



IDENTIFICATION AND RISK AWARENESS BY PUPILS IN CASE OF FLOOD PROBLEMS: PREVENTION, PREPARATION AND CONDUCT DURING AND AFTER FLOOD

COORDINATING CENTRE: ECMNR, Moldova

PARTNER CENTRES: ECRP, Bulgaria, ECBR, Romania, TESEC, Ukraine

REPORT ON THE RESULTS OBTAINED WITHIN THE COORDINATED
PROJECTS FOR 2015

ECMNR

For achieving a better and coherent knowledge and information of pupils, student environment, didactic staff and authorities in charge about the character and danger of floods, ECMNR, during the school year 2015, in collaboration with and with the contribution of centres (Sofia, Bucharest and Kiev), based on the results obtained in 2014, fulfilled a pilot project pursuing pupils' involvement in different activities for obtaining more information about disasters in general and floods in particular. The pilot experiment was carried out in three educational institutions from the Republic of Moldova: the Preschool Educational Institution no.119 from Chisinau city, the School with I-VI forms from Hincesti district and the Pedagogical School from Chisinau.

The project included information courses and mobilization exercises in case of floods. The project is destined for pupils and preschoolers and has two components:

- Courses of preventive education during classes of "education for a healthy lifestyle" and "decisions for a healthy lifestyle"

- Pupils and preschoolers participated to the information sessions and included this topic in the educational classes and in the classes for the education for a healthy lifestyle and decisions for a healthy lifestyle.

The information sessions have been supported by experts in the field of exceptional situations. These ones showed to the children the reasons of the occurrence of floods, how the floods occurred, the provoked damages and the solutions for reducing damages.

We aimed especially at facilitating pupils and preschoolers' abilities of identifying and being aware of the risks in case of floods, of making them more resistant to floods by prevention, preparation and by creating an appropriate behaviour during and after floods.

Helped by some intuitive materials and special techniques of simulating floods and using houses made of wood, the experts showed the children the effects of floods on residential spaces.

At the end of the session, the children, the teachers and the preschool teachers took part to an exercise of mobilization in case of floods. They evacuated the school. The rescue squad was giving first aid to the "victims" of the accident. The rescuers were saving the "victims" entrapped on the upper floor of the building.

We fulfilled preventive education during classes of "education for a healthy lifestyle" and "decisions for a healthy lifestyle".

During the project, the teachers and every child have firstly received didactic and educational materials for cases of flooding, and, at the end, an educational manual "What to do in case of floods", created by the ECMNR and approved and recommended for publication by the chair of *Pedagogy, Psychology, Arts and Physical Education* of the Pedagogical College "Alexei Mateevici" from Chisinau.

The manual is a support for teaching education in case of floods in preschool establishments and in the 1st - 6th forms. With its help, the class masters and the teachers of education for a healthy lifestyle and decisions for a healthy lifestyle will sustain courses until the end of the school year 2015-2016.

Pupils and preschoolers taking part in the project have participated to a drawing contest on the topic of preventing disasters provoked by floods. This contest was aimed at improving the response of pupils, preschoolers and of the communities exposed to the risks of flood-caused natural disasters.

During the pilot experiment, the Centre has implemented the existing materials on the identification and cognisance or the risks in the educational institutions subject to the Pilot Experiment relating to pupils' protection in case of floods, ensuring the continuity of the planned activity (training sessions taught by experts of the Service of Civil Protection and Exceptional Situations and coordinated by teachers, studies, seminars, projects, training classes, publications, etc.) coordinated by ECMNR upon mutual consent with educational institutions and authorities in charge from Moldova and Centres from Bulgaria, Romania and Ukraine.

For ensuring a strategic aspect, we laid stress on encouraging pupils to use the most accessible language for school and preschool-age children, thus they made their contribution in result of the Pilot Experiment as texts and drawings, which are the basic source in the elaboration of the manual "*What to do in case of floods*". In this sense, we have made a dictionary unifying the terminology and good knowledge:

Dictionary of Terms:

Risk.....	The probability of the occurrence of losses/damages. The risk is described by probability, exposition and vulnerability. In practice, the exposition is often included in the assessment of consequences, therefore, the risk is considered to be composed of two elements-the probability of the occurrence of an incident and the consequences (impact).
Risk receiver	Entity that can be affected by a phenomenon and can incur damages (population, property, habitats, etc.)
Risk review	Methodology for the objective determination of the risk by a consideration and combination of the probability of the occurrence with the consequences.
Risk assessment	Includes risk cognition's identification, assessment and interpretation and the comparison to a socially accepted risk for the orientation of decisions and actions in the process of risk management.
Risk mitigation (decrease)	Actions of mitigating either the probability of the occurrence or the exposure or vulnerability of the receivers, or all these factors.
Vulnerability	The sensibility of a community in relation to a phenomenon, susceptibility determined by physical, social, economic and environmental factors.
Risk management	The application of policies, procedures and practices aimed at risk identification, consideration and assessment, at risk processing, monitoring

	and reassessing.
Flood management	Includes both risk management and the management of emergency situations.
Durable flood management	The management of flood risk in the context of the integrated water resource management.
Exposure	The quantification of the receivers that can be influenced by flood occurrence (of example, the number of people, number and types of goods, etc.)
Consequences	The direct effect of a phenomenon, event, incident or accident (losses of human lives, injured people, loss of goods, environmental effects, etc.)
Risk maps	Processes of determining the spatial expansion of a risk (a combination of probabilities and consequences); the risk map is a combination of the hazard and vulnerability map.
Preventive measures	Measures and actions adopted before flood occurrence (prevention, protection and preparation).
Measures taken after floods	Measures and actions that are adopted after the flood phenomenon has passed for the reparation of the situation and for avoiding other future damages.
Response	Actions and measures or response, defence, in the conditions of a challenge.

In the light of the inclusive psycho-pedagogy, having in view the special character of the social category represented by children – the vulnerability, and a great receptivity as well, the inclusion of disabled children (children with deficiencies) among other pupils of the Pilot Experiment was a priority and one of the best methods of informing and educating them in view of their preparation to have a correct response in case of floods, and for ensuring children’s participation who, in most cases, are marginalized or even ignored during such events.

The carrying out of the pilot experiment has contributed essentially to the popularization of knowledge about the character of floods and providing support for didactic staff training and development of an appropriate behaviour in students in case of flooding problems. We noticed actions of public opinion awareness-raising, promoting educational initiatives and additional material developed by ECMNR for education in schools. These materials attest the actuality, importance and necessity of knowing and applying the favourable experience of the best practices for risk prevention in flooding problems, and various concrete proposals for publishing a book that would serve as an *ABC of pupils’ behaviour in cases of flooding* – an explicit and interesting solution. The European Centre for Mitigation of Natural Risks has organized and conducted throughout the year an action of preventive information, supply of initiatives, public awareness-raising, promoting educational initiatives and providing with additional material for education in schools developed in the project, aiming at a *manner of behaving in the event of floods*.

All the taken actions were aimed at creating a preventive spirit by knowing and ensuring preliminarily the correct measures during and after floods, of knowing the method of calling the 112 monitoring unit, as well as the cognisance by pupils of the risks that they can be exposed to in case of floods.

Another aim of this project is represented by knowing and applying the relevant behaviour in case of flood occurrence, both with pupils and teachers. The whole activity had as a target public the groups represented by

children from preschool and school education, adolescents, adults and public authorities in charge/volunteering services for emergency situations.

The pilot project has found out that the school has an important role in informing and educating the young human resource for preventing risk situations and to protect their own life and the one of their fellows. The pilot project results showed an added value of knowledge concerning the education for civil protection through a diverse and stimulating program of activities, training in students both the cognitive, motor, creative and critical sides. We have attested, in result of the pilot project, the change of preventive behaviours and attitudes at risk, in case of floods, among both the didactic staff and students. In this context, the European Centre for Mitigation of Natural Risks organized and held on October 22, 2015 in the conference room of „Dacia" Hotel, Chisinau, an international scientific-practical seminar with the participation of ECRP, Bulgaria, representatives of central and local public administration, from pre-school, school, university and academic environment (38 participants) entitled “***The identification and awareness of pupils related to risks in case of floods : prevention and behaviour during and after floods***” with the aim of the direct information of pupils, didactic staff, public authorities in charge, for raising the awareness and improving pupils and population’s preparation for situations of risk in case of floods. During the seminar, participants’ reports have been presented and analyzed, for finding out to what extent the Pilot Experiment can contribute to children’s training for making them be an important resource in a correct management of such situations.

During the seminar, we discussed aspects of an efficient training of pupils and of the teachers, able to improve the management of the prevention, training and response to disasters, here, in case of flooding. We identified new educational principles, general objectives and directions concerning the promotion of the culture of preventing risks by pupils, in case of floods, pupils’ prevention and behaviour during and after floods and we have determined the necessary competences and skills in case of floods.

These ones and other things served as subjects for reports with an important content, submitted to debates between the employees of the Service of Civil Protection and Exceptional Situations of the Ministry of Internal Affairs, of the Ministry of Education, university staff of Moldova State University, the Pedagogic College, the didactic staff from the preschool-school system and the teachers from the establishments where the pilot project has been carried out.

The participants have appreciated the basic objectives destined to pupils and preschoolers’ protection against floods and for helping them to overcome their immediate effects, ensuring the necessary conditions for survival.

The participants to the seminar have mentioned the importance of the discussed problems, given the fact that the floods occur in increasing frequency on the territory of the Republic of Moldova, Bulgaria and not only, and the human losses prove a decreased competence as to safety rules and the organization of urgent actions for saving and protecting children in case of floods.

We mentioned the stringent need of giving methodical support for training the didactic staff and for developing aptitudes of creating an appropriate behaviour of pupils during and after floods.

All those 38 participants to the seminar took part actively to debating the reports heard, coming with interventions and concrete suggestions.

According to seminar agenda, the following reports have been heard:

- The presentation of the pilot project and of the general results (rapporteur, A. Bantuş, PhD, university lecturer, director of ECMNR)
- The pilot experiment – a new challenge and essential contribution to the popularization of knowledge about the character of floods and giving the methodical support in training the didactic staff and developing the aptitudes of creating in children an appropriate behaviour in case of floods. (rapporteur: Victor Mîrza, lieutenant-colonel of s/s, Head of the Republican Training Centre)
- Results of training the pupils for protection in case of floods: their behaviour before, during and after the disaster (Bulgaria) (rapporteur: Kolio P. Kolev, Director of the European Centre for Risk Prevention, Sofia, Bulgaria).
- The elaboration of conceptual references on the strategy of education in the field of protection against floods in educational institutions. Problems and solutions.(rapporteur: Vladimir Guţu, Doctor Habilitatus, university lecturer, Dean of the faculty of Psychology and Sciences of Education, Moldova State University)
- The ABC of pupils and preschooler’s behaviour in case of floods. (rapporteur: PhD, Associate Professor, Larisa Bantuş, Head of the Chair of Pedagogy and Psychology).
- “Lessons learned from exceptional situations from the last period” (rapporteur: Alexandru Oprea, Colonel of s/s, Head of the Department of Civil Protection)
- Objectives of the curriculum for the education and prevention of children of early, preschool and school age in case of floods” (Aurelia Gherman, 1st didactic degree, Preschool Establishment no. 119. Chisinau)
 - The training of the didactic staff from communities affected by floods (rapporteur: Dimitar Yonchev, Prof.,Director of Center for Security – New Bulgarian University, Sofia, Bulgaria.
 - Teachers-children-community: together for improving and preventing the psychical effects of floods (rapporteur: Angela Potâng, PhD, Associate Professor, Head of the Chair of General Psychology, Moldova State University)
 - The quick assessment of children’s situation from communities affected by floods
(rapporteur: Doctor Habilitatus, university lecturer, Gheorghe Costachi, Academy of Sciences of Moldova)
 - The catastrophic consequences of floods after 2010. (rapporteur: Vitali Mutaf, Lieutenant-colonel of s/s, Deputy Head of the Civil Protection Department)
 - The prevention, protection and mitigation of the effects of floods. (Ştirbu Irina, Preshool Establishment no. 119. Chisinau)

We organized within the framework of the seminar the exhibition of drawings “The protection in case of floods in children’s view” as a result of the contest organized by the Centre within this project. During the debates, the exchange of opinions and the analysis, we have approved and proposed several materials for children’s direct information and for improving children’s training in situations of risk in case of floods.

Having analyzed the results of the pilot project, the participants to the seminar have stated that the identification and cognisance of the risks by pupils, in case of floods, their prevention and behaviour, during and after floods, can be achieved by:

- Promoting the risk prevention culture in case of floods and the implementation of risk prevention educational activities in schools.
- The popularization of knowledge about the character of floods and granting methodical support in training didactic staff and developing aptitudes of creating an appropriate behaviour in situations of risk.

For assessing the objectives, the participants have filled in questionnaires, mentioning the progress and concrete proposals on the identification and cognisance of risks by pupils, in case of floods, the implementation of risk prevention educational activities in schools and the elaboration of the educational principles in the field of protection against floods and the promotion of the risk prevention culture in case of floods.

The practitioners from the Department of Civil Protection and Exceptional Situations, the scientists from the field of pedagogy and psychology and the teachers from preschool and school establishments concluded the following:

- The interactive group methods used during the activities of the pilot project of integrated type taught the pupils to solve problematic situations that they can encounter and to take decisions in group for solving a possible situation of risk in case of floods.
- The integrated activities presuppose a combination of the objectives from different curricular areas in the development fields by contents, according to pupils' knowledge needs.

The participants to the seminar have assessed favourably the carrying out of the pilot project, the manner of its execution, taking a new shape and approach that can be found in:

- The identification and cognisance of risks by pupils in case of floods;
- Educating the pupils in the field of the science about the character of floods;
- Developing knowledge about the protection methods in case of floods and the danger that they represent;
- The popularization of the personal safety rules in case of floods among preschoolers and pupils;
- Pupils' acquaintance with some actions that have to be carried out before, during and after floods

The participants to the seminar concluded that the game as the main means of development and as an education tool in preschool establishments and schools give the children the opportunity to evaluate different risk situations and to identify solutions. The game is the activity in which children learn to know the real world, to act with confidence and calm, facilitating a great part of the didactic learning. The game is a good way to practice, a behavioral school where children can assert some skills, standards of discipline, and safety rules in situations of risk. The didactic task of the game is in fact the central intellectual problem which the children must solve, which may occur as a problem of thinking, recognition, denomination, restoration, comparison, identification of risk situations.

The participants to the seminar have considered that the following is especially useful and appropriate:

- The collection of didactic games (enclosed hereto) giving the preschoolers and pupils the opportunity to express some habits, standards of discipline, safety rules in situations of risk in case of floods.

- The popularization of safety rules in case of floods.
- The elaboration of educational principles in the field of protection in case of floods:
- The orientation of the risk prevention education to pupil's personality.
- Carrying out the educational process against the background of the collaboration between the teacher and pupil as mentorship.
- The transparency and relevant information of all the persons concerned (students, parents, didactic staff, scholars, technical staff, etc.) regarding the risks in case of floods.
- The use of different strategies and technologies concerning the development of the relevant behaviour in pupils, students, the didactic and technical staff in case of floods.
- The development of some automatic behavioural skills: before floods, during the floods and after the floods.
- The development of a more conscious attitude of the didactic staff related to the existing educational program carrying out according to the school curriculum.

The participants to the seminar have highly assessed this activity organized by the European Centre for the Mitigation of Natural Risks, qualifying it as a successful, resultative one and with a long-term effect in the mobilization and uniting the people concerned, for opening, getting involved, communicating and collaborating in the field of the support of the risk prevention culture in case of floods. In this context, we laid stress on the results of the pilot project motivating the role of the school in the social mobilization in situations of an act of God - floods.

We mentioned that the school is a key-establishment in the community, representing a viable dialogue partner both for the local authorities and for citizens (children's parents and former pupils of the school) – thus, it has an important potential of mobilizing the community at the prevention stage, fighting against the passivity trends, against the mentalities of accepting the faith like "it will always be like this in these places and we can do nothing about this". The school cannot do everything, of course, but it has a recognized authority in the locality: despite the fact that its role is not to support projects for the improvement of the watercourse/ barrage, road building, forestations, etc., the teachers can suggest the local authorities to develop such projects, to turn to the structural funds, to develop partnerships with specialized establishments, to turn to the lobby of the authorities for "not being passive while waiting for a flood to occur", and this is already an important step that the school can make, mobilizing other citizens as well.

From here, the participants mentioned that we should remember that the partnership is firstly an attitude that could be described by several principles:

- collaboration (a common action where everyone has its distinct role);
- cooperation (a common action with interrelations and common roles);
- the acceptance of differences and the toleration of different options;
- the equalization of chances of participating to a common educational action;
- interactions accepted by all the partners;

– an efficient communication between participants.

During the plenary sessions and the thematic workshops, we addressed a wide range of problems concerning different aspects of the principles of pupils' education in the field of protection against floods.

Based on the analysis of the results obtained after the pilot experiment, the participants to the seminar have outlined the favourable experience and the best practices for the prevention of the risks in problems of flooding for pupils. The information will be distributed to the participating countries. Thus, the pupils from the participating countries, by the intermediary of the Centres, will receive more information about risks in case of flooding and will be better protected.

As a result of editing the recommendations, the ECMNR has elaborated and published a guide "*What to do in case of floods*" (enclosed hereto) in English and Romanian concerning the pupils' actions in case of floods: before floods, during the floods and after the floods. *The book is actually a summary of the works developed by the pupils of those three educational institutions mentioned above. Besides the information it provides, the work includes applications course support and drawings made by pupils.* The information will be distributed to the participating countries. Thus, the pupils in the participating countries, by the agency of the Centres, will receive more information about the risks in the event of flooding problems and will be better protected. The guide on pupils' awareness of the flood risk will be distributed to the countries upon request. The Centre from Cyprus has already received the book on electronic support.

The conference noted that this work is one of the best ways both to inform and educate in order to prepare pupils to react properly in such situations and to ensure children's participation as, most often, they are left in the background or even ignored during such events.

The rapporteurs mentioned that the training methods oriented to the minimization of the consequences of flooding on pupils' life, health and on the environment should be prepared according to the best international practices.

The participants to the conference recommend:

- To publish and distribute, as soon as possible, a more complex book that would include all the acts of God, which is welcomed and necessary in the educational system "*Pupils' preventive information and education for fighting against the effects of the natural disasters*"

To organize the preparation of the most modern and advanced materials for the educational establishments and to ensure the professional development of the didactic staff at their place of work by activities of mentorship, for teaching classes in the educational establishments on the identification and cognisance of risks by pupils, in the event of natural disasters.

ECRP

In accordance with the decision adopted during the meeting of directors of the centers of European and Mediterranean Major Hazards Agreement (EUR-OPA) of the Council of Europe that took place in 2014 in Strasbourg (France) - European Centre for Risk Prevention (ECRP), Sofia, Bulgaria participates in 2015 how partner in a project coordinated by European Centre for Mitigation of Natural Risks (ECMNR), Chisinau, Moldova.

During the year, Bulgaria was a discussion on training on the prevention of risks to the school level as a result of which they had taken many initiatives in this area. Despite the increased number of natural disasters occurred and others continued the emergency training at the school level to be implemented mainly through school forms. The process of inclusion of this topic in other core subjects in schools for different age groups is very slow and limited.

Especially on the issues of protection of individual flood classes are very small. Developed are complex exercises involving the protection of several natural and technological risk it. Classes' bout protections against flood are accompanied by protection from earthquakes, landslide and more.

In Bulgaria, the different institutions seeking to conduct training on the prevention of risks to the school level : Ministry of Education, Ministry of Interior (General Directions "Fire Beasty and Protection of the population", Ministry of Environment and Water, Ministry of Building and Territory, Bulgarian Red Cross and many other organizations and a lot of NGOs.

Discussion in this area will continue in time the International Workshop "Building a Culture of prevention through improving the disaster risk awareness among children and adolescent" which will held in Sofia on 9-11 December 2015.

The following activities have been performed in 2015 by the European Centre for Risk Prevention (ECRP), Sofia within the implementation of the Project: "Identification and risk awareness by pupils in case of flood: prevention, preparation and conduct during and after flood" (Coordinator: ECMNR, Chisinau):

- Collection of the existing materials in relief of risk awareness by pupils in case of flood and the results of pilot experiments in Bulgaria;
- Report sent to the Coordinator;

All activities planned for 2015 under Work Package of this project have been performed.