Help Save the Children

5 Good Practices to Prepare Children for Floods

With the advent of more frequent extreme weather events, there is a greater need for flood resilience initiatives that mitigate flooding events' damage and enable quicker recovery. Generally, disaster preparedness efforts have been targeting adults to participate in activities such as making household emergency plans, making reserves of food, water, and supplies, and purchasing insurance. However, studies show that household preparedness levels have remained low and generally unchanged regardless of the fact that natural hazards such as flooding are more common[7]. In those households, children are among the most vulnerable to physical and mental health issues from encountering a flood. They have a higher mortality rate due to their reduced mobility, and they are more likely to suffer from physical ailments such as gastro-intestinal symptoms[2]. Furthermore, they may suffer medium to long term psychological effects such as increased symptoms of PTSD, anxiety and depression[2,4]. In order to better protect children against flooding and make them, their households and their community more resilient to natural hazards, it has become primordial to design curricula, programs, and other initiatives that cater to children and that leverage their influence in their community.

The implementation of disaster risk reduction and resilience initiatives for children are on the rise. The most effective initiatives are those that integrate three types of learning[3,8]:

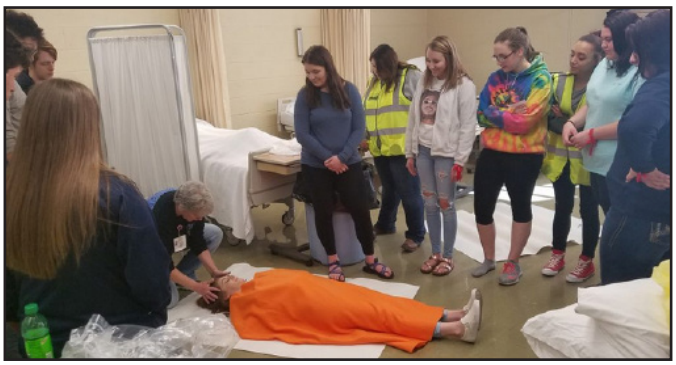
- Understanding and awareness of hazards and risks
- Cultivation of self-confidence to deal with a disaster and mitigate fear of hazards
- Acquiring skills and behavioural changes to prepare for and deal with a disaster

Based on research on initiatives from governments, research institutes, and global non-profits that prepare children for flood events and other disasters, here are 5 good practices which can help foster these three types of learning in child flood resilience initiatives.

Image Source: Radio-canada (iii)

1. Make It Interactive

Children are better able to retain information if it is presented in a way that captures their interests. One of the different ways in which information pertaining to disaster risk reduction and emergency response information can be presented in a creative way is through storytelling of real-life scenarios, whether by guest speakers or through in-class case studies. Activities can encourage play and social learning, examples of which could be (a) role playing of disaster scenarios, such as those part of the MyPI program[5] in the US, that reinforce the application of concepts learned, and (b) interactive activities that encourage collaboration, discussion and evaluation amongst peers. It is also important to accommodate different learning styles of students by using multimedia stimulus materials, board games, and guided visualization activities that are relevant to child interests and experiences. For example, the MyPI program also has students interact with different tools that are helpful during natural disaster events such as radios, emergency kits, and smartphones and social media for emergency preparedness.



Disaster simulation and triage instructions as part of the MyPI program in Virginia, USA (i).

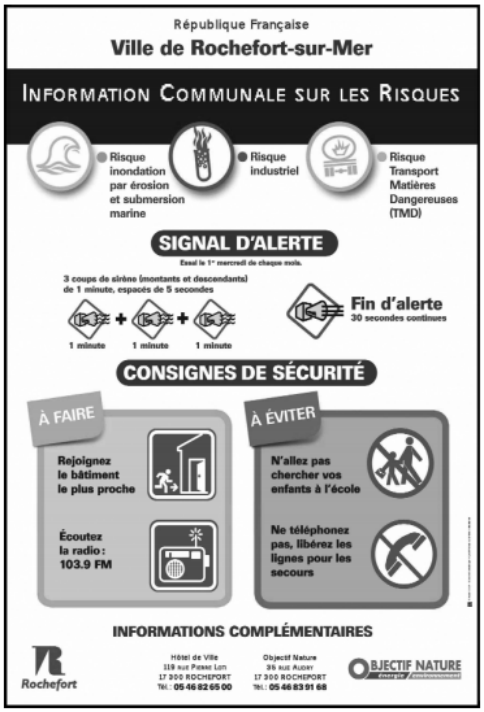
2. Involve Parents and the Community

In order to promote the dissemination of the knowledge and preparedness action, activities should involve parents and the community when possible. Activities may choose to include parents directly, by inviting them to join, or indirectly, by giving homework to children to do with parents at home. This would enforce the learning of program material but also increase the probability that safety information will reach whole households. The activities can include making a family communication plan and the assembly of an emergency supply kit. Furthermore, experiential, community-based activities are better than knowledge-based activities at instigating preparedness action. They may foster civic engagement and strengthen community bonds and collaboration, which are useful during an emergency. For example, the Vrije University Amsterdam organized a participatory pilot action[6] where students played journalists and investigated flooding risks and action through the experience of community members who were present at the last flood. The community members left with a greater willingness to share their knowledge and experience with floods and the children, greater awareness and tips for keeping safe. The activity also fostered solidarity and a culture of mutual aid during disasters.

A citizen shows students a pair of waders at the participatory pilot action hosted by the Vrije University Amsterdam (iv).

3. Adapt it to the Local Context

In order to make the information on disasters and preparedness accessible and relatable, it is important to make it available in several languages and to include local knowledge and experiences. To better apply information on floods to real life, it is important to integrate local issues into school curriculum and other programs covering disaster risk reduction. Especially when the local community has already experienced a flooding event, the activities can pull on the children's experiences or on other community members who were present as it was in the Vrije University Amsterdam participatory pilot action. Field trips can also be organized to affected areas. An example of an initiative that pulled on local issues is the Risk Ambassadors program[9] in the Merleau-Ponty Secondary School in France, which was highly successful in championing youth involvement in risk communication for local hazards including flooding risk. The teenage students were educated in a class on the hazards, prevention and protection, security measures and emergency alerts; trained in communication skills for different media, and put into partnership with local actors to become the voices of hazard risk reduction for their peers and their community at large.



From the Rochefort-sur-Mer Risk Ambassadors program, a poster made by students on communal information on risks (ii).

4. Have a Holistic Approach

Educating children about flooding from the perspective of different disciplines will allow them to develop the knowledge, skills, attitudes, dispositions, values through which they can perceive and articulate disaster risk reduction. It is as important to share the basic science of hazards and safety measures as educating on prevention, mitigation, vulnerability and resilience building. Public security can be integrated in all course curriculum as well as in extracurricular activities, overall reinforcing a culture of safety. For example, Georgia has been able to make big strides in disaster risk reduction education and life skills through a three-pronged approach[8]. One, by integrating a mandatory Civil Protection and Safety Course for grades 4 and 8, two, by including disaster risk reduction themes in the Science, Social Sciences, Geography and Civic Education subjects and, three, by introducing these themes in the 'Head of Class Hour' in grades 5 to 9 and. The 'Head of Class Hour' is a weekly hour-long class designed to address cross-curricular topics that are not easily accommodated by one subject. The disaster risk reduction component which covers natural hazards, global disaster trends, climate change and multiple natural hazards in Georgia. Activities range from discussions in the classroom, practical activities, excursions, and environmental campaigns, notably, mapping school hazards, risks and vulnerabilities and making school disaster preparation plans and often involves parents and the community.

5. Assess the Outcomes

A proper evaluation program of an initiative's material, usage and effectiveness can ensure its long-term viability. Teachers, parents and children can all be surveyed to collect both qualitative and quantitative data on the three learning types: knowledge acquisition, self-esteem and psychological preparedness, and behavioural change. The assessments should not limit themselves to traditional examinations testing the amount of information retained from the curriculum, programs and initiatives. Questions can survey whether or not the information has been transmitted to the household and instigated the creation of family emergency plans. They can also evaluate the attitudes that children have before and after initiatives: their confidence level to dealing with a flood as well as their anxiety level. That data can be used in the creation of a central repository of information that would allow regular evaluation of the initiative. For example, the Canadian Redcross "Expect the Unexpected" program[1] underwent an evaluation that included the survey of teachers, students and parents of different schools throughout Canada.

Inspiration: Guidebooks, Toolboxes and Existing Programs

Household

Save the Children, Family Emergency Preparedness Plan: https://www.savethechildren.org/us/what-we-do/us-programs/disaster-relief-in-america/family-emergency-preparedness-plan?vanityurl=getready

World Wide Fund for Nature, FamilEE: Environmental Education at Home: https://wwf.org.ph/wp-content/uploads/2020/06/PandaTalks_Environmental-Education-at-Home.pdf

School

Canadian Red Cross, Expect the Unexpected Program (guides and activity booklets for school and at home): https://www.redcross.ca/how-we-help/emergencies-and-disasters-in-canada/resources-for-teachers-and-voluntary-sector-organizations/teachers-and-educators-of-children/help-students-learn-about-and-prepare-for-disasters/expect-the-unexpected-program

Federal Emergency Management Agency, Catalogue of Youth Disaster Preparedness Education Resources: https://www.fema.gov/media-library-data/1392154628242-0e3e57e0d727baf6ac7fff1c2ce67964/Catalogue_YouthDisaster_Preparedness_Resources_September_2013.pdf

International Strategy for Disaster Reduction, Towards a Culture of Prevention: Disaster Risk Reduction Begins at School Good Practices and Lessons Learned: https://www.preventionweb.net/files/761_education-good-practices.pdf

UNICEF, Disaster Risk Reduction in School Curricula: Case Studies from Thirty Countries: https://www.unicef.org/environment/files/DRRinCurricula-Mapping30countriesFINAL.pdf

World Wide Fund for Nature, Your Climate, Your Future: An interdisciplinary approach to incorporating climate change in you classroom (grade 9-12): https://www.nps.gov/ever/learn/education/upload/WWF-Your-Climate-Your-Future.pdf

Community

Mississippi State University, National Youth Preparedness Initiative: https://mypinational.extension.msstate.edu/about-us

Ready, Teen Community Emergency Response Team: https://www.ready.gov/teen-cert

Resilient Children / Resilient Communities, RCRC Toolbox: https://rcrctoolbox.org/

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Images

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RIISQ
Réseau Inondations InterSectoriel du Québec

This aid was written for the research axis 5 of the Intersectorial Network for Flooding in Quebec (RIISQ): research in risk management and communication & decision-making, adaptation and resilience tools. It is meant to be a resource for researchers and practitioners when designing communication and education plans for communities at high flood risk.

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