

## **Sound Practice No.8**

### **CONSOLIDATING SCHOOL RISK MANAGEMENT PLANS AND INTRODUCING RISK REDUCTION CONCEPTS IN SCHOOL CURRICULA**

#### **1. Overview**

The third objective of the ***General Program to Strengthen Bogotá's Response Capacity to a Major Seismic Event*** aims to promote a more effective integration of prevention and self protection practices in the cultural setting of Bogotá, developing and strengthening the capacities at the community level. The strategy provides capacity building workshops and materials for the school community as it provides limits to consolidate risk management school plans (PEGR). On the other hand, it also aims to introduce risk concepts in school curricula (PDDA: Disaster Prevention in Classrooms) to guarantee an integral knowledge of all kinds of hazards that threaten the city and the prevention measures the community should follow in order to reduce risk. The objective is to address school children due to their openness to change long enrooted tendencies and, therefore, begin a desire of an authentic prevention culture through them.

On the District Prevention Day (October 11, 2006), all the schools of the city will carry out, simultaneously, an earthquake simulation drill. This event indicates the scale of this practice and the type of challenges it sets. The strategy aimed to promote the formulation of emergency plans in 400 educative centers in the city of Bogotá, so far 375 centers have accomplished the goal. Nevertheless, since the objective is to invite all the schools, or at least 2,000 of them, to participate in the large scale simulation, the results in this practice will increase drastically this year.

#### **2. Significant Background Information**

The Decree 332, 2004 establishes a commission for strengthening social and educative management and community participation in the field of risk. This commission should coordinate citizen formation processes, organize special programs directed to citizens' awareness towards risk management and promote actions to fortify science, technology and education research related to risk management and attention of emergencies. In light of the integral spirit of this decree, the Direction for the Prevention and Attention of Emergencies (DPAE) has given its group in charge of Education, in the Research and Development Area, a protagonist role. The objective is threefold: advice in the design of the instruction program, disseminate their capacity building workshops and material, and define complementary processes for the risk management plans in the city, especially in schools. To cope with this objective the Education Dependency in the DPAE has also three components: school component, teachers' and emergency plan support, and a community component.

On the other hand, a resolution (Res. 3459, 1994) of the District Education Secretariat

establishes that every school in the city has to adopt a risk management school plan. This is also confirmed in the Resolutions 4210, 1996 and 7550, 1994 of the National Education Ministry. It also decrees the introduction of risk concepts in the Institutional Education Project and in School Curricula by the Education Secretariat with the proper supervision of the DPAE.

The initiative to design Risk Management Plans in Schools was originated by DPAE in 1999, prior to that, efforts in prevention were developed by local committees. At the beginning, the efforts were directed solely to build evacuation plans; but the new integral approach results much more concrete with the change of paradigms from disaster response to risk management and the idea of inserting these concepts in school curricula. The practice has grown stronger through time and the permanent demand for workshops and assistance, shows that there is a fresh interest in a preventive culture and a sharper risk consciousness. Children are a key element in this process, since they are still learning new habits and may irradiate their awareness in the topic to their families and communities. This practice considers important to promote a sense of self protection and protection of their family and communities.

### **3. Sound Practice Details**

The strategy has two objectives:

- 1) Promote a Risk Management Plan in Schools.
- 2) Promote the introduction of risk management concepts in school curricula.

#### **Risk Management Plan in Schools**

One of the important steps towards reaching the objective is the writing of a Teacher's Guide for the organization of a Risk Management Plan in School. The purposes of the manual are: to generate a tool to promote a deeper knowledge about risk in schools; to orient processes in order to mitigate or eliminate risk and to orient in the attention of emergencies.

The manual is directed to the teachers or personnel with the disposition to carry out formative actions in risk management within the school's regular functioning. The goal is to elaborate a Risk Management Plan for each school. The manual gives out pedagogical and conceptual tools, as well as practical instructions that may be implemented by the school community. All in all, each chapter is a step towards awareness about risk and ways to reduce risk.

The following are the key organizational elements to be found in this guide:

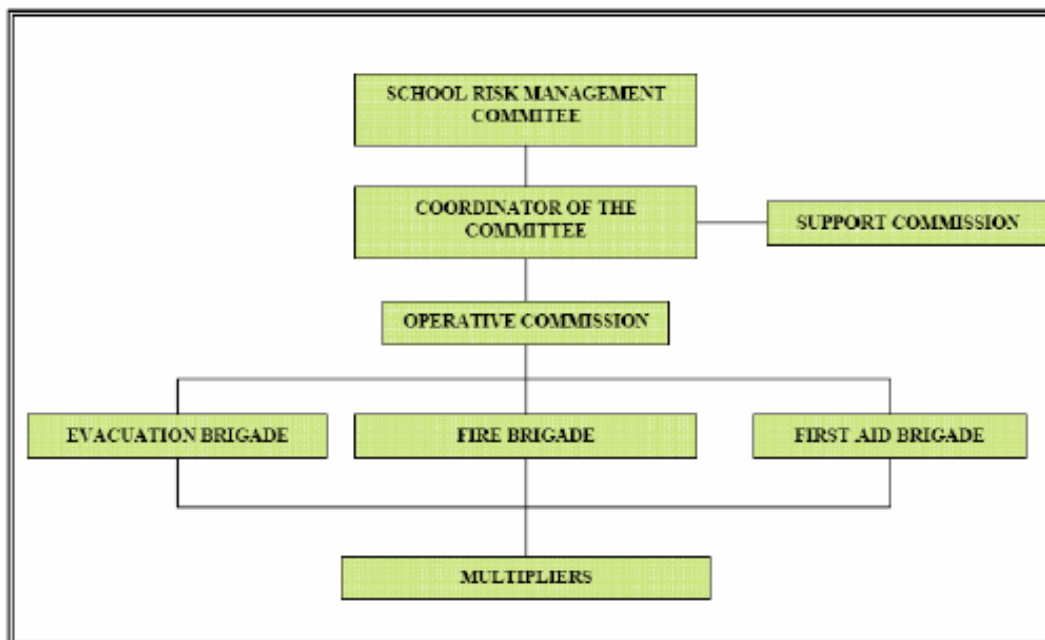
- a. Criteria to identify risk factors (hazards and vulnerabilities) that threaten an educational institution. Risk should be seen both, internally, i.e. the school physical conditions; or externally, regarding the social, economical, and natural surroundings.

- b. Criteria to elaborate a risk scenario: elements to recognize what may occur in case of an emergency event, elements to measure possible damage and losses. It also provides criteria to develop an action scenario: elements to decide what has to be done to avoid damage and losses and elements to organize actions in case of emergency.
- c. Instruments for intervention in the scenarios: elements to decide how to organize processes and assign responsibilities. It gives direction in how to formulate a mitigation plan and a fast and effective response plan.
- d. The mitigation and response action that constitute the Risk Management Plan in School must be carried out by all educative institutions in Bogotá and it represents a practice that recognizes risk conditions and how to handle them.

The structure of the manual is the following.

- 1) **Fundamental Concepts:** It exposes the main normative and conceptual elements to be taken into account for the risk evaluation and the construction of risk and action scenarios. It distinguishes risk from disaster and shows the different ways in which risk may be intervened.
- 2) **Risk Scenario:** It gives instruction for the construction of a risk scenario in order to give out a risk diagnostic for each institution. It distinguishes internal from external risk in order to promote a sound analysis of hazards, vulnerability and risk in schools.
- 3) **Instruments for intervention in risk management:** It helps in the identification of the actions to develop in order to advance in a sound risk management and mitigation. It shows how risk may be reduced, mitigated, or eliminated and calls the attention of social actors that contribute in the generation of risk.
- 4) **Risk Management and School Plan:** This chapter intends to apply risk management protocols in school and define the Risk Management Plan in Schools (PEGR). Two aspects are considered: the school conditions and social actors.

The PEGR is formed by a School Committee in which teachers, students, staff members, and directives participate. This Committee should organize brigades with the task to detect and mitigate risks: security and surveillance brigades, evacuation brigades, fire brigades, first aid brigades, rescue brigades, communication brigades, reservation brigades, management network brigades, and curricular and extracurricular brigades. The chief of each brigade ought to have decision power and certain continuity in the school. The manual recommends involving at least 10% of the school community in the brigades. The following is an example of the school organization in risk management:



The school committee would be in charge of carrying out preparation activities, following the emergency plan and seeking for continuity, registering meetings, school activities and brigades actions, activating emergency alarms, evaluating the magnitude of emergencies, and promoting contact with entities and organizations for support and attention.

Following an example of the duties of the brigades:

**Evacuation brigade:** develop an evacuation plan, put signals all over the institution, revision of evacuation routes, orient people in exit routes, revise number of students in the encounter points, and support in the reentry to the school building.

**Fire Brigade:** elaborate preventive charts, promote security manuals and diffusion of prevention rules in labs, workshops, or places such as storage rooms, detect possible fire risks, contact the closest official fire brigade, and identify and handle fire extinguishers.

*Response plans:* The response plans to emergencies and disasters that the school committee elaborates should acknowledge the action to follow before, during, and after an event.

In the case of seismic risk, the educative institutions and the community in general follow the strategy known as Six Master Moves.

- 1) Safe School: secure objects that may fall and hurt someone or obstruct evacuation routes in areas such as libraries, labs, classrooms, etc.
- 2) School Risk Management Plan: form a school committee and operative brigades. Carry out at least three evacuation drills in the year.
- 3) Emergency Kit: there should be a whistle, flashlight, portable radio, batteries, bottles of water, copy of important personal documents, and a basic medical first aid kit.
- 4) Safe Building: Verify the conditions of the structure and if it is seismic resistant, do the proper reinforcements, identify the places that may offer a major protection.
- 5) Protect Yourself: During an earthquake protect yourself under a strong desk, stay away from exterior walls, windows or ornaments, stand in an already identified safe place.
- 6) Evaluate the situation and act: when an earthquake is over check your health and your partners', inspect the damage, disconnect electricity, close water and gas connections, and activate the institutional emergency plan.

*Evacuation plans:* This plan starts operating in case of an event and outlines the activities and procedures that may help in saving lives and the physical integrity of people. They aim to move people from a high risk place to a safer place. Drills should be performed in order to train the community in this procedure. These are some of the recommendations of the manual: do not run, do not return for any reason, give priority to the youngest and handicap, if there is smoke lower your head, do not close doors with locks, verify the list of students in the encounter point. The manual suggests rehearsing evacuation for different types of events.

**5. Elaboration and implementation of the Risk Management Plan in Schools (PEGR):** The end of the whole strategy is to create awareness and provide tools to act against risk and during emergencies. Capacitating actors is primordial and the manual suggests training students from eighth to tenth grade since they will stay in school for at least two years, they have the capacity to promote awareness in other actors and, finally, they may engage themselves and engage others in the process.

The PEGR has three components: situation diagnostic (damage scenario and risk analysis), prevention measures (plan to eliminate or reduce risk), and response measures (actions in case of an event). The manual also promotes the elaboration a future scenario in case of a reconstruction phase. It gives suggestions on how to develop each component and how to impulse a long term sustainability.

## **Introducing Risk Reduction Concepts in School Curricula**

The second part of this strategy aims to clarify the way prevention should be inserted in school curricula. This is an objective that enters in the field of interest of the District Education Secretariat. This entity has designed a grade by grade achievement process that relates to different subjects such as mathematics, science, social sciences, and languages. This program will be implemented soon, at least in District schools. Even if the process is sound and well thought, it has been slow due to the many duties of the Education Secretariat. Plus, this institution covers easily District schools, but it does not always reach private ones.

Nevertheless, the DPAE has helped in the process of including risk management concepts in schools by designing material to be used the booklets: *Prevención de desastres desde las aulas* (Risk Prevention in Classrooms) in the years 2001-2003. The booklets have had a successful response and are an important precedent in the whole communication strategy of the DPAE.

The strategy as outlined by the booklets has two cross lined objectives:

1. Through an integral perception of school curricula —as a set of criteria, study plans, programs, methodologies, knowledge, and research— the strategy aims to educate students in the theme of risk prevention and disasters. The end is to promote an appropriation of the thematic in a personal, social, scientific, and natural level. It proposes a management of contents that gradually ascends in complexity according to the age of students and their concerns; and, it also opens gradually to wider geographical references: from the personal surroundings to the District and global ones; from a self-protection frame to stimulate an interest in protecting the family.

2. The methodology is perceived as a route with different levels and challenges. In a first phase it includes basic self-protection practices and recognition of the immediate quotidian surroundings (house, school and neighborhood). In a second phase, the emphasis is set over the understanding of natural phenomena and the analysis of emergencies and disasters: it aims for students to understand the way the planet works and why disasters take place. In an advanced phase of basic education, the approach concentrates on scientific knowledge about natural and human hazards in Bogotá and the social component in risk is introduced from a historical perspective in order to establish relationships between risk and planning and sustainable development. The end result is to recognize the unbalance between the human being, nature, and elements to recognize practices that may reduce vulnerability in face of the different hazards in the city. In the last grades, the work of the students should do is practical as participating in the school brigades and diffusion of risk themes in the education community.

The curricula proposal is currently being designed by the Districtal Education Secretariat according to the methodology inaugurated by the DPAE. The following is additional material designed by the DPAE that has been used to integrate risk management in schools:

1. Risk Management Prevention in Classrooms (3 volumes).
2. Risk Management School Plan (Teacher's Guide)
3. Risk Management Family Plan
4. Community Risk Map
5. To Prevent is to Live
6. The Day Pietra Terrarosa Got Wet
7. Landslides in Bogotá
8. Bogotá and its Hazards
9. Floods in Bogotá
10. Table Game: Master Games

### **First Risk Management Experience Conference: Territory and Prevention, an Option from the Formation and Participation Standpoint (May 2006)**

This text is a compilation of a group of experiences presented in the frame of this conference. The exercise results interesting due to the didactic and original approach each group proposed. Many communities, enterprises, educative institutions, universities, research groups and District entities participated and gave feedback to the DPAE, Education Secretariat and Local Emergency Committees. The whole experience may be considered as a sign of improvement in the generation of a prevention culture. All in all, it demonstrated that alternatives to provoke cultural changes in a short and long term are possible through this kind of programs.

### **Results**

The strategy has had outstanding results since program has been promoted in 400 schools and 375 have adopted the model. The following are the results of the actions taken by the School component among which the Risk Management Plan in Schools (PEGR) and Disaster and Risk Prevention in Classroom (PDDA):

#### **Advances in the School Component June 20 /06**

Risk Management Plan in Schools (PEGR) workshops	45
Schools in the PEGR process	375
Teachers in the PEGR process	1165
Disaster and Risk Prevention in the Classroom (PDDA) workshops	30
Schools in PDDA	248
Teachers in PDDA	934
Adaptation of workshops, stressing in evacuation	60%
SIRE -actualized information about School Plans	70%
Proposal- table game about risk in schools	80%
Cadel Proposal	100%

Activity: The Pedestrian Child Day	100%
Revision Game-Type Project with Children	30%
Protective City - Story Book	95%
Actualization Teacher's booklet	95%
Market Study and booklet re-edition	50%
Revision of the Booklets: Sign posting, Bogotá and its Hazards, Landslides.	50%

#### Support in Capacitating Activities

Accompaniment in workshops	4
PEGR Workshops	10
Information and discussion about workshops	3
Workshop assistance Certificates	46

#### Permanent Activities

Information and inscription to workshops	Continues
Preparation in communication	Continues
Logistics for the preparation of workshops	Continues

### Main problems in the practice

One of the main obstacles in the development of this practice regards inter-institutional agreements. The DPAE and the District Education Secretariat have been working together in this thematic but the ultimate responsibilities are not yet agreed upon. As a matter of fact, they are still in a process of reaching a clear division of roles and a coordination of functions. Some steps have been taken in this direction. For instance, in the frame of the certain programs from Bogotá's Mayor's Office, such as the Policy for a Quality Living Conditions for Children and Adolescents (Política para la calidad de vida de niños/niñas y adolescentes) and the program Protective City (Ciudad Protectora), there have been dialogues to properly assign the functions of each entity.

Inter-institutional coordination also needs to be strengthened with the District Fire Brigade and the International Red Cross. Sometimes institutions ask for their support and they use different criteria in risk management. Therefore, agreements with these institutions need to be promoted.

Another obstacle regards the follow up and control process that the practice requires. More or less 40 risk management plans are received by the DPAE monthly. The personnel working in this practice takes almost all month revising documents, but are unable to have a closer follow up of the plans. Evidently, there is a lack of specialized personnel to visit schools and closely revising the programs of each institution. In order to alleviate the problem, the DPAE intends to design a capacitating system (curricula program, evacuation plans, family plans and community plans) in order to generate more experts in the theme that may contribute in the sound development of the process.

The last difficulty is related to the attitude of school directives since they sometimes do not pay as much attention as the one expected in this proposal. Most of the time, this lack of interest is due to lack of knowledge of the practice itself. In order to improve the dialogues with directives, new ways of meeting the school directives are being considered.

## **Resources**

The budget of the Education Department in the DPAE for 2006 is 271,000,000. 45% covers the personnel salaries, 40% is destined to capacitating activities (workshops, didactic material and events), 5% is used in self-protection campaigns, and 10% is used in community campaigns.

Some adjustments are required in order to achieve the goal of October 11, 2006. The amount of workshops and consultancy processes must be radically increased in order to get to all the schools in the city and make the large scale simulacrum a reality.

## **4. Relevance to Megacities**

### **Universality/transferability**

This practice may be considered a universal initiative because it points towards generating a prevention culture through programs with children and young people. These programs have a didactic and ludic approach in order to originally promote a cultural change. Some processes of transference are being held by smaller cities in Colombia like Tunja and Bucaramanga. The frame adopted by the DPAE and SED provide an interesting methodology that may be adapted to the local conditions of any municipality, city, or megacity.

### **Applicability**

The applicability of this practice is facilitated by the participation of the Districtal Education Secretariat since it has the authority to reach all schools through their normative decrees. The elaboration of a Risk Management School Plan is obligatory for all educative institutions (even for alternative institutions). One of the possible obstacles for the application of this kind of programs is related to the tendency of great part of the community to give little interest to the theme of risk prevention. To overcome this problem, it is important to design motivating strategies.

### **Expandability**

This is an ambitious program that intends to reach all educational institutions. Recent studies show a great advancement in each locality but the challenge persists, especially if the goal is to have a large scale simulacrum in which all schools in Bogotá participate. Expandability may also be seen as how this practice may irradiate effects over a larger portion of the community by stimulating students to discuss these topics with their families and communities.

### **Orientation/ Focus**

This practice considers important to promote a sense of self protection and protection of their family and communities. The strategy has two objectives:

Promote a Risk Management Plan in Schools.

Promote the introduction of risk management concepts in school curricula.

### **Assimilation/Integrability**

The assimilation of the process is shown in the recent studies. It was also witnessed in the First Risk Management Experience Conference: Territory and Prevention, An Option from the Formation and Participation (May 2006). According to Eugenia Arboleda, current coordinator of the practice, a new consciousness about risk management can be felt in the workshops.

### **Impact/Effectiveness**

Some signs of the impact of this practice may be the interest it has caused in the educative community, the amount of schools subscribed to the program and the amount of solicitations they have received. The schools have initiated organization processes and have started to share their experiences. All in all, the community is requesting information and capacitating workshops, therefore it may be stated that some steps toward considering a preventive culture a citizen right are being taken.

### **Sustainability**

The Education Department in the DPAE has an annual budget that guarantees an economical sustainability of the practice. The fact that people present requests is a symptom of a cultural change that is demonstrating that people are going to be the ones to guarantee the sustainability of the practice: risk management education is gradually becoming a right. Nevertheless, in order to reinforce these processes it is important to invest in research and design a capacitating system.

### **Supporting Documentation**

PLAN ESCOLAR PARA LA GESTIÓN DEL RIESGO. Guía del docente. Instrumentos y herramientas metodológicas. Alcaldía Mayor de Bogotá, DPAE.

PREVENCIÓN DE DESASTRES DESDE LAS AULAS, Incorporación de la gestión del riesgo en el currículo escolar. Alcaldía Mayor de Bogotá, DPAE. (III Tomos). Abril, 2003.

PRIMERA JORNADA DE EXPERIENCIAS CIUDADANAS EN GESTIÓN DEL RIESGO: TERRITORIO Y PREVENCIÓN, UNA OPCIÓN DESDE LA FORMACIÓN Y LA

PARTICIPACIÓN. Alcaldía Mayor de Bogotá, DPAE. Mayo, 2003

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**Knowledge Base Coding Reference:**

Name of the Practice: Constructing Well is a Serious Matter”.

The macro-intentional communication strategy of the housing improvement program of the Caja de la Vivienda Popular

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