and can be extracted to be used as a fertilizer

- Other works demonstrated for training and mitigation purposes were the pumps for extracting safe water from the subsoil. To this end, 15 metre deep wells were drilled by means of a simple system to extract water from a layer of clean water in the subsoil. As part of the process, educational actions were combined with two-week practical applications in the field, training and drilling wells, first in health centres and then in areas close to the homes
- As part of the water supply system, a tower was set up in the community to hold the water storage tanks donated by the regional Civil Defence after the latest flood (2,500 litre tanks), where the pumped water will be stored. A base for the water pump was also installed above the flood level, so that it would not be affected by overflows
- In addition to the waterworks, training modules were implemented on the safe storage of clean water, the use of home-made filters to purify river water, the importance of boiling water, among other health and sanitary education measures

Throughout the works implementation process, teachers and students were trained and informed about their operation, so that the systems could be replicated and adapted in the event of emergencies.

3.2. Improvable aspects

The improvable aspects include sanitary education related to the need to change the local people's hygiene habits. In many cases, continuous actions are required for a long period of time, the implementation of which requires planning with adequate material and human resources.

The experience taught us that for replication purposes, formal relationships need to be established under an agreement with responsible public entities like the Ministry of Health, the Ministry of Education, health centres, the Regional Office, UGEL and educational institutions, so as to create a greater impact on the educational community and the public in general, thus ensuring the continuity and sustainability of the results of the project's work.

- **Understanding and valuing the importance of across-the-board work:** popular know-how, the knowledge of expert technicians and the knowledge shared by the schools must be valued, generating new knowledge
- **Strategies, results and resources:** it was important to establish a closer alliance with health and education entities in order to carry out concerted actions and improve the desired effects
- **Communication for action:** the communication work was important for establishing links between the school and the community, not only for capacity-building but to develop disaster risk management skills. The following methods were used to achieve this: loudspeakers, awareness-raising campaigns, poster competitions based on risk management themes, drills with the population, radio spots and press releases or reports. A training workshop for journalists was held in the

San Martin, within the risk management framework. It is worth mentioning that in all communication-related training activities, efforts were made to include all the stakeholders involved in communications: technical secretaries, communication teachers, student networks, student network communicators, school brigades and the communications commission of the district civil defence committee. This type of linkage can only be replicated if trained and organised stakeholders are available to create their own dynamics for establishing relations in joint disaster prevention actions

3.3. Essential aspects to be maintained, boosted or changed

The links with decision-makers established by the project must not be lost, not only to continue improving the understanding and incorporation of risk reduction issues in institutional management, but also to report on the improvement of the subject the implementing institution is working on. Likewise, the synergies created with the schools should not be lost, in order to ensure the sustainability of the project's achievements. Capacity-building to reduce risks at a district level should be kept open to the province and the region.

The involvement of public and private authorities and officials in educational actions must be encouraged at provincial and regional levels, either as facilitators or recipients of the information or training. This work should be continuous in order to achieve a greater social impact and boost sustainable overall development processes.

Work must be carried out with various kinds of state and non-state agents at local, regional and national levels, in order to complement and improve the project's achievements and impacts.

Real cases and daily examples must be used in education activities, using local cases if possible, as this will help people understand and value the potential changes and/or improvements in health and risk conditions.

3.4. Challenges

- **Work on disaster risk reduction issues from various fronts (school, community, authorities).** This makes it easier to implement processes and to encourage and promote common actions between the different stakeholders so that they can deal with vulnerable situations in common
- **Bear in mind and value the importance of acknowledging and recovering the diversity of stakeholders in order to achieve a better intervention and create a greater impact:** sometimes working methods can be based on theoretical budgets, but the empirical identification of the actual circumstances can be drastically different from the plans. This is a fundamental condition for planning projects and establishing adequate methodological strategies and activities. It is impossible to work and establish relations in the same way with all the stakeholders in a community
- **The importance of having plans, programmes and projects to complement contingency plans.** This is particularly important in terms of human and financial resources, as the achievements not anticipated by the project that could create a greater social impact can be investigated and supported. A typical case is the establishment of the municipal association in the Sisa river basin in Central Huallaga, which was an unplanned event arising from the project that became a focal point, not only for congregating local development agents but for boosting disaster risk management efforts
- **Capacity-building to deal with emergency situations.** This resulted in the establishment and improvement of organisations such as local networks specializing in risk management, the purpose of which is not only to overcome the limitations

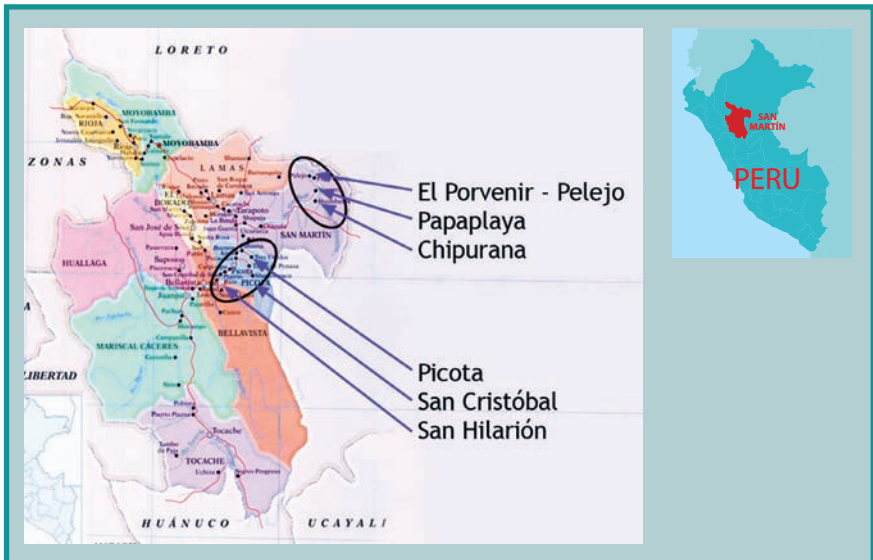
of current training activities, due to problems related to the access for and permanence of tasks forces in the areas of involvement, but to strengthen awareness-raising processes with their presence and wide scope of action in the communities involved

- **Establishing links with and heightening the awareness of staff in schools and health centres run by the Ministry of Health** located in the isolated areas in which the project is being implemented, are highly important for improving the health conditions of populations that are excluded and isolated from State health services

CHAPTER 4

Appendices

4.1. Project area



4.2. Backup material produced

- Flip charts
- Homemade washbasins (diptych)
- Dry toilets (triptych and poster)
- Coloreando conocemos el riesgo de desastre en nuestra comunidad (colouring book)
- ¡Unidos, salvemos al río! (colouring book)
- The mad drop (game)
- Reducción de riesgos de desastres y respuestas a emergencias desde las instituciones educativas (third and fourth grade)
- Reducción de riesgos de desastres y respuestas a emergencias desde las instituciones educativas. (Teacher's guide).
- Methodological guidelines for incorporating risk management into educational institutions



4.3. Bibliography

1. Ferradas, P.; Medina, N. *Riesgos de desastres y derechos de la niñez*. Lima: Soluciones Prácticas-ITDG-Save The Children, 2003.
2. Cosude. *Información técnica en agua y saneamiento*. Cd-rom. s/c: Cosude-OMS, 2003.
3. *Manual de gestión de riesgo en las instituciones educativas*. Lima: Soluciones Prácticas-ITDG, 2005.
4. Mackliff, F. *Resultados de la revisión de las sistematizaciones de los proyectos DIPECHO del cuarto plan de acción y propuesta. Documento final*. Lima: Soluciones Prácticas-ITDG, 2008.

