CUIDAR

Cultures of Disaster Resilience among children and young people

Scoping Report

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1. INTRODUCTION

Every disaster encompasses unique entanglements of nature and culture, through which climate change and/or social vulnerability can greatly exacerbate how 'natural' hazardous events are experienced. Engaged participation and cultural sensitivity are essential for effective disaster management and Disaster Risk Reduction (DDR) (Fothergill and Peek, 2015). Yet national and international emergency strategies for human influenced environmental crises, such as extreme weather/flooding/wildfires/earthquakes, rarely take children and young people[1] into account. When they are mentioned, literature reports, children tend to be positioned as vulnerable recipients of care rather than active, engaged participants (Anderson, 2005; Ronan et al. 2015; López et al. 2012; Peek, 2008). Therefore, young people, along with others in vulnerable and underrepresented situations, such as women, people with disabilities, migrants and the elderly, are disproportionately affected[2].

Following the Sendai Framework for Disaster Risk Reduction 2015-2030[3], and drawing on a wider commitment to assure that children's voices are heard and contribute to discussions that affect their lives (Boocock & Scott, 2005; Lloyd-Smith & Tarr, 2000), this project seeks to foster a greater engagement with children and young people in disaster management at the European level. Inspired by the work of authors like Anderson (2005) and Fothergill and Peek (2015), the CUIDAR project aims to challenge the field by examining culture, risk perception and disaster management through the perspectives of children and young people, taking into account a wide range of cultural differences,

1 The United Nations Convention on the Rights of the Child specified in 1989 that a child is anyone below the age of 18. In this report, however, we distinguish between children (0 – 15) and young people (16 – 18) as a way to acknowledge that there is a socially constructed age between childhood and adulthood. But we are well aware that social categories associated with age are socially constructed and vary historically and geographically. In any case, the main rationale for including such a wide and varied population under the categories of "children" and "young people" is the need to acknowledge a social minority that is frequently marginalized in terms of social status and political power (for a discussion see Fothergill & Peek, 2015: 223-224).

2 Annually, around 175 million girls and boys are affected by disasters (see Webster et al. 2009). In 2014 alone, these emergencies forced 9 million girls and boys out of school (see Save the Children, 2014).

3 "Children and youth are agents of change and should be given the space and modalities to contribute to Disaster Risk Reduction, in accordance with legislation, national practice and educational curricula" (UN, 2015: p. 20)

thereby enabling disaster responders to meet the needs of children and young people more effectively.

Specifically, this report aims to explore four sets of questions:

- What Disaster Risk Reduction and resilience building programs addressed to children and young people currently exist for urban contexts?
- What is the role of the different actors, from civil protection agencies to schools and voluntary institutions, in designing or implementing these programs for children and young people?
- How are children and young people involved in disaster management and to what degree do they participate?
- What assumptions are made about children and young people in disaster management? Are issues such as cultures of disability, social class, disadvantage, gender, ethnicity, and marginalization taken into account in disaster management, and if so how they are perceived?

2. METHODOLOGY

To answer these questions, we have conducted a scoping review, a relatively new type of literature analysis (Arksey & O'Malley, 2005; Peters et al. 2015). In contrast to systematic reviews and other methods, scoping reviews are particularly recommended to map existing literature in fields that, like ours, are large, complex, and diverse and have yet to be comprehensively reviewed. They are also particularly useful for clarifying working definitions and conceptual boundaries of a topic or field, and identifying research and practice gaps, thereby creating recommendations for policy, practice and research.

We have reviewed sources from three main categories: 1) policies, practices and programs relating to children's involvement in disaster management in each partner country; 2) EU and Nationally-funded projects; 3) scientific literature. Each source has been reviewed following a specific procedure. It is important to note that this procedure identifies highly disparate empirical material, making comparisons problematic. This is due not only to programs, plans, actions and policies originating from five very different European countries, geographically, politically, economically and culturally (Greece, Portugal, Italy, UK and Spain), but also because each source enables us to form a particular group of questions while excluding others. Therefore, rather than a comparative analysis, we present this report as an initial diagnosis; and a partial diagnosis at that, since, despite representing the first systematic evaluation at European level, only specific countries have been taken into account. This analysis is enriched by examination of EU-funded research projects and those awarded in partner countries, as well as by discussion with the main evidence gathered in international scientific literature.

2.1. Policies, practices and programs

The methodology for scoping existing disaster policies, practices and programs relating to children and young peoples' participation in disaster management in partner countries followed three stages: a) collection and tagging of documents; b) interviews with key practitioners; c) data processing and analysis.

First, each partner conducted an Internet search to identify, collect, and classify relevant documents (websites, documents, reports, guides, exercises, workshops, games, etc.)

relating to children's involvement/participation in disaster management. For this we used the social bookmarking App 'Evernote' which enables collaborative tagging among partners. The search terms used were: 'children' AND 'participation' AND 'disasters' OR 'emergencies'. The inclusion criteria applied to the search was based on these principles:

- No matter what type of document was found, it had to be clearly oriented (partially or completely) to include/dialogue with/education of children and/or young people. This included programs, practices, plans, protocols, policies, and educational activities devoted to disaster management relating to children and young people. It included both documents that spoke in general terms and those on specific disaster situations, covering any phase of disaster management: from prevention and preparedness through response and recovery.

- The document had to frame the problem or issue it addressed as a disaster or emergency requiring management in the partner country.

- The document could be in any of the countries' official languages.

- Documents could be current or obsolete. As this was a general scoping exercise, we recommended collecting all relevant documents regardless of date or prevalence.

- Those items that did not comply with the inclusion criteria but were considered relevant for the interpretation of data were placed in a different folder. For instance, in the Spanish scoping there were many documents relating to children focused on disaster management in Latin American countries.

Those items that complied with the inclusion criteria were stored under eight tags, each answering a basic question:

1. What kind of document is this?
2. What organisation has produced this document?
3. Is this document related to a specific disaster? Which one?

4. To what phase of disaster management is this document related? There were five options available: Prevention, Preparedness, Response and Recovery and Non-specific.
5. Who is the target of the document? Even though the general target is always children, the items we come across might not always be directly addressed to them but to parents, teachers or other professionals and collectives.
6. Is the document produced for children of a specific age?
7. To what type of activity/program/plan/policy does this document belong? What is the name of the activity/program/plan/policy? For instance, when we came across an online game that was part of an educational program, all the games and activities in the program were collected and tagged accordingly.
8. What is the scale of the activity/program/plan/policy? We set three levels: Local/Municipal, Regional and National.
9. What is the level of children's participation? The activities/programs/plans/policies in which children and young people participated in disaster management decision-making processes were tagged according to the steps of Hart's children and youth participation ladder (UNICEF 1992): 1. adult-initiated with decisions shared with youth; 2. youth-initiated and directed; 3. youth-initiated with decisions shared with adults.

Second, the scoping was used to identify key practitioners to be interviewed. These practitioners, experts and/or professionals were crucial for providing the information, confirmation and insights required for us to complete, polish and refine our searches. Interviewing them enabled us to better understand how policies were implemented; the role of different organisations involved in disaster management (e.g. municipalities, local resilience forums, schools, national civil protection organisations, voluntary organisations); and explore the assumptions made about children/young people.

As a result of this, we were able to collect specific programs, projects and policy documents in which children and young people were actively involved in disaster management. We could also discuss with practitioners some of the preliminary scoping findings and the role children and young people should have within disaster management in each country.

As set out in Figure 1, the practitioners interviewed had diverse profiles and expertise (for more information on interviewees see Annex I). In all cases, we wanted to engage with individuals who could provide valuable information on children's participation and on those disasters that are especially prevalent and damaging in each country.

	Education	Civil Protection	NGO	Research Institutes	Citizen Groups	Companies	Total
Spain	2	11	5	2	1	1	22
UK	-	15	8	2	-	-	25
Greece	1	3	3	2	-	-	9
Italy	2	4	2	4	-	-	12
Portugal	2	7	-	-	-	-	9
	7	**40**	**20**	**8**	**1**	**1**	**77**

Figure 1: Practitioners interviewed

All the data collected were analysed quantitatively and qualitatively. First, the stored and tagged data was imported to a spreadsheet. Taking each activity, program, plan and policy as a unit of analysis we created a quantitative representation based on the following factors: type of organisations involved, age of children, type of disaster (we have used the typology of The International Disaster Database [4]), phase of disaster management addressed, and children's participatory level.

Second, each partner conducted a thematic analysis of the stored documentation and the partially transcribed interviews. This analysis was supported by quantitative evidence in some cases and was framed by the four questions driving this review.

It is worth noting that the sample of documents collected cannot be representative of the total of programs and actions of disaster management addressing children and young

[4] http://www.emdat.be/

people in the partner countries. Even though all partners followed the same search protocol and all collected documents matched the inclusion criteria, search results will have been influenced by the expertise and skills of each partner, the accessibility of documents and national civil protection procedure. In some countries, for instance, documentation of disaster management programs and actions relating to children and young people seldom appears online.

Altogether, we collected **750 documents and materials** that matched the inclusion criteria, from which we identified and analysed **265 different programs and actions**.

2.2. Research projects

We also compiled and analysed European-funded research projects that fell within the scope of the project. The search was initially restricted to those projects which simultaneously addressed the three keywords/topics covered by the CUIDAR project: (a) 'disasters' AND 'children' AND 'participation'. However, according to our results, this specific research field is practically non-existent (only one research project would fulfill these criteria), therefore the search was broadened to three other possible combinations of these terms: (b) 'disaster' AND 'children'; (c) 'participation' AND 'children'; (d) 'disasters' AND 'participation' (when this involved lay people in some way and not exclusively experts). This broader scope allowed us to screen via the deliverables (b) what is the role of participatory methodologies in projects that address disasters and children; (c) are there are any good practices in participatory methodologies with children in any other European projects; (d) what role is given to children in projects that address disasters with a participatory approach.

The main source for searching and selecting such projects was the CORDIS database. An initial draft list was built by introducing the keywords detailed above. In addition to the project acronym, its full name and the website, some other fields of information were collected in this first round, such as: status (ongoing or closed), four keywords, a short list of outputs and/or deliverables, the participating countries (signalling which one was/is the coordinator) and the funding call and/or scheme. That initial database was filtered through a first screening of each project website, rejecting those that were unrelated to any of the research topics of CUIDAR. Once the list was completed, we proceeded to

download all the deliverables published on the website of each project (or if not available, via CORDIS). The final step was screening each of these documents to detect any information useful for CUIDAR, including any other relevant research projects cited that we may have overlooked. For example, by reading these documents we became aware of another EU research database relevant to our research (Projects selected under the annual Call for Proposals for Prevention and Preparedness in Civil Protection[5]), where we located other projects fitting the 'disasters' AND 'children' category.

Part of this process was also informed by the interviews with key experts. These enabled us to detect a number of other relevant research projects unavailable via the search process described above. Finally, this process was completed following consultation with members of the CUIDAR International Advisory Board, so as to include other interesting projects beyond the European scope.

In total, we identified and analysed **31 different projects**, the majority no longer active. The distribution of these projects by keywords/topics can be seen in Figure 2.

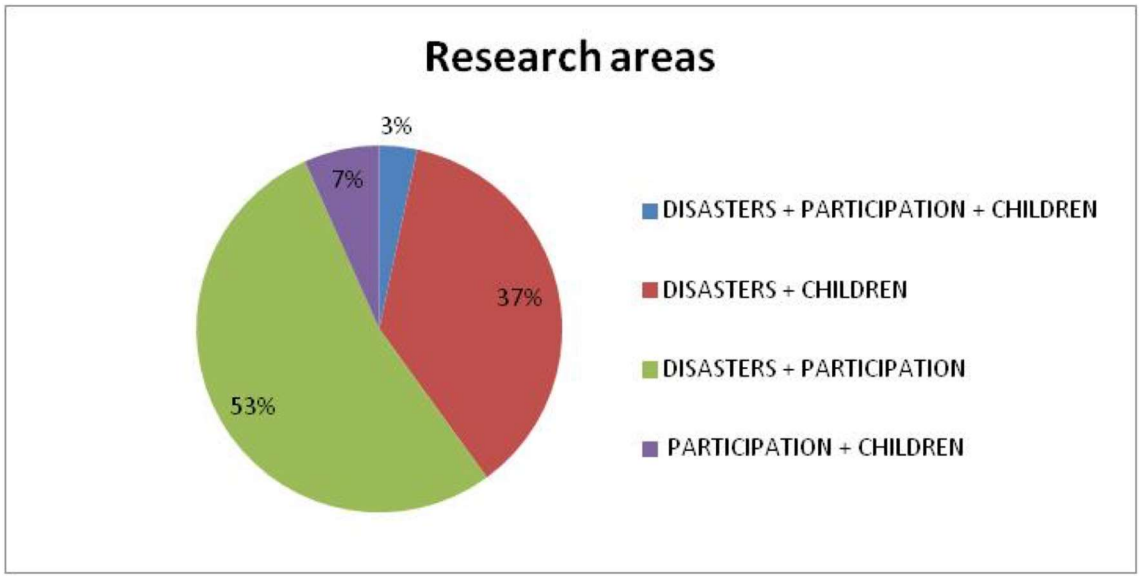


Figure 2: European projects - research areas

As shown, there is a significant amount of research on disaster and participation, with disasters and children being the second largest category. However, there is little evidence

[5] http://ec.europa.eu/echo/funding-evaluations/financing-civil-protection/calls-for-proposal_en

of research explicitly exploring the relationship between disasters, participation and children, the principal focus of CUIDAR and this scoping review. A more detailed information of the projects identified can be found in Annex II.

2.3. Scientific literature

The main aim of our scientific review was to bring together literature concerned with understanding children's active participation in disaster management, summarize research findings, identify research gaps, and make recommendations for future research in the field (Peters et al. 2015; Arksey & O'Malley, 2005).

All literature published between 2000 and 2015 that directly explored, reviewed or assessed the "voice" and "agency" of children in disaster management was included. Papers that were concerned with children and disasters but did not advocate, include or consider the voices, capacities and knowledge of children in these situations were not. For instance, we excluded the extensive work carried out to review, assess and measure the impact of disasters on children (psychologically, physically, sociologically, economically, educationally) that do not directly include or revolve around children's active participation in defining their own situation and/or condition (for instance Weissbecker et al. 2008; Pfefferbaum et al. 2012; Wilson & Kershaw, 2008). Equally, we excluded some research assessing and measuring the impact of hazard education campaigns (to raise awareness, build preparedness, etc.) that do not include, ask or give direct voice to children and young people (for instance Boon et al. 2012; Boon et al. 2014; Ronan, 2015; Aondo 2007; Apronti, 2015; Duffy, 2014; Kitamura, 2014). Although both approaches have been crucial for advocating children's inclusion in disaster management we chose to focus intensively on research engaging more directly – thematically but also methodologically – with the central concern of CUIDAR.

There is also another reason for this decision. Literature on the impacts of disasters and the effectiveness of hazard education campaigns has a longer history and has therefore been reviewed extensively (Ager et al. 2010; Weissbecker et al. 2008; Pfefferbaum et al. 2013; Johnson et al. 2014; Peek, 2008). The more emergent status of participatory and child-led approaches to disaster management warrants a concentrated review.

This literature review started with a search on the SCOPUS database. To tailor our search strategy, we began by conducting a pilot study searching for papers containing 'Child' AND 'Disaster' AND 'Participation', within the social sciences. This yielded 21 positive results. After reading all the sample papers from the pilot study, we widened and refined our search by including other keywords such as 'Evaluation', 'Hazard', 'Youth', 'Teen', 'Education', 'Participation', 'Engagement', 'Involve', 'Earthquakes', 'Tsunamis', 'Floods', 'Fires', 'Volcano', 'Hurricane', 'Storm', 'Tornado'. We compiled the different outputs from these searches, and selected those papers most aligned with our principal aim. This compilation was also augmented through a snowballing strategy: the selection of references directly mentioned in the papers within the scope of this research. After reading titles and abstracts of all these results we reduced the sample to **94 papers.**

The sample contains various types of research outputs, mostly articles and literature reviews[6], but also position papers and policy briefings[7]. As the following figures illustrate, the selection also demonstrates a clear increase in such work from 2008 onwards. This time-frame coincides with an increase in major disasters (occurring in the USA, New Zealand, Japan and the Philippines) and new premises and guidelines promoted by two influential international policy frameworks: Hyogo 2005 (UNISDR, 2005) and Sendai (UNISDR 2015). Both frameworks clearly recommend the engagement and involvement of the most vulnerable groups and communities in disaster management, with a special focus on children and young people (for a more detailed account of the sample please see Annex III).

[6] All literature is publicly available online, either through library journal access or on websites of the various organisations.

[7] The sample does not include a systematic review of the significant grey literature existing in this field. For its abundance, we could not include this literature at this stage of the project. However, we hope to conduct a more systematic review soon to complement the evidences and best practices already published in scientific journals.

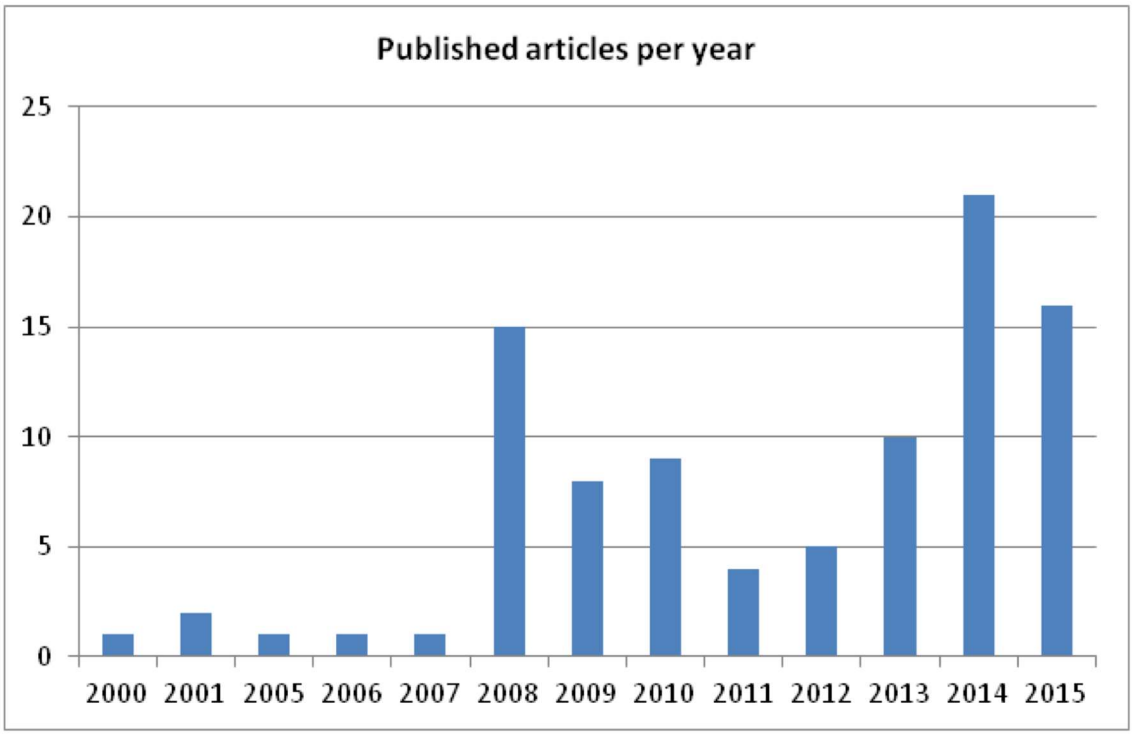


Figure 3: Published articles per year

3. MAIN FINDINGS

Based on the quantitative and qualitative data gathered, in the following section we present a comprehensive and synthetic overview of (1) the programs and plans addressed to children and young people currently existing in partner countries; (2) the role of different actors, whether civil protection agencies, schools or voluntary institutions, in designing or implementing these programs; (3) how children and young people are involved in disaster management and to what degree they participate; and (4) what assumptions are made about children and young people in disaster management, and to what extent variables such as disability, social class, disadvantage, gender, ethnicity and marginalization are taken into account. This analysis will be informed by examination of research projects awarded in this field by the European Commission and partner countries, and enriched by dialogue with the main international scientific evidence.

3.1. Existing programs and projects

As is shown in Figure 4, the majority of documents collected and analysed relating to programs and actions in partner countries are educational programs (52,9%) and awareness and information campaigns (34,9%), mostly including self-protection recommendations, intended to raise awareness among the school community of civil protection and how to identify risks; acquire safe practices and develop skills in civil protection; and promote suitable attitudes and behaviours in cases of emergency. We have also identified a number of support programs (11,9%) and reconstruction projects (0,4%) where children and young people are specifically mentioned or addressed.

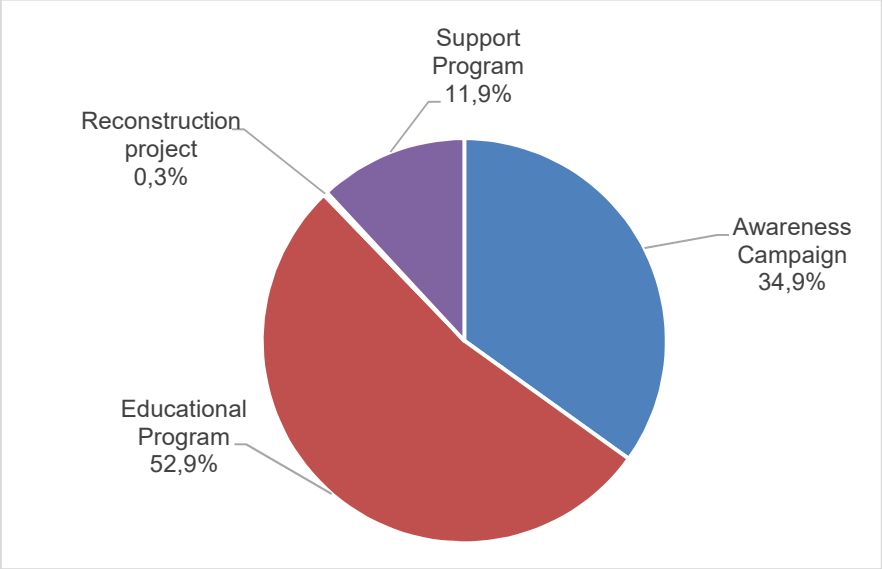


Figure 4: Types of documents

Educational programs can be divided into two broad categories: *"disaster and emergency education"* and *"risk education"*. The programs included in the former category generally aim to foster an increased capacity among children and young people to protect themselves, and understand and reduce the risk of disasters and emergencies. On one hand, they are intended to teach children and young people the causes and consequences of disasters and emergencies, and on the other, foster preventative behaviour and attitudes and reduce impacts at school, home and in their communities. They are designed to teach children about basic concepts such as disaster, risk, hazard, and provide them with self-protection orientations to identify, prevent and respond to specific threats and disasters. The majority of educational programs are issued by Civil Protection Authorities together with the Department of Education to be implemented in schools.

The second category of educational programs is devoted to risk education. These documents are similar to disaster and emergency education in terms of methods and children's participation but are more focused on security issues and intended to promote a culture of safety and reduce everyday risks, such as risky health behaviour and accidents in schools. Their general aim is to raise children and young people as responsible citizens endowed with "safety values".

Some examples of risk education initiatives in partner countries

ITALY: we find programs such as '**Sicurezza in Cattedra**' [Safety in the teaching post] an educational and management model developed in the Veneto region by SiRVESS, the technical body responsible for the promotion of regional policy related to occupational safety in the school (art. 11, paragraphs 1c and 4, of Legislative Decree no. 81/08), which aims to develop a culture of safety among children and apply safety in schools.

PORTUGAL: the NCPA launched the **Civil Protection Clubs** program in 2006 intended to stimulate the creation of civil protection volunteer clubs in schools (from the 5th to the 12th grade) to encourage children and young people to become more active in risk protection by providing information and training resources and developing activities.

No badis! (Spain)

SPAIN: almost each Regional Government in Spain has developed its own toolkit to foster safety culture among children and young people. '**No badis!**' [Watch out!] in Catalonia; '**¡A salvo!**' [Safe!] in Castilla León or '**Prevebús Joven**' in Andalucía. The range of ages of these educational programs is quite broad: from online games designed to teach four-year-old children to identify risky situations and danger signs to role playing games for 16 to 18 year olds.

UNITED KINGDOM: risk education in **safety centers** such as **Absafe** or **Dangerpoint** encompasses a broader range of safety issues, from domestic measures to the prevention of "anti-social", illegal or unhealthy habits. These safety centres aim to teach children (and adults) to lead safer, healthier lives through experiential learning.

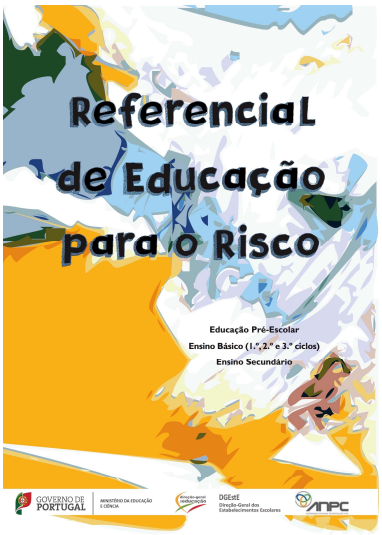
Absafe brochure (UK)

Regarding methods and learning and training strategies, educational programs are largely textbook-based and implemented in schools as instructional activities. In most countries, national civil protection authorities together with the minister of education publish pedagogical guidelines for teachers in primary and secondary schools to implement in the classroom.

Disaster Prevention Program for Schools (Spain)

This is the case with "*Programa de Educación para la Prevención en Centros Escolares*" [Disaster Prevention Program for Schools] in Spain or the "*Referencial de Educação para o Risco*" [Framework for Risk Education] in Portugal, or the "*Scuola Multimediale di Protezione Civile*" [Multimedia school of Civil Protection] in Italy.

These are guidance documents for the implementation of complementary curriculum components related to risk education in all levels of pre-higher education. These guidelines usually start with an introduction to the national system of civil protection that aims to make children and young people recognize civil protection practitioners in an emergency situation.



Framework for Risk Education (Portugal)

Instructional activities in textbooks: the case of Greece

The Ministry of Education has published interdisciplinary or single subject curricula entitled 'Environmental Education', 'Health Education', 'Flexible Zone', 'Geology-Geography', 'Physics', 'Home Economics' and 'Environmental Studies'. These set out the skills and knowledge children need to achieve at each grade and suggest activities to enhance children's familiarity with the environment and the risks and problems that can arise. The curricula aim to familiarize students with several hazards and make them aware and knowledgeable regarding the role and dimensions of human actions on the environment.

Together with instructional guidelines on self-protection at school and home, these programs usually include lectures and activities on specific disasters. Earthquakes, floods, tsunamis, volcanoes, bush fires, and nuclear risks are the disasters most frequently covered. These programs tend to include contents that can be used and adapted by teachers and schools according to the grades and subjects in their curricula.

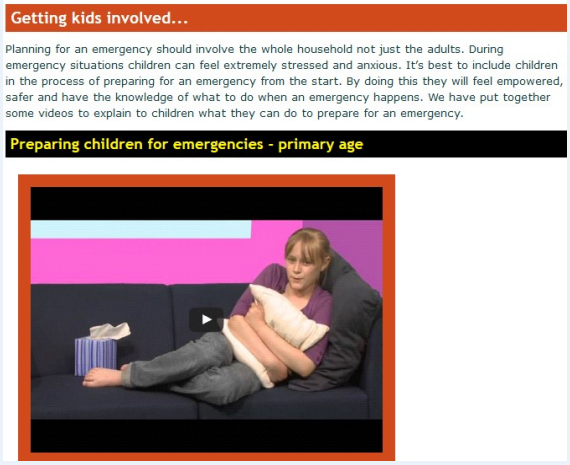
As most of these programs are text-based and instructional, they are usually supported by books and comic books, online games and resources, toys, videos and even music. These pedagogical guidelines usually include creative activities such as the organization of live shows, plays or drawing contests and often include hands-on activities in Civil Protection or Fire-fighter premises. These complementary materials and events are intended to familiarize children with civil protection authorities and establish a relationship of trust from an early age (3-5 years). The participatory levels of these programs and actions vary but all attempt to raise awareness of disasters and risks children might have experienced or will likely face in the future.

Stories and toys: the example of the United Kingdom

The Local Resilience Forum (LRF) of the UK counties Hampshire and Isle of Wight have developed the '**Susie the Childminder**' books to help primary school children stay safe and prepare for emergencies. The stories can be read online and are followed by activities designed to be fun whilst reinforcing the key messages.

Similarly, Northamptonshire's LRF provides primary school age children with **a toy bear called Edward Paws** alongside fun activities to help them understand what they can do to prepare themselves and their family for emergencies.

Videos: the example of the United Kingdom



With a strong focus on flooding, Humber and Cleveland's LRFs provide, respectively, **videos for primary and secondary schools** and a puppet show for primary schools.

Hands-on methods: the example of Portugal

The municipal civil protection service of Lisbon has a program named '**Crescer na Segurança**' [Growing up in Safety] that includes a mock-up house, '**Casa do Tinoni**' [House of Tinoni] where school groups learn through hands-on methods about different risks, including the two most significant in the city: earthquakes and urban fires.

Multimedia tools: the example of Italy

The main education program developed by the National Civil Protection Authority is '**Scuola Multimediale di Protezione Civile**' [Civil Protection Multimedia School].

It addresses different ages, primary (9-10 years) and secondary (11-12 years) schools, and focuses mainly on earthquakes, volcanoes, floods, bushfires, industrial risks, landslides, preparedness and self-protection measures and the civil protection system.

It comprises educational activities and games that can be used by teachers through an e-learning platform, with the opportunity of organizing a final event to learn the operating structures of Civil Protection.

Also in Italy, '**In vacanza con Sunny: una vera frana!**' [On holiday with Sunny: a true landslide!] aims to increase hydrogeological risk awareness and promote a culture of civil protection among primary school children through the creation of interactive learning material focused on landslide risk. The material includes a wide choice of adventures by a dog named Sunny, bringing in scientific experiments, games, models to be built, brochures and guides, to promote civil protection in primary school curricula.

On geological risks we also find '**Sebastiano ti prende per mano**' [Sebastian takes you by the hand] a project to enhance children's perception of natural hazards through the language of music and images. A CD with 8 songs for children and teens has been produced, each with a specific geological risk theme and accompanied by animated video clips, and a theatre representation titled '**Sebastiano all'Opera**' was performed by school age dancers in Florence.

It is also worth mentioning the Italian project '**Responsabili studenti sicurezza**' [Student representatives for safety] and the award '**Vito Scalfidi**' for their participatory approach. The first is intended to train students as school safety managers, and the latter a competition calling for innovative projects on school and community safety issues and active citizenship.

Analysis of EU and nationally funded projects has thus revealed that innovation in methodology is becoming an important area of development in this field. Most EU projects are intended to develop and implement innovative tools for training children and young people, be it formally in school curricula, guidelines and handbooks (YOUTHPREVENTION.PRO, RACCE and FLOODCOM) or informally through role games (RINAMED and FLOODCOM) or online games and story books (YAPS). The projects usually include educational and complementary videos and/or communication activities, such as an exhibition (RACCE) or radio announcements (PROmyLIFE).

Suggestions about education programs in European research projects

POP-ALERT, for instance, remarks that children may react better to games, simulation and fun activities (in contrast to their parents, who might be more receptive to informative campaigns on how to protect their children). Interestingly, this project also notes that while most parents agreed their children should receive "emergency preparedness training" in school, did not consider the school itself the most appropriate organiser of preparedness training, preferring local authorities and emergency management agencies.

CapHaz-Net, meanwhile, remarks on the importance of adapting any educational program (both for the school curricula and in teachers/educators' training) to the local context, taking into account regional and local risks, and past events and memories of the specific area. This requires strong individualisation, i.e. paying attention to local-specific hazards, and relying on more educational environments than schools alone. For this project, training during childhood and adolescence is considered a key tool in preparedness policies, since it enables children to grow up "with preparedness embedded in their way of living" and facilitates their awareness. They, in turn, can transfer information to their parents/families "and indirectly train the adults".

Although we have located various kinds of educational material and activities, and noted acknowledgement that this is an important area of development, educational programs do appear to be both scarce and unevenly implemented. Most countries (such as Spain, Italy, Portugal and Greece) have legislation relating to self-protection measures in schools,

including mandatory emergency plans[8], but only in Greece[9] are textbooks on disaster and emergency education distributed to all children for use as the main educational material in every school. In other countries, only those schools with enough resources or with teachers sensitized to civil protection issues are such activities and textbooks used in the classroom. For instance, in Scotland (UK), Education Scotland has issued their "Ready Scotland" website to bring emergency resilience into the curriculum, but this is not a mandatory requirement for schools. And as practitioners told us in Spain, the exclusion of emergency education from the curriculum makes it almost impossible for emergency and disaster education programs and activities to be implemented due to time constraints and lack of resources. The Spanish Association of Civil Protection Professionals and Volunteers (EDCIVEMERG) have long campaigned for these to be included in the curricula of primary and secondary school. They claim these education programs are crucial to make "*children of today capable of saving lives tomorrow*".

Children and young people are rarely afforded an active role in training or education programs: in most countries they are merely expected to follow teachers' instructions. Illustrative of this is the Safety Manual for Schools published by the Portuguese Ministry of Education in 1999, updated in 2003, which establishes a set of safety rules against risks in the regular operation of schools, health and hygiene, fires and earthquakes. The document sets out measures intended to raise awareness of emergency procedures, including awareness campaigns, training sessions for teachers and protection and evacuation exercises. It is clear the agency is wholly reliant on the teachers tasked with instructing and directing students during an emergency. This is also present at the national legislative level: Article 7 of the Portuguese Basic Law on Civil Protection (Law number 80/2015, published on the 3rd of August 2015) states that: *"Education programs, at their different levels, must include civic training, civil protection and self-protection matters, in order to disseminate practical knowledge and rules of behaviour to adopt in the case of severe accident or disaster"*.

[8] In the case of the UK, further to the Civil Contingencies Act 2004, it is the responsibility of all public bodies to set in place emergency plans for the continuity of their service. The Local Authority advocates that schools should have appropriate and effective emergency plans.

[9] The Ministry of Education, Research and Religious Affairs, in collaboration with other ministries and authorities, is responsible for informing and educating students in relation to the risks and hazards.

Children and young people are specifically addressed in a number of **public awareness campaigns**. These are usually organized by the municipalities of partner countries, in coordination with Local and Regional Civil Protection Authorities, and are legally enforced. In Portugal, for instance, the law that defines the institutional and operational framework of civil protection (Law 65/2007) states that municipalities are responsible for *"Information and training of the population of the municipality, seeking to promote their awareness on self-protection and cooperation with the authorities"* and should *"promote information campaigns on preventive measures, aimed at specific segments of the target population, or about specific risks in previously defined likely scenarios"*.

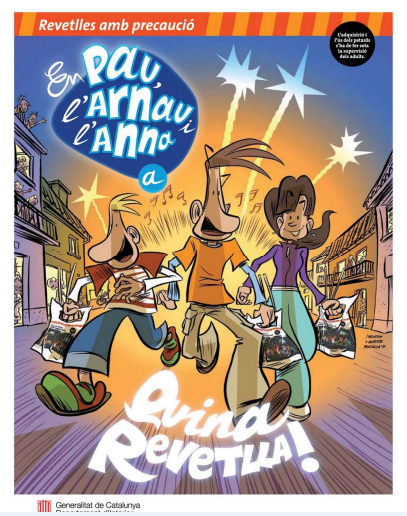
Some examples of awareness campaigns in partner countries

ITALY: one of the main national prevention initiatives is the awareness campaign "**Io non rischio – Buone pratiche di protezione civile**" [I don't risk – good practices of civil protection]. This campaign is organized in public spaces by civil protection volunteers and addressed to the public to raise awareness about civil protection best practice.

PORTUGAL: a yearly exercise named "**A terra treme**" [When the Earth shakes, [based on the U.S. model "ShakeOut"] takes place each November, promoted by the Civil Protection Authority.

Schools, companies, NGOs and individual citizens are invited to simultaneously take protective measures against earthquakes. The 2015 exercise had thousands of registered participants, most of them in schools.

Some examples of awareness campaigns in partner countries



SPAIN: children and young people often play with fireworks when participating in "correfocs" (parades that take place mostly in Catalonia, Valencia and the Balearic Islands, in which people dress as devils, dance, light fireworks and run through the streets) for Saint John's festival and other popular summer events. At these times, Regional and Local Civil Protection Authorities disseminate posters and comic books "to alert parents and young people about the dangers of fireworks and provide specific instructions on safe handling.

ITALY: Civil Protection Summer Camps "Ache io sono la Protezione Civile" [I am the Civil Protection too] organized by the National Civil Protection Agency.

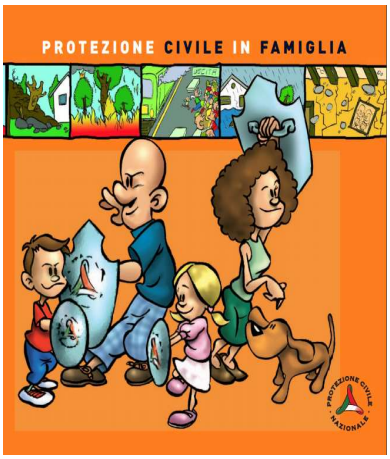
These camps are intended to make children and young people aged 11-17 aware of how to respond during emergency situations and disasters and the active role they can play in protecting the environment, territory and community, such as preventing wildfires

The purpose of these civil protection campaigns, like educational programs in schools, is to provide children with a number of capabilities: to identify risks, threats and dangers; to correctly interpret emergency signals and alarms; to acquire preventive behaviour; and react effectively and safely in an emergency situation. However, these programs also address other social spaces such as the home, city and neighbourhood. The primary goal is to foster self-protection and ensure children and young people cooperate in the effective implementation of emergency plans.

These awareness campaigns are therefore strongly linked to emergency plans set at a regional and local level to prevent specific risks and disasters, and include school and municipal emergency plans, and self-protection recommendations for households.

As with educational programs, self-protection guides intended to help families develop an emergency plan are usually disseminated by local civil protection authorities. These guidelines set out clear instructions on how the family and community should behave in the event of the most common risks in that area, whether fires, toxic spills, earthquakes, floods or wildfires.

Self-protection guide for schools in case of nuclear emergency (Spain)



Civil Protection in Family (Italy)

In some cases there are very simple educative activities attached to these guidelines specifically addressed to children and young people. Largely based on painting and drawing exercises, these are intended to enable children to recognize civil protection actors and memorize very precise instructions of what should be done in the face of specific events. As is the case with educational programs, such awareness campaigns and support programs are therefore highly specific to each country's principal threats: hydrological in the case of UK (floods), geophysical in the case of Greece, Italy and Portugal (earthquakes and tsunamis), climatological and meteorological in Portugal, Spain and Greece (drought, bushfires) and the refugee crisis[10] in Greece.

[10] Although a controversial approach, in this report we consider the refugee crisis in Greece and the housing emergency in Spain as disasters. Firstly, because they are serious disruptions of the normal functioning of a society or community: both have widespread human, economic and social impacts and exceed the ability of a community to cope. Secondly, because this enables us to challenge the mainstream definition of disasters as phenomena caused only by geo or biophysical hazards: social processes, such as war, financial speculation or corruption, can also cause severe disasters.

Finally, children and young people are the target of **support actions and programs** as part of disaster response and recovery processes. In fact, the majority of these are addressed to children and young people with the intention of mitigating emotional trauma, a highly significant problem acknowledged in most documents. As it is stated, for instance, in the UK *"Non-statutory guidance accompanying the Civil Contingencies Act 2004"*, in the event of a disaster or emergency: *"The emotional effects on children and young people are not always immediately obvious to parents or school staff. At times, they find it difficult to confide their distress to adults, often because they know it will upset them. In some children, the distress can last for months and may affect academic performance. Families, caregivers and professionals who deal with children and young people need to be aware of the range of symptoms that they may show after a major trauma. They should note any changes in behaviour and alert others"* (p. 129).

A number of the psychologists interviewed noted this could be a greater problem when no people had been injured but homes were destroyed, as in most wildfires. In these cases, trauma symptoms are often silenced by parents and educators making intervention difficult. This is in fact the principal concern of most supporting programs aimed at children and young people.

Some examples of supporting programs addressing children

SPAIN: "**Érase una vez unos valientes**" [Once upon a time the brave ones!] is a toolkit developed by the Spanish Association of Psychologists to help children cope with the Lorca earthquake (2011). The main goal is to gain trust and help children express and discuss their experiences and feelings.

UNITED KINGDOM: "**Journey of Hope Program**" is a program to help children and adults to cope with traumatic events. The program was originally developed by Safe the Children USA after Hurricane Katrina in 2005, it has also recently been tested in Australia, Italy, Spain and New Zealand after events ranging from natural disasters to violent incidents.

The majority are developed by NGOs in collaboration with research institutions and professional associations, usually of psychologists and social workers, and are shaped as toolkits to be implemented by practitioners, teachers and parents in the field. We located

a few research projects on psychosocial intervention in emergencies specifically addressing children.

Some examples of psychosocial intervention in emergencies addressing children

ITALY: "**Ambiente Terra, Ambiente Bambino. Dalla gestione dell'emergenza, alla valutazione, cura e monitoraggio del disagio post-traumatico nei minori Aquilan**" [Earth environment, Child environment. From emergency management, assessment, treatment and monitoring of post-traumatic discomfort of children from l'Acquila], a project aiming to evaluate, treat and monitor the discomfort states and/or psychological disorders resulting from the exposure of minors to catastrophic events with a focus on clinical manifestations of Post-Traumatic Stress Disorder. The objective was to analyse the intra-psychic conflicts that hamper the processing of trauma and the psychological and social development of the child.

SPAIN: some researchers at the University of Castellón (Spain) have been working on a national project about psychosocial intervention strategies in disaster contexts, with a number focusing on how to deal with grief and aid resilience within the educational context. One member of the research group, Mónica García Renedo, did her PhD research on the psychosocial impact of the Madrid terrorist bombings in 2004 on geographically-distant children (García Renedo, 2008). As part of her research, and in collaboration with schools, the author distributed questionnaires to children (between 8 and 12 years old), their teachers and parents with the aim of developing psychological models of intervention with children.

Despite the fact psychosocial intervention in a crisis situation is deemed vital and children are widely acknowledged to be vulnerable, we have found little specific guidelines or training for civil protection staff and volunteers on how to take care of children during emergencies in the partner countries.

Guidelines for civil protection staff and volunteers

ITALY: "**Orientamenti per la protezione dei bambini e deli adolescent nelly emergence in Italia**" [Guidelines for the protection of children and adolescents in emergency situations in Italy] by Save the Children.

GREECE: "**Kateuthintiries odigies gia ta paidia pou zitoun asilo**" [Guidelines on Unaccompanied Children Seeking Asylum], published by the Office of the United Nations High Commissioner for Refugees (UNHCR) and the Greek Ombudsman (2005).

Guidelines on Unaccompanied Children Seeking Asylum (Greece)

It is worth noting that the latter document clearly states that respecting the wishes and rights of children and young people to participate is essential. "*When decisions relating to unaccompanied children are to be made, their views and wishes should be taken into account. The adoption of measures that facilitate their participation in the decision-making process according to their age and maturity is essential. This makes it crucial to train practitioners, including police personnel and other officials. Minors are entitled to participate directly or through a legal representative or guardian or adviser in any legal or administrative proceeding. They should also have the opportunity to be encouraged to express their opinions, concerns and complaints about the way guardianship, care and health services, education, and legal representation are applied*" (p. 8-9). Such advice is sadly lacking from the majority of programs and actions we have analysed.

In fact, this lack of guidance for Civil Protection authorities on how to treat children during emergencies is the subject of a number of EU projects, such as "Self-protection with children...", SAMETS, "Child Trauma Network" or SAVE ME, all intended to increase expert knowledge about children in disaster contexts.

3.2. Actors involved

The majority of these programs, actions and plans are run by public organisations but developed and implemented at a local level by regional and local civil protection agencies. In Greece for instance, most programs on earthquake prevention and preparedness for children and young people are designed and implemented by the Earthquake Planning and Protection Agency (OASP), a public organisation that coordinates related civil protection actions and research endeavours. In the UK most of the pedagogic guidelines and resources are created through Local Resilience Forums (England and Wales) or equivalent organisations (Scotland and Northern Ireland) and revolve around floods and severe weather conditions. In Italy, the main education program *"Scuola Multimediale di Protezione Civile"* [Civil Protection Multimedia School] is developed by the National Civil Protection Agency.

In some countries, this can lead to fragmentation and a lack of continuity, viewed by many practitioners as a significant obstacle. Between local and national level, as previously noted, various actors develop relationships and agreements for the development of projects, training and awareness campaigns, but these do not ensure national coverage and often lack continuity. Therefore, despite creating interesting experiences and replicable best practices, there is often a lack of long-term sustainability. A risk-reduction strategy at national level that could boost the development of these initiatives and maintain their continuity appears to be missing. For instance, according to interviews with practitioners, Italy has the largest amount of informative and educational materials, based on agreements between institutions and resource-producing organisations at local and national level. These materials and programs take a theoretical approach to civil protection and lack repeated and sustained training and drill activities. Consequently they fail to produce citizens – including children – with realistic perceptions of local risks.

Although there are important differences between partner countries (see figure 5), our scoping has identified increasing involvement by NGOs in the development of programs and actions addressing children and young people about disaster and emergency response. Most of these organizations adapt their background and expertise in international cooperation and development in crisis situations for the European context

(as is the case with Save the Children). In Italy and Greece, for instance, organizations such as the United Nations Children's Fund (UNICEF) have taken on issues usually addressed by public social services, such as poverty and the marginalization of children and young people. This has contributed to framing the problem as a social disaster produced by the global economic crisis (or global economic war) and raises issues such as the neglect of children and young people's needs and opinions by national agencies. These international organisations are also important for their role in introducing a global and more child-centred approach to many disasters and for extending their range of action beyond the usual disaster/risk-reduction purview.

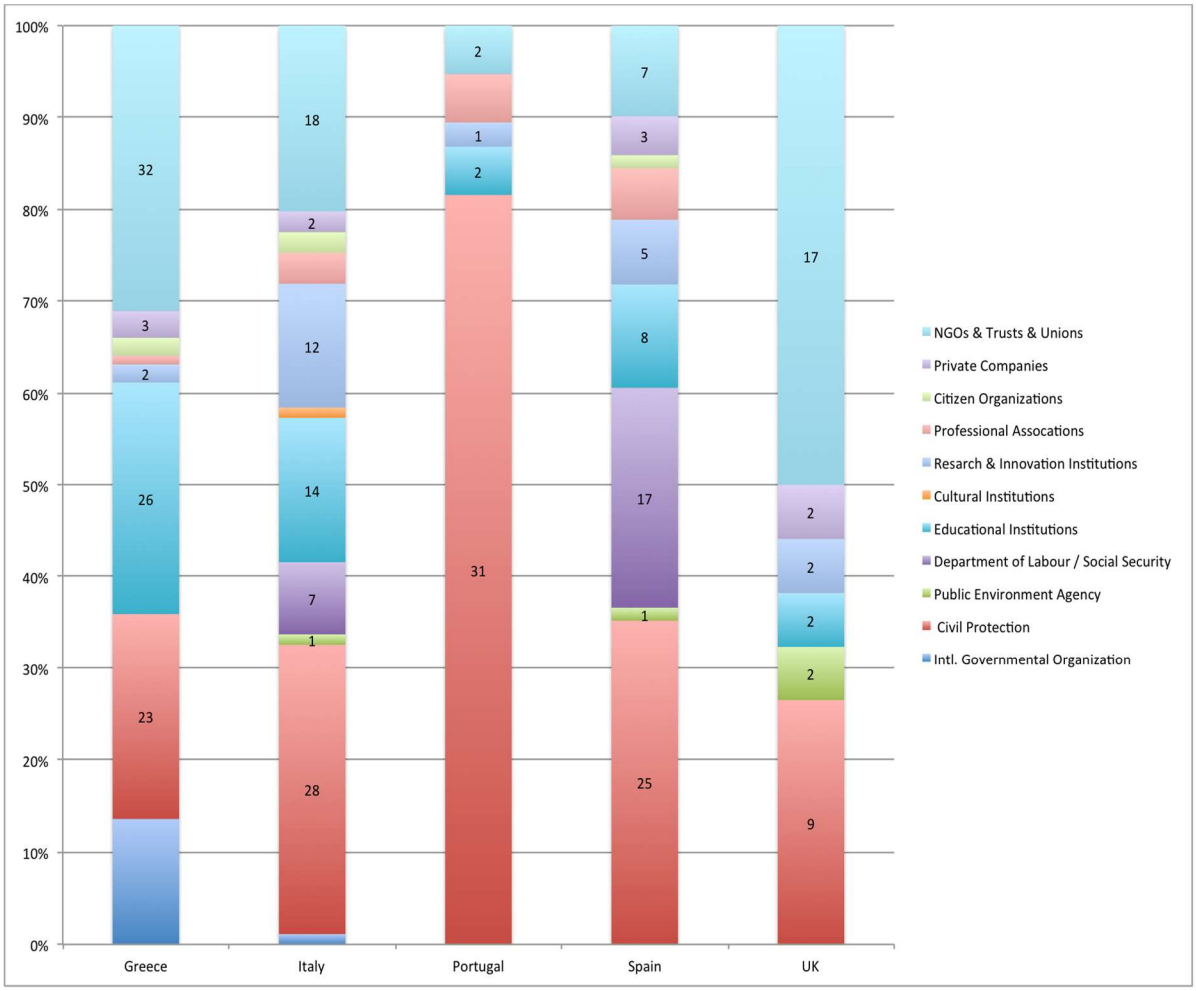


Figure 5: Types of organisations involved

International NGO's initiatives:

UNICEF has produced pedagogical materials to raise awareness about the refugee and financial crises among students in Greek and UK schools ("**In Search of Safety: children and the refugee crisis in Europe**") and promote the creation of videos and games in Greece to make children aware of poverty, social exclusion, rights violations and refugees.

Also, through the campaign "**Voices of Children in Emergencies**", the **European Union and UNICEF** call attention to the experiences of millions of children around the world who are victims of natural disasters, food crises, conflicts and civil unrest, and give some the opportunity to tell their stories to a worldwide audience, through both amateur and professional videos with comments and photos. The website of the campaign enables visitors to strengthen the voices of these children through their own digital social networks.

Another example is "**Passages**", an experiential simulation-based game by **the United Nations High Commissioner for Refugees (UNHCR)**. Through the process of dramatization and the simulated reality, participants can experience events and situations faced by refugees in their attempt to find a safe shelter in another country.

Similarly, **Actionaid** in Greece has also created an educational digital game, "**Apostoli Rouanda**" [Mission Rwanda], which enables students to face difficult situations, such as a lack of food, water, doctors and education.

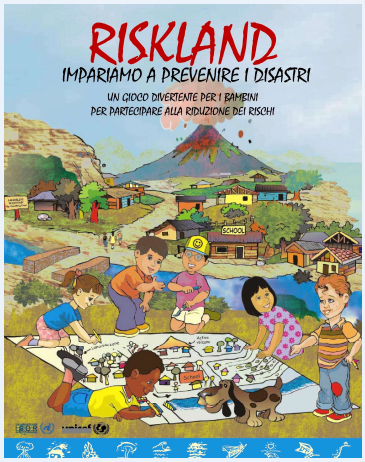
In a number of countries, NGOs also play a role in educational programs and awareness campaigns. Whereas risk education programs in the UK are usually implemented by safety centres[11], generally not for profit and run by charities, trusts or local authorities, in other countries this has largely been taken over by the public sector, guided by either the

[11] http://www.safetycentrealliance.org.uk/

Department of Labour and Education or the National Civil Protection Authority. In some cases, NGOs may also play a role in developing and implementing new educational programs in DDR.

International NGO's initiatives: Disaster Risk Reduction

Local Resilience Forums in the UK, such as Hampshire, also include links to the **UN Office for Disaster Risk Reduction's** (UNISDR) simulation game "**Stop Disasters!**", aimed at secondary school age children and young people.



Lombardia regional school of Civil Protection – Eupolis – in Italy and the general Secretariat for Civil Protection in Greece have used a game called **Riskland** for DRR that was created by **UNICEF** and **UNISDR** for non-European contexts.

Local NGO's initiatives: the example of Spain

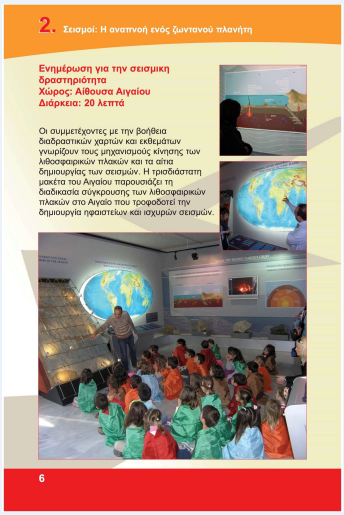
Fundació Pau Costa (a Catalan association of fire-fighters) has developed **MEFITU**, a project addressed to schools close to zones affected by wildfires. The main aim of the program is that children and young people (but also teachers and parents) change their relationship with the scorched landscape by experiencing how woods regenerate following a wildfire. With this program, they intend to create an ecological culture of fire.

MEFITU workshop in action by Fundació Pau Costa

Education and Cultural institutions also have an important role in fostering prevention and preparedness, usually in partnership with national civil protection agencies. Museums, for instance, are taking an important role in the development of disaster education programs. Collaboration between the Department of Education and research institutes devoted to the study of specific disasters are also crucial in producing educational materials, enabling children and young people to increase their knowledge on a specific topic, while enhancing their capacity to understand and respond effectively to disaster situations. This is especially salient in countries that have previously experienced earthquakes, such as Greece, Italy, Spain and Portugal.

Education and Cultural institutions' initiatives: some examples

GREECE: The **Geodynamic Institute of the National Observatory of Athens** has signed a Cooperation framework with schools to plan and implement activities and workshops for students and teachers in relation to seismology and geology. Thanks to this, educational visits can take place and schools can borrow seismological tools for educational purposes. **The Greek National Archaeological Museum, the Fire Museum, and the Natural History Museum of Lesvos** also provide various educational programs for children to promote their awareness and readiness.



Natural History Museum of the Lesvos Petrified Forest

SPAIN: we have found other examples of collaboration between research institutions and education authorities in developing learning programs for disaster education in schools. After an earthquake in 2011, a group of high school teachers and professionals from Lorca, together with geologists from the Department of Geodynamics at Universidad Complutense de Madrid, created "**EsLorca**" [It's Lorca], a set of activities aiming to raise earthquake awareness among students and citizens.

Education and Cultural institutions' initiatives: some examples

ITALY: the **Instituto Nazionale di Geofisica e Vulcanologia** (INGV) is involved in the project for schools, **EDURISK**, which provides teachers with lessons to present, the textbook "A prova di terremoto" [Earthquake proof], and tools and resources to create training courses on seismic and volcanic activity. Some of these materials are extremely innovative and participatory.

For instance, the educational kit "**Se arriva il terremoto**" [If the earthquake comes], for children at kindergarten (4-5 years) and primary school (6-7 years), is a set of tools that can be managed independently by the children themselves. The INGV also provides guided tours, seminars and educational courses for schools at the Institute.

Other research institutes, such as the Rete del **Laboratori Universitari di Ingegneria Sismica (ReLuis)** and the **University of Basilicata**, in collaboration with the Italian National Department of Civil Protection organize the "**Piattaforma Sísimica**" (Seismic Platform), a simulator that enables people to live the earthquake experience, as part of the national awareness campaign "**Terremoti d'Italia**" [Earthquakes in Italy].

PORTUGAL: researchers develop many activities with schools aimed at risk education, particularly in the case of earthquakes, from lectures to open days at the universities during Science and Technology week. For instance, the **Faculty of Sciences** holds a "day of natural risks", when visiting school groups undertake hands-on activities under the label "**CSI Planet Earth: disasters under investigation**". Researchers also visit schools with an "earthquake simulator" to train children on earthquake self - protection techniques

3.3. Children and young people's participation

This scoping review has uncovered very little evidence of children meaningfully participating in emergency management or community resilience work in the partner countries. As figure 6 shows, only 20% of the actions, programs and plans addressed to children and young people involve either adult-initiated shared decision-making with young people or are led and initiated by children or young people themselves. Only this 20%, therefore, can be considered to be participative according to Harts' Ladder of children's participation (Hart, 1997)[12].

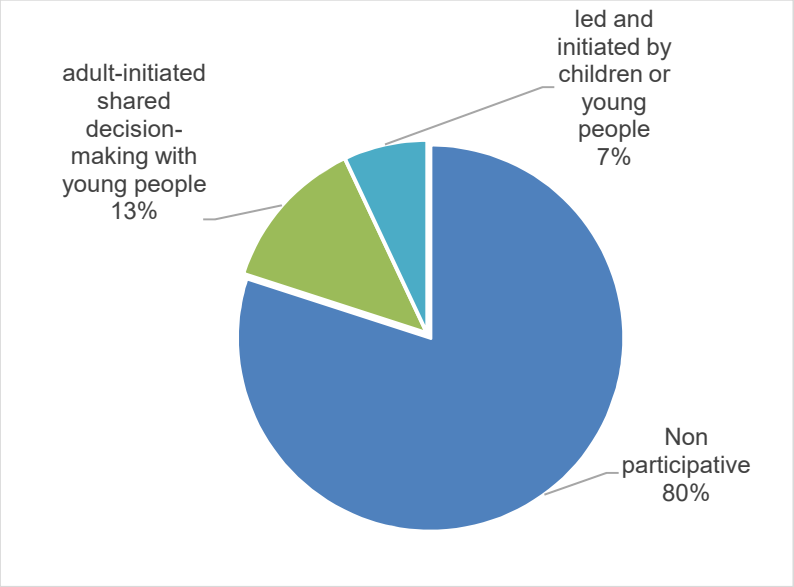


Figure 6: Programs, actions and plans involving adult-initiated shared decisions with young people or lead and initiated by children or young people.

As figure 7 shows, the degree of children's participation in national programs varies, with Italy and the UK having higher proportions than other partner countries.

[12] According to Hart's ladder of children's participation (Hart, 1997), actions can be considered as participative if they are adult-initiated with decisions shared with youth, youth-initiated and directed, or youth-initiated with decisions shared with adults.

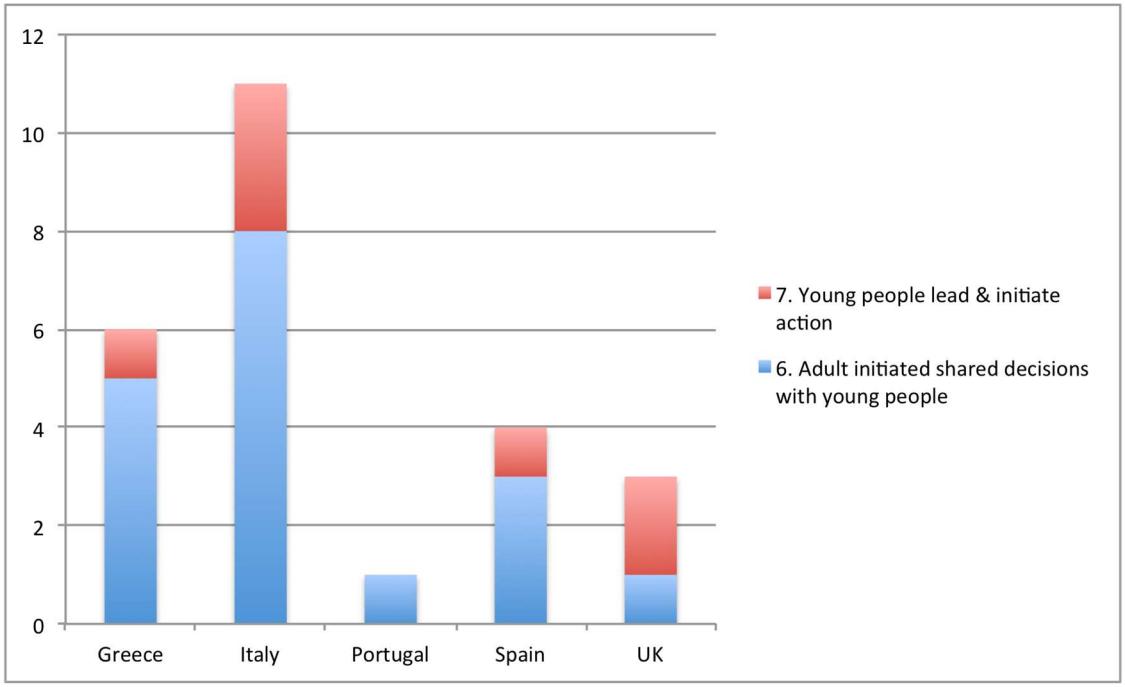


Figure 7: Programs, actions and plans in partner countries involving adult-initiated shared decisions with young people or lead and initiated by children or young people.

In the programs and actions analysed – which are mostly educational – children and young people are rarely considered as a group with valuable experiences and knowledge that should be taken into account, or as a leading group in specific areas of disaster management and risk reduction. They are generally considered passive beneficiaries/recipients, rarely playing any active role in the realization of these programs.

Low participation levels: some examples

In the context of the Making Resilient Cities (UNISDR) in Potenza (**Italy**) and Amador (**Portugal**), despite a Permanent Panel on Youth and Resilience to Disasters being established, a relevant level of public participation is yet to be achieved. In Potenza they organized a school contest called "**Resilient school. Let's build it together**" and in Amadora the civil protection team conducts workshops in schools as part of their awareness and training programs, based on the principle 'that the children are at the centre of the neighbourhood network, able to disseminate information to their families'. An interview with the civil protection officer in Portugal revealed there are no formal mechanisms of consultation with children even though the workshops include participative, hands-on activities, where children at times provide novel contributions and recommendations. These are sometimes included in the reports facilitators send to their superiors.

This lack of child participation in disaster management may be encouraged by the legislative frameworks of partner countries, which stipulate that the population should be informed and trained, but make no mention of participation by children and young people.

Children's participation in partner countries' legislation: some examples

ITALY: in Article 3 of the **Law on Civil Protection** and in **the Operating Instructions for the Preparation of a Municipal Emergency Plan**, (NDCP, O.P.C.M. 3606/2007) no specific references are made about informing/training children or training on how to treat them, neither is any mention made of the contribution children as citizens can make, or the need to consult them in defining and assessing risks and vulnerabilities and prevention, or mitigation and preparation measures.

PORTUGAL: the **Basic Law on Civil Protection** (Law number 80/2015) says that populations are to be "informed and trained, in order to raise awareness regarding self-protection and collaboration with the authorities" (Article number 4). Citizens have the right to be informed on risks and public information seeks to 'enlighten populations on the nature and aims of civil protection, to make them aware of the responsibilities of each institution and raise awareness on self-protection' (Article 7). However, no mention is made of the contributions citizens could make or the need to consult them in defining and assessing risks, vulnerabilities and prevention, or mitigation and preparation measures. Similarly, the PROCIV Technical Notebooks n. 3 and n. 7 makes public consultation mandatory for emergency plans, but does not go into details on how this should be conducted, other than setting a minimum period of 30 days However, citizen participation in these types of processes is usually low and no specific actions for children are included.

SPAIN: according to the **Law on Civil Protection** (1995), citizen involvement is mandatory and cooperation considered a duty. "All adult citizens will be obliged to cooperate personally and materially with Civil Protection Authorities if requested. Every 18+ citizen, but especially non-employed, private and public security and broadcasting services must collaborate in these terms with Civil Protection Authorities in cases of emergency". However, collaboration is not framed as participation but as an obligation to comply with Civil Protection rules and commands regarding prevention and the protection of people and goods, and accept their intervention in a situation of emergency (Law 2/1985, Cap. II, Art. 4).

Children's participation in partner countries' legislation: some examples

UNITED KINGDOM: guidance for **Local Resilience Forums** (LRFs) provided by the Cabinet Office – the UK Government Department responsible for overseeing emergency preparedness, response and recovery – was last updated in July 2013 and makes no mention of children or young people. Accompanying this guidance is a Cabinet Office document, which aims to further clarify what is expected of responders. Children attract one mention in this latter document under "hard to reach" groups.

Those programs and actions that do attempt to involve children and young people as active agents tend to address the consequences of specific disasters. Their main aim is to generate a space where the voices of children and young people can be heard and provide them with the opportunity to participate in the recovery process, either through the knowledge they gain or because they are actively involved in undertaking specific tasks.

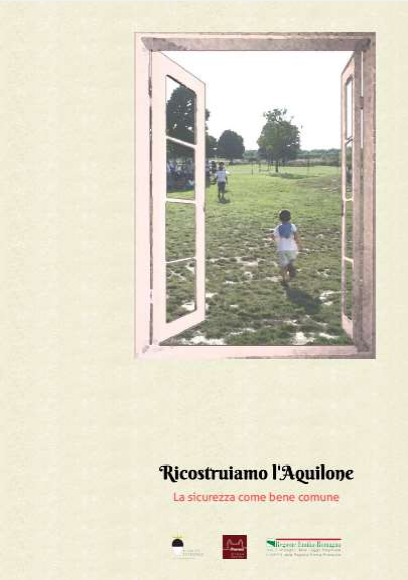
Involving children and young people as active agents: some examples

SPAIN: we discovered interesting experiences of young people participating in recovery processes. The most interesting was "**Quan perdem la por**" [When fear vanishes], a comic book created by a 15 year-old member of the **Plataforma de Afectados por la Hipoteca** [Platform for People Affected by Mortgages]. The story depicts the life of a family about to be evicted from their home, and aims to raise awareness about this problem from the perspective of a child.

UNITED KINGDOM: the community work done after the **Buncefield industrial accident** (2005-2007) shows the importance of providing opportunities for children's voices to be heard in the response and recovery phase of a disaster. This project established a young people's forum, together with an art competition, to discuss progress on investigations into the emotional long-term impact of the event on children and families.

Involving children and young people as active agents: some examples

ITALY: we found an interesting example called "**Vibrazioni**" [Vibrations], a radio/podcast laboratory run by secondary school students about L'Aquila's 2009 earthquake, through the voices of young people and citizens who experienced it.



Also related to this disaster and worth noting was a participatory project called "**Ricostuiamo l'Acquilone**" [Rebuild the kite], which involved children in the reconstruction of the school garden after the earthquake in Emilia Romagna. This case is especially interesting because the participation of children was not only deemed therapeutic, helping the children cope with the socio-psychological impact of the disaster, but also beneficial in acknowledging them as social actors who could meaningfully contribute to restoring the community.

We have also identified a number of programs and actions that attempt to foster a "preventive culture", in which children and young people are encouraged to educate or even watch over other members of the family or community. In some activities intended to teach risk reduction behaviour in everyday situations, children and young people are depicted as responsible actors capable of keeping a watchful eye on their parents and teaching them what to do when they are not following civil protection procedures. They are in effect turned into civil protection allies, charged with ensuring family protection plans are implemented correctly.

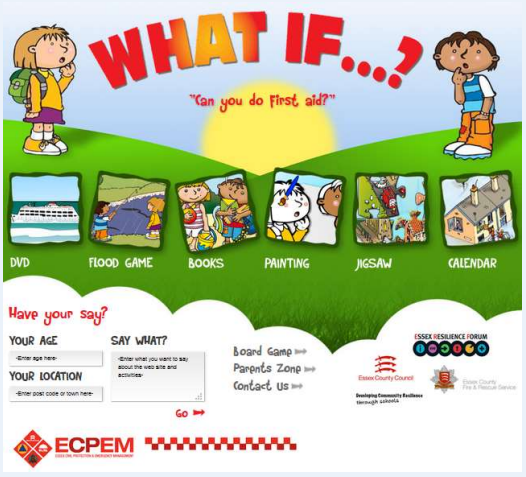
Fostering a "preventive culture": some examples

ITALY: there is an interesting project called "**Responsabili Studenti per la sicurezza**" [Student representatives for safety] for training students as School Safety Managers, who take part in safety management alongside school personnel, as established by the law 81/08. In this case, safety management is collaboratively undertaken with the students.

Fostering a "preventive culture": some examples

GREECE: the active role of children and young people as disseminating agents of self-protection measures is acknowledged to be a crucial factor in earthquake preparedness. As stated in "**Plaisio sinergasias anamesa sto Geodinamiko Institouto tou Ethnikou Asteroskopeiou Athinas kai sxoleion**" [The Cooperation Framework Agreement between the Institute of Geodynamics of the National Observatory of Athens and schools of primary and secondary education] "students are capable of assimilating and implementing simple specific instructions which they can transfer to their family and friends and teachers because they are in touch with vulnerable population groups for a considerable time during the day" (p. 1).

UNITED KINGDOM: surveys conducted by Save the Children UK revealed a number of remarkable programs where participation went beyond tokenism. One is the **Duke of Cornwall Community Safety Award**, open to all uniformed youth organisations with young people between 10 and 18 able to participate. Members of these groups, such as Guides and Scouts, earn the award by gaining an understanding of how to prepare for and respond to a range of severe weather emergencies. They also take part in a simulated emergency exercise with local responders.

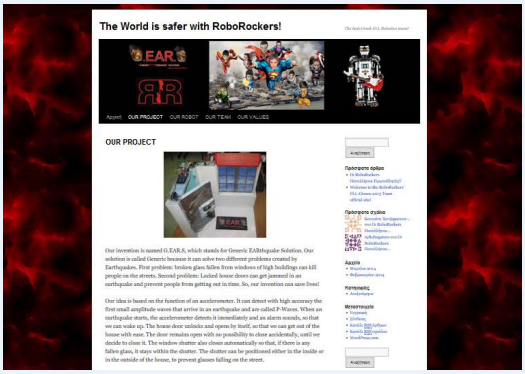


Another successful initiative in UK was the Essex LRF program known as **"What if?"**, a range of web based activities aimed at primary school children. The program teaches children aged 6-11 about risks in their communities through fun activities such as poetry, music, dance and games. Subsequent evaluation revealed that 59% of pupils involved their families in the project and 64% made a fire escape plan for their homes. The Hyogo Peer Review described the program as "a good soft way of raising citizens' awareness through active engagement. The school project in Essex supported by the program reflects good practice in educating children about risks at an early age, while at the same time engaging effectively with the wider community, and parents in particular, by using children as effective communicators" (p. 23).

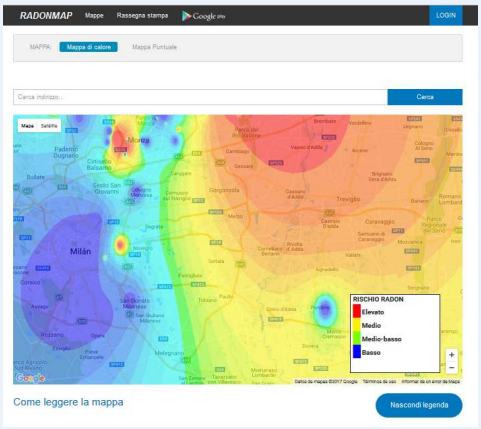
Finally, we have also identified a few programs in which children and young people participate as co-researchers investigating the causes and impacts of specific disasters before providing innovative solutions.

Children and young people as co-researchers: some examples

GREECE: at the University of Macedonia's Experimental High School, the Robotics Group during the year 2013-2014 devised a device for earthquake protection both in and outside buildings. For the Project entitled **G.EAR.S (Generic EARthquake Solution)** the students constructed a seismic buildings mechanism.



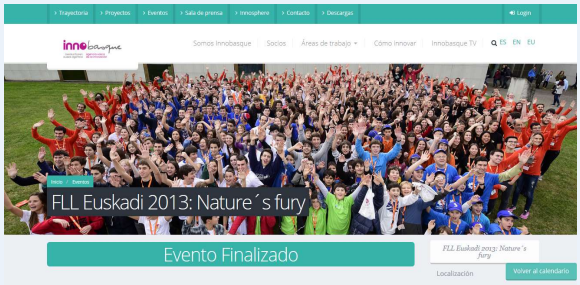
ITALY: we came across two interesting examples of children and young people as co-researchers in risk prevention and recovery. The first is "**Laboratorio Emergenza**" [Emergency Lab], a project for vocational school students from 14 to 18 years. Having analysed waiting areas in the earthquake emergency plans of 33 municipalities in the Terni province, they formulated proposals for their improvement and for conveying the municipal emergency plan to local people.



The second is "**Radonmap**", a school project in which an online map of the Monticello Brianza municipality was created to display levels of Radon gas (prevalent in that area) found in school facilities and houses. Students supervised and carried out detection and monitoring of the gas, maintained the website, and delivered an information and awareness campaign to the local population.

Children and young people as co-researchers: some examples

SPAIN: a contest organized by toy company LEGO and the NGO First, **First Lego League**, is a perfect example of this kind of participation. This annual international contest is designed to foster entrepreneurism and scientific skills in 10-16 year olds.



For the First Lego League in 2013, school teams were trained to work together in an innovative way to prevent, respond or recover from a specific disaster. For instance, in the Basque Country, a coastal, hilly and rainy region, the teams were trained by various experts in weather forecast-, sea storm alert- and fire detection-systems, along with wildfire simulation, effective disaster communication, and the role of ICT in disaster management and flood response. The teams developed specific emergency plans, new alert systems, rescue robots, awareness campaigns and many other innovative actions or infrastructures that could improve disaster management. This contest was revelatory for the Civil Protection Officers we interviewed, demonstrating to them the importance of children and young people's participation in disaster management and their potential for improving emergency plans, prevention strategies and recovery. As some of the practitioners we consulted agreed, this is the path Civil Protection should follow, with children and young people involved as actors, devising their own solutions for managing a disaster and, even more importantly, presenting these solutions as economic and social contributions to the community.

Despite these excellent examples of participation, children are scarcely involved – explicitly at least – in the vast majority of projects our scoping located. Although there are participatory projects which experiment with self-reliance, emergent and bottom-up community-led processes, multi-stakeholder dialogues and partnerships for knowledge exchange including lay citizens and other non-expert participation, they rarely mention children and young people as a specific group with specific needs in disaster management. Apart from CUIDAR, the only EU project to specifically address the effects of disasters on children with an age and culture-sensitive approach using participatory research

techniques, is POST-TSUNAMI. This project does not investigate a European context, however, focusing instead on the children of Tamil Nadu, India. It is interesting to note that some of these projects explicitly advocate for children and young people as allies in risk and disaster education and preparedness programs.

At a national level, there have been three highly relevant projects carried out by the University of Lancaster (UK) that reveal the importance of listening to young people's opinions, and of channeling their willingness to participate in both the recovery process and the establishing of resilience strategies for their communities.

It all began with the project "***Flood, Vulnerability and Urban Resilience: a real-time study of local recovery following the floods of June 2007 in Hull***". Although this was not child-centered research, the approach of the project, based in participatory methods and interactive working between participants, researchers and stakeholders, demonstrated the central role children had in the personal accounts of participants. The project included a qualitative account of diverse flooding experiences, with 44 people keeping weekly diaries over an 18-month period. These diaries revealed that the effect the floods had upon children was a widely held and prominent concern, with many people reporting that although children initially found the situation exciting, they experienced problems later as their lives changed in ways they would not have anticipated or desired. Simultaneously, family members were affected through the nature of their relationships with the children: for instance, parents felt guilty, believing they had let their children down and failed in their responsibilities, and grandparents missed the comfort and support from their grandchildren's visits. There was also a general feeling of frustration when undertaking simple tasks with children, and disruptions to care work after the flooding. Thus, children were seen rather as a problem than a resource, as was implicit in the Hull City Council FLOSS (Flood Support System) database typology of "household by tenure and vulnerability category" mentioned in the Final Report. This typology gives the Golden


defra

Environment Agency

Flood vulnerability and urban resilience: a real-time study of local recovery following the floods of June 2007 in Hull

Project Summary SC080008/S1

The flooding that took place during summer 2007 exposed the vulnerability of urban communities. A new report explores the experiences of people trying to recover from a flood, based on a study of residents in Hull who were severely affected by the 2007 floods.

Hull, summer 2007

Severe flooding in the UK in 2007 highlighted the need to help residents reduce the impacts of flooding and improve the way in which organisations such as the Environment Agency and local authorities can help people recover more effectively.

This project, carried out by Lancaster University and funded by the Environment Agency, Engineering and Physical Sciences Research Council and Economic and Social Research Council, used diaries, interviews and group discussions over an 18-month period to explore 44 residents' experiences of flood recovery. These methods were adapted successfully from a study of community recovery following the 2001 foot-and-mouth disease outbreak in Cumbria (see www.footandmouthstudy.org.uk). Interviews were also carried out with 18 frontline workers who were involved in flood recovery as part of their job.

The study found that it is the recovery process – rather than the flood itself – that is most difficult for residents deal with. This is largely due to a 'recovery gap' which emerges during the longer process of recovery, at the point where contingency arrangements provided to the affected community by the local authority diminish and where less well-defined services provided by the private sector (such as insurance and repair work) begin. In this gap, residents must manage their own recovery and coordinate the actions of the different private and public sector organisations involved.

Such project management is both time-consuming and stressful. It is made more challenging by the fact that it involves new kinds of skills and expertise – for example, learning to make a major insurance claim and finding ways to prevent poor workmanship within the home. Crucially, this must be done at the same time as having to deal with everyday tasks such as cooking, washing and commuting to work or school – many of which became more difficult as a result of displacement into temporary accommodation in different parts of the city.

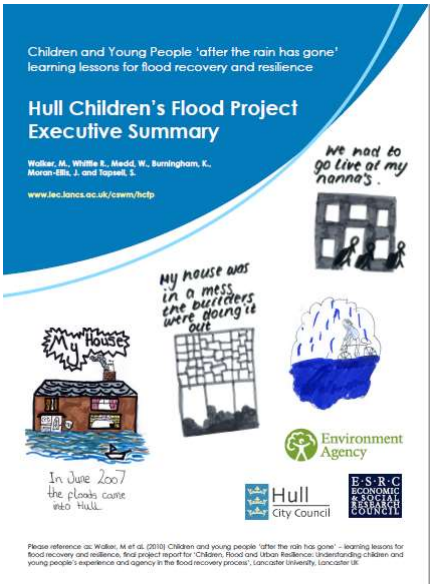
The challenges of flood recovery can be particularly intense for more vulnerable residents. This report found that vulnerability is hard to predict with reference to pre-defined groups, as it is the specific interaction of factors operating within a person's life which determines how and when they may become vulnerable. People's vulnerability can also change over time or take longer to emerge, such as a person's ability to access affordable insurance. However, this study identified specific difficulties associated with private tenants, council tenants and older people which may make them more vulnerable to floods.

The recovery process itself can generate new forms of vulnerability. The report found that the way people are dealt with by various agencies after a flood affects their long-term recovery. Many diarists coped well with initial problems brought by the floods, only to find their stress levels rising due to their treatment by private and public sector organisations involved in the recovery.

Flood and Coastal Erosion Risk Management R&D Programme SCHO0210BSBI-E-P

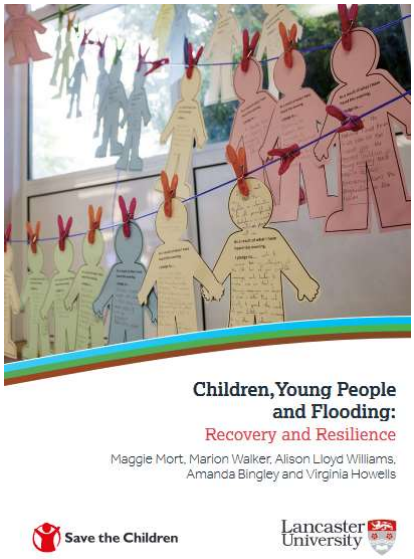
category to households with residents over 60 years of age, people with disabilities and single parents with at least one child under five. As this project raised the alarm that no-one was asking the children about how they were coping, the same research team decided to carry out two additional pieces of work with flood- affected children and young people.

The first one was "***Children, Flood and Urban Resilience: Understanding children and young people's experience and agency in the flood recovery process***" (2009 – 2011).

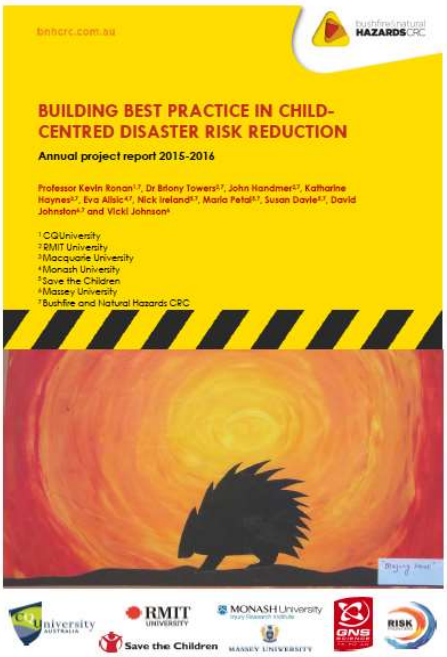


Participatory research was undertaken to identify key issues in children and young people's experiences and agency in relation to resilience to flooding and the flood recovery process, and assess the policy implications of children's perspectives. Working closely with local and national stakeholders and some partner schools, this included storyboard workshops and interviews with affected children and young people about their experiences of the floods and the recovery process that followed. The final report summarizes some key findings from the children's point of view, for example: their many descriptions of the flood and its impact; their most significant losses (tangible and intangible, objects and relationships, etc.) and their experiences of disruption. A number of general conclusions were made, including the fact that disasters can highlight – and sometimes intensify – pre-existing vulnerabilities, and that children's level of resilience is often influenced by the coping abilities (or lack of coping abilities) of those around them. Similarly, the report states that professionals must be aware that children and young people often define their own vulnerabilities differently than adults might.

The team then continued their research with flood-affected children in the third project: "***Children, Young People and Flooding: Recovery and Resilience***" (2014 – 2016). This collaborative work between Lancaster University and Save the Children researched children and young people's experiences of the UK winter 2013/14 floods and used creative arts methods to work with flood-affected children and communicate their ideas to policy. This project has generated several outputs to both disseminate their results and generate policy-impact, such as the drafting of Flood Manifestos[13], Top Tips for Insurers, and presenting their conclusions in the Houses of Parliament.



Finally, it is worth mentioning a couple of international projects. The first, "***Child-centred Disaster Risk Reduction***" led by Professor Kevin Ronan in Australia[14] was a nationwide evaluation of programs and strategies based on a Child-Centred DRR framework. Although children were considered part of the stakeholder group, and the research was based on experiential, interactive and participatory forms of learning, a participatory approach was not detailed in the project's final report. However, some findings did highlight children's perspectives on participation, for example:



- They wanted "to know more about how to stay safe from disasters" (96%).

[13] http://wp.lancs.ac.uk/cyp-floodrecovery/outputs/
[14] http://www.bnhcrc.com.au/research/resilient-people-infrastructure-and-institutions/236

- They wanted a more participatory role in school-based CC-DRR/DRE programs and safety initiatives (83%),

- They wanted to be more involved in making their homes prepared for disasters (86%).

Another interesting finding in this research was a notable discrepancy between children's perceptions of the extent to which they could keep themselves safe during a hazard event (children were over-optimistic) and their factual knowledge about how to stay safe.


fact sheet
RESILIENT CHILDREN / RESILIENT COMMUNITIES

The three-year Resilient Children/Resilient Communities Initiative (RCRC) will develop a replicable mode focused community resilience planning that can be brought to national scale.

Emergency response plans often fail to address the specific needs of children and their families before, d after disasters. Child care centers, schools, and other programs that serve children are often left out of the These institutions may lack the knowledge, resources, and capacity to ensure the children in their care will be they can be reunited with their families while fully restoring services as quickly as possible. Studies show children are unable to return to school or child care quickly, the resulting lack of routine and normalcy can les term negative impacts. Getting back to these familiar settings can improve children's ability to cope with cri allowing parents the opportunity to address other issues of family recovery.

Why child-focused resilience matters[1]:

- 69 million children are separated from their parents each work day as they go to school or child care.
- 37% of American households are not confident in their community's ability to meet the needs of children disasters.
- Over half (54%) of Americans believe they will be reunited with their children within several hours of a di took almost 7 months to reunite the last child with her family after Katrina.
- Of every $10 spent in Federal Agency Preparedness Grants, less than one penny goes to activities targeti children's safety.

National Center for Disaster Preparedness gsk Save the Children.

The second, *"**The Resilient Children/Resilient Communities Initiative**"*[15] is a partnership between The National Centre for Disaster Preparedness (NCDP) and Save the Children in the USA, funded by GlaxoSmithKline (GSK). This project is developing a model for child-focused community disaster planning, with a strong emphasis on building long term resilience. Although the project is based on data collected from adults[16], the goal is to create a set of tools, guidance, and best practices that can be used by communities and child-serving institutions to prioritize the needs of children during disasters, and replicated across the nation. The project states that nearly 35% of the households studied were not very familiar, or not familiar with the emergency or evacuation plan at their child or children's day-care or school, with over 40% of participants unaware where their child or children would be evacuated to. Regarding perceived vulnerabilities, 51% of respondents had no confidence in the government's ability to meet the unique needs of children in disasters, having greater faith in the abilities of their communities, schools and other child-serving institutions.

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[15] http://us.gsk.com/en-us/about-us/disaster-preparedness-and-resilience/the-resilient-childrenresilient-communities-initiative/

[16] We refer here to the national survey 'Children in Disasters: Do Americans Feel Prepared?' undertaken as part of the project.

3.4. Assumptions about children and young people

As seen in the previous section, children and young people's participation in these programs and actions depends greatly on how they are represented in disaster management. According to our analysis of the programs and actions in partner countries, children and young people are predominantly depicted as a vulnerable group, defined in much of the guidance as those 'less able to help themselves in the circumstances of an emergency' and therefore requiring external assistance. When encouraging awareness of the most 'vulnerable groups', children and young people tend to be included under this definition, even when this is not explicitly stated. Only rarely is any attempt made to clarify why children are vulnerable or what qualities set them apart from other vulnerable groups. For instance, according to the CapHaz-net project very young children are considered the most affected during response and recovery phases, since it is assumed that preparation in the form of receiving a warning is the responsibility of a parent or guardian. In the POP-ALERT project, it is stated that: *"Children can become very frightened and emotional and physical exhaustion is common soon after onset. In the longer term (months or years), suffer survivor guilt and if the disaster included loud sounds such as thunder or explosion, trigger sounds can cause panic symptoms, smells of toxic fumes or soaked property can also trigger memories, as can tastes of soot, rubber, smoke, these all require the child to draw on coping mechanisms. A minority of children will experience post-traumatic stress disorder and these should be referred to specialist mental health services"* (2015: 29).

Therefore, vulnerability is related to age, as a proxy for the psychological and physical development of children: the more adult the children the more capable they are of helping themselves. However, the more independent children are from their parents the less protected they may be in an emergency situation. This is why most programs address separately young people from 14 to 15 year olds. In the majority of policies reviewed there is little reference to age groups, even though the label 'children' encompasses new-borns to 18-year-olds, but in most educational programs and awareness campaigns these are the age-groups addressed.

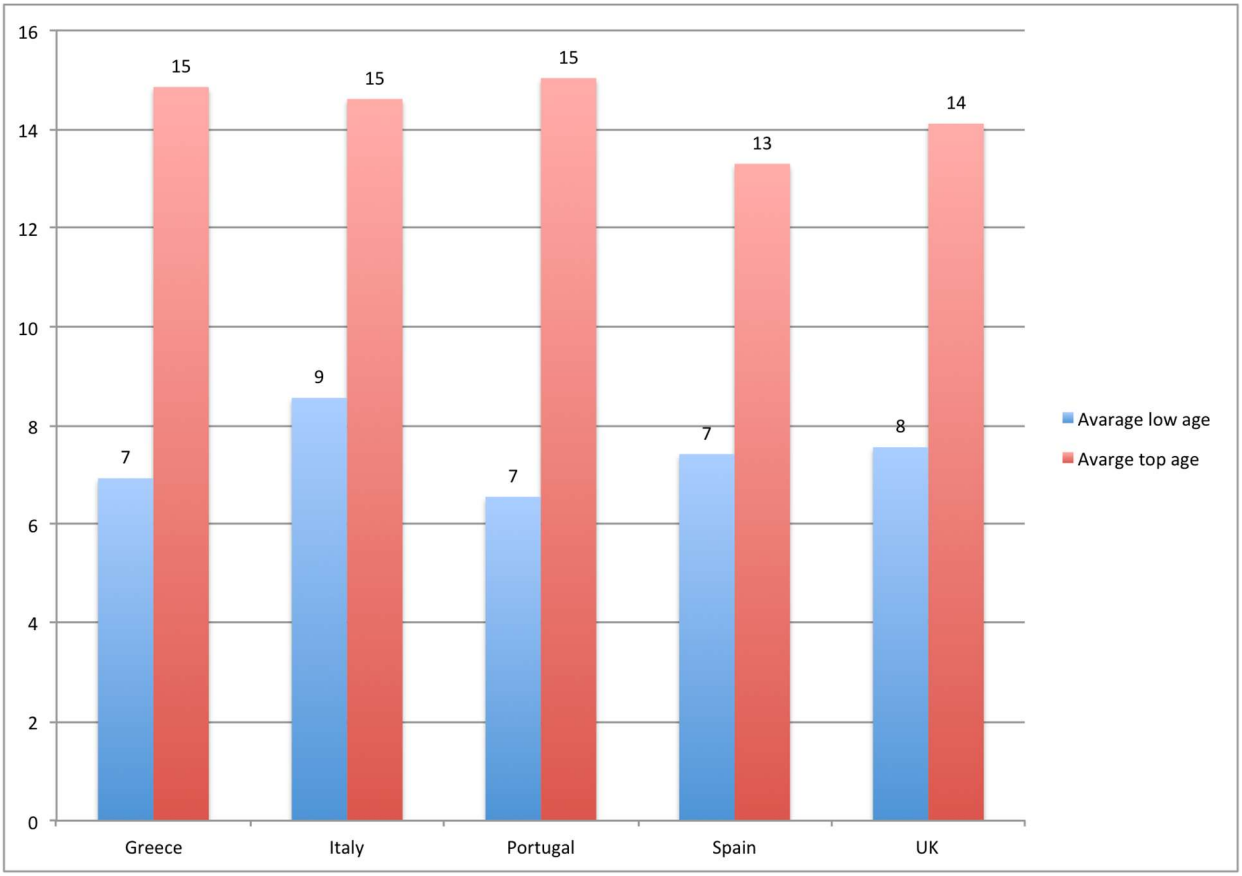


Figure 8: Average age for all the programs

This creates two marginal groups within children and young people that appear inadequately addressed: very young children (0 to 6 years) and adolescents (15 to 18 years and beyond). The former, especially those between zero and four seem almost invisible while the latter, according to the civil protection practitioners interviewed, are "hard to reach".

A number of the projects reviewed provide reasoning for a focus on this age range. The project SAVE ME, for instance, takes into account different age groups, and their potential limitations/abilities at each stage in emergency situations. Drawing on the psychological development of children, this project considers 6 to 14 the relevant age range for risk education. These children are capable of cooperating with civil protection agents, of understanding and applying safety rules, using emergency phone numbers and following instructions of what to do in case of fire or other disasters. As they mature and begin to strive for greater independence from their parents, the vulnerability caused by such dependency is reduced.

POP-ALERT also recommends that training should always be adapted to the specific age of children for similar reasons. The table below, taken from this project, makes clear how vulnerability and a capacity to collaborate and undertake training depends on age.

0-6 yrs.	This age group is primarily in the care of a responsible adult at all times, whether that is a parent or carer in an individual/small group environment, or as part of a larger group setting such as a nursery or child care setting. Providing opportunities for young children to explore their world through various forms of play will help to build a solid foundation for their future learning, and alert training can be built into this phase of child development with the help and support of parents, carers, and staff in childcare settings.
6 -12 yrs.	This age group is primarily in a formal education setting, and this provides the opportunity for alert training to be included as part of the core curriculum. During this age group, children become less self-centred and can look outside themselves. By the age of 12, most children can reason and test out their ideas about the world, which provides us with the opportunity to ensure that the upper age range are exposed to education about hazards and risks throughout Europe, and not just the ones that they may experience locally. This age group is likely to participate in organised extra-curricular activities and clubs, which provide further opportunity for informal education regarding alerting and hazard awareness. (...) This age group is likely to be I.T. aware, but not necessarily fully competent (although this is improving year on year) and may need additional systems training.
12 -18 yrs.	Again, this age group is primarily in a formal education setting, and this provides the opportunity for alert training to be included as part of the core curriculum. However, it is extremely important to recognise that scientists believe the human brain undergoes the greatest spurts of growth after infancy just around adolescence. (...) This means that the training solutions implemented for this age group need to take into account that adolescents have trouble prioritising what to do in the event of an emergency and will therefore require clear, unambiguous instruction and regular reinforcement. This age group may also be involved in organised extra-curricular activities in a similar manner as described above; however they are likely to be influenced significantly by their peers and the multitude of different media channels, and therefore alerting and awareness training will need to consider a broad range of delivery methods. This age group is very I.T. aware and little systems training would be required.

This approach to age, very much focused on a standard pattern of psychological and physical development, reinforces a notion of vulnerability as entirely independent of cultural factors. In fact, there is little recognition in the programs and actions analysed that the vulnerabilities and needs of children and young people are not homogeneous. Variables such as gender, social class and ethnicity are rarely considered.

Cultural diversity: some examples

SPAIN: cultural diversity was briefly mentioned by some fire-fighters in Spain as a critical issue in emergencies. They told us the reaction of people in the face of a disaster and emergency depended on cultural and social factors. To illustrate this, they told us of witnessing some children from migrant communities running away from a fire rather than staying in their homes, which is the advice given by Civil Protection.

UNITED KINGDOM: cultural diversity is merely alluded to in the **Civil Contingencies Act Enhancement Program**: "What is the demographic, ethnic and socio-economic composition of the community? Are there any particularly vulnerable groups in the community? How are the various communities geographically distributed within the local area? How prepared and experienced is the community at coping with different types of emergencies?" (p. 19).

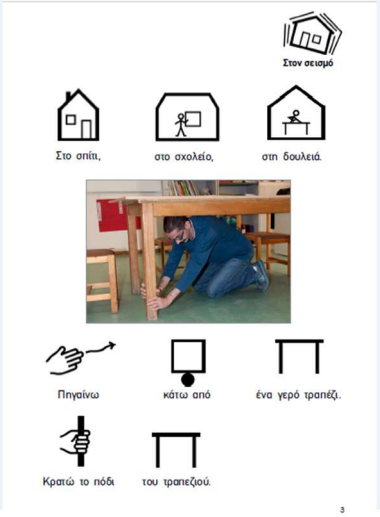
Although it is a specific focus of CUIDAR, disability is included in only a few programs and actions collected from partner countries. When mentioned, it is treated in an abstract way, with no specific reference to children with disabilities.

Disability: some examples

SPAIN: we have found recommendations on how to design self-protection plans, "**Guía técnica para la elaboración de un plan de autoprotección**" [Technical Guide for the design of self-protection plans], and intervention strategies in emergencies, "**Guía de Atención a las personas con discapacidad**" [Guide for the attention of disabled people], that are suitable in case of disabilities. But none refer specifically to children with disabilities.

Disability: some examples

GREECE: the **Earthquake Planning and Protection Organisation** (EPPO) has produced guidelines using the method "easy to read" for people with physical disabilities (16-18 years old): "**Proetoimazomai gia to seismo – Odigies gia atoma me kinitikes anapiries**" [Getting ready for an earthquake: guidelines for people with motor disabilities]. The guidelines provided to individuals with mobility problems address barriers in relation to accessibility issues. Another EPPO document addresses people with visual disabilities, people who are deaf or hard of hearing, and people with cognitive and motor disabilities: "**Mathainontas gia to seismo – Odigies gia atoma me anapiries**" [Learning about earthquakes – Manual for people with disabilities]. Nonetheless, the guidelines provided in this document are general and do not take into account specific issues in relation to each disability nor are they addressed specifically to children



Finally, although children and young people are largely characterized as a homogeneous and vulnerable group, there are assumptions about the role of children in civil protection worthy of mention. In a number of programs and actions from partner countries analysed, children and young people appear as allies of the civil protection authorities. As we have seen, experts and other adults lead and define these activities, providing children and young people with little space to negotiate terms and goals. Within this framework, children are often treated as civil protection allies in implementing self-protection measures and emergency plans, but also act as civil protection leaders, observing their parents and spreading safety culture in the community[17] or undertaking communication tasks during an emergency. Although there is little evidence of empirical implementation, this is the principal role promoted by civil protection agencies in disaster management,

[17] For instance, the KNOW4DRR project found that students in Spain had more knowledge about natural hazards than the population in general. See http://www.know4drr.polimi.it/

and the one intended to be reinforced at the European level by projects such as POP-ALERT and CapHaz-Net.

Children as allies in European Research Projects

In the **CapHaz-Net** project, training during childhood and adolescence is considered a key tool in preparedness policies not only because it allows children to grow up "with preparedness embedded in their way of living" and facilitates their awareness but also because they can, in turn, transfer information to their parents/families "and indirectly train the adults".

Other projects such as **POP-ALERT** suggest children should be at the heart of communication. For instance, children who have experienced disasters can help people understand the risks they are exposed to. Young people could also help create emergency supply kits, set dates for checking these supplies, and prepare plans and disaster kits for family pets. At school, children and young people can participate via "school crisis teams" to encourage other children to discuss disasters they have experienced, or develop problem-solving skills and peer-support strategies. In the community, children and young people can also participate in disaster management by establishing a child-centred disaster-resilient community through various mechanisms: a) a child/youth committee with a recognized voice that feeds into other levels of governance; b) child protection policies and procedures for inclusion in community plans; c) risk assessments with a category for children; d) training for staff and volunteers; e) legislation to support children's rights.

In a similar vein, the **ELICIT** project cites one Italian example where school children were engaged to create information campaigns regarding earthquakes, producing a brochure and a TV commercial broadcast on local stations. In this process, they not only learned about the secondary risks triggered by earthquakes but could also relay this information to their families and the local community.

Sometimes, however, children and young people can also be depicted as problematic actors in disaster management. We have not found any partner country programs and actions that depict children and young people as such, but there are several EU projects on disaster and emergency management that do so.

In the **PEP project**, the municipal safety coordinators interviewed by the researchers considered children and young people to be problematic because they can get lost and disappear and need to be watched at all times; and young people because they are seen as socially uncontrollable and vulnerable.

Children can also be considered a problem because their perceived needs may influence the behaviour of their families in emergency situations.

In **POP-ALERT**, children are seen as indirectly generating unpredictable situations in an emergency context. When the family is together people are more likely to evacuate (especially if they are tourists travelling with children). But if separated, adults may prioritise locating their children over evacuating, for example by going to pick them up from school, and this can override other actions. In fact, as an online survey by POP-ALERT discovered, most parents did not know the emergency plan of their children's school.

Similarly, **TACTIC** project argues that households with children (or dependents) are more likely to take certain precautionary actions.

In other cases, the problems associated with children and young people were not seen as inevitable, but rather the result of a lack of knowledge, awareness and/or accessibility.

In **TACTIC** some German disaster managers criticised the lack of risk awareness among the younger population, pointing out that public authorities have the main responsibility in this situation; they found the Internet the best method for communicating with young people.

Similarly, in **PEP** they also identified that among "young people" (13-19 years old) problems included low levels of awareness, inaccurate perceptions and knowledge of natural disasters, and an inability to gauge which media stories to trust and which were rumours and misinformation. The PEP project also emphasized the importance of Internet and ICT tools for engaging young people in crisis management actions/organisations, rather than other methods that, for instance, might require higher commitment and reserving free time for voluntary work.

Despite children and young people often being seen as key players in the promotion and dissemination of a "culture of prevention", as civil protection officers freely acknowledge they are seldom included in any disaster management decision-making process. This is due to participation rarely being approached from a perspective of children's rights, but rather as a means of obtaining feedback on the effectiveness of educational programs and awareness campaigns.

We have discovered only a few programs in partner countries that claim to honour the rights of children and young people to participate in decision-making. These are mainly concerned with the refugee crisis. This understanding of children as having the right to take part in disaster management decision-making processes is also absent from the EU projects we analysed. Only CUIDAR and the project *"Children, Flood and Urban Resilience: Understanding children and young people's experience and agency in the flood recovery process*", led by the University of Lancaster and Save the Children UK, regarded children as having rights and actively involved them in a participatory process to generate policy.

For instance, the program "**Kateuthintiries odigies gia ta paidia pou zitoun asilo**" [Guidelines on Unaccompanied Children Seeking Asylum]", published by the Office of the United Nations High Commissioner for Refugees (UNHCR) and the Greek Ombudsman (2005), states that: "when decisions relating to unaccompanied children are to be made, their views and wishes should be taken into account. The adoption of measures that facilitate their participation in the decision-making process according to their age and maturity is essential. This makes it crucial to train practitioners, including police service personnel and other officials. Minors are entitled to participate directly or through a legal representative or guardian or adviser in any legal or administrative proceeding. They should also have the opportunity to be encouraged to express their opinions, concerns and complaints about the way guardianship, care and health services, education, and legal representation are applied" (p. 8-9).

4. DISCUSSION WITH THE SCIENTIFIC LITERATURE

Types of programs

As we have seen, the majority of national programs we located are educational programs, awareness campaigns and school and household emergency plans intended to increase the capacity of children to understand the causes and consequences of disasters; identify and reduce the risk of the most likely disasters and everyday threats; instil self-preservation behaviour; and successfully cooperate with civil protection agencies when needed. Most are textbook-based and pedagogical. The results of the scoping review of EU-funded projects are similar. Most of these also focus on training and education packages and/or tools, particularly for schools. They tend to be based on knowledge exchange, generation and/or identification processes, and raising awareness.

However, as most interviewees have remarked, these programs are inconsistently implemented, as in most countries there are no policies to make curricula inclusion mandatory at a national level. Only in schools where teachers have been highly motivated and sensitized towards disaster management do these activities tend to be carried out.

As most of the programs and actions are educational and awareness campaigns, most of the documents collected cover a wide range of disasters, including the less likely ones. In contrast, educational programs issued by national civil protection agencies tend to be more specific (see figure 9), addressing the disasters and risks most likely to occur locally or that have previously caused the highest impact: hydrological in the UK (floods), geophysical in Greece, Italy and Portugal (earthquakes and tsunamis) and climatological and meteorological in Portugal, Spain and Greece (drought and bushfires).

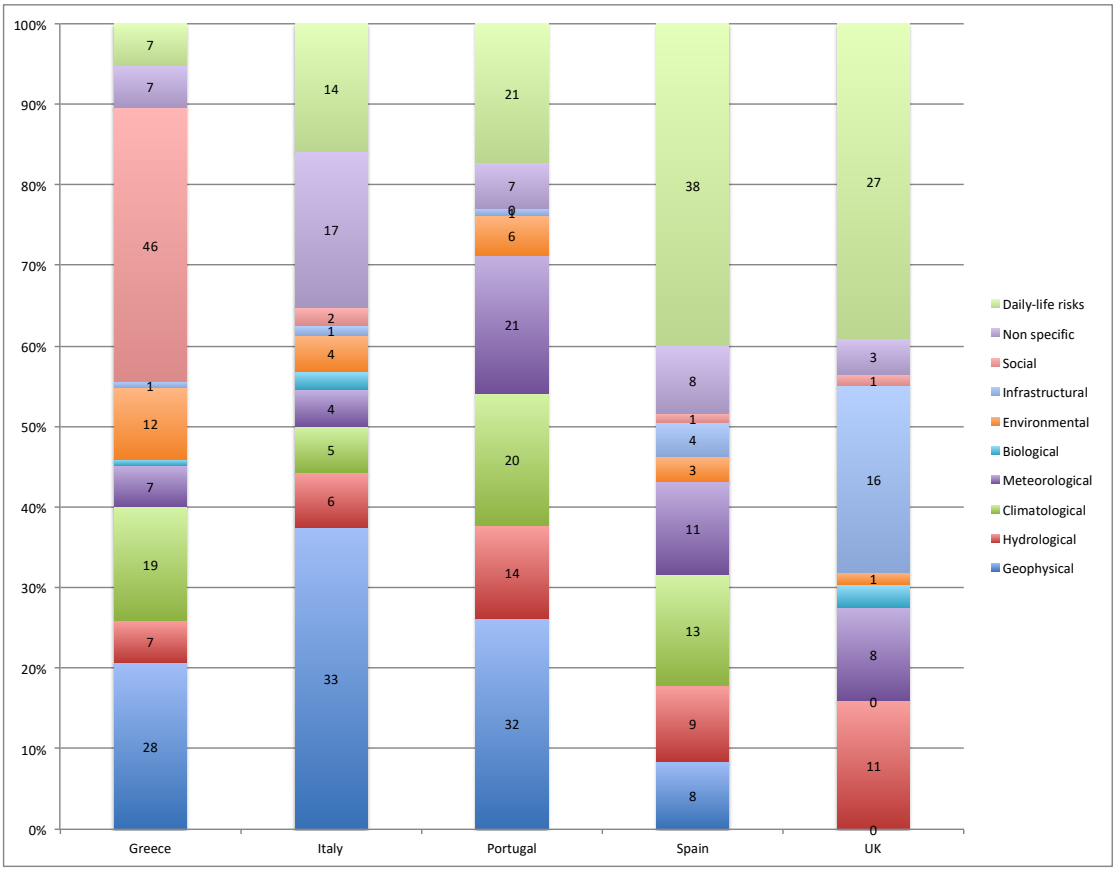


Figure 9: Types of disasters covered in the programs, plans and actions by partner country

These are the types of disasters covered in national and EU-funded projects alike. In contrast, in the scientific literature the disasters more frequently addressed are earthquakes, tsunamis and hurricanes (see figure 10). This probably reflects the impact of recent major disasters in the international context: Indonesia's earthquake and the Indian Ocean tsunami (2004), Hurricane Katrina (2005), the Christchurch earthquake (2011) and Japan's earthquake and tsunami (2011). Issues linked to climate change are also frequently dealt with. This discrepancy can also be explained by the fact only 8% of the literature on the participation of children and young people in disaster management analyzed is based on European scenarios (see figure 14 in Annex III). When the focus is Europe, however, an influx of literature on flooding, particularly concerning the UK, is evident.

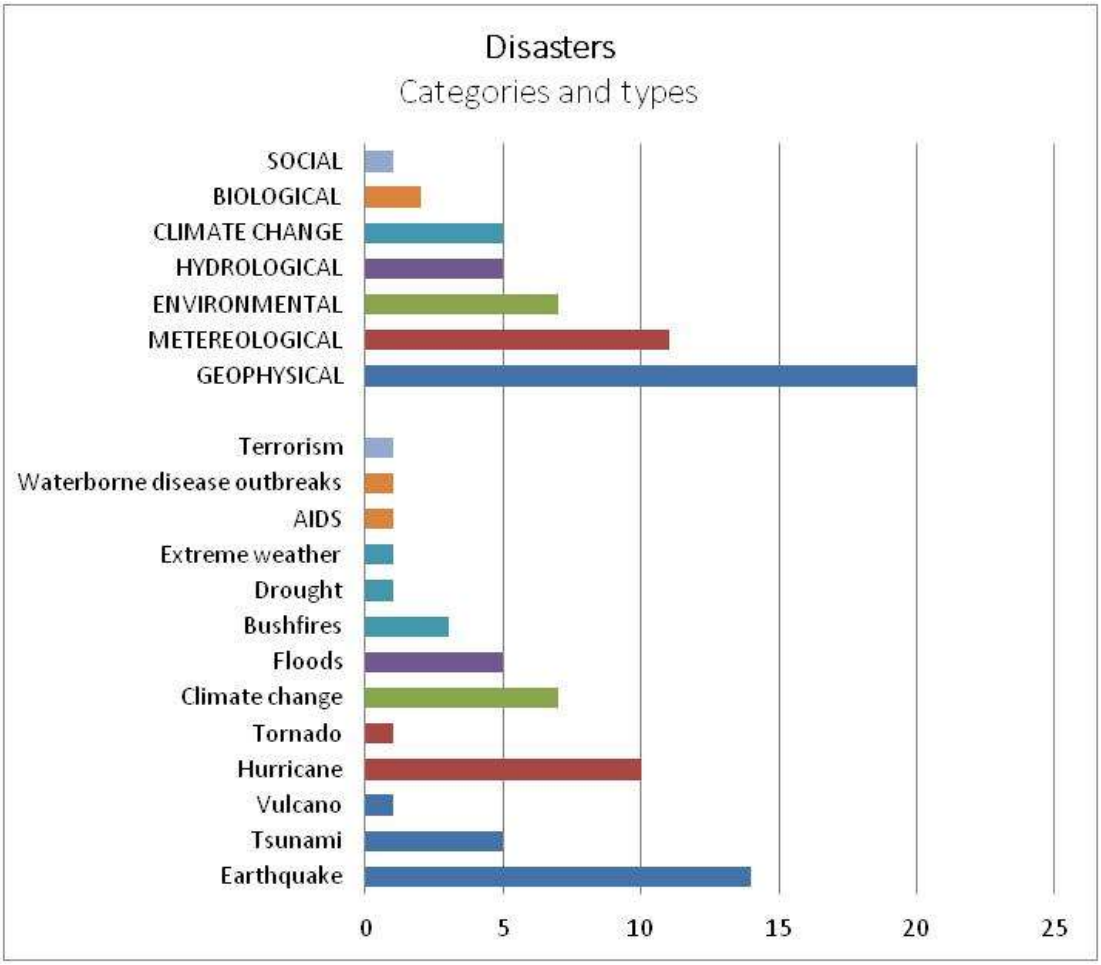


Figure 10: Types of disasters covered by the scientific literature

Similarly, due to the high number of education and awareness campaigns, prevention and preparedness are the phases most covered in partner countries (see figure 11). Children are generally absent from recovery stages both in policy and practice, particularly in Portugal, Spain and the UK. Programs for children and young people that include response and recovery phases are more prevalent in Greece and Italy: these mostly relate to recent disasters, such as earthquakes in Italy, and the financial and refugee crises in Greece. These programs are intended to reduce the psychosocial and emotional impact of these disasters on children and young people, but they are seldom included as active agents either during an emergency or through the recovery process. Most include guidelines for teachers and parents on how to support children in emergencies, but lack similar guidance for civil protection staff and volunteers.

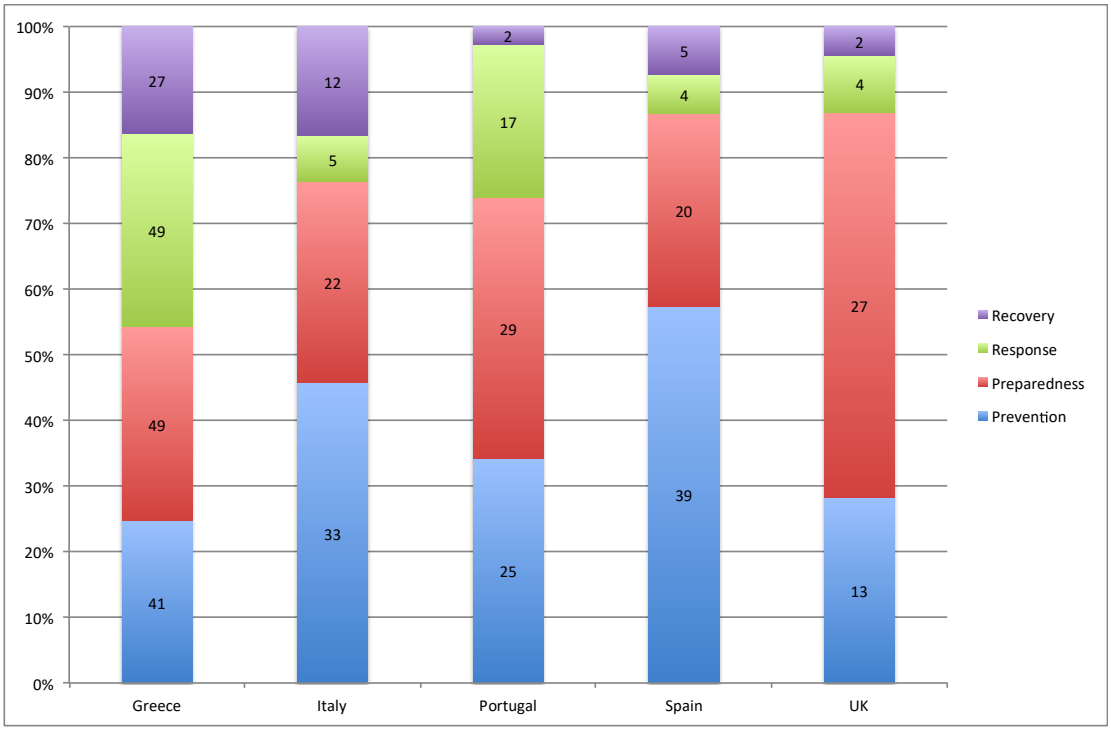


Figure 11: Disaster management phases most covered in partner countries

The European projects we reviewed also focus largely on prevention and preparedness rather than later phases of intervention.

These findings contrast sharply with the research literature, which is highly influenced by non-European situations. Research on children and young people in disaster management – according to keyword analysis – tends to focus on comprehensively understanding their role through the phases of disaster management (see the keywords' analysis in Annex III**).** In fact, this literature casts doubt on the effectiveness of hazard education which focuses too heavily on preparedness (Ronan et al. 2015) or on a single recent disaster, and when centred on hazard identification, emergency equipment and drills (Johnson et al. 2014). Martin (2010), for instance, emphasizes that DRR should be considered a long-term process, to be repeatedly reinforced over time, rather than an isolated event. Also, children involved in multiple hazard education campaigns over time are more knowledgeable than those involved in just one program, one time (King & Tarrant, 2013; Ronan & Johnston, 2011). Therefore, researchers advocate not only an increase in the number and frequency of activities but also a diversification of scenarios and disasters (Bird & Gísladóttir, 2014) to further embed preparedness and response skills. Johnson et al. (2014) have suggested that drills and other activities should be held at unexpected times and locations, thereby requiring the ability to translate skills to less familiar

situations (Johnson et al., 2014). Children who have previously been involved in hazard education also have more realistic perceptions of risk, reduced fears of hazards and increased knowledge of how to build preparedness, particularly when they receive constructive feedback during practices (Ronan et al. 2015; Ronan et al. 2008; Ronan & Johnston, 2001; Ronan et al. 2010).

Finnis et al. (2004) also argue that children's knowledge of protective behaviour can reduce their vulnerability when alone or unsupervised, and can reduce community vulnerability through their instruction of household members on the correct actions to take during an emergency. In fact, children play a highly significant role in transferring DRR knowledge to their family and community (Wisner, 2006; Selby, & Kagawa, 2012). However, the scientific literature also acknowledges that children and young people can take up this role of "co-educators" only when a commitment to listening to children's voices is constantly maintained, rather than limited to the "easy" pre-disaster period (Gibbs et al. 2013).

However, as the literature reports, knowledge is still lacking on how and why educational programs affect/reduce social vulnerability, and how disaster education programs facilitate children's roles in household readiness (Ronan et al. 2015) and their own self-protective capacities or likelihood of preparing for disasters in adulthood (Johnson et al. 2014b). In fact, the main problem identified by the literature is the minimal space given to the voices of children within education. There is still a tendency to use principals, teachers and parents as children's spokespersons. As the majority of papers conclude, greater participation by children in the design, development and effectiveness assessment of DRR educational programs is essential.

Types of actors

As we have discussed, the majority of programs, actions and plans reviewed are run by public organisations. In some countries there is a significant fragmentation or lack of continuity between local and national administrations. This is seen by some practitioners as a problem, hindering as it does the replicability and long-term sustainability of best practices across and between countries. These findings correspond with those summarized in the scientific literature. As several authors report, hazard education does

not translate into preparedness action if there is a lack of constructive and integrative dialogue among stakeholders (Johnson et al. 2014; Ronoh et al. 2015).

NGOs, international organizations and cultural institutions also have an important role in developing programs and actions addressing children and young people. These organizations tend to extend the range of action beyond the usual disaster-risk reduction scope and, in line with their background and expertise, contribute to improving children-oriented disaster management in the partner countries. As literature reports, NGOs are particularly important for promoting participatory and child-centred approaches (Gaillard & Pangilian, 2010; Mitchell et al. 2009; Haynes et al. 2010, Tanner, 2010).

The important role schools can play in providing emotional processing activities, enabling children to gain perspective and distance as part of their recovery from disaster events, is also emphasized (Mutch & Gawith, 2014). School is not only where children can be trained and acquire DDR-related knowledge, habits and skills, but also a place from which preventive culture can be disseminated throughout the community. Thus, as well as DRR education, schools can play an integral role in promoting community preparedness and resilience. They are often a community meeting point (Mutch, 2014; UNISDR, 2005; Tripler et al. 2010), for instance, when used as emergency management sites, shelters or communication centres. In the event of a disaster, other more informal places, such as Safe Spaces or other Child-Friendly spaces, specifically developed to mitigate or cope with the emergency through play, peer support, inclusion and cooperation are also valuable (see Save the Children 2013a, 2013b; UNICEF, 2009; Ager & Metzler, 2012).

According to the scientific literature, teachers also have a central role in community resilience, not only by restoring children's roles and routines, providing physical and emotional security (Barrett et al. 2008), helping them to acquire distractions and develop coping skills (O'Connor & Takahashi, 2014) but also by turning the school into a place for empowerment of the wider community (Tatebe & Mutch, 2015). However, there is little evidence of the type of training and materials teachers and educators would need to build more resilient communities (Apronti & Babugura, 2015; Barrett et al., 2008; Gibbs et al. 2014a; 2014b).

Participation

A lack of child participation is acknowledged by all representatives of civil protection, at all levels. As our scoping has revealed, there is little space for children and young people to participate in disaster management and they are rarely considered a group with valuable experiences and knowledge that should be taken into account. The imprecise legislation that exists in partner countries will not reverse this situation. Participation, if pursued, remains within a collaborative framework of rules and goals determined by experts and other adults. In this regard, the tokenistic views of most adults hinder participation and, although there is an increasing tendency to address the situation, children and young people are still underrepresented in decision-making processes.

These results are very similar to those in EU and nationally-funded projects. With a few notable exceptions, the projects are not participatory and children are scarcely involved.

In contrast, we find abundant evidence of more meaningful participation within the scientific literature. The beneficial role participation plays in providing emotional processing opportunities for children and young people following severe disasters is particularly apparent (Mutch, 2013; Walker et al. 2010), enabling them to cope better with changes to their homes and make decisions about repairs (Walker et al. 2010; Whittle et al. 2012). To this end there are a number of papers which emphasize the importance and effectiveness of involving younger children, particularly in 'meaning making' and 'sense making' (Gawith; 2013; Mutch, 2013; Freeman et al. 2015).

Children's accounts have proved significant for raising subtle (Harwood et al. 2014) and unconsidered questions and dimensions about the impact of disasters (Bolton & Neuwelt, 2014), such as who is affected by the disaster and how vulnerability is produced during the recovery process (Walker et al. 2012). Bartlett (2008a) reports how children brought fresh perspectives and practical common sense to discussions after the 2004 Indian Ocean tsunami, contributing, together with parents, to designing spaces for children to play and study, and for adult members to socialize and hold social celebrations. Children's significant participation in decision-making processes is also reported in Bangladesh (Martin, 2010; Mitchell & Borchard, 2014), where they came up with important interventions such as tree planting, boat building, and bridge construction.

The literature also shows us that children have a strong potential for raising awareness, contextualising knowledge, using analytical tools and prioritising actions, and therefore making significant long-term contributions to the resilience of communities. They are good at creating educational murals, disseminating warnings, designing preparedness measures and planning for protection of the environment, their parents and the wider community (Ronan et al. 2015; Bolton & Neuwelt, 2014; Finnis et al. 2010). They are also skilled at organizing events such as drama, music, art exhibitions and community meetings to increase community knowledge, build coalitions with parents and other stakeholders and advocate for DRR and political mobilization (Cumskey et al. 2015; Back et al. 2009; Benson & Bugge, 2007). There is evidence that significant mental health and wellbeing benefits arise from this involvement (Peek 2008; Fothergill & Peek, 2015; Anderson 2005; Mitchell, Tanner & Haynes 2009).

Children and young people are also good at analysing and communicating risk (Mitchell et al. 2008), sharing and contextualizing knowledge, building credibility and trust, and persuading others to take action (using media, theatre, concerts, etc.). Their role as translators, as mediators and brokers between generations and communities is highly important. For instance, Michell et al. (2009) have explored the role of young people from the Vietnamese community in New Orleans in assisting the evacuation and relief efforts, as they could translate central information (food distribution, access to relief supplies, etc.) from formal English sources. Marlowe and Bogen (2015) have provided evidence of how young people from refugee backgrounds acted as cultural brokers and mediators during the Canterbury earthquakes in New Zealand, ensuring their respective communities had access to disaster-related information and that this information was properly translated and interpreted.

Children and young people can be accomplished social networkers and community-builders, mobilizing people and resources (Geiselhart et al. 2008), volunteering, raising funds, and providing mutual help and peer counselling (Nikku et al. 2006), and young people tend to perceive themselves as capable of effectively helping others and promoting resilience (Bocksczain, 2012). Caring for children and young people's social networks therefore appears central to forming and strengthening social relationships in the event of a disaster, preventing marginalization and facilitating social cohesion (Ensor, 2008; Fothergill & Peek, 2015). The literature also demonstrates the role they can play as first

responders, engaging in search and rescue, providing food, and participating in other emergency activities (Sunal & Coleman, 2013; Fernández & Shaw, 2015).

Interestingly, research literature also highlights the importance of using artistic and creative methods (Gangi & Barowsky, 2009; Looman, 2006), such as drawing (Izadkhah, 2015 Sunal & Coleman, 2013), mosaic making (Locke & Yates, 2015), comics (Sharpe & Izadkhah, 2014) and play, and positively assesses the role of these materials for addressing very young children's sense of loss and engaging them in rebuilding and recovery activities (Plan International, 2013; Shah, 2013). This, as we have seen, is an important area of development in partner countries, as both scoping reviews - of programs, plans and actions in partner countries, and of national and EU-funded projects – have demonstrated. In fact, as Mort et al. (in press) have stated, further research is needed about the possibilities and limitations of this work with creative methods, which though well-documented in art therapy settings appears less so in the context of involving children (and adults) in exploring disaster recovery, resilience and planning. As they have discovered in their *Children, Young People and Flooding* project, 3D activities, such as sandplay, modelling and sculpture, facilitate deeper individual and group engagement than a reliance on 2D techniques such as drawing.

Accordingly, and despite the continued importance of questionnaires, there is an emerging interest in the literature in experimenting with methods and techniques that foster the voice and agency of children and young people more clearly, such as participatory action research (see Zeng & Silverstein, 2011). It is worth highlighting the contribution of NGOs such as Save the Children and Plan International in this area, as they have pioneered the introduction of more ethnographic and participatory approaches (Mellor et al. 2014; Plan UK, 2010). For instance, Haynes & Tanner (2013) underline the importance of participatory video in strengthening community networks, making space for storytelling about sensitive issues and communicating with parents and other concerned actors (Margolin, 2010). Films produced this way also have the ability to transcend regional scales and promote in-country advocacy (Haynes & Tanner, 2013). Gaillard (2010) discusses the significant contribution participatory mapping can make in materializing hazard, vulnerability and risk. This is particularly important for marginalized communities, which are both the most vulnerable to natural hazards and for whom access to knowledge is often more difficult. Participatory mapping is also an interesting tool for

enhancing youth awareness of risk as it makes disaster-related concepts tangible to everyone.

Peek & Fothergill (2009) have analysed the utility of focus groups as a means of studying children in disaster situations, and found that this method not only provides the opportunity for children's voices to be heard but also minimizes status differentials between adult researchers and young participants. They therefore particularly recommend focus groups for researchers studying vulnerable, stigmatized and marginalized groups (Fothergill & Peek, 2015). In these contexts, focus groups are tools for providing support and a setting where people can listen, share and empathize with each other. Apart from their therapeutic potential, focus groups also provide an opportunity for collective action and empowerment, as these authors demonstrated in their post-9/11 and Hurricane Katrina research projects.

Finally, the importance of telling stories is also mentioned by several researchers (Brown, 2012; Walker et al. 2012; Gawith, 2013; Mutch, 2103; Bateman & Danby, 2013). As most of these authors note, sharing and telling stories collectively can be important for children, particularly the very young, but also for teachers, parents and the wider community. Through storytelling they can come to terms with what has happened and share and create a common narrative that contributes to the recovery process and building resilience. Stories and narratives are also crucial for conducting emotional work with and by children and young people, and can lead to a more nuanced understanding of what a disaster means and who is involved and/or affected (Walker et al. 2012; Whittle et al. 2012).

Assumptions about children and young people

In the programs and actions covered, and the EU- and nationally-funded projects, children and young people are generally characterized as a homogenous group, with no specific attributes other than age. As we have seen, most programs and actions in partner countries – and those in international literature and EU projects – are addressed to children between 8 and 14 years old. The very young are considered less capable of helping themselves in an emergency situation, and are usually protected by their parents.

They are also practically invisible because most actions are implemented in schools. Teenagers over 15 are deemed hard to reach and not usually addressed as a specific age-group. They appear to be resistant to pedagogical hazard education and their acknowledged capacity to collaborate in an emergency situation may also be viewed by civil protection professionals as a potential source of trouble and risk. In fact, young people are frequently deemed to lack risk awareness and be easily influenced by rumours and misinformation.

This is also the case in the scientific literature. As can be seen in figure 12, the age of children in the papers analysed largely ranges between 10 and 16, with a clear peak at 12 years old. Therefore, with a few notable exceptions (see Towers et al. 2014 and Pine et al. 2015), there is a lack of risk and hazard education delivery to preschool children and older teenagers.

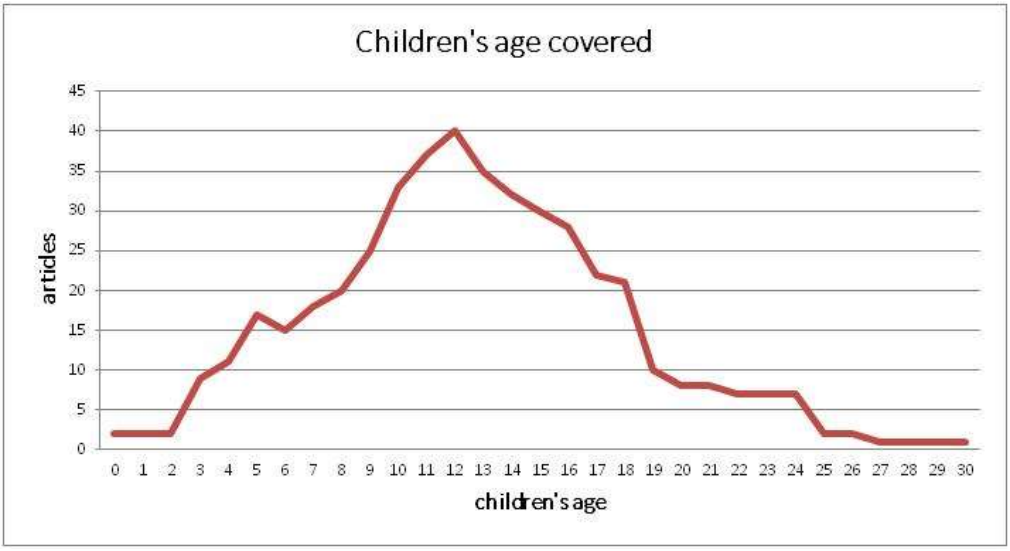


Fig. 12: Ages covered

The importance of factors such as gender, disability, ethnic diversity, race[18], class or religion appear in the scientific literature but are seldom considered in educational

[18] The reader will see that we have differentiated between race and ethnicity. This differentiation respects the terms originally used by some of the authors of papers analysed. Race, for instance, is particularly important in the context of Hurricane Katrina, and authors discuss the importance of this concept to understand social vulnerability, particularly for black people, in the aftermath of the disaster (see for instance Brown, 2007; Barrett et al. 2008; Fothergill and Peek, 2015). In the context of New Zealand or Australia the concept mostly used by authors has been ethnicity or ethnic diversity (see for instance Finnis et al. 2010; Pine et al. 2015; Bolton & Neuwelt, 2014).

programs and awareness campaigns analysed. Neither is there any reference to urban/rural differences. According to some papers, however, the role of children and young people in DRR is influenced by a combination of community and institutional dynamics (Tanner et al. 2009; Fernandez & Shaw, 2013; 2014; Haynes et al. 2010) but also by socio-economic and cultural factors (Silah, 2015; Taylor & Peace, 2015). There is no agreement about the most relevant "cultural" or "structural" dimensions affecting/informing children's participation. However, there is evidence of the influence of socio-economic factors (Grotberg, 2001), cultural differences (Haynes et al. 2010; Taylor & Peace, 2015), ethnic diversity (Bolton & Neuwelt, 2014), race (Peek & Stough, 2010; Peek, 2008), class (Brown et al. 2007), religion (Haynes et al. 2010; Taylor & Peace, 2015), and geographic location (Towers, 2015; Gaillard, 2010).

Disability and gender are of particular interest in disaster research. For instance, as Bartlett (2008) states, although girls may often appear more resilient they tend to be more vulnerable when they are denied basic rights and opportunities to participate (see also Haynes et al. 2010). Similarly, there is agreement on the fact that disability (Ronoh et al. 2015a; Ronoh et al. 2015b; Boon et al. 2011) contributes to social vulnerability. For instance, despite their considerable presence in schools, disabled children and young people have largely been overlooked both by researchers and policymakers (Boon et al. 2011). The lack of research focusing on children with disabilities and their limited involvement with DRR planning has reinforced a sense that they are inherently vulnerable and have little to contribute to effective DRR (Ronoh et al., 2015a). Those with mobility and cognitive disabilities are at particular risk in the event of a disaster (Boon et al. 2011).

Finally, the disaster management programs and actions of the partner countries analysed show that the rights of children and young people to be informed and participate in disaster management are not effectively taken into account because a children's rights perspective is absent. In contrast, the rights of children are acknowledged in most scientific literature, with some research emphasizing the positive effect that ideas of childhood and children's rights can have in thinking about and promoting participation. As Nikku (2013) argues, children's participation depends on the ways in which their rights and the very notion of childhood are constructed/interpreted. Similarly, an inadequate concept of children's rights creates tokenistic and "adultist" ideas of child participation (Hart, 1997; Fernández & Shaw, 2013; 2014). Furthermore, the lack of a proper approach

to rights during an intervention can have traumatising effects. This was certainly the case following Hurricane Katrina (Lautent & Lietz, 2008). In comparison to the response of the Indonesian government to the Indian Ocean Tsunami, the US government's response displayed a disturbing lack of awareness of threats to children's physical security during and after the storm. Ignorance about the affected population also prevented officials from identifying culturally-appropriate solutions to the challenges faced after the storm. This hindered the development of a long-term protection plan for children that included such important factors as equitable distribution and the reuniting of families.

These findings therefore underline the crucial role of government agencies and NGOs working in the field, the importance of critically examining the ideas of childhood, children's rights and children's citizenry, and the need to incorporate lessons learned in international contexts. A number of studies have also explored the negative effects that Eurocentric conceptions of children's rights, and of humanitarian assistance, may have in other places (Martin, 2010; Manyena et al. 2008). As with concepts of participation, it is important to engage with meaningful and culturally adapted ideas of childhood (Haynes et al. 2010; Mitchell et al. 2009). In fact, evidence gathered on assumptions made about children also underlines the central role adults may play in discouraging children and young people's participation (Mitchell, Tanner and Haynes, 2009). From the "still small" approach that systematically underestimates children's ideas, knowledge and perceptions (Delap, 2000; Sewell et al. 2014; Haynes et al. 2010), to the social and cultural factors that frame children's participation as a challenge to adult authority (Martin, 2010; Mudanvhanu et al. 2015, Manyena et al. 2008), adult resistance may negatively impact on children's motivation to participate. It can seriously undermine children's confidence and create a perception that parents, educators and policymakers do not take them seriously. Some researchers have suggested the best way to combat this is to conduct participation in close collaboration with adults and the wider community (Pujadas & Kulig, 2014; Reich & Wadsworth, 2008). For others, however, these resistances are more structural and demonstrate the importance of adult, patriarchal, wealthy and colonial hegemonies in shaping children and young people participation (Haynes et al. 2010).

5. CONCLUSION

In summary, participation is an emergent and globally important heuristic in contemporary disaster management. From 2008 onwards there has certainly been an increasing desire to place children and young people at the heart of disaster management. Among the factors explaining this shift is the influence of the Hyogo (2005) and Sendai (2015) international frameworks, alongside the impact of major disasters in the USA, New Zealand and Australia, and evidence presented by important NGOs like Save the Children and Plan International from countries such as Bangladesh, Haiti, Philippines, India, El Salvador or Indonesia.

Although this tendency can be detected in the European countries we have studied, particularly in the UK and Italy, there is still a significant lag behind the leading countries in this field, particularly New Zealand, Australia, the USA and Japan. As we demonstrated in the first part of this report, there is no clear national risk-reduction strategy in the European countries analysed. Although practitioners and experts deem children and young people's participation to be crucial, our scoping reveals that such factors as institutional fragmentation, lack of continuity, inadequate strategies of curriculum implementation and an excessive focus on abstract training are obstacles to further and more significant implementation of children-centred approaches.

One of the main challenges facing the countries analysed is how to achieve greater coordination between actors. It is time to translate the Sendai framework at governmental level, making it operational and effective. This will involve administrations at different levels, and the private sector, most notably NGOs working in European countries, which have accumulated vast knowledge and experience in the field, although often in very different political, economic and cultural contexts. How such a diversity of actors might be integrated and coordinated, and how a greater presence by third sector organisations might transform the role of the state in disaster management, remain to be seen.

Another major obstacle to increased participation by children and young people in disaster management is adult assumptions about childhood. As we have seen, even when their rights are recognized, children and young people are seldom included in the management of disasters. This is because they are considered as a homogeneous,

vulnerable group: as helpless victims, all equally affected by disasters. This positions them as objects of care rather than subjects with agency and the right to make decisions. There are a number of programs and actions, and a few projects, beginning to challenge these assumptions, mostly by exploring new interactive and creative ways of "giving voice" to children and to value them as important, collaborative and skilled actors in building up resilient communities. However, as the literature reports, there is still a substantial difference between "hearing" and "listening" to children (Bartlett, 2005, Mutch, 2013; Towers, 2015). More actions, programs and plans must be established to include children's voices in decision-making processes and contribute to community-based disaster management (Peek, 2008). There is also a need for clearer consideration of key variables such as gender, ethnicity and socio-economic differences in children-focused disaster management.

There are other important challenges ahead. For example, education and the role of teachers and schools must be reinforced, as recommended in the Sendai Framework, while at the same time, resilience is built in a more participatory, transversal, sustainable and continuous way. This will probably entail extending DRR beyond schools and formal spaces of education and incorporating children and young people as partners, encouraging them to take a more active role in the design, development and evaluation of future risk education programs, emergency plans and awareness campaigns. It is also important to more explicitly encourage transgenerational learning, the use of new media to foster communication and informal learning among younger people, and give more value to the local and grounded knowledge of children and young people, their families and communities.

This underlines the need to access international knowledge. A number of countries – most significantly New Zealand, Australia, the United States and Japan – have been identified in the literature as having valuable experience in the field. Although these countries are affected by disasters of a magnitude unlikely to take place in Europe, they have developed abundant institutional programs and research projects from which Europe can learn. Additionally, there is important, perhaps less formalized knowledge originating from the interesting work being carried out by various actors, especially NGOs, in the Global South. Although many of these practices have been developed in very different cultural, political and economic contexts, they constitute highly valuable resources for those interested in

fostering more participatory, communitarian and creative approaches. Apart from requiring a positive predisposition from administrations, citizens and practitioners, positioning Europe as a leader in this field may depend on our capacity to translate and adapt this knowledge to our own reality.

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ANNEX I: Profile of practitioners interviewed in each partner country.

ITALY

In Italy we conducted interviews with practitioners from various fields of expertise, in various settings and formats. One-to-one interviews were conducted with two individuals: a representative of Cittadinanzattiva, a non-profit organisation active in the promotion of civic participation and the protection of citizens' rights, experts in school safety issues; and a geologist and former executive at the National Department of Civil Protection, currently professor at the University of Florence, Director of municipal civil protection and a representative of the municipal Youth Service of Carpi (Emilia Romagna region). A questionnaire was initially issued via e-mail, followed by a phone interview.

We also organised a discussion panel during the Emergency Department Scientific Committee's annual meeting of Save the Children Italia. Present were a delegate from the Ministry of Education; a former civil protection executive; an expert in citizen's rights and active citizenship; an expert in traumatic stress studies; an expert in paediatrics; an expert in pedagogy; an expert in human rights; and an expert in strategic consulting. This meeting took place at the Save the Children Italia offices.

GREECE

In Greece we conducted interviews with a range of practitioners involved in disaster management. This included earthquake experts: a geologist and Head of Education and Awareness in the Earthquake Planning and Protection Organisation (EPPO) of the Ministry of Infrastructure, Transport and Networks, and two seismologists at the Geodynamic Institute of the National Observatory of Athens, one of whom was also the Research Director at the Geodynamic Institute. We also interviewed key practitioners from the Civil Protection Authority: the Director of International Affairs, Volunteerism Training and Publications in the General Secretariat for Civil Protection/Ministry of Citizen Protection, and the Head of the Emergencies Planning and Management of the General Secretariat for Civil Protection/Ministry of Citizen Protection. The Head of the Department of Environmental Education from the Ministry of Education, Research and Religious Affairs was also interviewed.

With regard to the role of NGOs in disaster management, and the financial and refugee crises in particular, we interviewed the Child Protection Officer and Social Researcher of Arsis (Association for the Social Support of Youth); a Social Worker of "SOS Children's Villages"; and the Communications and Development Manager of "Together for Children".

PORTUGAL

In Portugal, seven interviews were conducted with representatives from the Civil Protection Authority at the national, regional and municipal level, and two representatives from the Ministry of Education, one from the safety department, the other from the educational department.

For the National Authority for Civil Protection, a group interview was conducted with the National Director for Emergency Planning and the Director of the Communication and Awareness unit. All other interviews where individual and always conducted in the interviewee's office. At regional level, a member of the Regional Command for Relief Operations in the district of Setúbal was interviewed. At municipal level, interviews were conducted with the heads of the municipal services of civil protection in Lisbon and Amadora and with the head of the prevention and public awareness unit of civil protection for the Lisbon municipality.

SPAIN

In Spain, we conducted group interviews with practitioners and researchers who have worked with children and young people in disaster management. Together with the Institute of Public Security of Catalonia we organised a group meeting. In attendance were: from the School of Civil Protection and Fire-fighters, the Director, the Head of the Training Department, and Head of the R+D Department; a psychologist from the Medical Emergency Services at the Catalan Government Fire-fighters Department; Head of the Research and Innovation Department at the Police School; and the Head of the Department of Quality Assessment at the Institute of Public Security of Catalonia. After this meeting, we conducted a group discussion with people from the Catalan Civil Protection Authority at the CECAT (the Centre of Coordination of Emergencies of Catalonia), including the Deputy Director of Emergency Management and Coordination, and the Head of the Emergency Services, responsible for communication, civil protection volunteer training and emergency drills.

We contacted the civil protection services and people who were actively involved in the Lorca Earthquake response in 2011. A group discussion was held in Lorca with the principals of two high schools, the Head of the Youth Department at Lorca City Council and the Head Development Project Manager of Deveryware, developers of technological emergency management tools.

We also interviewed the Head of the UTTCB (Unit of Crisis, Trauma and Conflicts) and a psychologist from this unit. UTTCB is a resource centre dedicated to the provision of care, training and research for critical situations based in the Faculty of Psychology at the Autonomous University of Barcelona.

With regard to the role of NGOs in disaster management, we interviewed the Head of the R+D Department of Fundació Pau Costa, an NGO working on forest fire management and education. The Head of the Department of Psychosocial Intervention in Crisis, and Head of Youth Participation and International Cooperation – both from Red Cross Catalunya – were also interviewed, as was Carlos Macías, representative of the anti-eviction citizen platform PAH (Plataforma de Afectados por la Hipoteca) in Barcelona.

UNITED KINGDOM

We conducted 10 telephone interviews with practitioners from the children's sector based in every region of the UK: Save the Children UK's Heads of UK Programmes and Emergencies and their Heads in Northern Ireland, Scotland and Wales. One interview was conducted with a representative from the Emergency Planning College and two interviews were conducted with flood researchers from the University of Lancaster.

We also designed a survey and distributed it to all Local Resilience Forums (LRFs) in England and Wales, plus various contacts throughout the UK suggested by our connections from the Emergency Planning College and Save the Children UK; 15 replies were returned.

ANNEX II: European Projects

Following the methodology described in section 2.2, we found and selected 31 projects, distributed in 4 categories: (a) 'disasters' AND 'children' AND 'participation' (3%); (b) 'disaster' AND 'children' (37%); (c) 'participation' AND 'children' (7%); (d) 'disasters' AND 'participation' (53%).

The majority of projects focusing on issues concerning children were funded under the FP6 or FP7 programs, with a few coming under the Civil Protection Funding Scheme or Interregional projects. Other than CUIDAR, no projects specifically addressing children have been found currently receiving funding from the H2020 Program. Research areas include: international cooperation; environment; transportation; health; security; seas; civil protection; socio-economic sciences and society; disasters and resilience; and ICT.

In regard to geographical distribution, although the UK has coordinated the most projects, Italy leads two research areas ('disasters' AND 'children', and 'disasters' AND 'participation'). Similarly, while the UK is the only country that has conducted research projects based on 'participation' AND 'children', Spain, Germany, Italy, Bulgaria, Greece and France have also led research projects on disasters that significantly include children. A participatory approach in disaster research is more prominent in the UK, Germany and Spain.

DISASTER + PARTICIPATION + CHILDREN		
2008 - 2011	POSTTSUNAMI - Three years post-Tsunami: long-term effects of trauma in children aged 7-15 - a culture-sensitive approach	http://cordis.europa.eu/project/rcn/88130_en.html
DISASTERS + CHILDREN		
2002	Information to our children – a key to saving lives. Improving methods by learning from one another	http://ec.europa.eu/echo/files/civil_protection/civil/act_prog_rep/saving_children.pdf
2002 - 2004	RINAMED - Els riscos naturals de l'arc mediterrani oriental (Natural hazards in West Mediterranean)	http://www.rinamed.net/index.html
2005 - 2008	CHILD TRAUMA NETWORK - Psychological network support to violence traumatized children: disasters, conflicts	http://cordis.europa.eu/project/rcn/74205_en.html
2007 - 2013	FLOODCOM - Positive Water Management in Lowland Areas facing climate change	http://www.floodcom.eu/
2008	Self-protection with children in Community	http://ec.europa.eu/echo/funding-evaluations/financing-civil-protection-europe/selected-projects/self-protection-children_en
2009 - 2012	SAVE ME - System and Actions for Vehicles and transportation hubs to support Disaster Mitigation and Evacuation	http://www.transport-research.info/project/system-and-actions-vehicles-and-transportation-hubs-support-disaster-mitigation-and
2010	RACCE - Raising earthquake Awareness and Coping Children's Emotions	http://racce.nhmc.uoc.gr/en

2010	YOUTHPREVENTION.PRO - Modern approaches for prevention amongst children in Europe	http://youthpreventionpro.eu
2013	SAMETS - Social Affairs Management in the Emergency Temporary Shelter	http://sametsproject.eu/
2015	YAPS - Raising young people's awareness on preparedness and self-protection	http://ec.europa.eu/echo/funding-evaluations/financing-civil-protection-europe/selected-projects/raising-young-people-s_en
2015	ProMyLife - How to better protect my life in major emergencies	http://ec.europa.eu/echo/funding-evaluations/financing-civil-protection-europe/sel
PARTICIPATION + CHILDREN		
2010 - 2012	COPING - Children of Prisoners, Interventions & Mitigations to Strengthen Mental Health	http://childrenofprisoners.eu/
2014 - 2019	CONNECTORS - An international study into the development of children's everyday practices of participation in circuits of social action	https://connectorsstudy.wordpress.com/
DISASTERS + PARTICIPATION		
2008 - 2011	BESECU - Behaviour, Security and Culture	http://m-health.psychologie.uni-greifswald.de/besecu/html/besecu_cooperation.html
2009 - 2012	CAPHAZ-NET - Social Capacity Building for Natural Hazards	http://caphaz-net.org/
2009 - 2014	WATERWORLDS - Natural environmental disasters and social resilience in anthropological perspective	http://waterworlds.ku.dk

2011 - 2015	EMBRACE - Building Resilience Amongst Communities in Europe	http://www.embrace-eu.org/
2011 - 2015	OD - Organizing Disaster. Civil Protection and the Population	http://organizingdisaster.net/
2012 - 2014	PEP - Public Empowerment Policies for Crisis Management	http://www.crisiscommunication.fi/pep
2012 - 2016	ENHANCE - Enhancing risk management partnerships for catastrophic natural disasters in Europe	http://www.enhanceproject.eu/
2013 - 2014	ELITE - Elicit To Learn Crucial Post crisis Lessons	http://www.elite-eu.org/index.html
2013 - 2015	KNOW4DRR - Disaster risk reduction knowledge	http://www.know4drr.polimi.it/
2013 - 2016	ATHENA - Empowering citizens, protecting communities	http://www.projectathena.eu/
2014 - 2016	POP-ALERT - Population Alerting: Linking Emergencies, Resilience and Training	http://www.pop-alert.eu/
2014 - 2016	TACTIC - Tools, methods and training for community and society to better prepare for a crisis	https://www.tacticproject.eu/
2014 - 2017	RESCUE - Patterns of Resilience during Socioeconomic Crises among Households in Europe	http://www.rescueproject.eu
2015 - 2017	EDUCEN - European Disasters in Urban centres: a Culture Expert Network (3C – Cities, Cultures, Catastrophes)	http://www.educenproject.eu/
2015 - 2018	DARWIN - Expecting the unexpected and know how to respond	http://www.h2020darwin.eu/
2015 - 2018	CARISMAND - Culture And Risk management in Man-made And Natural Disasters	http://www.carismand.eu/
2016 - 2018	COMRADES - Collective Platform for Community Resilience and Social Innovation during Crises	http://www.comrades-project.eu/

ANNEX III: Scientific literature: sample

Authors and countries

The 94 papers selected had 222 authors. The following chart (Figure 13) presents authors with two or more publications and their affiliated country. The chart demonstrates that Australia, New Zealand, the UK and the USA are leading the way in the field:

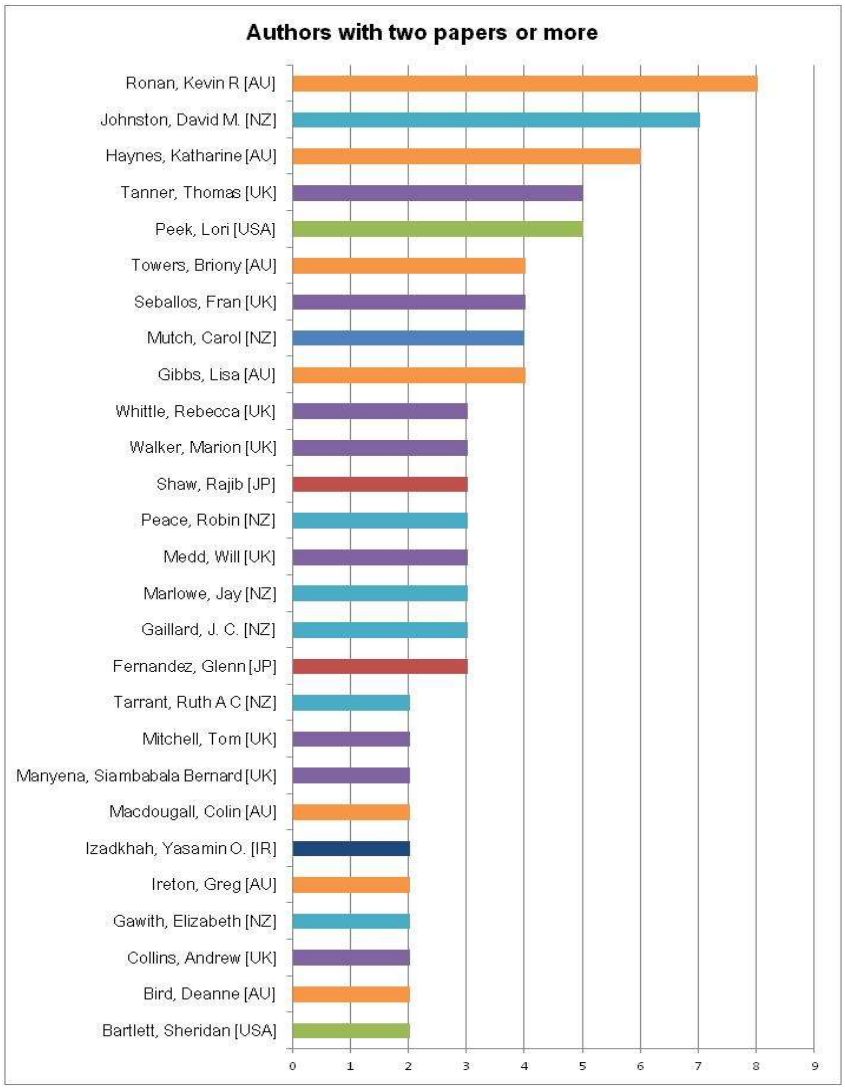

Figure 13: Authors with two papers or more

Although the context under analysis is not detailed in all publications, the following chart (Figure 14) depicts the most significant settings by continent:

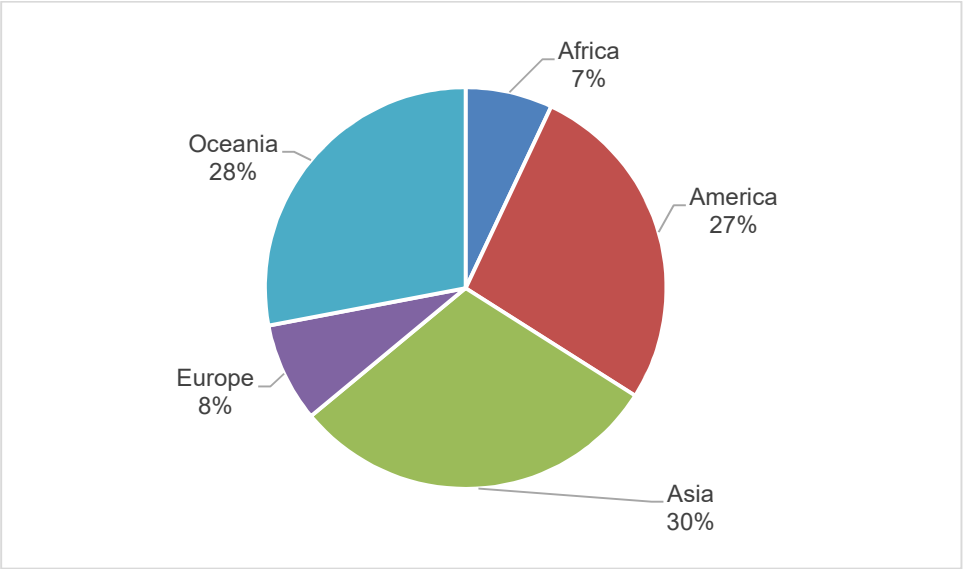

Figure 14: Scenarios analysed by continent

Interestingly, Europe has a more prominent role as a producer of disaster research than as a research setting (see figure 15). It is worth mentioning that the UK is the most productive European country, accounting for almost half the output. Portugal, Iceland, Italy and Poland are the other countries with publications in our sample. In contrast to Europe, Asia tends to be studied by researchers from other parts of the world.

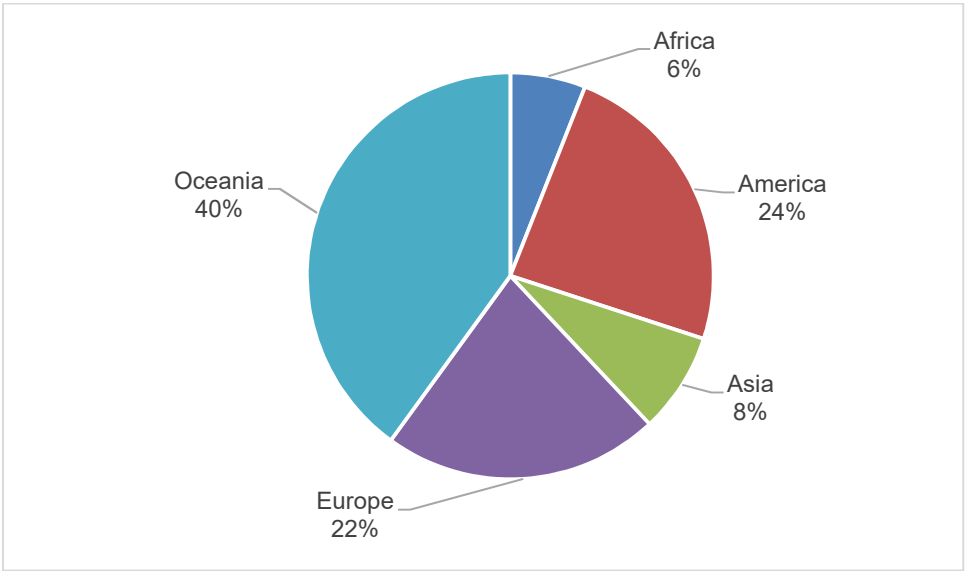

Figure 15: Publications per continent

The authors originate from various disciplinary backgrounds such as anthropology, education, environmental science, geography, psychology, public health, sociology and urban planning.

Journals and types of papers

When analysing by journal, two special issues on children and disasters stand out: one from *Children, Youth and Environments* (2008), the other from *Australian Journal of Emergency Management* (2014). Our review also demonstrates the significance of other journals, such as *International Journal of Disaster Risk Reduction*, *Pastoral Care in Education*, as well as the influence of publications produced by the *Institute for Development Studies*.

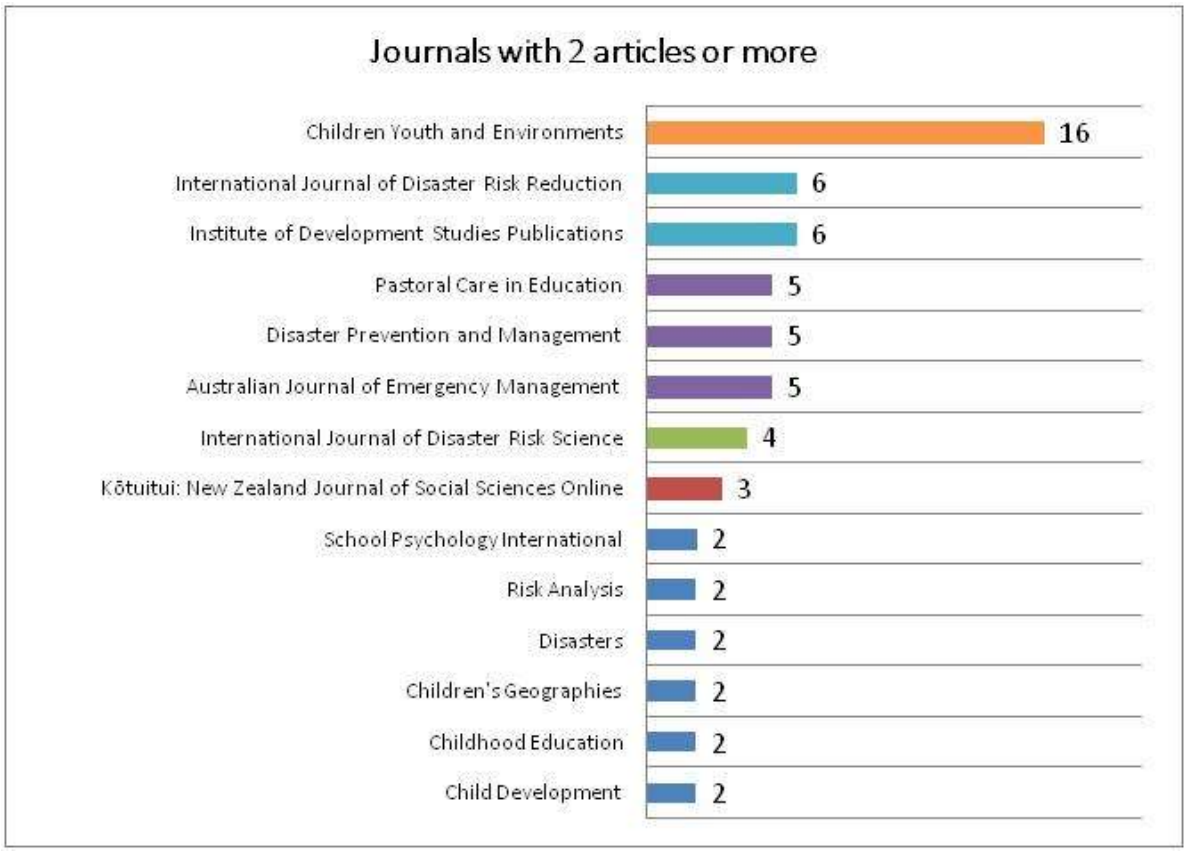

Figure 16: Journals with 2 articles or more

The vast majority of the papers are research articles (conducting empirical research, describing case studies, discussing methodological innovations, etc.). There are also some notable and influential literature reviews frequently cited in the other papers (for instance Peek, 2008; Boon et al. 2011; López et al. 2012; Johnson et al. 2014; Tatebe & Mutch, 2015).

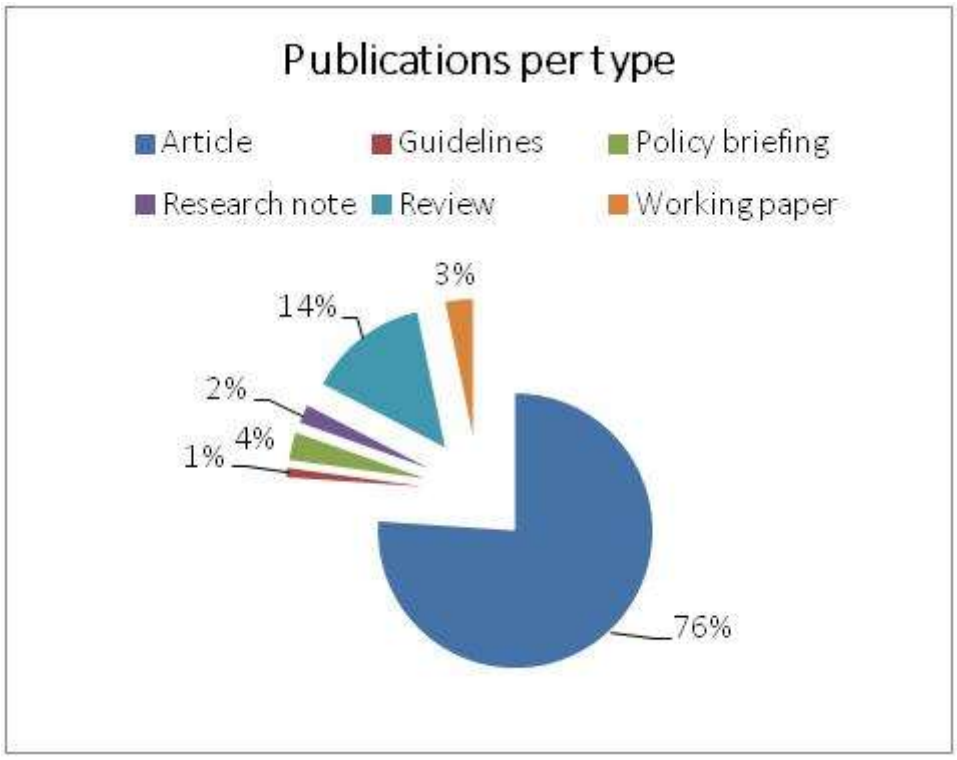

Figure 17: Publications per type

Keywords/Topics/Fields of research

By analysing the papers' keywords we observe that:

- Hurricane Katrina (6), the Christchurch earthquake (3), and the Hull floods (2) are the case studies most often referred to.
- There is an emphasis on education (drills, schools, educational tools), psychology (coping strategies, stress, emotional work, psychosocial interventions) and communication (risk communication, emergency communication).
- The keywords display a general interest in children and young people but also specific interests in adolescents/teenagers and early-childhood/preschoolers.
- The phases of emergency management most often referred to are Recovery (9) and Preparedness (6). Less frequent are Response (5) and Prevention (3).
- Culture and community are the sociocultural factors most often addressed.

- There is a growing interest in the methods/tools used for research and intervention with/on children. Participative methods are often referred to, as are artistic and creative methods, such as drawing, storytelling, comics and storyboards. Focus groups and more conventional quantitative methods are also mentioned.

- Last but not least, DRR emerges as a significant and key concept in the reviewed literature, encompassing the most innovative and emergent participatory-oriented disaster research on/with children and young people.