CUIDAR

Cultures of Disaster Resilience among children and young people

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Scoping and review report

Document information

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1 INTRODUCTION

Disasters and emergencies each comprise unique and troubling entanglements of nature and culture, and where climate change or social vulnerability greatly exacerbate how 'natural' hazard events are experienced. Cultural sensitivity is essential to effective disaster management and disaster risk reduction, yet disaster plans still largely view those affected as homogenous groups of victims. Unfortunately, (with a few exceptions), children and young people[1] are virtually invisible as active, engaged participants in national and international emergency planning for disasters such as extreme weather/flooding/wildfires/earthquakes and other human influenced environmental crises. When they are mentioned, children tend to be positioned as vulnerable recipients of care. In this context, CUIDAR aims to (1) examine culture, risk perception and disaster management through the cross cutting perspectives of children and young people, taking into account a wide range of cultural differences; (2) to enable disaster responders to meet children and young people's needs more effectively.

While there may be knowledge in each partner country about responses to particular disasters and management plans for future disasters, it is the particular role of children, and the position of children and young people from a range of cultural groups, which is either ignored or poorly understood. This is also reflected in the research literature in this field (Anderson, 2005; Ronan et al. 2015; López et al. 2012; Peek, 2008). To address this, WP2 has concluded to conduct a scoping review to identify key reports and disasters plans and examine them for what they say, or do not say, about children and young people.

Scoping reviews, as the literature reports, are a relatively new type of literature review (Arksey & O'Malley, 2005; Peters et al. 2015). In contrast to systematic reviews, or other literature reviews, scoping reviews are particularly recommended to map existing literature in fields that, like ours, is large, complex, and diverse and have not been

[1] Generally speaking in this report we distinguish between children 0 – 15 and young people 16 – 18. However, we have also tried to respect alternative orderings and references to age used by the authors, programmes and research outputs reviewed, such as "very young children", "adolescents", "teenagers", etc.

systematically reviewed before. They are also of great utility to clarify working definitions and conceptual boundaries of a topic or a field, and to identify research and practice gaps and to make recommendations for policy, practice or research.

Specifically this report aims to understand:

- To what degree do children and young people participate in disaster management?
- What assumptions if any are made about children and young people in these policies and programmes?
- What is the role of the different actors, from civil protection agencies to schools and voluntary institutions, in designing or implementing protection plans and building resilience?
- Do policies and practices take a range of cultural perspectives into account? For example, cultures of disability, social class, disadvantage, gender, ethnicity, marginalization.
- How are these cultures perceived as: a) strengths or b) vulnerabilities?

All CUIDAR partners have contributed to this review by searching relevant policy and practice relating children's involvement in disaster management in each partner's country; interviewing key informants in each partner's country; and sharing expertise. Additionally we have reviewed and updated knowledge about the academic and research based literature, by compiling information and evidence from research projects in the field and by scoping evidence and gaps in scientific literature.

Apart from this general introduction, and the final concluding remarks, this report is organized into 3 main sections:

- The Scoping of disaster **policy, practice & programmes** relating to children in partner countries
- The Scoping of **research projects**, particularly at the EU level
- The Scoping of **scientific evidence**

Each section shows and discusses the results of the main phases and decisions of this scoping exercise. In addition, each section provides information about the methodologies and search strategies conducted by the partners and the authors of this report.

2 SCOPING EXISTING DISASTER POLICY, PRACTICE & PROGRAMMES RELATING TO CHILDREN IN PARTNER COUNTRIES

The main goals of Phase A of the scoping review are:

1. To identify and review local, regional and national disaster policies, programmes and practices relating to children in partner countries.
2. To identify and characterise public, private and voluntary institutions, NGOs working with children and emergencies in each country.

2.1 Methodology

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

2.1.1 Collection and tagging of documents

First, each partner conducted an Internet search to identify, collect, classify relevant documents (websites, documents, reports, guides, exercises, workshops, games...) relating to children's involvement/participation in disaster management. For this procedure we used a social bookmarking app called Evernote which enables collaborative tagging among the partners. The search terms that were used are: children AND participation AND disasters OR emergencies.

The inclusion criteria applied to the search was based on these principles:

- No matter what item was found, it had to be clearly oriented (partially or completely) to include/dialogue with/educate children and/or young people. This included programmes, practices, plans, and protocols, policies, educational activities devoted to disaster management relating to children and young people. It also included all forms of disaster, including those items that speak very

generally about disasters. It also included all phases of disaster management: from prevention, preparedness, and response to recovery.

- The item had to address disaster management in the partner country (which means that the problem or issue at stake must be framed as a disaster or emergency)
- The document could be in any of the official languages spoken in each country.
- Documents could be valid/current or extinct/ended. As this is a general scoping exercise, we suggested collecting all relevant document regardless of dates and prevalence.
- Those items that did not comply with the inclusion criteria but were considered relevant for the interpretation of the data were placed in a different folder. For instance, in the Spanish scoping there were lots of documents relating to children but focused on disaster management in Latin American countries.

Those items that comply with the mentioned inclusion criteria were stored and tagged using eight tags, each answering a basic question regarding the document collected.

1. What kind of item is this?
2. What organisation has produced this item?
3. Is this item related to a specific disaster? Which one?
4. To what phase of disaster management is this item related? There were five options available: Prevention, Preparedness, Response and Recovery and non-specific.
5. What is the target of the item? Even though the general target is always the children, the items we come across might not be always directly address to them but to their parents, teachers or other professionals and collectives.
6. Is the item produced for children with a specific age?
7. To what type of activity/program/plan/policy this item belongs to? What's the name of the activity/program/plan/policy? For instance, when we came across an online game which is part of an educational program, all the games and activities comprised in this program were collected and tagged accordingly

8. What is the scale of the activity/program/plan/policy? We set three levels: Local or Municipality, Regional and National.
9. Level of children's participation: those activities/programmes/plans/policies in which children and young people participate in disaster management decision-making processes were tagged according to the steps of Hart's children and youth participation ladder (UNICEF 1992). We only tagged those activities/programmes/plans/policies that are: adult-initiated, with shared decisions with youth; youth-initiated and directed; or youth-initiated, with shared decisions with adults.

2.1.2 Interviews with key practitioners

Second, the scoping facilitated the identification of key practitioners to be interviewed. These practitioners, experts and/or professionals have been crucial to provide information, confirmation and insights to complete, polish and refine our different searches. Interviewing them allowed us to better understand how policies are 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 these interviews, we were able to collect specific programmes, projects and policy documents in which children and young people are actively involved in disaster management. Also, we could discuss with practitioners some of the preliminary findings of the scoping and the role children and young people should have in disaster management in each country.

Figure 1: Practitioners interviewed

Partner	Education	Civil Protection	NGO	Research Institutes	Citizen Groups	Companies	Total
Spain	2	11	5	2	1	1	22
UK		15	10				25
Greece	1	3	3	2			9
Italy	2	4	2	4			12
Portugal	2	7					9
	7	**40**	**20**	**8**	**1**	**1**	**77**

As set out in Figure 1, the practitioners interviewed had different profiles and expertise. In all the cases we wanted to engage with those that could give valuable information on children's participation and also in those disaster that are specially prevalent and damaging in each country. Below we describe the profile and setting of practitioners interviewed in each partner country.

Italy

In Italy we conducted interviews with a cross-section of practitioners with different expertise; in different setting and formats. We conducted individual interviews with 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; a geologist and former executive at the National Department of Civil Protection, currently professor at the University of Florence, and two local authorities – the Director of the municipal Civil Protection and a representative of the municipal Youth Service, of Carpi (Emilia Romagna region), with the submission of a questionnaire via e-mail and phone call.

We also organised a discussion panel taking advantage of the Emergency Department Scientific Committee annual meeting of Save the Children Italia. In particular during the group discussion were present 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 an expert in strategic consulting. This meeting took place in Save the Children offices.

Greece

In Greece we conducted interviews with a range of practitioners involved in disaster management. This included experts in earthquakes: 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 of Civil Protection Authority in Greece: 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. Also, the Head of the Department of the Environmental Education of the Ministry of Education, Research and Religious Affairs was interviewed.

With regard to NGOs working in disaster management and on the financial and refugee crisis in particular, as two major social emergencies, 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 also with two representatives from the Ministry of Education, one from the safety department and another from the educational department.

With the National Authority for Civil Protection interviews were conducted with the National Director for Emergency Planning and the Director of the Communication and

Awareness unit. These were the only interviews conducted in-group. All other interviews where individual and always at their offices. At the regional level the interviewee belonged to the Regional Command for Relief Operations of the district of Setúbal. At the municipal level interviews were conducted with the heads of the municipal services of civil protection of Lisbon and Amadora and also with the head of the prevention and public awareness unit of civil protection of Lisbon municipality.

Spain

In Spain, we conducted group interviews with practitioners and researchers who have worked with children and young people in disaster management. In collaboration with the Institute of Public Security of Catalonia we organised a group meeting with: the Director of the School of Civil Protection and Firefighters and the Head of the Training Department; a psychologist from the Medical Emergency Services at the Catalan Government Firefighters Department; the Head of the Research and Innovation Department at the Police School and the Head of the R+D Department of the School of Civil Protection and Firefighters; 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 the people from the Catalan Civil Protection Authority at the CECAT (the Centre of Coordination of Emergencies of Catalonia): the Deputy director of Emergency Management and Coordination, the Head of the Emergency Services, the responsible of communication and the responsible for 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. We had a group discussion in Lorca with the heads of two high schools, the head of the Youth Department at the Lorca City Council and the Head of the Development Project Manager of Deveryware, a technology developer for emergency management tools.

Also, we interviewed the Head of the UTTCB (Unit of Crisis, Trauma and Conflicts) and a psychologist of this unit. UTTCB is a resource centre dedicated to the care provision,

training and research for critical situations based in the Faculty of Psychology at the Autonomous University of Barcelona.

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

United Kingdom

In the UK, we conducted 10 interviews with a cross-section of practitioners with expertise from the children's sector (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 of Emergency Planning College and two interviews were conducted with floods researchers from the University of Lancaster. The interviewees were from every region of the UK and conducted by telephone.

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

2.1.3 Data processing and analysis

All the data collected about the activities/programmes/plans and policies in which children and young people participate in partner countries have been analysed quantitatively and qualitatively.

Firstly, the data stored and tagged in Evernote has been imported to a spreadsheet. Taking each activity, program, plan and policy as unit of analysis we have made 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 http://www.emdat.be/), the phase of the disaster management addressed, and children's participatory level

Secondly, each partner has conducted a thematic analysis of the documentation stored and the interviews, which have been partially transcribed. This analysis was supported by quantitative evidence in some cases and was framed by a set of shared analytical questions:

- What is the role of the different actors, from civil protection agencies to schools and voluntary institutions, in designing or implementing protection plans and building resilience?

- How are the policy documents, guidelines, programmes, or plans in which children and young people are specifically addressed or involved?

- What is the role of children and young people? To what degree do children and young people participate in disaster management?

The report of this phase of the scoping has followed this same structure.

2.2 Short overview of disaster management in each country. *What is the role of the different actors, from civil protection agencies to schools and voluntary institutions, in designing or implementing protection plans and building resilience?*

Disaster management is coordinated by national, regional and local authorities whose main function is to coordinate different sorts of agents; public and private; and external and internal to assure the civil protection action. In this section we provide a short overview of the main actors in disaster management in each country and their role in designing and implementing protection plans and building resilience.

Italy

The National Department of Civil Protection (NDCP), established by Law n. 225 of 1992 and reformed by Law n.100 of 2012, operates at central, regional, and local levels in compliance with the principle of subsidiarity. The first response to an emergency needs to be guaranteed at the local level under the aegis of the mayor. Each municipality has to design and implement an emergency plan, which is the mandatory tool for emergency prevention and management at local level and is based on regional guidelines and national regulations on Civil Protection. During emergencies, NDCP "operating structures" are ensured by the National Fire Department, armed forces, police, the National Forestry Corps, the scientific community, the Italian Red Cross, the divisions within the National Health Service, volunteer organisations of civil protection and the National Mountain and Alpine Rescue Corps. Besides these agents, there is an array of other institutions that have the duty to cooperate during emergencies, national and local administrations, public and private actors in charge of security, energy, transport, communications, water management and environmental agencies, and other volunteer organizations.

In ordinary situations these actors carry out information and training activities/projects on civil protection, prevention and preparedness issues for the population. Emergency management and safety in school is regulated by Leg. Decree no. 81/2008 "Concerning the protection of health and safety in the workplace", which establishes a set of rules in

the regular operation of schools in emergency situations, self-protection measures, health and hygiene, fires and evacuation, including a mandatory rule for the creation of emergency plans. The key players for the implementation of the requirements and the promotion of "safety culture" information and training activities are the schools, the National Institute for Insurance Against Accidents at Work (INAIL), the National Health Service, the National Fire Department, NDCP, as well as officials in municipalities, provinces and regions, among others.

Greece

Disaster management in Greece is organized as a coordinated resource system whereby national, regional, provincial and local authorities work together with local and public institutions and services. Each of these authorities and institutions has developed its own part of the national civil protection plan and makes its own contribution towards achieving the aims of civil protection.

The main Greek bodies responsible for the implementation of civil protection measures are: The General Secretariat for Civil Protection (GSCP) which is responsible for the preparation, mobilization and coordination of civil protection action, disaster prevention, the preparation of resources and the mobilization of resources: preparedness-response, the organized evacuation of civilians, the business integration of the Specialist Volunteers of the Registry of the GSCP, damage repair, citizen awareness and provision of specific instructions.

Additionally, depending on the type of disaster and the factors that cause it, several ministries, authorities, organisations and institutions are involved, such as the Earthquake Planning and Protection Organisation (EPPO) which operates under the supervision of the Ministry of Economic Affairs, Infrastructure, Marine and Tourism, the fire brigade, the police, the defence forces, health and welfare institutions, prefectures, municipalities and the of Ministry of Education, Research and Religious Affairs which work together in planning and rescue operations.

The Ministry of Education, Research and Religious Affairs plays a crucial role in educating students in relation to several hazards and extreme phenomena. Through the national curricula, the national textbooks, the departments of environmental education and the environmental centres, students at different grades in primary and secondary education have the opportunity to learn about environmental risks, hazards and about the consequences of human actions on the environment.

Also, NGOs and volunteering organisations are involved in the support of youth and families that experience a disaster because of an environmental hazard but also because of extreme social, political or financial problems such as economic crisis, or a war.

Portugal

In Portugal the National Authority of Civil Protection (NACP) is responsible for coordinating the whole structure of civil protection, which is organized at the national, regional, and municipal level. There are several agents of civil protection, namely: fire departments, police forces, army, aeronautical and maritime authorities, INEM (National Institute of Medical Emergency) and Forest Fire Department (sapadores florestais). The Red Cross interacts with the system in the areas of intervention, support, relief and social and healthcare assistance.

Besides these agents, there is an array of other institutions that have the duty to cooperate, namely: volunteer fire departments, security forces, social security agencies, institutions that usually work on relief situations, public agencies in charge of forests, nature conservation, industry and energy, transports, communications, water management and environment, volunteer organisations of civil protection and all private companies in the security and relief sector.

All the agents and different institutions are joined together in the Integrated System of protection and relief operations and there are Operational Coordination Centres at the national and regional levels. The Operational Coordination Centres have a number of representatives that are always present independently of the event (the National Authority, representatives from the police forces, National Institute of Medical

Emergency, Meteorology Institute, National Forest Authority) but there is also the possibility to include other institutions, whenever the situation requires. In case there is a need to involve the Army in the operations, this institution will also be (temporarily) part of the national or regional structure.

At the municipal level there are the Municipal Services of Civil Protection that work in cooperation with the regional operational Coordination Centres. The autonomous regions of the Azores and Madeira have their own regional civil protection authorities.

In Portugal, public institutions almost exclusively run disaster risk programmes for children and young people. The only exception is one initiative undertaken by the National Insurance Association. The main actors involved are the civil protection and education services, at the national (National Civil Protection and Education Ministry) and local level (municipalities, fire-brigades and schools). Regional civil protection offices are very active in the promotion of child awareness programmes in both islands: Azores and Madeira. On the continent, although most municipalities promote some kind of initiatives related to children, civil protection, security and disasters, there is a wide variety in the investments made in this field. At the moment, no Non-Governmental Organisation (NGO) works on the topic of disasters with Portuguese children.

Spain

In Spain, Civil Protection authorities are responsible for disaster management. According to the Law (2/1985) civil protection is considered a public service aiming to physically protect people and goods in the face of a severe collective risk, public calamity and extraordinary catastrophe that put the life and security of people in peril. According to the national law, it only addresses damaging events which are low frequency but with wide impact. These may change in some regional civil protection policies, such as the Catalan one. In this case, Civil Protection also addresses risks that are not collective, but can be prevented or at least their damaging consequences substantially mitigated as a result of their intervention. This means that Civil Protection covers big emergencies and daily-life risks that need the coordination among different actors to be reduced.

Civil Protection's responsibility is the coordination of the public services in a situation of emergency, whether these are external (such as national, local, regional police; firefighters, Medical emergencies, Red Cross, NGOs) or internal (Local Civil Protection Services, volunteers of civil protection, etc.). Red Cross plays an important role in emergency response, as well as Local Civil Protection Clubs, which undertake most of the educational and awareness campaigns for children and young people.

According to the Law (4/1997), Civil Protection is in charge of coordination of the identification and assessment of risks (pre-emption), the preventive actions either to reduce the harm (forest cleaning and detection of toxic leaks) or to reduce the vulnerability of the population (preventive warning in the face of severe weather conditions); the design of emergency plans (the main objective is to protect the population); the emergency response; the information and formation (the aim is to foster a culture of security and prevention) and the recovery.

There are different types of emergency plans: territorial plans, special plans and self-protection plans. In Spain, most of the plans are created and executed by the Regional Civil Protection Agency which is responsible for the detection and evaluation of risks and disaster management in the case of: wildfires, floods, transportation accidents, earthquakes, chemical risks, snowstorms, pollution of sea water, airplane accidents, radiation and other chemical pollution risks, train accidents and pandemics. The only exceptions to these are war and nuclear accidents, which remain under the responsibility of the Central National Civil Protection Agency. Each municipality has to design and implement an Emergency Plan according to the regional regulation of Civil Protection. Schools and nurseries specifically must also develop and implement their own Emergency Plan according to the law.

United Kingdom

In the UK, emergency management is governed by the national risk assessment, which sets out the priorities for emergency planning, and by the Civil Contingencies Act 2004, which puts a duty on emergency responders to coordinate, assess risks, plan for

emergencies, respond and recover from emergencies. Northern Ireland has a similar Civil Contingencies Framework 2005.

The UK Government Cabinet Office has overall responsibility for civil contingencies and issues the national risk assessment and key national guidance, such as the Humanitarian Assistance guidance. However, devolved governments in Scotland, Wales and Northern Ireland have key roles and responsibilities in setting country emergency policy, assessing risk and producing guidance.

At a local level emergency responders and key agencies, such as utility companies, voluntary organisations, coordinate to plan for, respond to and recover from emergencies. The scoping revealed the types of emergency generally considered by emergency planners, which are severe weather, floods, terrorism, pandemic flu, and utilities failures. Refugee and asylum seeking children and response to their needs in the UK, is not usually considered within the remit of emergency management in the UK. While there is no obligation for schools to have emergency plans, the Department for Education expects schools to have procedures in place for safeguarding and keeping children and young people from harm as well as robust policy for dealing with emergencies. The voluntary sector in the UK has strong community links and networks that already enable some organisations to be closely involved with emergency preparedness activities (i.e. British Red Cross).

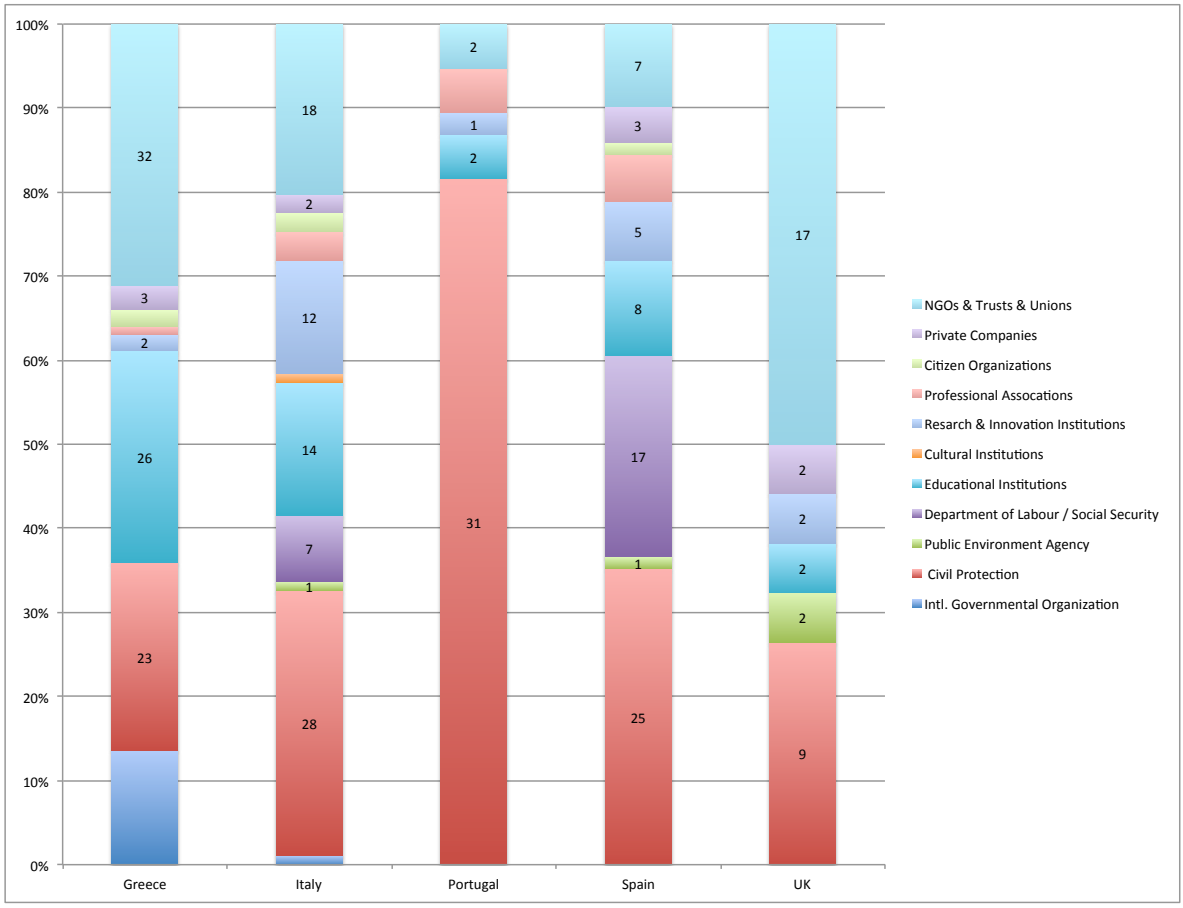
2.3 Disaster management Programmes, Actions, Plans and Policies addressing children and young people. *How are the policy documents, guidelines, programmes, or plans in which children and young people are specifically addressed or involved?*

Based on quantitative and qualitative data gathered in the scoping, in the following section we aim to construct a comprehensive and synthetic overview of the guidelines, programmes or plans in which children and young people are specifically addressed at a national level.

2.3.1 Organisations involved

As the following chart shows, there are different kinds of organisation involved in disaster risk programmes depending on the country. In Greece, even though Civil Protection Authorities have an important role, International Governmental Organisations such as UNICEF or UNHR and numerous local and international NGOs working in the refugee and financial crisis are coordinating most of the programmes of risk disaster reduction with children and young people. In Portugal, these programmes are almost exclusively run by public civil protection authorities, at national, regional and local level, and the Ministry of Education; there is no NGO working in the field. This highly contrasts with the UK where most of the programmes, especially in the area of risk education, are run by charities. In Spain the public sector is almost as important as in Portugal but the Department of Labour and Education has an important role in developing the risk education programmes. In Italy, public institutions and local civil protection authorities mainly run these programmes with a strong influence from research and education institutions. But as in the UK and Greece, NGOs have an important role.

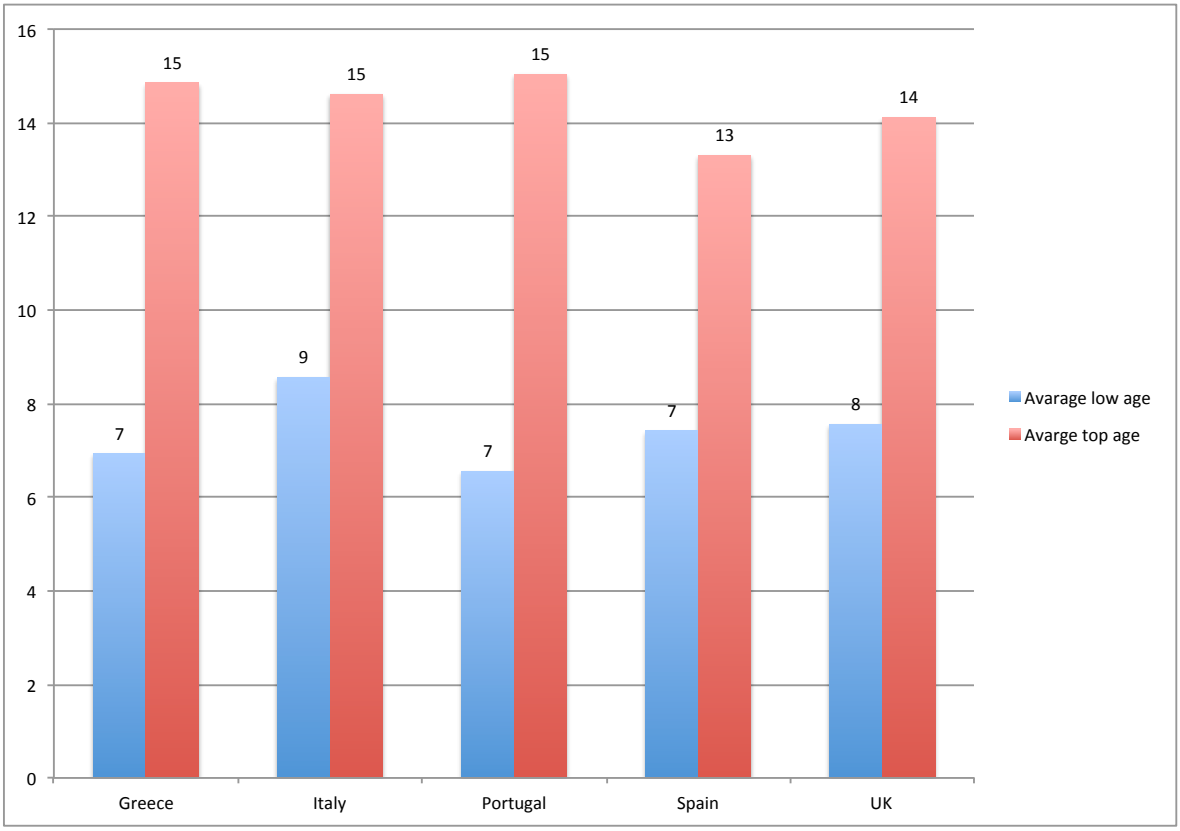
Figure 2: Type of organisations involved



2.3.2 Age range

The average age for all the programmes that address needs of children and young people are similar: the average low range is 7-8 years and the average top range is 15 years. It is important to note that there are a few interesting programmes designed for younger children aged 4 years in the area of risk education. There are also some cases in which the age is not specified.

Figure 3: Average age for all the programmes



2.3.3 Disasters

In the UK the most common disasters addressed in programmes aimed at children and young people are road safety, fire safety (daily-life risks) and flooding (hydrological disaster). There is also a large contingent of documents that discuss disasters and emergencies in general terms and therefore were classed as 'nonspecific'. This is reflective of the UK's most commonly occurring emergencies. There are a few niche points to extrapolate from the scoping, however. Documents relating to conflict, terrorism and the prevention of radicalization and extremism (social disasters) are of particular interest and often are more inclusive of children's experiences and encourage their participation at a higher level. An example of this is the work of Digital Disruption, which trains young people to think critically and sceptically in order to empower them to tackle online extremism directly.

In Italy, many documents refer to multiple risks, however, it is interesting to point out that many self-protection guides and learning activities are focused on fires (bushfires,

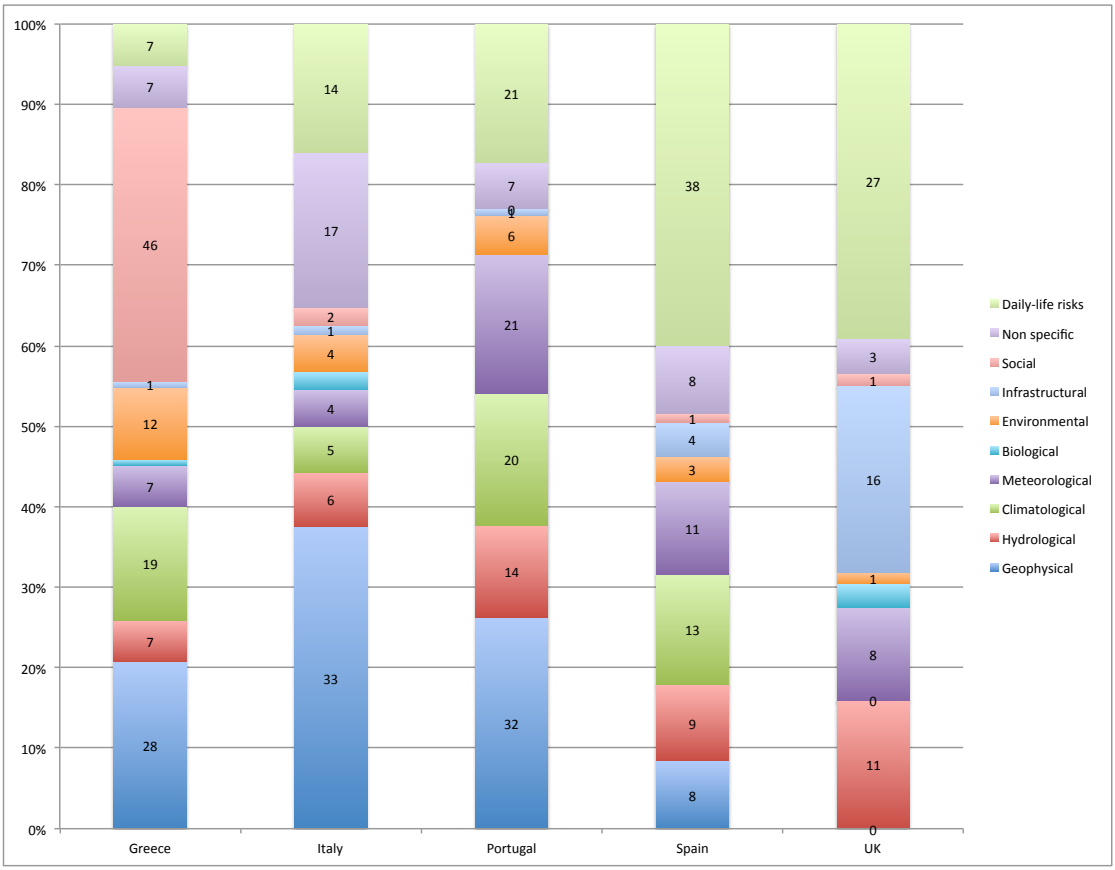
house and school fires) and earthquakes (geophysical). This is probably due to the fact that Italy experienced two severe earthquakes in the last decades such as in Abruzzo (2009) and Emilia Romagna (2012). These emergencies caused severe damage and loss of life, and this implies more attention is paid to earthquake risk, even though other risks such as floods and bushfires are more frequent and experienced in many regions. The scoping highlighted that there are just few documents related to floods, although in Italy more than the half of municipalities are in hydrogeological risk areas and floods and landslides provoked many damages and life losses too in the last years.

The most common hazards addressed in Greece are earthquakes and volcanoes (geophysical), extreme temperatures, mainly wildfires, (climatological), snow (meteorological) and climate change (environmental). Furthermore, some of the programmes concern children and families who experience a disaster due to extreme social or political phenomena, such as the financial crisis, or the needs of unaccompanied children and families at displaced contexts (social disasters).

In Portugal, earthquakes and tsunamis (geophysical), wildfires (climatological) and storms (meteorological) are the most common disasters covered in awareness programmes and self-protection guides, followed by floods (hydrological) and cold and heat waves (climatological). Educational programmes tend to be more extensive and cover several different types of natural, mixed and technological hazards. Several local civil protection programmes include disaster education and disaster risk management within broader programmes focused on child security (that can include road accidents, home accidents, internet security or dating violence, among others).

In Spain the most common disasters addressed in programmes for children and young people are daily-life risks such as fire accidents and domestic accidents because safety culture educational programmes have been extensively promoted. With regard to disasters addressed by Civil Protection Authorities wildfires (climatological) and floods (hydrological) are the most mentioned and covered.

Figure 4: Type of disasters covered



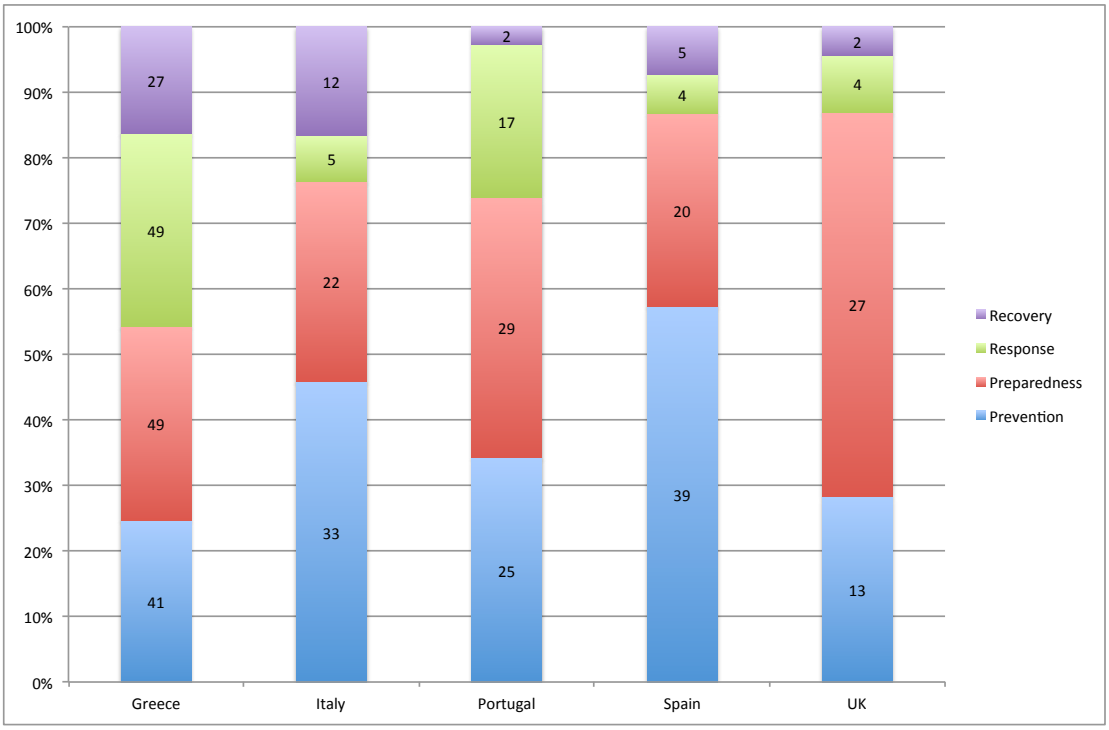
2.3.4 Disaster management phases

The results of the analysis were overwhelmingly clear: most of the scoping was centred on preparedness and prevention. Children are by and large left out of the recovery stages both in policy and practice. This was a mix of direct and indirect targeting. In the UK, children are most often indirectly targeted via policy and practice aimed at communities, schools and teachers. For example, within Chapter 7 of the Civil Contingencies Act Enhancement Programme schools are considered the most effective delivery platform of information for raising children's awareness, which benefits the rest of the community's emergency preparedness. Documents targeting both practitioners and policy makers followed closely behind. This is due to children not yet being recognized as potential 'decision makers' within UK Emergency Management.

This situation seems to be similar in the other CUIDAR countries. In contrast, there are more programmes for children and young people covering the response and recovery

phase of disaster managed in Greece and Italy because they have suffered recent disasters such as earthquakes (Italy), financial and refugee crisis (Greece). For this reason there are some examples of support programmes that aim to reduce the psychosocial and emotional impact of these disasters on children and young people.

Figure 5: Disaster management phases covered



2.3.5 Programmes, actions, plans and policies

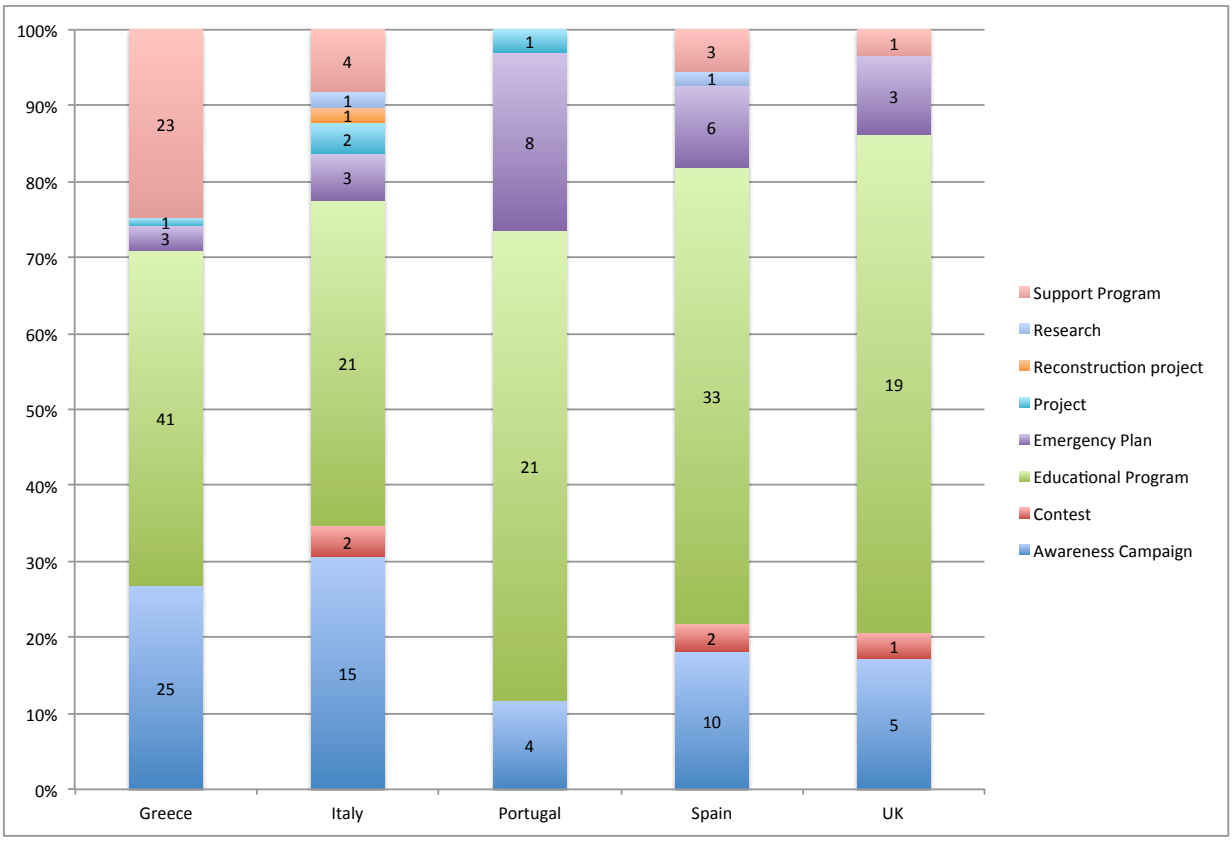
In most of the countries, the National Civil Protection Authorities have a wide array of initiatives aimed at promoting information and education about disasters and emergencies among children. It usually promotes regular training courses for teachers and educators on Civil Protection and publishes books, leaflets and videos aimed at children, parents and teachers, which are then disseminated through session in schools and public spaces.

Most of the child focused documents analysed are learning activities, information campaigns and self-protection guides, aimed to raise awareness among the school community for the issue of civil protection; to identify risks; to acquire safety habits and

to develop skills in civil protection; and to promote suitable attitudes and behaviours in case of emergencies.

Children and young people are most commonly addressed in our scoping in educational programmes, awareness campaigns, emergency plans and supporting programmes.

Figure 6: Type of programmes, plans, actions and policies



Educational Programmes

Educational programmes are seen as crucial to foster "safety or preventive culture" among children and young people and increase their capacities to understand, protect themselves and reduce the risk of disasters and emergencies.

For this reason, in most of the countries, national civil protection authorities at a local, regional and national level publish pedagogical guidelines that primary and secondary schools' teachers can implement in the classroom. 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 a situation of emergency. As these guidelines are very much content-oriented, they are complemented by comic books, the organisation of puppet shows in the school or a drawing contest to design the logo of the Local Civil Protection Club or the emergency phone service. All these complementary materials and events are meant to make children familiar with civil protection authorities and build up a trust relationship with them from the very early stages (3-5 years).

The second aim of these educational programmes is to cover "school safety" issues and increase the capacity of children and young people to respond effectively to an emergency. To do so, in Spain, Italy, Greece and Portugal the civil protection authorities issues pedagogical guidelines such as "Programa de Educación para la Prevención en Centros Escolares" in Spain or the "Referencial de Educação para o Risco" (Framework for Risk Education) in Portugal. As most of the learning activities are instructional, these educational programmes are supported by online and board games, videos and comic books to make the learning process more engaging and lively. One of the main national projects on earthquake and volcanos in Italy is Edurisk, developed by the National Department of Civil Protection (NDCP) and the National Institute of Geophysics and Volcanology (INGV) to provide teachers with tools to create classroom courses on seismic and volcanic knowledge.

In the same line, in the UK, there is also a growing body of practice provided by the Local Resilience Forums (LRF) that aims to inform and educate children about

emergencies. Hampshire and Isle of Wight LRF has developed the "Susie the Childminder" (http://www3.hants.gov.uk/susiethechildminder.htm) books which are aimed at helping primary school children keep safe and prepare for emergencies and can be read on line followed by activities which are designed to be fun whilst reinforcing the key messages from the books. Cleveland LRF has partnered with Tristar Homes, a social housing provider to offer a puppet show to primary schools in Stockton-on-Tees. The puppets run through a flooding scenario and interact with the children through singing with them. Humber LRF offer "Let's get ready kids" (http://www.heps.gov.uk/lets-get-ready/lets-get-ready-kids/) video content on emergency preparedness with a particular emphasis on the flooding which has affected the area in recent years. There are videos for primary school and secondary children; however, the content is exactly the same in both with the only difference being the age of the child presenter.

Merseyside LRF offers a "kidzone" to help children plan for emergencies, including a worksheet to complete. Hertfordshire LRF also offers the worksheet approach. Wiltshire, Bedford and Luton, Sussex and Gwent also include webpages aimed at primary school children and links to other resources such as "What if?" and "Susie". Devon and Cornwall utilise child presenters for their "Clear Plan" video, which is designed to communicate preparedness information to the whole population. Northamptonshire LRF offers a toy bear called Edward Paws who is part of fun activities offered to primary school age children to help them understand what they can do to prepare themselves and their family for emergencies.

The main aim of these emergency education programmes for schools is to teach children about basic concepts such as risk, precaution, prevention, and provide them with self-protection orientations on how to detect, prevent and respond to the most common risky situations in the school.

In some countries (such as Spain, Italy, Portugal and Greece) there is legislation on self-protection measures in schools, including a mandatory rule for the creation of emergency plans. 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.

In Portugal, the Ministry of Education published a Safety Manual for Schools in 1999, updated in 2003, that establishes a set of rules for safety against risks in the regular operation of schools, health and hygiene, fires and earthquakes. The document sets out a list of measures to attain the objective of raising knowledge on what to do in an emergency situation: awareness campaigns, training sessions for teachers and protection and evacuation exercises, making it clear that the agency lies exclusively with teachers, who are tasked with instructing and steering the behaviours of students during an emergency. This concern 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 programmes, 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'.

In this line, the Earthquake Planning and Protection Organisation (EPPO) of Greece published a "Sxedio mnimoniou energeion gia ti diaxeirisi tou seismikou kindinou se sxoliki monada/Plan of Memorandum Actions for the earthquake risk management in schools", which describes the preparation and/or the updating of the existing School Emergency Plan, the organisation of earthquake preparation drills and the awareness of teachers, students, parents and guardians. The School Emergency Plan aims to ensure that teachers and students will know how to react if an earthquake takes place through actions planned thoroughly before the actual occurrence of an earthquake.

Therefore, one of the aims of these educational programmes across the partner countries is to provide the school community with effective self-protection measures to deal with an emergency or a disaster. These self-protection measures must be coherently aligned to the School Emergency Plan and implemented and tested. The implementation is usually undertaken by civil protection volunteers. In Portugal, the NCPA launched the Civil Protection Clubs programme in 2006, aimed at stimulating the creation of civil protection volunteer clubs in schools (from the 5th to the 12th grade), by providing information and training resources for acquiring specific skills and

developing actions. In most of the countries, civil protection volunteers, together with firefighters are indeed the ones that usually organize practical and also more entertaining learning activities to teach the self-protecting measures students and the rest of the school community should follow in case of emergency (the most common activity is the firefighters visit where children can experience a simulation of fire ignition and extinction). Indeed, this is very much welcomed by teachers because even though knowing these measures are mandatory and they are responsible for it, the curricula is overloaded with academic content and school activities, so these issues are very hard to address in the classroom. The Local Civil Protection Authority is also responsible for drills, which is part of the self-protection plan of the school.

While civil protection education in schools is considered, by each national civil protection authority, a cultural and social investment to spread a culture of safety among children and their families, civil protection issues are not mandatory in school curricula in any of the CUIDAR countries. In Scotland this has been addressed by Education Scotland and their "Ready for Emergencies" work, aiming to bring emergency resilience into the curriculum for excellence, however, it is still not a mandatory requirement for schools. As practitioners told us in Spain, the exclusion of emergency education from the curriculum makes it almost impossible for the implementation of emergency and disaster education programmes and activities due to time constraints and lack of resources. In this regard, the Spanish Association of Civil Protection Professionals and Volunteers, EDCIVEMERG (http://edcivemerg.com/), has campaigned for a long time to include them as part of the curricula in primary and secondary school. They claim these education programmes are crucial to make "children from today capable of saving lives tomorrow".

Risk Education

There are also other educational programmes with slightly different aims. These are not meant to secure effective cooperation among children, school personnel and civil protection authorities in the event of a disaster or emergency. These programmes not only aim to make children and young people cooperate with civil protection authorities but to raise them as responsible citizens endowed with "safety values".

In the case of Italy and Spain they are usually focused on risk reduction in the workplace and public health issues and are designed and fostered by the Regional Department of Education or Labour and even by insurance companies, trade unions and NGOs. This is the case of “Sicurezza in Cattedra” (Safety in the teaching post) an educational and management model developed in Veneto region by SiRVESS, the technical body responsible for the promotion of the 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. In Spain, almost each Regional Government 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 Andalucia. The range of ages of these educational programmes is quite broad: from online games designed for four year old children in the identification of risky situations and peril signs to role playing games for 16 and 18 years old young people. Regarding the methodology, it is worth mentioning the Italian project “Responsabili studenti sicurezza” (Students representatives for safety) and the award "Vito Scalfidi" for their participatory approach. Both projects are organised by the association Cittadinanzattiva; the first one is aimed to train students as school safety managers, and the latter a contest of innovative projects on school and community safety issues and active citizenship.

In the UK, risk education in safety centres such as Absafe or Dangerpoint encompass a broader range of safety issues, from domestic safety 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. They form part of the Safety Centre Alliance (http://www.safetycentrealliance.org.uk/). Safety centres are generally not for profit and run by charities, trusts or local authorities. Even though the aim of safety centres in the UK go beyond the promotion of safety habits in the workplace, as they are framed in Spain or Italy, we can see that this kind of educational programme seems to endow citizenship with specific moral attributes rather than only pursuing the effective collaboration between civil protection and children and young people in the prevention and managing of a situation of emergency.

Emergency and disaster education

In most of the countries, national civil protection authorities' educational programmes are usually devoted to emergency education (even though cybersecurity and cyberbullying are currently included in some cases) but their main focus is disaster management. Together with pedagogical guidelines on self-protection at school and at home, civil protection agencies at a regional and national level, usually include lectures and activities on specific disasters. Earthquakes, floods, tsunamis, volcanoes, bush fires, and nuclear risks are the disasters which are usually covered. However, the most likely disasters, and those most dangerous in that territory, usually get more attention especially if it has previously hit the region. In Greece for instance, most of the programmes 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 civil protection actions and research endeavours related to this disaster. 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 programme developed by the NDCP 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 risk, 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 (http://scuolamultimediale.protezionecivile.it/), with the chance of organizing a final event to know the operating structures of the Civil Protection, at the end of the program.

In Greece, Italy, Spain and Portugal, school textbooks seem to be one of the main means of educating children and young people about disasters. In fact, the usual school educational programme is comprised of textbooks linked to the regular curricula of the

corresponding grade e.g. in natural sciences, social sciences, maths, and activities (from painting exercises to role playing) the teacher can implement in the classroom depending on the school grade and the subject they are working on. To easily embed these activities in the regular curricula, disaster education is usually introduced within the class of sciences, for instance lecturing on chemistry and physics to explain the ignition of a bush fire.

In this respect, the case of Greece is probably the most interesting because the Ministry of Education, Research and Religious Affairs, in collaboration with other ministries and authorities, is indeed responsible for informing and educating students in relation to the risks and hazards and, in contrast to other countries, textbooks are mandatory, distributed to the children all over Greece and used as the main educational material in all schools. It is worth going into more detail to see how this educational undertaking is organized. The Greek Ministry of Education has published Interdisciplinary Curricula or single subject Curricula titled “Environmental Education”, “Health Education”, “Flexible Zone”, “Geology-Geography”, “Physics”, “Home Economics” and “Environmental Studies”. These curricula set the aims and the skills and knowledge that children need to achieve at each grade and also suggest activities that can be used 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 the dimensions of human actions on the environment. The topics covered vary depending on the subject and the grade level. In general children learn about different natural and human made phenomena, about the effects of humans on the environment and also learn to prepare for different types of hazards. Based on these curricula, textbooks have been developed with educational material and activities, which are used by teachers and students. For instance, in relation to the subject “Environmental Studies” there are four textbooks for the first four grades of primary school (6-9 years old) during which children learn about various environmental hazards such as waste, recycling, water and soil pollution, forest fires and crop destruction. In the fifth and sixth grade of primary school (10-12 years old), the subject "Geography" is introduced, which includes information about the natural environment of Greece, the weather conditions and the climate, the volcanoes and

earthquakes, the changes that can occur in relation to the nature and people's lives and the role of human activities as a factor of changes on the earth.

In this regard, in most of the partner countries, collaboration between the Department of Education and organisations devoted to the study of specific disasters seems to be crucial to produce educational materials that enable children and young people to increase their knowledge on a particular topic while enhancing their capacity to understand and respond effectively to a disaster. This is especially salient in the case of past disasters such as earthquakes in Greece and Italy.

In Greece, for instance, 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. As a result of this, educational visits can take place and also schools can borrow seismological tools for educational purposes.

In Italy the Instituto Nazionale di Geofisica e Vulcanologia (INGV) plays a crucial role in the organisation of all sorts of educational programmes and activities addressed to children and young people. It is involved in the project Edurisk, a project designed for schools to provide teachers with lessons to give in class, such as the textbook “A prova di terremoto” (Earthquake proof), tools and resources to create training courses on seismic and volcanic activity. This was an ambitious and important project. Edurisk aims to target children and young people from four to 17 years old, and some of the pedagogical toolkits included in this programme are really innovative and participatory. For instance the educational kit “Se arriva il terremoto” (If the earthquake comes) for kindergarten children (4-5 years) and primary school children (6-7 years) is a set of tools that can be managed independently by children. The INGV also offers guided tours, seminars and educational courses for schools in this Institute. Other important 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 Sisimica” (Seismic Platform), a seismic simulator that allow people to live the experience of an earthquake, as part of the national awareness campaign called “Terremoti d’Italia”.

In line with this, in Spain, we have found other examples of collaboration between research institutions and education authorities in developing learning programmes for disaster education in schools. In the case of the INGV, the earthquake in Lorca 2011 influenced geologists from the Department of Geodynamics at Universidad Complutense de Madrid, and high school teachers and entrepreneurs from the affected zone decided to create a set of activities aiming to raise earthquake awareness among students and citizens ("EsLorca").

We found another example in the RINAMED project (http://www.rinamed.net/), an Interreg European Project formed by Mediterranean regions from Spain, Morocco and France that aim to create educational programmes and awareness campaigns specifically to increase the visibility of natural risks in these regions. As a result of the collaboration between the Regional Civil Protection Agencies, research institute and universities and the environment department of these regions, some interesting learning activities were produced. The most relevant one is a role playing game designed to make +10yr students aware of the complexities of managing different sorts of risks, which are less or more likely to happen depending on urban development and other characteristics of the territory. These complexities are managed by the players but assuming a particular point of view: each player acts as a concerned actor with particular interests (major, farmer, rancher, tourist, etc.).

In Portugal, researchers develop multiple activities with schools aimed at risk education, particularly in the case of earthquakes: from lectures to open days at the universities during the Science and Technology week. For instance, the Faculty of Sciences holds a "day of natural risks", receiving the visit of school groups for hands-on activities under the label "CSI Planet Earth: disasters under investigation" (https://ciencias.ulisboa.pt/pt/noticia/19-11-2013/dia-dos-riscos-naturais).
Researchers also visit schools with an "earthquake simulator" to train children on earthquake self-protection actions (http://srl.geoscienceworld.org/content/87/3/773).

As cultural and educative institutions, museums are also having an important role in the development of educative programmes for disaster education. This is the case of the

Greek National Archaeological Museum, the Fire Museum, and the Natural History Museum of Lesvos also in Greece. They offer different educational programmes to children to promote their awareness and readiness.

Other than civil protection authorities, NGOs seem to be important in designing innovative programmes in disaster education. For instance, Fundació Pau Costa (Spanish association of firefighters) has developed MEFITU (https://mefitublog.wordpress.com/), a project mainly addressed to schools that are close to zones burned by wildfires. The main aim of the programme is that children and young people (but also teachers and parents) change their relationship with the burned landscape by experiencing how the woods regenerate after a wildfire. With this programme they intend to create an ecological culture of fire.

International organisations such as UNICEF are also important in introducing a global approach to some disasters. 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 disaster risk reduction that was created by UNICEF and UNISDR to be used in non-European contexts. UNICEF has also produce pedagogical materials that are being used to raise awareness about the refugee and the financial crisis 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 which aim to make children aware of poverty, social exclusion, rights violation and refugees. For example, the "Passages" is an experiential game of the United Nations High Commissioner for Refugees (UNHCR), based on the method of simulation (http://www.unhcr.org/473dc1772.pdf). Through the process of dramatization and the representation of reality, participants are allowed to 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, which enables students to face difficult situations, such as the lack of food, water, doctors and education (Apostoli Rouanda/Mission Rwanda). Local Resilience Forums in the UK, such as Hampshire also includes links to the UN Office for Disaster Risk Reduction (UNISDR) disaster simulation game “Stop Disaster” which is aimed at secondary school age children and young people.

Awareness Campaigns

Children and young people are not only the target of educational programmes on emergency and disaster management, but are also specifically addressed in some public awareness campaign and emergency plans. The municipality, in coordination with the Local and Regional Civil Protection Authorities, usually organizes these actions in the partner countries. 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'. And in 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 general public to raise awareness about civil protection best practice.

These informative and awareness campaigns are usually linked to specific events such as the Civil Protection Summer Camps in Italy (Ache io sono la Protezione Civile in Italy – I am the Civil Protection too) organized by the NDCP, which are addressed to children and young people aged 11-17, with the aim to make children aware of the active role that each can play in protecting the environment, the territory and the community during emergencies situations and disasters, such as to prevent the increase of wildfires, bushfires and how to respond to these emergency situations. In Spain, for instance, children and young people usually play with fireworks and participate in "correfocs" (a parade of dress up like devils that dance spotting fireworks and running through the streets) on the feast of Saint John and other summer popular festivals. For these events, Regional and Local Civil Protection Authorities disseminate posters and comic books to alert parents and young people about the risks of fireworks and giving specific instructions to handle fireworks safely.

In Portugal, a yearly exercise named "When the Earth shakes" (based on the American model "ShakeOut") takes place in November, promoted by the Civil Protection Authority. Schools, companies, NGO, individual citizens are invited to take protective measures against earthquakes at exactly the same time. The 2015 exercise had thousands of registered participants, most of them in schools (http://www.aterratreme.pt/).

The purpose of these civil protection campaigns are similar to the educational programmes at school: to train children in the identification of risks, threats and dangers; in the correct interpretation of emergency signals-and-alarms, in the acquisition of preventive habits and in reacting effectively and safely in a situation of emergency. The main goal is to foster self-protection and make sure that children and young people cooperate in the effective implementation of emergency plans. For this reason, these awareness campaigns are very much linked to emergency plans set at a regional and local level, including school emergency plans, municipal emergency plans and household emergency plans. The latter are not enforced by law but strongly suggested by Civil Protection Authorities in order to reduce the risks in case of emergency or disaster. As happens with educational programmes, the local civil protection authorities usually disseminate self-protection guides aiming to help families develop an emergency plan that will help them in case of emergency. These guidelines set clear instructions on how the family and community should behave in the event of the most common risks in that area: fire accidents, toxic spills, earthquakes, floods and wildfires. In some cases, attached to these guidelines there are very simple educative activities specifically addressed to children and young people. Mostly based on painting and drawing exercises, these activities aim to help children recognize civil protection actors and memorize very precise instructions of what should be done in the face of specific risk.

However, civil protection authorities do not only organize awareness campaigns. Citizen organisations, NGOs and other types of groups can also foster them. In fact, this is usually the case when a disaster has occurred and their consequences are still vivid for the population. We have found interesting examples of this.

In Italy, more citizen-led awareness campaigns have been organized in Abruzzo and Emilia Romagna Regions, which recently experienced emergencies. For instance, "Facciamo noi!" (Let's do it!) is a blog created after the 2012 earthquake in Emilia Romagna region to collect the experience of children and young people. The blog collects and makes available materials, for students, teachers and communities to face earthquake risk.

In Spain we have found similar experiences but regarding the financial crisis and its disastrous consequences mainly affecting working class people. The most interesting one is "Quan perdem la por" (When fear vanishes), a comic book created by a 15 year-old member of the "Platform de Afectados for la Hipoteca" (anti-eviction citizen platform). 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.

Another interesting example are the Children and Young People's Flood Manifestos, that were developed by children from South Ferriby Primary School, Humberside, UK and by young people from the Magna Carta School in Staines-upon-Thames, UK as part of "Children, Young People and Flooding" project with Lancaster University and Save the Children UK. The Manifestos, the Children's Flood Manifesto (http://wp.lancs.ac.uk/cyp-floodrecovery/files/2015/11/Childrens-Flood-Manifesto-FINAL.pdf) and Young People's Flood Manifesto (http://wp.lancs.ac.uk/cyp-floodrecovery/files/2015/11/Young-Peoples-Flood-Manifesto-FINAL.pdf) aim to raise awareness about children's and young people needs and their ideas for "how to make things better in the UK based on their experiences".

Support actions and programmes

Children and young people are also the target of support actions and programmes as part of the response and recovery process in the event of a disaster. In fact they are defined as a vulnerable group and therefore a preferential subject of civil protection action in the event of a disaster or emergency. Paradoxically, document analysis and the interviews clearly show, that there are few specific guidelines or training for civil protection volunteers or staff on how to take care of children during emergencies (see

for instance: “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), while, in contrast, we do find psychological self-help guides for teachers and parents on how to support children during emergencies.

Having said so, most of the supporting actions and programmes addressed to children and young people aim to mitigate the psychosocial impact the disaster or emergency may have. However, as stated 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).

In fact the problem of emotional trauma was also pointed out by one of the psychologists interviewed in Spain. The psychologists explained that this problem is even stronger when disaster has no injured people but may traumatise people who know their place has been destroyed, as is the case with most wildfires. In those cases, the trauma symptoms can remain silenced by parents and educators and is even more difficult to intervene if needed. This issue is in fact the main concern of most of the supporting programmes aimed at children and young people. Most of these programmes 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 professionals, teachers and parents in the field. This is the case of “Érase una vez unos valientes” (Once upon a time the brave ones!), 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 talk about their experiences and feelings. The American Association of School Psychologists and Save the Children UK have developed similar toolkits. This is the case

of the Journey of Hope Program, that was developed in the United States after Hurricane Katrina in 2005 and used to respond to events such the Oklahoma bombing in 1995 and is more recently being tested in the UK.

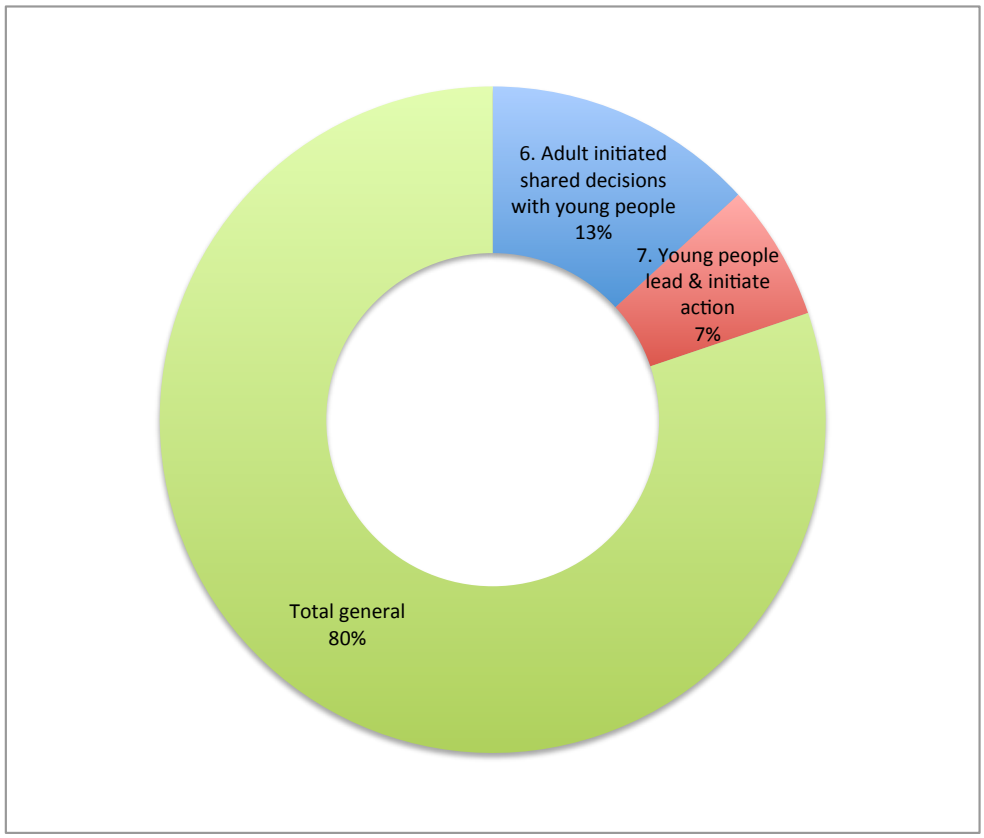
In the case of Greece there are also emerging supporting programmes and infrastructures for refugees and people suffering the financial crisis. In these cases, these programmes are not only aimed to provide psychosocial support but also legal help and habitable living conditions. Some of these projects and actions are specifically addressed to children and young people. For example, the NGO Arsis has a supporting infrastructure for refugees (Estia Prosfigon/Refugees' Home). Moreover, SOS Children's Villages help children in need of care and protection because they have been away from their family environment and offer them the opportunity to regain a permanent home and live in an environment that closely resembles family (Paidika xoria SOS – Ena spiti agapis gia ta paidia/SOS Children's Villages - A loving home for every child, Kentra Stiriksis Paidiou kai Oikogeneias – Paidika Xoria SOS Ellados/Child and Family Support Centres - SOS Children's Villages).

2.4 Children and young people's involvement in disaster and emergencies management. What is the role of children and young people? To what degree do children and young people participate in disaster management?

After an overall description of the main type of actions, programmes, plans and policies addressed to children and young people in disaster and emergencies management, we present the findings from the analysis of the scoping materials the specific modes of children's involvement and participation. To do this, each partner has produced a brief account based on the materials collected. The purpose of this section is to show how children and young people are addressed: if they are represented as a highly vulnerable group that needs protection; if they have needs that must be specifically addressed; if they are seen as lacking in education about risks, disasters and emergencies so they can contribute to effectively respond or prevent a harmful situation; if children are considered as a group with valuable experiences and knowledge that should be taken into account in disaster management; or for instance, as a leading group in specific areas of disaster management and risk reduction, or any other assumption about their role. Each partner will also reflect upon the cultures of disability, social class, disadvantage, gender, ethnicity, marginalisation that might be framing the actions, programmes, plans and policies addressed to children and young people and how the practitioners perceive this diversity of cultures, if this is considered a strength or a weakness for disaster management. Furthermore, each partner was asked to identify those cases in which children and young people are actively involved in any sort of decision-making process and their voice is taken into account.

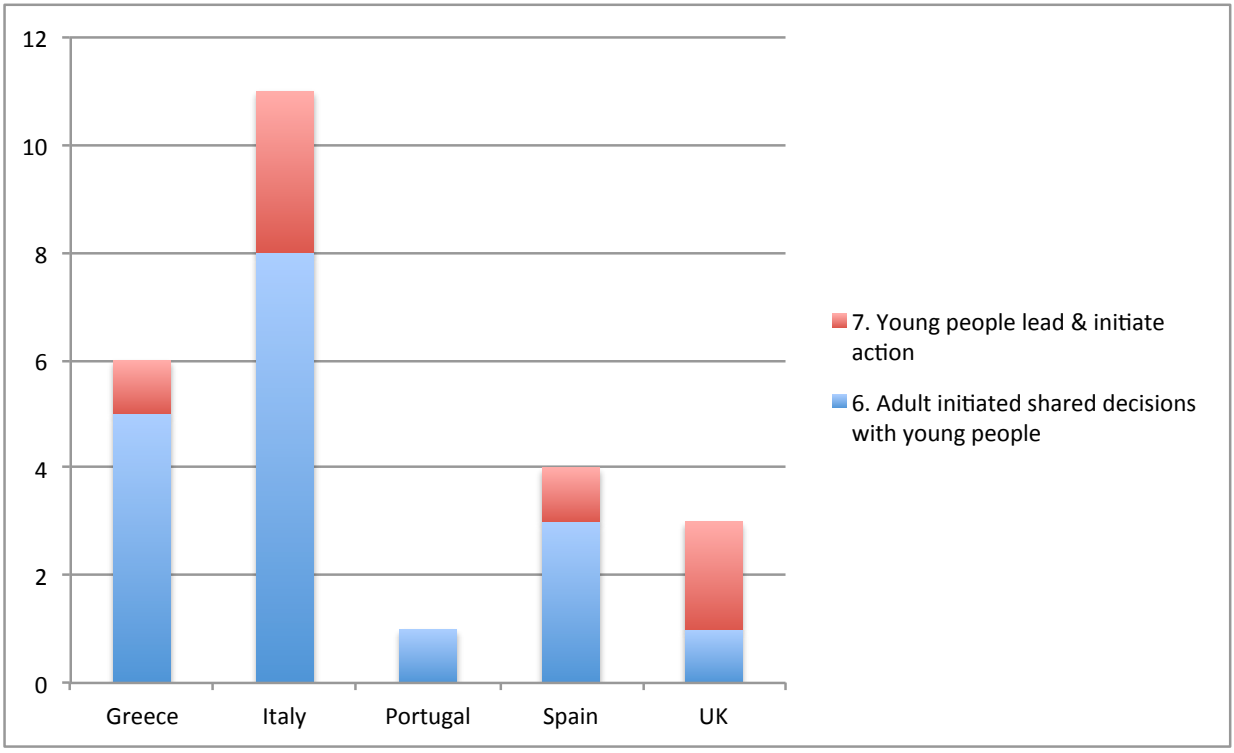
Before moving into this, it is important to have a general picture of the level of participation of children and young people in disaster and emergencies management. From the quantitative analysis of the tagging process, we see very little evidence of children meaningfully participating in emergency management or community resilience work in any of the countries. This is our main finding after scoping emergency and disaster policies and programmes and interviewing key practitioners in each country.

Figure 7: Programmes, actions and plans involving adult initiated shared decisions with young people or lead and initiated by children or young people.



As figure 7 shows, only 20% of the actions, programmes and plans addressed to children and young people that we have collected and analysed either involve adult initiated shared decisions with young people or are lead and initiated by children or young people. This means that only 20% could be indeed deemed as participative according to Harts' Ladder for children's participation (Hart, 1997)

Figure 8: Programmes, actions and plans in partner countries involving adult initiated shared decisions with young people or are lead and initiated by children or young people.



In fact, as we see in figure 8, most of the participative programmes are located in Italy and Greece where emergencies and disasters have been experienced quite recently. This seems to be quite relevant because in this kind of scenario more grassroots-based and inclusive projects and initiatives seem to emerge.

Italy

At legislative level the concern of informing and training the population is present, for instance, in the Article 3 of the basic law on civil protection (Law number 100, published on the 12 of July 2012) and in the Operating Instruction for the Preparation of a Municipal Emergency Plan, (NDCP, O.P.C.M. 3606/2007) but no specific references are made about informing/training children or training on how to treat them, neither is there mention made of the contribution children as citizens can give or the need to consult them in defining and assessing risks, vulnerabilities or prevention, mitigation and preparation measures.

Children and young people of school age are considered a prime target for public programmes aimed at raising awareness on matters of prevention and mitigation of major accidents and disasters. These programmes consider the involvement of children as beneficiaries/recipients of the activities as participation while they don't play any active role in the realization of these programmes. Actually, there is no involvement of children in decision-making processes within national programmes or policies, so according to some practitioners interviewed "the first step would be to clarify what we mean by active participation of children and adolescents and then carry out actions intended to meet a real participation".

Children and young people's active participation has been found in some local projects, like Vibrazioni (Vibrations) a radio/podcasts laboratory, run by secondary school students, to tell through the voices of young people, students in schools and citizens from L'Aquila, how they lived through and after the 2009 earthquake. Also related to this disaster, there is an interesting project called "Ricostuiamo l'Acquilone" (Rebuild the kite), a participatory project that involved children for the reconstruction of the school garden after the earthquake in Emilia Romagna. "Radonmap" (https://www.radonmap.it/) is also an interesting collaborative project. It is a school project that aimed to build an online map of the Monticello Brianza municipality to monitor the level of Radon gas (highly present in the area) in school facilities and houses. Students ran the detection and monitoring of the gas, the platform maintenance and delivered an information and awareness campaign to the population. "Laboratorio Emergenza" (Emergency Lab) is a project for vocation school students from 14 to 18 yr. They analysed the waiting areas in the case of earthquake comprised in the emergency plans of 33 municipalities of the Terni province and formulated proposals to improve them and to communicate the municipal emergency plan to the population. Another interesting experience is "Responsabili Studenti per la sicurezza" (Students representatives for safety), a project aimed to train students as School Safety Managers, and take part in the safety management in schools along with school personnel, as established by the law 81/08.

As in other countries, as part of the activities organized for the Resilient Cities programme (United Nations Office for Disaster Risk Reduction), the Province of Potenza

established a Permanent Panel on Youth and Resilience to Disasters. By now the activity organized within the programme is a school contest called “Resilient school. Let’s build it together”, but a meaningful public participation is yet to be achieved.

Greece

The policy documents, programmes and the actions in relation to hazards, risks and disasters address children as a group that needs to be educated, but adults have produced all the materials. In some documents, mostly in policy documents, children are briefly addressed among other populations, while others, such as programmes, actions, educational films, school curricula and textbooks, focus exclusively on children. All documents have been designed and developed by adults, but the level of the children’s participation depends on the way that children are treated by the adult who is in charge of the action, i.e. who uses the textbook, who implements the program; the teacher therefore plays a crucial role.

For example, the EPPO’s (Earthquake Planning and Protection Organisation) “Plan of Memorandum Actions for earthquake risk management in schools” describes in detail the steps a school unit should follow before, during and after an earthquake. According to this, the responsibility of preparing the plan and coordinating the actions for its implementation is upon the Director and the teachers of the school, for monitoring its implementation. The students should be informed about earthquakes and the appropriate protective measures that should be taken before, during and after an earthquake, about the emergency plan of the school, participate in drills and be trained in the implementation of the School Emergency Plan for an earthquake. However, as the teachers have a key role in implementation, they are the ones who will determine how children will participate. Some teachers might lead children while others might promote children’s thinking and encourage them to take initiatives and decisions. For example, there were school programmes where children were encouraged to participate in a very creative and active way. In such cases the teachers designed and developed the programme, which, however was implemented with children as active participants.

Furthermore, the circular of the General Secretary for Civil Protection on Planning and Civil Protection actions to address risks from seismic events defines EPPO as "responsible for issues concerning the design, preparation, coordination and monitoring of the education and public awareness in seismic protection and response to emergencies from earthquake" (p. 6). In relation to students and teachers this document specifies that, "the principals of schools of Primary and Secondary Education are obliged at the beginning of the school year to implement exercises of buildings abandonment and inform students". If an earthquake happens while children are at school" (p. 7), "the principals have to immediately evacuate the school building and guide the students and staff to the pre-determined safe outdoor region in case of an earthquake, until the students are received with safety from their parents or guardians" (p. 22). Once again, it is not analytically explained how these exercises will take place and what will be the level of children's participation.

Children are rarely considered as a group with valuable experiences and knowledge that should be taken into account in disaster management or as a leading group in specific areas of disaster management and risk reduction. For example, "The Cooperation Framework Agreement between the Institute of Geodynamics of the National Observatory of Athens and schools of primary and secondary education" (Plaisio sinergasias anamesa sto Geodinamiko Institouto tou Ethnikou Asteroskopeiou Athinas kai sxoleion - Cooperation framework between the Geodynamic Institute of the National Observatory of Athens and schools) suggests that "students and teaching staff are those groups that may have a significant role in reducing the earthquake's impacts. And this happens because students are capable of assimilating and implementing easier specific instructions which they can transfer to their family and friendly environment, and the teachers because they are in touch with vulnerable population groups for a considerable time during the day" (p. 1). In this case, young people lead and initiate action. Additionally, according to the "Guidelines on Unaccompanied Children Seeking Asylum" (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), "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 crucial to train practitioners, including personnel of police services 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). In the above documents it is clear that children have knowledge, views and preferences that need to be heard and also taken into account.

Furthermore, some documents in relation to earthquakes have been developed for persons with specific disabilities but not exclusively for children. For instance, the Earthquake Planning and Protection Organisation (EPPO) has produced guidelines for persons using the method "easy to read" and for persons with physical disabilities (16-18 years old) (Proetoimazomai gia to seismo – Odigies gia atoma me kinitikes anapiries/Getting ready for an earthquake: guidelines for persons 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 earthquake – 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.

Finally, in some policy documents ("Kateuthintiries odigies gia tin organomeni apomakrinsi politon gia logous prostasias apo ekselissomeni i epikeimeni katastrofi eksaitias dasikon pirkagion/Guidelines for the organized evacuation of citizens for protection from ongoing or imminent disaster" people with respiratory and other health problems, children and older people are given priority for evacuation in case a wildfire starts. Also, in the document titled "Kanonismos leitourgias ipiresias asilou - Regulation of Asylum Service operation) it is mentioned that "Officials conducting interviews to unaccompanied minors and decide on the relevant applications for international protection, have the necessary knowledge of the minors' special needs, where possible.

The interview's content should be comprehensible by the child, taking into account its childhood" (p. 4).

In relation to ethnic groups, Arsis deals with children of different ethnic groups, such as Roma children, Bulgarian, Romanian, etc.". Indeed, Arsis in cooperation with Praksis has created a Mobile School for the needs of children living and working on the street and who have no access to the school environment (Kinito Sxoleio/Mobile School).

Portugal

The analysis of policy documents and legislation pertaining to disaster management in Portugal shows that children and young people are seldom considered as active subjects in this matter. There are no specific guidelines or plans aimed at them (other than of an educational nature) and they are referred to in this type of document solely as a 'vulnerable group', with 'special needs', alongside older and disabled persons. No specific references to age groups are made, even though the label 'children' encompasses from newly born to 17 year-olds.

For instance, in the Technical Notebooks (a collection of manuals that contain technical information on emergency planning) published by the National Authority of Civil Protection (NACP), children are only mentioned as potential victims or as targets for special measures - 'Focusing on the element to be protected, the population, we distinguish specific vulnerabilities, such as those caused by difficulty in walking, hearing or seeing, children, elderly people, foreigners, among others, in order to prepare in a suitable manner the protection measures' (Technical Notebook n. 7, Information Guide for Designing External Emergency Plans.

The National Civil Protection Emergency Plan only mentions children when it describes the actions to be taken in the emergency stage, once again describing them as a vulnerable (therefore problematic) category.

The analysis has also shown that little consideration is yet given to public participation in disaster prevention and management. According to the Basic Law on Civil Protection

(Law number 80/2015), 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). No mention is made to the contribution citizens can give or the need to consult them in defining and assessing risks, vulnerabilities or prevention, mitigation and preparation measures.

According to the Resolution n. 25/2008, all civil protection emergency plans (the non-confidential parts) have to undergo public consultation procedures. The PROCIV Technical Notebooks n. 3 and n. 7 also mention public consultation as mandatory for emergency plans, but do not go into details on how to conduct it, other than setting a minimum period of 30 days. The National Civil Protection Emergency Plan underwent public consultation in June 2012 and it is mentioned that several contributions were received and integrated in the final version of the plan. Several municipal emergency plans give similar information. However, citizen participation in this kind of process is usually low and no specific actions for children are included.

The "Framework for Risk Education" also underwent public consultation, but again children were not specifically targeted in the consultation process, although it acknowledges the importance of public engagement in risk reduction: 'For an effective safety culture to exist, it is necessary that individuals are encouraged to participate actively in the construction of solutions for problems, by discussing them, intervening, demanding, cooperating with public services and other organisations'.

An assessment of local level engagement in Disaster Risk Reduction based on the case study of Amadora, one of the few Portuguese cities (alongside Lisbon and a handful of others) that integrate the UNISDR Resilient Cities Programme, has shown that children are already included in public communication and public consultation events, but a relevant level of public participation is yet to be achieved. The civil protection team conducts workshops in schools as part of their awareness and training programmes, based on the principle 'that the children are at the centre of the neighbourhood

network, able to disseminate information to their families'. The interview with the civil protection officer in Portugal revealed that there are no formal mechanisms of consultation with children. Nevertheless, the workshops include participative, hands-on activities, where children sometimes give novel contributions and recommendations that are then included in the reports the facilitators send to their superiors.

The lack of children's participation is acknowledged by all representatives of civil protection (at all levels) and representatives of the Ministry of Education in Portugal, although most recognize that it would be important to include children's perspectives. There is some awareness of this issue, but a severe lack of resources and lack of knowledge on how to change risk education, which is already highly formalized. Therefore, disaster risk reduction in Portugal is still a long way from achieving the aim of engaging children as active members of their communities, with valuable knowledge and skills that can be mobilized towards risk prevention and impact mitigation.

Spain

According to the Spanish Law (1995) on Civil Protection, citizen involvement is mandatory and considered as a duty to collaborate. However, collaboration is not framed as participation but obligation to comply with Civil Protection rules and commands regarding prevention and protection of people and goods and their intervention on a situation of emergency. As it is stated by the Spanish Law of Civil Protection (Law 2/1985, Cap. II, Art. 4): "All adult citizens will be obliged to cooperate personally and materially with Civil Protection Authorities if it is requested. Every +18 citizen, but specially non-employed, private and public security and broadcasting services must collaborate in this terms with Civil Protection Authorities in case of emergency." There is no explicit reference to children in civil protection legislation other than being considered as a vulnerable population and therefore as a target of civil protection authorities' actions. The fact that citizens below 18 years old are not obliged to collaborate with the Civil Protection Authorities may explain why there is no reference to them as possible collaborators or allies. However, as we have already seen, children and young people are the target of specific information, educational and raising awareness action, which is one of the duties of Civil Protection.

Children and young people are a target group addressed in educational programmes and awareness and informative campaigns to foster self-protection at schools and households. This can be done in a more or less participative way depending on the "school culture" and the teacher. But either at school or at home, the programmes and campaigns aim to make children and young people perfectly aligned collaborative actors with the Civil Protection Authorities. They must know how to prevent emergencies and disasters and behave according to the self-protection plans set for the schools and households. This is the main role of children young people in disaster management. In fact, based on the results of the drills conducted at schools, they are perceived by Civil Protection Officers as having increased their risk awareness and internalized the damage-reduction or prevention recommendations given to them in case of emergency or disaster.

In these educational programmes and awareness campaigns, we have found few cases in which cultures of disability, social class, gender and marginalization were addressed. Children are usually treated like people with disabilities, older people and people with cognitive and physical limitations that may make civil protection actions harder to accomplish. There is no reference to social class, marginality, social exclusion, and cultural diversity in the documents. Disability is the only aspect that seems to be included. It must be taken into account in the design of the self-protection plans (Guía técnica para la elaboración de un plan de autoprotección) and in the intervention in emergency situations (Guía de Atención a las personas con discapacidad). However, there is no reference to children with disabilities.

Despite these, practitioners seem to be very much aware of the necessity to take into disability account. Spanish firefighters told us that the reaction of people in the face of a disaster and emergency depends on cultural and social factors. For instance, they said they had seen migrant people from African countries running away from a fire rather than staying in their homes, which is the advice given by Civil Protection. Also, previous experiences in emergencies and disasters play an important role and civil protection practitioners need to have this in mind.

Even though children and young people are seen as a vulnerable group akin to older and disabled people that must be protected or provided with training to protect themselves, we have found a few examples in which they can educate other actors in "preventive culture". In some activities aiming to teach children risk reduction habits in the face of common risky situations such as snowstorm or heavy rains, they are pictured as responsible actors that should keep an eye on their parents and teach them what to do in case they are not following Civil Protection advice. In contrast to what happens with teachers at school, children must watch over what adults do. They are turned into civil protection allies whose mission is to collaborate with their parents to make sure that the family auto-protection plan designed is properly. For instance a learning activity designed by the Catalan civil protection authority and addressed to children, ask them to remind their parents of three self-protection measures in case of snowstorm.

Despite this, children and young people can be seen as key players in the promotion and spreading of "culture of prevention", but as the civil protection officers acknowledge, they are seldom included in any decision-making process in disaster management. For them, this is a gap that must be covered to get valuable feedback to improve disaster management strategies for instance, the civil protection officers' educational program. Without children and young people's involvement it is difficult to know their perception of the disaster and the effectiveness of the educational programmes.

We also have found a different type of activities and programmes in which children and young people are involved in disaster management and prevention. In 2013-2014 33 schools from all over Spain participated in the First Lego League, a contest organized by the toy company LEGO and the NGO First. This contest aimed to foster entrepreneurship and scientific skills among 10-16 year olds. In contrast to education in emergencies programmes or awareness campaigns and informative actions, in the First Lego League different 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, which is a coastal, hilly and rainy region, the teams were trained by different experts in weather forecast systems, sea storm alert systems, crisis management, fire detection systems and simulation of wildfires, effective systems of disaster communication to the population, the role of ICT in disaster management and flood behaviour. The teams

developed specific emergency plans, new alert systems, rescue robots, awareness campaigns, any innovative action or infrastructure that could help to better manage the disaster.

According to the Civil Protection Officers we interviewed, this contest was quite revealing for them because they became aware of the importance of children and young people's participation in disaster management and their potential in improving emergency plans, prevention strategies and recovery. In contrast to the education in emergencies activities, children and youth are involved here as actors that devise their own solutions to manage a disaster and even more importantly these solutions are presented as economic and social contributions for the community. As expressed by some of the practitioners consulted this is the path Civil Protection should follow in the next years. As they acknowledge it is a big challenge, because children and young people participation is currently considered as part of the assessment process, as a way to get more and better information about their perception of the awareness campaigns and the education programmes.

United Kingdom

In existing policy and guidance children and young people are predominantly depicted as a vulnerable group. Vulnerable people are defined in much of the guidance as those 'that are less able to help themselves in the circumstances of an emergency' and those that need external assistance to become safe. It is typical of policy in the UK for children to be listed alongside the elderly or disabled as being vulnerable with little remark made on how these groups differ. It is not specifically made clear why children may be vulnerable and how their vulnerabilities set them apart from other vulnerable groups.

There is also little recognition that within children and young people, vulnerabilities and needs are not homogeneous, gender, social class, ethnicity, age are rarely considered in detail. In fact, in the UK's Civil Contingencies Act Enhancement Programme, awareness of cultural diversity is merely alluded to:

> "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)

Encouraging awareness of the most 'vulnerable groups' is meant to include children and young people (though this is not explicitly stated).

Despite children being included as a vulnerable group and emphasis placed on the need to plan for vulnerable groups, this has not always translated into practice, for example, in the 2005 London Bombings children's dependency on their caregivers was not adequately taken into account and some children were sent home from school even though their caregivers may have been caught up in the bombings or were still at work.

The Cabinet Office is the UK Government Department with responsibility for oversight of emergency preparedness, response and recovery and in turn they produce guidance for Local Resilience Forums (LRFs) on their role. This guidance, which is intended to provide a consistent framework for self-assessment and peer review 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.

Despite this, LRF websites reveal highly commendable efforts to engage children and young people in emergency preparedness. The most prominent initiative was the Essex LRF programme, which has become known as "What if?" which is the title of a range of web based activities aimed at primary school age children. The programme involves teaching children aged 6-11 about risks in their communities through fun activities (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 own homes. The Hyogo Peer Review commented that it "is a good soft way of raising citizens' awareness through active engagement. The school project in Essex supported by the

programme reflects good practice in educating children about risks at an early age, while at the same time engaging effectively a wider community, and parents in particular, by using children as effective communicators." (p. 23)

Surveys we conducted revealed programmes where participation went beyond tokenism. One is the Duke of Cornwall Community Safety Award, which is open to all uniformed youth organisations with young people from 10 to 18 able to participate. Members of uniformed youth groups such as Guides and Scouts obtain the award by gaining an understanding of how to prepare for and respond to a range of severe weather emergencies. They also participated in a simulated emergency exercise involving local responders. There has been considerable interest in the programme from uniformed youth groups in England and Wales and it is intended to further encourage adoption across the UK.

The survey responses revealed considerable activity in Scotland. Particularly interesting is the Education Scotland website "Ready for Emergencies?" Education Scotland is a Scottish Government body responsible for supporting quality and improvement in education in Scotland. The "Ready for Emergencies?" website aims to help teachers develop community resilience through the school curriculum and contains educational resources on severe weather, floods, terrorism, pandemic flu, animal disease outbreaks and utilities failures. Teachers can access a range of "learning journey" resources, which suggest lesson plans, resources, activities and potential partners in delivering the material. The materials are aimed at nursery education through to S4 level (15-16 years).

An issue that was infrequently addressed by policy and practice but frequently (and obliquely) brought up throughout the scoping is the emotional impact of emergencies on children. Thus far, this huge need is not being addressed by any actual practice. However, Save the Children UK are piloting their programme, Journey of Hope, to address children's emotional resilience in the recovery phase within the UK.

2.5 Concluding remarks.

After having described the disaster management organisation and policies of CUIDAR countries, the main actions, programmes, plans and policies addressed to children and young people and analysed how they are represented, involved and participate in these actions, we can provide some brief main findings that help us to construct the best case scenarios for the following CUIDAR Work Package: Dialogues with Children.

- Most of the programmes, actions and plans addressed to children and young people are run by public organisations and usually developed and implemented at a local level. However, a risk-reduction strategy at a national level that could boost the development of these initiatives and maintain their continuity seems to be missing. Even though these initiatives are deemed as crucial to increase risk reduction and emergency prevention habits among children and young people, they are seldom and not consistently implemented. For instance, according to practitioners interviews Italy is one of the main European countries that produces information and training materials, agreements between institutions and organisations for the realization of informative and educational resources at local and national level. These materials and programmes have an intellectual approach to the field of civil protection but a lack of training and drill activities, enacted in a cyclical and constant way. That is why most of these projects and programmes have a lack of continuity and remain purely theoretical and do not produce in citizens, including children, a real perception of local risks.

- In some countries, practitioners see fragmentation as a problem. From the local to the national level, different actors develop relationships and agreements for the development of projects, trainings and awareness campaigns: for example, in Italy, among the local and regional civil protection authorities and the regional school departments or the Ministry of Education and INAIL, both at national and local level. But these programmes do not ensure national coverage and often lack continuity, creating some interesting experiences and replicable best practices but do not have long-term sustainability.

- There is a significant contrast between what representatives say about children and youth participation in disaster management, as something very positive that

should be pursued, and what is actually done and implemented. This is also the case with most of the educational programmes: even though their importance is assumed by policymakers and practitioners, most of them are not implemented. The fact that they are not included in the curriculum may explain why most of them have been poorly implanted. According to the UK review of the Hyogo Framework, this is a key barrier to involving children in emergency management and explains why children and young people are largely excluded from UK Emergency Management and are not explicitly mentioned in the Strategic National Framework on Community Resilience of the UK Government.

- The most covered range of ages is from 6 to 15 years. This creates indeed two marginal groups within children and young people that seem to be poorly addressed: very young children (0 to 6 years) and adolescents (15 to 18 years and beyond). The former ones, especially those between zero and four seem to be almost invisible and the oldest, according to the interviewed civil protection practitioners, are hard to reach. Despite being acknowledged as having potential to collaborate in disaster management, they remain under the radar.

- Disaster management is mostly addressed through a one-disaster-at-a-time approach. Usually the most frequent and/or major disasters recently occurred are the ones most covered. In contrast, risk education seems to be more present in those countries where there has not been a recent damaging disaster.

- In relation to the phases of disaster management, the main focus is on prevention and preparedness, coherent with the important role of education (instruction), self-protection, awareness campaigns and emergency plans. There are a few projects about response and recovery and these usually revolve around psychological issues and providing minimal infrastructures for survival. According to this scoping study, it is also clear that risk education, which goes "beyond" preparing and preventing emergencies and disasters, is unevenly developed and implemented across the four countries. In some countries, there are quite a lot of programmes and centres devoted specifically to risk and safety education e.g. in UK and Spain.

- Those actions, programmes, and plans addressed to children and young people are usually meant to train them and inform them. Most of the learning activities are instructional and focused on conveying content produced by adults. The more participative actions, programmes and plans usually seek to promote responsibility (safety values) and recruit children and young people as potential collaborators in civil protection responses. They are usually seen as allies in spreading a culture of prevention to families and the wider communities. However, their voices seem to be rarely if ever incorporated in disaster management decision-making processes in spite of this being very positively valued by practitioners.

3 RESEARCH PROJECTS- EU LEVEL

3.1 Methodology

These are the results of the analysis carried out about research projects funded under European Calls. In a first instance, the search was restricted to those projects which simultaneously addressed the three keywords/topics covered by the CUIDAR project: (a) "disasters" + "children" + "participation". Nonetheless, since according to our results this specific research field is almost non-existent, the search was also broaden to other three possible combinations of this very same words: (b) "disaster" + "children"; (c) "participation" + "children"; (d) "disasters" + "participation" (only when participation involved in somehow lay people and not only experts). This broader scope has allowed us to screen via the deliverables (b) what is the role of participatory methodologies in projects that address disasters and children; (c) if there are any good practices in participatory methodologies with children in any other European projects; (d) the role given to children in projects that address disasters with a participatory approach.

3.1.1 CORDIS database

The main source for searching and selecting projects has been the CORDIS database. A first draft list was built with the information found by introducing the keywords mentioned above. In addition to the acronym, the full name of the project 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.

3.1.2 Projects' Websites

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 project. Once the list was completed, we proceeded to download all the deliverables published on each projects' website (or if not available, via the CORDIS website). The last step was

screening each of those documents to detect any information that could be useful for CUIDAR, including any other relevant research projects quoted there and that we may have overlooked. In this sense, for example, by reading these documents we have noticed another EU research database that is also significant for our research area (Projects selected under the annual Call for Proposals for Prevention and Preparedness in Civil Protection), where we have found some other projects on the "disasters + children" category.

3.1.3 Experts interviews

The interview process has also allowed us to detect some other research projects that were not available via the search process described above, but that are relevant for CUIDAR. Their details have been included in the database, and an exploitation of their results have been undertaken following the same process that in "projects' website" section.

3.1.4 Advisory board

This process was completed with the consultation to some of the members of the Advisory Board, especially so as to include other interesting projects beyond the European scope (they are mentioned at the very end of section B).

3.2 Results

DISASTERS + PARTICIPATION + CHILDREN		
1	POSTTSUNAMI	Three years post-Tsunami: long-term effects of trauma in children aged 7-15 - a culture-sensitive approach
DISASTERS + CHILDREN		
2	YOUTHPREVENTION.PRO	Modern approaches for prevention amongst children in Europe
3	RINAMED	Els riscos naturals de l'arc mediterrani oriental (Natural hazards in West Mediterranean)
4	RACCE	Raising earthquake Awareness and Coping Children's Emotions
5	Self-protection with	Self-protection with children in Community

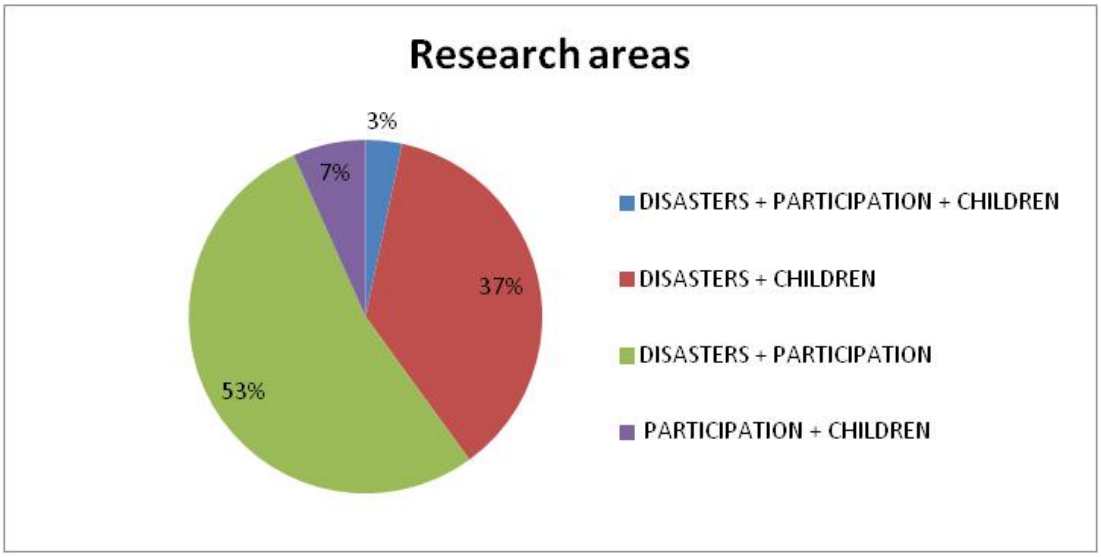
	children in Community	
6	YAPS	Raising young people's awareness on preparedness and self protection
7	ProMyLife	How to better protect my life in major emergencies
8	SAMETS	Social Affairs Management in the Emergency Temporary Shelter
9	CHILD TRAUMA NETWORK	Psychological network support to violence traumatized children: disasters, conflicts
10	Information to our children	Information to our children – a key to saving lives. Improving methods by learning from one another
11	SAVE ME	System and Actions for Vehicles and transportation hubs to support Disaster Mitigation and Evacuation
12	FLOODCOM	
PARTICIPATION + CHILDREN		
13	COPING	Children of Prisoners, Interventions & Mitigations to Strengthen Mental Health
14	CONNECTORS	An international study into the development of children's everyday practices of participation in circuits of social action
DISASTERS + PARTICIPATION		
15	RESCUE	Patterns of Resilience during Socioeconomic Crises among Households in Europe
16	EMBRACE	Building Resilience Amongst Communities in Europe
17	BESECU	Behaviour, Security and Culture
18	OD	Organizing Disaster. Civil Protection and the Population
19	CAPHAZ-NET	Social Capacity Building for Natural Hazards
20	ENHANCE	Enhancing risk management partnerships for catastrophic natural disasters in Europe
21	ATHENA	Empowering citizens, protecting communities
22	PEP	Public Empowerment Policies for Crisis Management
23	POP-ALERT	"Population Alerting: Linking Emergencies, Resilience and

		Training"
24	WATERWORLDS	Natural environmental disasters and social resilience in anthropological perspective
25	TACTIC	Tools, methods and training for community and society to better prepare for a crisis
26	DARWIN	Expecting the unexpected and know how to respond
27	KNOW4DRR	Disaster risk reduction knowledge
28	COMRADES	Collective Platform for Community Resilience and Social Innovation during Crises
29	EDUCEN	European Disasters in Urban centres: a Culture Expert Network (3C – Cities, Cultures, Catastrophes)
30	ELITE	Elicit To Learn Crucial Post crisis Lessons
31	CARISMAND	Culture And Risk management in Man-made And Natural Disasters[2]

3.2.1 Research areas

As a result of the search described above we have compiled a selection of 30 projects distributed as follows by our delimited research areas:

Figure 9: European projects - research areas



[2] This project was identified at the very end of this report. As it does not address children explicitly, we have decided not to include it in the analysis.

As shown in Figure 1 above, although it seems that the participatory approach is gaining relevance in the disasters research field (16 projects has been found), it is still almost inexistent when addressed specifically to children. In fact, only one research project would fulfil these criteria. On the contrary, some projects on children and disasters have been found (11 projects) although they do not take into account children as active agents, but rather as (only) vulnerable subjects that need to be cared by adults (be it their families or related professionals). Then, even when the research topic is on children they are not situated in the centre of the whole process. In fact, as this same figure points out, in general, the number of research projects based on participatory methodologies and addressed to children is also comparatively small (2).

3.2.2 Status

When looking at the status of these projects in figure 2 below, we can see that most of those projects that are on children, are already closed/finished, being those that address disasters from a participatory point of view (though not specifically addressing children's situation) the most recently approved.

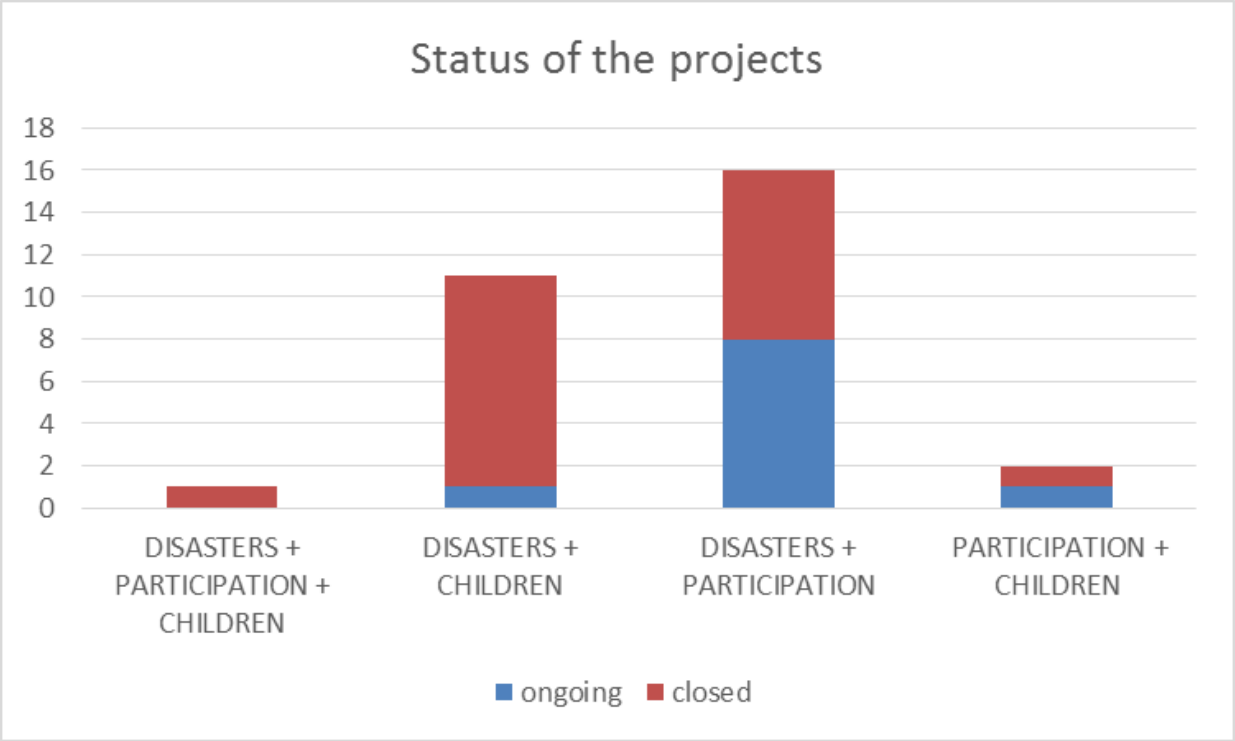
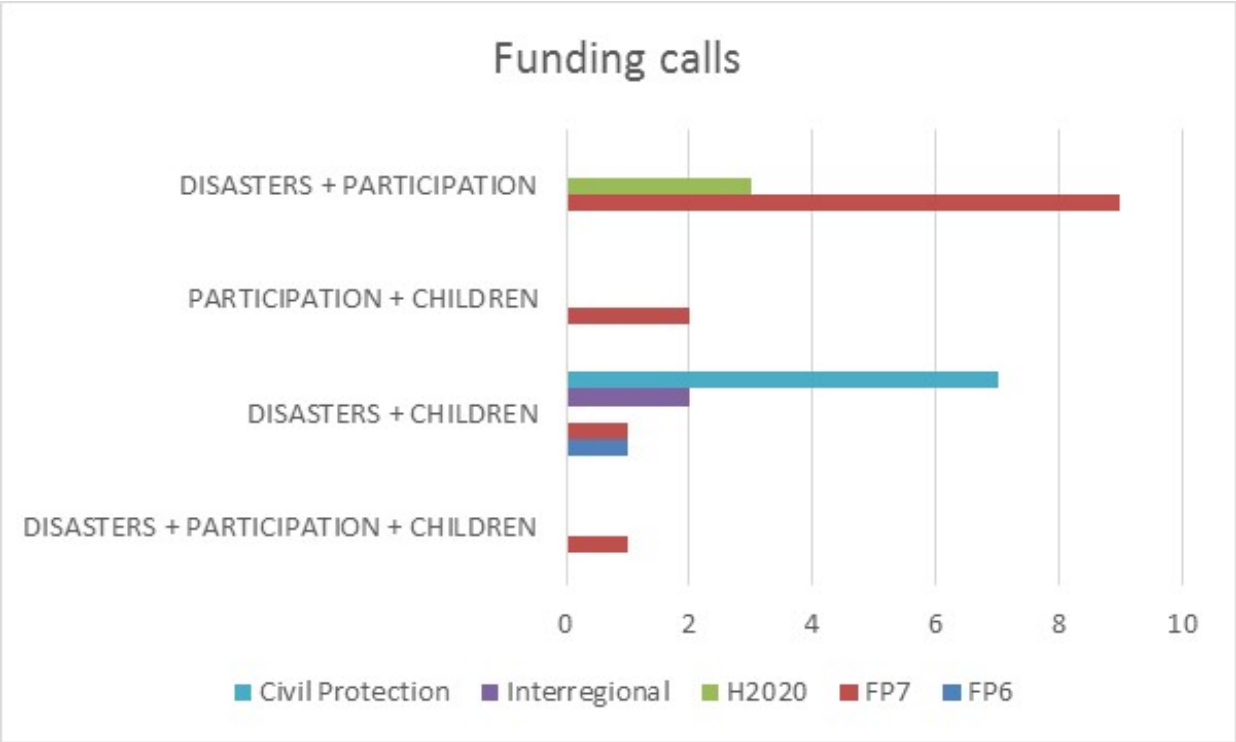


Figure 10: European projects - status by research area

3.2.3 Funding calls and schemes

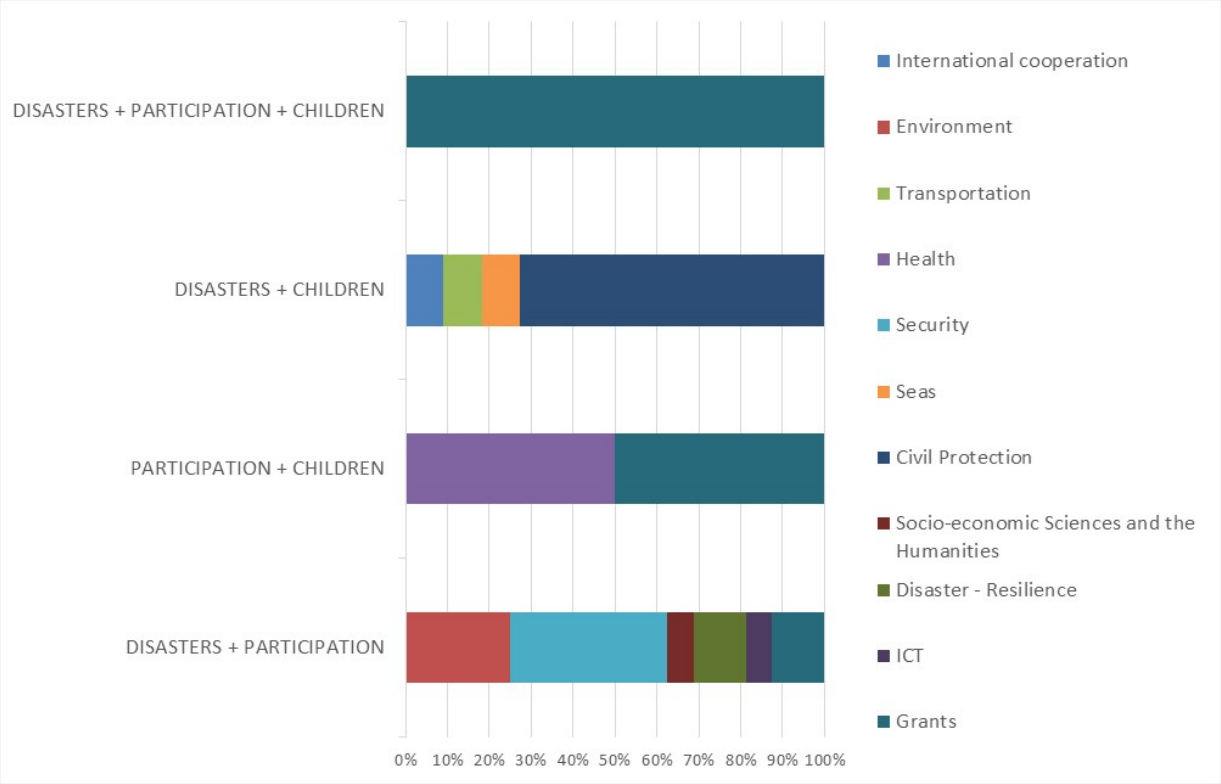
The status of these projects has to do with the focus of each European Funding Call, since as shown in the figure below, those projects focused on children issues were funded under the FP6 or FP7 programmes, or other minor calls such as the Civil Protection Funding Scheme or Interregional projects. No projects specifically addressing children needs (other than CUIDAR) have been found funded by the current H2020 Program.

Figure 11: European projects - funding calls by research area



When looking at the specific scheme, the projects are distributed among a great variety or research areas, as shown below, however, the greatest variety is within the “disaster” + “participation” area.

Figure 12: European projects - topics by research area



3.2.4 Countries involved

Regarding the geographical distribution, as indicated in the figure below, UK is the country that has coordinated more projects in these research areas, including all subcategories except the first one (disasters + participation + children), which includes only one project (in fact, it is a grant) leaded by an Austrian institution.

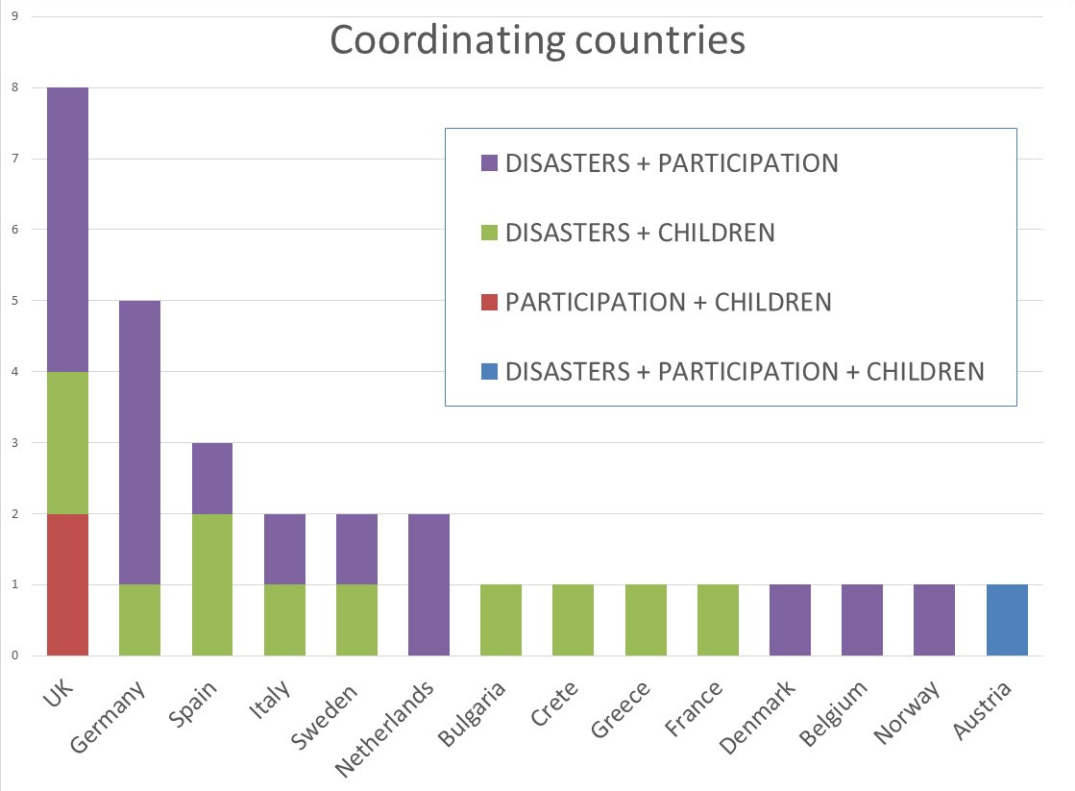


Figure 13: European projects - coordinating countries by research area

Likewise, we can see that UK is the only country that has led research projects based on participation and children. Spain, Germany, Italy, Bulgaria, Crete, Greece and France have led research projects on disasters that significantly include children. When looking at the countries who have been more actively involved as partners in the projects, Italy, Germany and Greece, are the ones that stand out as a whole.

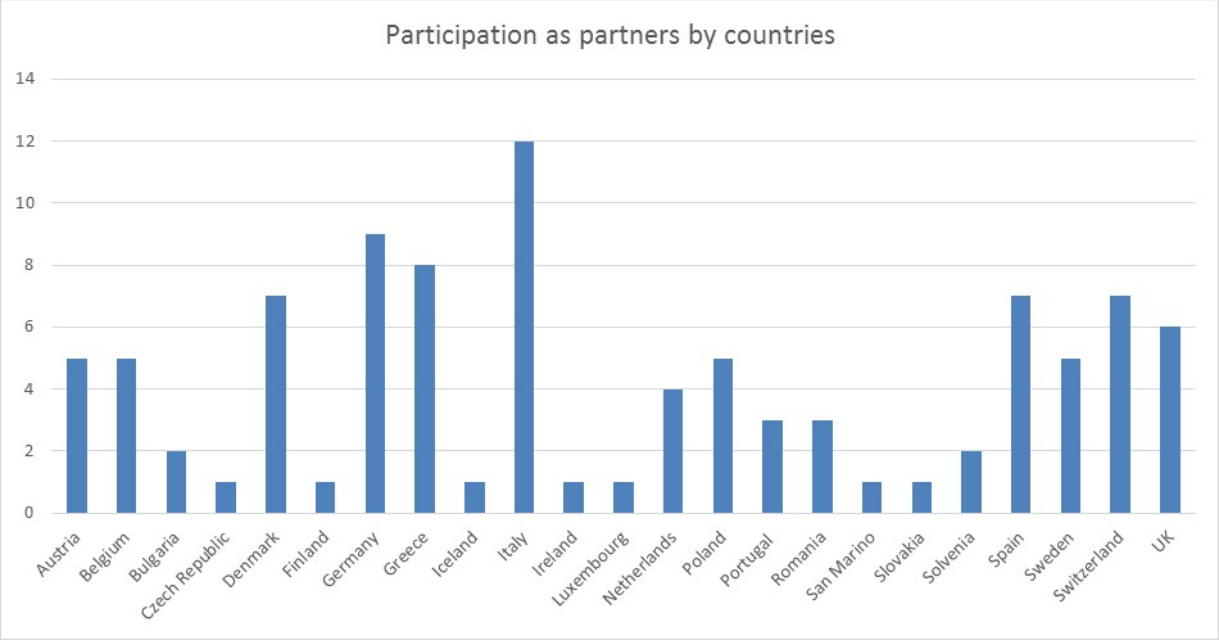


Figure 14: European projects - participating countries as partners in general

As portrayed in Figure 7 and in Figure 8 Italy leads both resarch areas ("disasters + children" and "disasters + participation"). However, there is a higher interest on children in projects with partners from France, Greece or Bulgaria. While the participatory approach is disasters research is more accute in countries like UK, Germany or Spain.

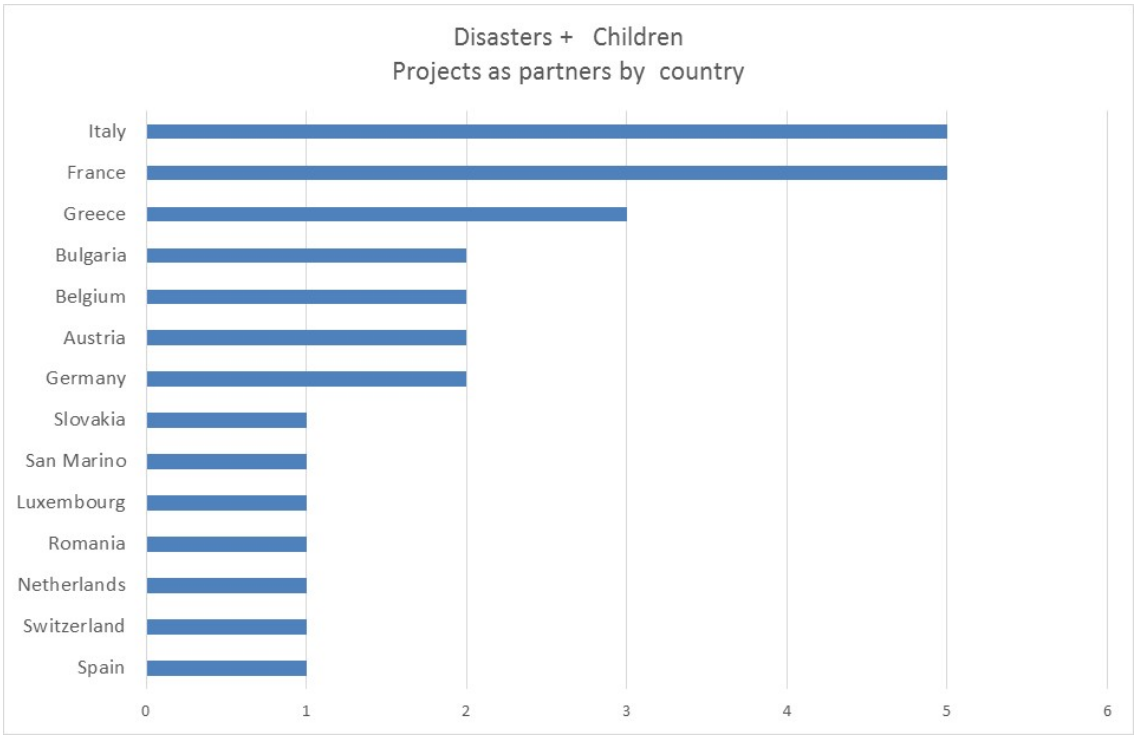


Figure 15: European projects - participating countries as partners in the "disaster + children" research area

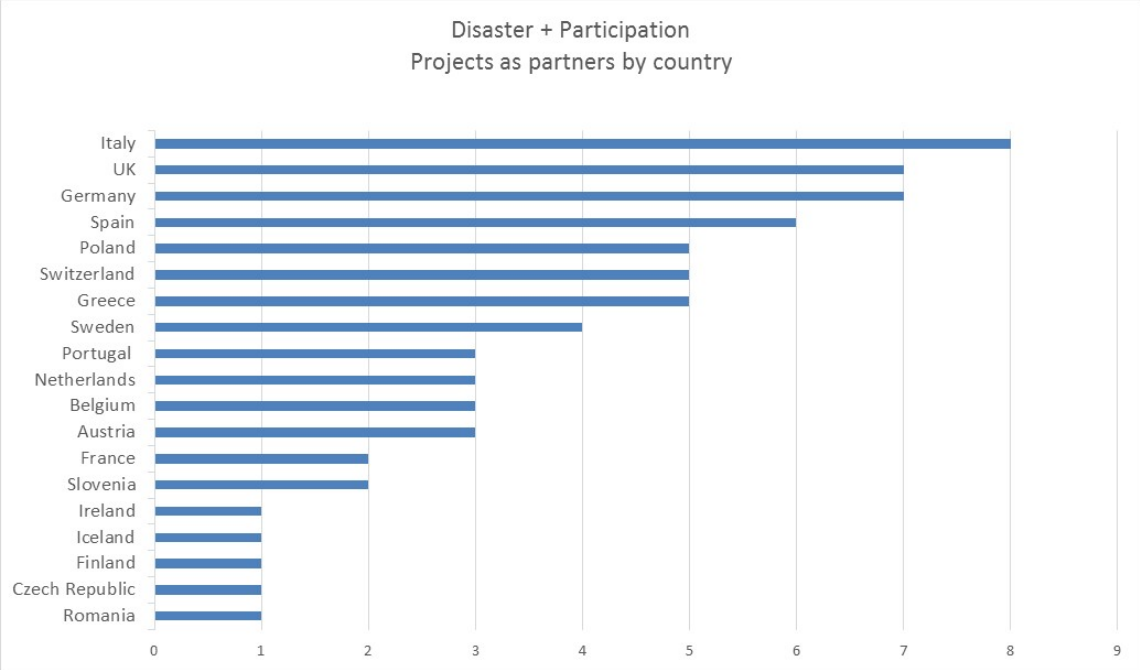


Figure 16: European projects - participating countries as partners in the "disaster + participation" research area

The countries involved as partners in participative research with children are Germany, Switzerland, Sweden and Romania. Finally, it is also worth mentioning the active involvement of Turkey in 6 projects on “disasters” + “participation”, as well as the participation of some non-European countries like Algeria, Tunisia and Morocco in a project on the “disasters + children” category, and, Mexico, Israel, Kenya, USA and Canada, in the area of “disasters + participation”.

3.2.5 Keyword analysis

Based on the information provided on the short descriptions/abstracts of each project, the projects database included a list of keywords for each project. Next, we present an overview of the keyword analysis, ordered by category (except “participation” +

"children", considered not relevant at this level), where a short description is accompanied by a tag-cloud elaborated with the online tool Wordle[3].

DISASTERS + PARTICIPATION + CHILDREN

The only project identified within this research area is POSTTSUNAMI- Three years post-Tsunami: long-term effects of trauma in children aged 7-15 - a culture-sensitive approach. It takes a participatory approach to the children's experiences in disaster situations and is the one closest to CUIDAR framework and objectives except in one point: it only addresses developing countries realities. In the figure 9 below, we can see the wordle resulting from the projects keywords.

Figure 17: POSTTSUNAMI project's keywords

DISASTERS + CHILDREN

In terms of projects that address disaster and children, in some cases they have been created as a response to specific geographical needs (as for example, the Mediterranean or Lowland Areas). Although different type of disasters are addressed, floods, fires and natural disasters or hazards, are the ones that are more specifically highlighted as seen in figure 10 below.

[3] http://www.wordle.net

Figure 16: Type of disasters addressed by research projects in the "disasters + children" area.

On the other hand, the focus of these projects is rather in prevention, preparedness and management, than in later phases of intervention, as can be noticed in figure 11.

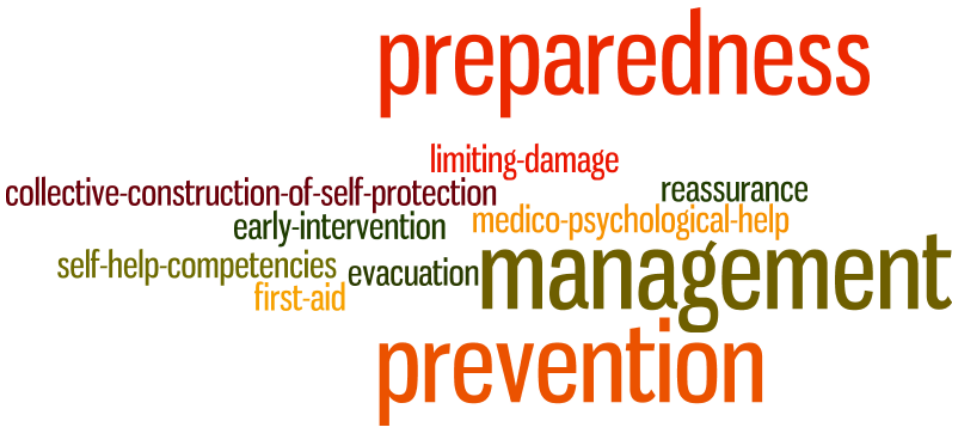


Figure 17: Disasters' phases covered by research projects in the "disasters + children" area.

The results illustrated by the wordle below (Figure 12) are on the area of training and education packages and/or tools, including school curricula. They are based mostly on knowledge exchange, generation and/or identification processes, and addressed to awareness-raising activities and policies.

Figure 18: Results expected and/or tools used/generated in research projects in the "disasters + children" area.

Finally, when looking at the social groups that we aimed to include in the research process (see figure 13 below), we obviously highlighted those with children. In most cases, however, they are seen as vulnerable groups that need special attention (along with old and/or disabled people). Similarly, volunteers and civil protection professionals are the other more frequently targeted groups whose knowledge can be improved via their participation in the projects.

Figure 19: Social groups targeted in research projects in the "disasters + children" area.

DISASTERS + PARTICIPATION

On the other hand, when looking at those projects that address participatory initiatives in the disasters research area, the contextual references are not on geographical dimensions but rather on small-scale approaches: cities, local/regional or cities In this case, the analysis of natural hazards/disasters is also the most usual. However, the term "crisis" is more recurrent in this kind of projects, even including the socioeconomic dimension of those events, as shown in figure 14.

Figure 20: Type of disasters addressed by research projects in the "disasters + participation" area.

In this case, attention to preparedness is also remarkable (see figure 15). However, the later phases such as response and resilience are more highlighted here that in projects that address children's needs.

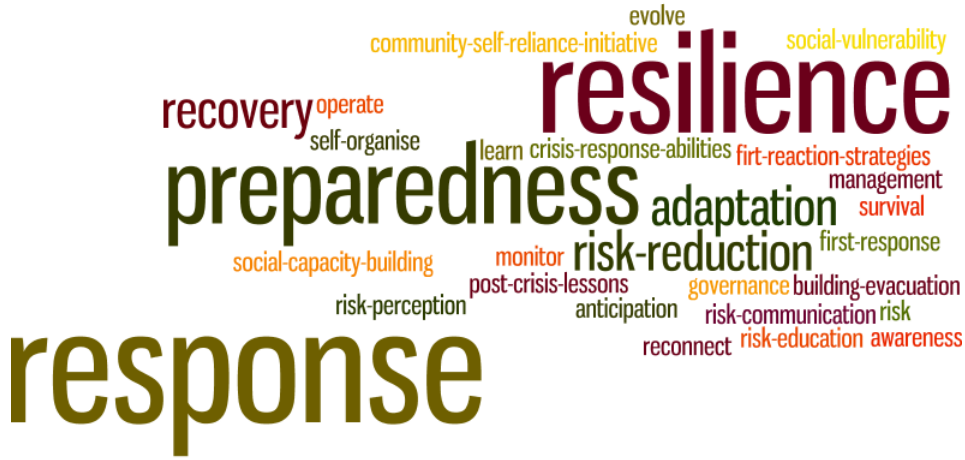


Figure 21: Disasters' phases covered by research projects in the "disasters + participation" area.

In relation to this, the focus is on ICT, social media and communication tools and/or guidelines, rather than on education or training as stated before (figure 16).

Figure 16: Results expected and/or tools used/generated in research projects in the "disasters + children" area.

Accordingly although specific group populations are mentioned, the main goal of the "participatory approach" is to put practitioners/experts/researchers knowledge and practices closer to communities/citizens/end-users realities, and vice-versa. Thus, the participatory approach encompasses different practices and/or concepts such as self-reliance/emergent/bottom-up processes led by communities, multi-stakeholder dialogues/partnerships for knowledge exchange including lay citizens, and other non-expert participation in ICT-design processes (see figure 17).

Figure 17: Social groups targeted in research projects in the "disasters + participation" area.

Thus, as a conclusion we can see that at a European level, participatory research projects with children in disasters research have been mostly restricted within the context of developing countries. When addressed in the European countries, the research has been focused mostly on prevention and preparedness via education and training activities and not participatory, since children are envisaged as vulnerable agents to be protected. In contrast, when projects on disasters do take a more

participatory/bottom-up approach, they address communities and citizens as active agents with or valuable knowledge and abilities. However, it seems that children and young people are not (at least explicitly) included in this framework.

3.2.6 Deliverable analysis

In evaluating children's representations and the corresponding created knowledge, we have analysed the deliverables of each of these projects, only paying attention to those documents where children, youth and/or young people were explicitly mentioned.

DISASTERS + CHILDREN

None of the projects we identified, that address the topic of children and disasters, was developed with a fully participatory approach. This group of projects can be divided in two major groups: research ABOUT children and research WITH children (for a discussion see Mutch, 2013).

Research ABOUT children

In projects like "Self-protection with children...", SAMETS, Child Trauma Network or SAVE ME, the objective is to increase experts' knowledge about children in disasters contexts. However, there is no direct involvement of children in these projects, they do not take into account children's direct experiences or knowledge.

In general, they share the idea of children seen as a vulnerable group (along with disabled and old people) that need special protection and attention. This is the approach of SAVE ME, where they also take into account different age groups, and their potential limitations/abilities at each stage:

Infants	<1 year	Very young child (birth to 1 year) who have not yet begun to walk or talk.
Toddlers	1-5 years	Children who are of the age of learning to walk, between infancy and childhood.
Early Childhood	5-9 years	Children that become more independent and develop greater self-confidence and a stronger sense of identity. They like to take risks and to test their abilities and boundaries. By the end of this period children have the capacity to solve increasingly complex problems and express complex ideas. They are likely to have early skills in reading and writing.
Mild childhood	10-14 years	Children in this age group strive for greater independence from their parents. They can understand and apply safety rules, including the use of emergency phone numbers and what to do in case of fire or other emergencies.

Research WITH children

Most of the projects are focused on risk/prevention education research. They can be focused on formal education (school) but also address more informal contexts (as for instance, youth clubs). The activities developed in the projects can follow different methodologies, more conventional or participatory. However, participation is always restricted to this kind of engagement in "children/youth specific" training/educational activities or pilot applications.

In many cases, as a result of the project they develop educational products that can be used for others children's and youth training, be it formal (school curricula, guidelines, handbooks) like in YOUTHPREVENTION.PRO RACCE or FLOODCOM, or more informal like RINAMED and FLOODCOM, where they developed a role game about disasters related to each specific region, or like YAPS where they created an online game and

story books (Full name and link to URL website projects can be found in section 2.1. General description and analysis). Usually, the projects also include some video as educational and complementary tool and/or communication activities: an exhibition (RACCE), radio spots (PROmyLIFE).

DISASTERS + PARTICIPATION

As mentioned above, children do not appear as the main target group of any projects collected in this category. However, in some cases they appear as a specific group to be taken into account at the different levels of disasters management: risk education and preparedness training programmes, communication strategies and voluntary crisis management organisations.

In general, children were associated with two opposite images: a negative one related to their vulnerability and their need to be protected and how it modifies their families' behaviours in emergency situations; and a positive one, as the recipient and communicators of long-term risk education and awareness programmes. Occasionally, some participatory experiences and/or approaches involving children are also considered.

Children and young people as a problem

In the PEP project, the municipal safety coordinators we interviewed considered children and young people (along with older people) **as vulnerable and in need of special care**: in the case of children, this was considered because they can get lost and disappear and then they need to be watched all the time; and in the case of young people, because they are seen as socially uncontrollable and vulnerable. According to the CapHaz-net project very young **children are considered as most affected during the 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. As quoted in the POP-ALERT project:

> "Children can become very frightened and emotional and physical exhaustion is common soon after onset. In the longer term (months or years), survivor guilt and if the disaster included loud sounds such as thunder or explosion, trigger sounds causing panic symptoms, smells of toxic fumes or soaked property also can trigger memories, as can tastes of soot, rubber, smoke and these 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" POP-ALERT. D1.2 Behavioural Analysis[4] (page 19).

Similarly, children can be considered problematic not only for themselves, but also because their perceived needs may influence their families' behaviour in the emergency context. For example, in the TACTIC project is it considered **that households with children (or dependents) are more likely to take certain preparedness actions**. But in the POP-ALERT project, children are also seen as indirectly generating unpredictable situations in an emergency context. When the family is united people are more likely to evacuate (especially if they are tourists travelling with children), but if not together, the adults' priority can be to locate their children instead of evacuating for example, by going to pick up them from school: and this can override other actions. In fact, as found on online survey taken by POP-ALERT, most parents did not know about the emergency plan of their children's school. Even when, as quoted by the TACTIC project "**identifying the emergency procedures at work and for children at school**" is considered one of the self-preparedness strategies in the booklet about terrorism that the UK Government distributed in 2004 to every household. However, the school is not always considered a "safe space", and for example, as also quoted in TACTIC, in a situation of infection control regarding diseases that specially affect children (like the influenza), school closure and domestic isolation can be the best strategy.

In other cases, the problematic dimension associated with children and young people is not seen as inevitable, but rather as the result of a lack of knowledge, awareness and/or accessibility. For instance, in the TACTIC project, some German disasters managers criticised the **lack of risk awareness among the younger population**, pointing out

[4] POP-ALERT. Population Alerting: Linking Emergencies, Resilience and Training. D1.2 Behavioural Analysis. Revision v2.0 (16/09/2015): https://drive.google.com/a/uoc.edu/file/d/0BxgtF3_zj30KWlJyU05lcUtELW8/view

that public authorities have the main responsible of this situation; they found that the Internet was the best strategy to communicate with young people. Similarly, the PEP project also identified among "young people" (13-19 years old) that the problem lay in a low awareness, inaccurate perception and knowledge of natural disasters, not knowing whether to trust media stories, and what stories were rumours and misinformation. Although the impact of social media on young people perceptions and knowledge on disasters has not been analysed yet, the PEP project situates the relevance of Internet and ICT tools for engaging young people in crisis management actions/organisations, instead of other strategies that for instance require higher commitment and reserving free time for voluntary work. In this sense, although the organised volunteers consider children and youngsters a prioritised group for recruitment, they admit facing great difficulties. Similarly, although compared with other social groups (such as people with disabilities, elderly, people with migrant background or even the general public), the fire-fighters interviewed in the BeSeCu project (simultaneously in Czech Republic, Germany, Italy, Poland, Spain, Sweden, Turkey and the UK), apparently did not have special problems in communicating with children during an operation or with their behaviour in emergency situations. In the case of the Spanish fire fighters, they affirmed that they would like having more information on how to communicate with children (and the elderly), despite this is the population group that comparatively receives more training[5].

Children and youngsters as allies

Despite all the difficulties pointed out above, in most of these projects children and young people are also viewed as key allies for risk and disaster education and preparedness programmes. In fact, in the CapHaz-Net project, it is considered very relevant not seeing children as a "vulnerable group" using a taxonomy model, but rather to refer to specific situations of social vulnerability. This approach may present some difficulties when turning this local approach into macro-perspective indicators that may

[5] Similarly, the KNOW4DRR project was detected that in the case of Spain, students had more knowledge about natural hazards than the general population, and therefore programmes should reach beyond school and communities.

allow comparing different contexts; however it recognises diversity in terms of who may in fact be potentially vulnerable in a disaster at every specific location and moment.

Thus, according CapHaz-Net training during **childhood and adolescence** is considered a key tool in preparedness policies, since it allows children growing up "with preparedness embedded in their way of living" and facilitates their awareness. They can, in turn, can transfer information to their parents/families "and indirectly train the adults". This training can be included in any **educational environment, mostly school, but also in informal education** (Scouts, Guides, etc.) and using different methodologies. The POP-ALERT project highlights that preparedness training should be included in the school curricula, and that **children might react better to games, simulation and fun** activities. (In contrast with their parents, who might be more receptive to campaigns on how to protect their children).

However, training should always be adapted to the specific age of children, as identified by POP-ALERT in their **training needs analysis:**

0-6 years old	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 years old	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 years	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.

According to POP-ALERT, in order to achieve this goal, the first step should be focus on **trainers and educators' training**. CapHaz-Net also remarks the relevance of educators' education, instead of changing the school curricula and preparing risk education programmes. However, in the survey results of the POP-ALERT project, while most of the parents agreed that their children should receive "emergency preparedness training" through the school, they did not considered the school as the most appropriate organiser of preparedness training in school, but rather local authorities and emergency management agencies.

In any case, both in POP-ALERT and CapHaz-Net, they highlight the relevance of adapting any educational programme (both the school curricula and teachers/educators training) within each local context, taking into account regional and local risks, and past events and memories of the specific area. Then, although risk

education would still rely on teachers, children are also expected to learn on how to cope with the ever-larger amount of information they have increasingly to cope with; in other words, risk education should face stronger individualisation (local-specific hazards) even though the education system is going to be more generalised (learning capabilities for using the available information). It is here where the relevance of taking a participatory approach is highlighted.

Children and youngsters as leaders

CapHaz-Net project concludes that more efforts are encouraged towards risk education in the field of formal education, where research has shown to be relatively underdeveloped in the European countries. This formal education should include information on natural hazards and its relations with social dimensions; and capabilities (what to do in the event of an emergency). But as noted before, it is also considered relevant that a participatory approach is used and delivered through locally based forms of participatory learning. These would be focused on a specific locality, concrete events, environments and relations and the involvement of local communities in formal and informal risk education for children and teenagers, for instance, via flood markers, local archives and eyewitnesses. This participatory and locally embedded education would still need the framework of a curriculum-based education. CapHaz-Net project understand these forms of participatory learning activities as:

- Driven by the demand of the students to learn more about their immediate environment and stress factors.
- Including other actors familiar with the local context: NGO, local fire brigade, local authorities, scientists, and so on.
- Stimulating engagement with the local environmental situation as well as with personal histories of relatives and the wider civil society.
- Providing information about natural hazards to people who do not have any previous and/or direct experience with such an event.

Three experiences of this approach were collected by the CapHaz-Net project. However, the Memo-Risks project[6] undertaken in the Loire River in France is the most relevant in terms of children's participation. There, students collect information on local hazards and social vulnerabilities to disasters, and their results are shared within their schools, politicians and other decision-makers. This participatory approach works as an awareness-rising activity for all the agents involved.

At a higher level of children's leadership, there are suggestions that children could be situated in the centre of communicative actions. POP-ALERT, for instance, in understanding that victims can also help train and give advice to the population, considers that local children (and adults) who have experienced a particular crisis could help people understand how real the threat is. In a similar vein, the ELICIT project cites one Italian example where school children were engaged to create informational campaigns regarding earthquakes: producing a brochure and a TV commercial broadcasted in local stations. In this process, they not only learned about the secondary risks triggered by earthquakes but also were able to relay this information to their families and local community.

Children's rights and voice

Finally, POP-ALERT considers, independently of any educational or training project, that children should have an active role at different levels:

- **At home**: in their Children Kit[7] section on the website, assuming that "involving children is the first step in helping them know what to do in an emergency", some examples are provided:
    - Ask them to think of items that they would like to include in an emergency supply kit, such as books or games or non-perishable food items. Ask them to help you remember to keep the kits updated.

[6] http://www.memorisks.org/
[7] http://www.pop-alert.eu/index.php/tips-emergency-supply-kits#tip-children

- Children can help mark the dates on a calendar for checking emergency supplies. Remember to rotate or replace emergency food and water every six months and replace batteries as necessary.
- Children can also help prepare plans and disaster kits for family pets.

- **At school**: for example, via "school crisis teams" where children that have experienced a disaster should be encouraged to talk, develop problem-solving skills and peer support strategies.

- **In the community**: building a **child-centred disaster resilient community** with different mechanisms:
  - A child/youth committee with a recognized voice that feeds into other levels of governance.
  - Child protection policies and procedures incorporated into community plans.
  - Risk assessments with a category for children.
  - Training for staff and volunteers.
  - Legislation to support children's rights.

3.3 Other projects at the national and international level

Complementing the EU-level research analysis, each partner has also undertaken an exploration about any national-level research projects that may fit within the keywords used with the European Projects.

- Research projects in this topic have been found in only in three countries (UK, Italy and Portugal). Although the procedure has been the same with the EU projects, with national projects the results are more difficult to compare. This is why instead of a shared analysis; a brief description of each of these projects is

provided here, trying to highlight in each case the role given to children and to participation.

- There are no research projects found from Greece or Spain. However in the case of Spain, some publications about specific disasters and children are listed, pointing out also in this case the role given to children and to participation.

Finally, some other international projects (out of the EU reach) are also included in this section, as an example of other experiences closer to CUIDAR, since they share the main concern of building Children-Centred Resilient Communities. This is the case of two different research projects, one developed in Australia and the other in the United States of America.

NATIONAL PROJECTS (Europe)				
Research project	**Country**	**Research institutions**	**Funding Agency**	**Duration**
Flood, Vulnerability and Urban Resilience: a real-time study of local recovery following the floods of June 2007 in Hull.	UK	Lancaster University	The Economic and Social Research Council, the Engineering and Physical Sciences Research Council and the Environment Agency.	2007 - 2011
Children, Flood and Urban Resilience: Understanding children and young people's experience and agency in the flood recovery process			The Hull City Council, the Economic and Social Research Council, and the Environment Agency.	Ongoing
Sebastiano ti prende per mano.	Italy	University of Florence, Civil	National Department of	2014

		Protection volunteers[8] and Charity organisation[9].	Civil Protection	
In vacanza con Sunny: una vera frana!	Italy	University of Florence and University of Bologna.	University of Florence, Faculty of Earth Science	Ongoing
INAIL 1.0 & INAIL 2.0: "Spreading the knowledge and awareness of geological hazards - Leverage the knowledge, innovation and education to build a culture of geological safety in schools"	Italy	University of Florence, the Toscana Regional office of the National Institute for Insurance against Accidents at Work (INAIL) and supported by Toscana Region and the Regional office of the Ministry of Education.	The Toscana Regional office of the National Institute for Insurance against Accidents at Work (INAIL)	2014 - 2015
VISUS (Visual Inspections for defining Safety Upgrading Strategies	Italy	The Sprint-Lab of the Department of Chemistry, Physics and Environment, University of Udine.		Closed
Ambiente Terra, Ambiente Bambino. Dalla gestione dell'emergenza, alla valutazione, cura e monitoraggio del disagio post-traumatico nei minori aquilan.	Italy	University of L'Acquila	The National Department of Civil Protection	Closed
(Dis)Memory of Disaster? Culture and natural hazards, catastrophe and resilience. Madeira island, a case study	Portugal	Catholic University of Portugal and University of Madeira		2012-2015
ÁFRICA ANNES -	Portugal	Centro de	Fundação para	2009-

[8] Raggruppamento sussidiario per il servizio nazionale di protezione civile e tutela ambientale.
[9] Venerabile Arciconfraternita della Misericordia di Firenze

Social perception in environmental risk communication		Investigação e Tecnologias Agrárias dos Açores	a Ciência e a Tecnologia	2011

RELATED INTERNATIONAL PROJECTS				
Child-centred disaster risk reduction	Australia	Central Queensland University		Ongoing
Resilient Children/Resilient Communities	USA	The National Center for Disaster Preparedness (Columbia University) and Save the Children.	GSK	Ongoing

3.3.1 National projects

United Kingdom

As pointed out in the EU-level research, the UK has been one of the more active European countries in leading projects in this research area. In fact, CUIDAR is the outcome of previous research experiences at national-level developed in the UK.

Flood, Vulnerability and Urban Resilience: a real-time study of local recovery following the floods of June 2007 in Hull.

This project was a response to the events of June 2007 in Hull, which dramatically exposed the vulnerability of urban communities in the face of major flood events. While the initial impact in Yorkshire, Humberside and Worcestershire was documented by the media, it was considered that the extended process of physical, social and personal recovery from the flood experience was going to be lost from the headlines as local people, key agencies and government departments seek to re-establish the social and physical fabric of affected local communities.

This project could be considered as participatory for two different reasons: on the one hand, this project aimed at generating a bottom-up and/or community-based approach to the experience of a flooding, based on the recovery process from the perspective of the householders and workers who had to live through it; and on the other hand, it was

based in participatory methods and interactive working between participants, researchers and stakeholders. Although it was not a child-centred research, this participatory approach enabled to make visible the relevance that children had in the participants' personal accounts. For instance, the project included a qualitative account of the diverse flooding experiences with weekly diaries of 44 persons over an 18-month period. In these diaries it was found a prominent concern about the effects of the floods upon children, with most people reporting that children found it exciting to begin with, only to experience problems later on as their lives changed in ways that they would not have wanted or anticipated. Simultaneously, other members of the family were affected through the nature of their relationships with the children: for instance, parents feeling guilty after believing that they had let their children down and failed in their responsibilities, or grandparents missing the comfort and support from their grandchildren's visits. In general, there was also a feeling of frustrations of undertaking simple tasks with children, and the disruptions to care work after the flooding. Thus, children were seen rather as a problem than a resource, as also 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 category to households with residents over 60 years of age, people with disabilities and single parents with at least one child under five.

Given this pre-eminence of children and young people in their families' accounts, the same research team decided to develop a new project aimed at specifically addressing the effects of flood recovery in children and young people.

Children, Flood and Urban Resilience: Understanding children and young people's experience and agency in the flood recovery process

Similarly as in CUIDAR, the aim was to undertake a participatory research 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 to assess the policy implications of children's perspectives. In this case, working closely with local and national stakeholders and some partner schools, this participatory approach included

storyboard workshops and interviews to talk to flood-affected children and young people about their experiences of the floods and the recovery process that followed.

As a result of the research, the final report summarises some of the key findings from the children's point of view, as for example: their multiple definition of flood and its impacts; their most relevant loses (tangible and intangible, objects and relationships...) or their experiences of disruptions. Moreover, some general conclusions would be that disasters can highlight – and sometimes intensify – pre-existing vulnerabilities, and the children's level of resilience is also often influenced by the ability to cope (or otherwise) of those around them. Similarly, the report states that professionals must be aware that children and young people may define their own vulnerabilities differently to those of adults.

A list of suggestions for actions was included:

- Policy makers, practitioners and researchers need to pay more attention to the recovery process and how children can be supported at home and at school.
- Parents and carers need to consider ways in which they can involve (rather than exclude) children in the recovery process, such as joining in family discussions and providing practical help at home.
- The education system (at both local and national level) needs to take the long-term recovery process into account for individual pupils, especially pupils in transition between schools and for those about to begin, or currently working towards, examinations.
- Key service workers need to adopt a more flexible understanding of vulnerability so that the needs and concerns of *all* children and young people are considered. They should also be proactive when offering support because children and young people will not necessarily ask for help.
- In order for children to receive effective support it is also important to provide effective support for the front line workers (for example, teachers, classroom assistants, youth group leaders etc.) who work with them. These workers may need training to help them support children (and particularly teenagers) more

effectively. However, also they may need help dealing with their own problems – particularly in the aftermath of a disaster.

- There is overwhelming evidence showing that it is important to accommodate children and young people's voices into building resilience for the future – for example, in order to help deal with the challenges of climate change. The conclusions of the research suggest that service workers should talk to flood-affected children directly about their experiences of living though an extreme weather event and the kinds of changes they would like to see in future.
- Storyboards may be a helpful means of incorporating children's voices into policy and practice. The research shows that it is not always easy to identify who has been affected or what help they may need. We therefore suggest that schools and youth groups consider using storyboards to help young people deal with floods and other kinds of disaster recovery.
- More needs to be done to enable research to be commissioned quickly in the aftermath of disasters.

Moreover, this project has generated several outputs addressed at disseminating their results and generating policy-impact, such as drafting Flood Manifestos, Top Tips for Insurers, or present their conclusions at the Houses of Parliament.

Italy

Here, participatory approaches are unusual, however, some research projects have been collected.

Sebastiano ti prende per mano. [Sebastian takes you by the hand]

The project aimed to promote children's education about geological risks and enhance their perception of natural hazards through the language of music and images. As a result, they produced a CD entitled "Sebastiano takes you by the hand" with 8 songs for children and teens, each having a specific theme about geological risk and accompanied by animated video clips (https://www.youtube.com/watch?v=CatOe7cKPbk). Moreover it has been realized a theatre representation titled "Sebastiano all'Opera", performed by school age dancers in Florence (https://www.youtube.com/watch?v=oaGDk-k4ztQ).

"In vacanza con Sunny: una vera frana!" [On holiday with Sunny: a true landslide!]

The aim of this ongoing project is to increase hydrogeological risk awareness and promote a culture of civil protection among primary school children, through the creation of an interactive learning material focused on landslide risk. The material includes a wide choice on the adventures of a dog named Sunny, such as scientific experiments, games, models to be built, brochures, guides, in order to transversalise the education of civil protection issues among primary school curricula. Moreover the project aims to train future primary school teachers and educators, attending Scienze della Formazione Primaria course at the University of Bologna, on how to teach these topics at school. The learning material had been tested in a primary school and now is part of the school curricula of 3 primary schools. In addition the learning material will be used in the city of Pistoia for an awareness campaign along the year 2016/2017.

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"].

The aim of this project was 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 PTSD (Post Traumatic Stress Disorder). The focus was on analysing the intra-psychic conflicts that hamper the trauma processing and evolution of psychological and social development of the child. There is a publication still in print as a result of this project (see Bandecchi et al. in press).

Although not child-focused, there are two other projects addressing school safety and security in front of geological disasters: the first one working on teacher's resilience (INAIL), and the second one, developing a methodology for assessing safety upgrading Strategies of School Facilities (VISUS). In this case, there are no participatory methods,

neither an involvement of children; however, indirectly they are addressing children's safety in front of disasters.

INAIL 1.0 (Phase 1) and INAIL 2.0 (Phase 2): "Spreading the knowledge and awareness of geological hazards - Leverage the knowledge, innovation and education to build a culture of geological safety in schools".

The objective in phase 1, the pilot project, was to consolidate "workers 'resilience' in public schools, through their training / information in the field of natural hazards. In doing so, they developed a standardized methodology in order to mitigate the risk of accidents at work generated by inappropriate behaviours during unusual natural events, such as floods, earthquakes, landslides; they implemented methodologies that can ensure the continuity of activities in case of unusual natural events management; and they define good practices for minimizing the direct or indirect effect that a geological disasters can have on the activity itself. In phase 2, the objective is validating the procedure developed during the INAIL 1.0: to analyse within the Toscana region (in 5 provinces) the geological situation of 15 public school buildings. A jounal publication resulted from this research (Pazzi et al. 2016).

VISUS (Visual Inspections for defining Safety Upgrading Strategies).

The purpose was to define a decision-making support tool aimed at planning strategies for the seismic risk reduction of learning facilities. VISUS methodology permits to assess the safety of school facilities at regional scale, with the purpose of supporting the definition of pragmatic safety upgrading strategies. It was first developed aiming to assess the safety of school facilities in a seismic scenario, but it is going to evolve into a holistic and multi-hazard approach, considering floods, wind, fire and also safety during ordinary utilization. There is a publication resulted from this project (see Grimaz et al. 2015).

Portugal

In Portugal only two projects have been detected, although children are not the main target:

"(Dis)Memory of Disaster? Culture and natural hazards, catastrophe and resilience. Madeira island, a case study" (http://dmdm.uma.pt)

This project was a collective, multi and trans-disciplinary research project, aimed exploring the (re)construction of Madeira's cultural memory and how that memory has been represented in the past and the present, either by recreating or rejecting the existence of natural hazards in the island. It articulated scientific investigation, artistic creation/dissemination and civic engagement, being this third line the one where children were involved via a school intervention. It was based on challenging all schools in Madeira (especially those located in disaster-prone areas) to reflect on the memory of local natural disasters, focusing on developing action research projects, coordinated both by teachers and researchers/artists.

ÁFRICA ANNES - Social perception in environmental risk communication.

It was aimed at approaching the scientific community, the decision-makers and citizens via communicative tools to enable informed and responsible decision-making processes of those people involved in diminishing risks and its consequences. Focused on the Azores Islands reality it addresses hydrological resources, civil aviation, global warming, animal and vegetal plagues and handling of toxic substances within at hospitals. However, although the project adopts a bottom-up approach in disaster communication, children are not specifically addressed.

Spain

Lorca earthquake

Despite not all publications being research-driven, there are some of them based on the experience of the 2011 Lorca earthquake that somehow address children's needs,

though more centred around educational or psychological intervention approaches, than any participatory process.

- Martínez Moreno, F., Salazar Ortuño, A., Martínez Díaz, J. J., López Martín, J. A., Terrer Miras, R., & Hernández Sapena, A. (2012). EsLorca: una iniciativa para la educación y concienciación sobre el riesgo sísmico (EsLorca: an initiative for education and awareness on seismic risk). *Boletín geológico y minero, 123* (4), 575-588. This paper explains a resource developed in the aftermath of the disaster, in front of the evidence of the population's lack of knowledge about this topic and how it increased the negative effects of the event. Although part of this educational tool is addressed to children (4 -18 year old, divided into 4 age strips), they were not included in the elaboration process, but only conceived as part of the target population. This article does not include any evaluation of this educational tool and is just a proposal to be developed.

- Secretaría General Técnica. Ministerio del Interior. (2015). *Lorca Resiliente*. Madrid: Dirección General de Protección Civil y Emergencias. This is the resulting publication of the event *Jornada Lorca resiliente: lecciones aprendidas* (Reslilient Lorca: Lessons learned), aimed at reflecting and exploring about the resilience generated in this municipality after the earthquake. It includes the communications presented there, accompanied by interviews with professionals and representative of those who worked in and/or were affected by the earthquake, as well as some personal testimonies. In this text, children are not treated as a special group at any moment; however, they are commonly mentioned as those who should receive more education on these topics. Their experiences are also included via the director's schools views, however, their personal voices are never taken into account.

- López-García, J. J., & López-Soler, C. (2014). Trastorno de estrés postraumático en escolares tras el terremoto de Lorca (España) en 2011 (Post-traumatic stress disorder in students after Lorca's earthquake in 2011, Spain). *Gaceta Sanitaria, 28* (3), 230-233. This research was aimed at detecting the posttraumatic effects on school children of the Lorca earthquake. It used a cross-sequential design

with children aged from 8 to 12 years, being 495 students assessed at 1 month and 374 at 1 year, following the Post-traumatic Children's Symptoms Stress Disorder Scale. The results showed that the percentage of children with PTSD was 55.4% (65.6% of girls and 46.9% of boys) at 1 month and 40.1% (44.5% girls and 35.9% children) at 1 year, with one in two young girls (8-10 years) with PTSD 1 year after the earthquake. Thus, a gender and age differential effect was detected in which younger children, especially girls, were particularly at risk, even 1 year after the earthquake. In this case, although child-focused, it is not participatory at all, taking only a clinical approach to analyse the effects of the earthquake on children's lives.

Madrid terrorist bombings

Similarly, some researchers of the University of Castellón have been working on psychosocial intervention strategies in disasters context, with some focus on how to deal with resilience and grief at the educational context. One member of the research group, Mónica García Renedo, did her PhD research about the psychosocial impact on geographically-distant children of the Madrid terrorist bombings in 2004 (García Renedo, 2008)[10]. As part of her research, the author distributed some questionnaires to children (between 8 and 12 years old), their teachers and parents with their schools collaboration. However, the methodology was not participatory but mostly statistical -including some open (qualitative) questions- and in the case of children, including some drawings and compositions. In any case, the aim was not gathering children's voices and recommendations, but rather developing psychological models of intervention with children. No information of other related funded research projects in this area and led by this group have been found.

3.3.2 International projects

Taking into account their similarities with the CUIDAR project, two international projects can be highlighted.

[10] Mónica García Renedo (2008). El 11M. Un estudio sobre su impacto psicológico desde el entorno familiar y escolar en alumnos de infantil y primaria (11M: A study about its psychological impact from family and school environment in students of preschool and primary school). PhD defended at Universitat Jaume I de Castelló, Spain.

Child-centred disaster risk reduction. (http://www.bnhcrc.com.au/research/resilient-people-infrastructure-and-institutions/236)

It is led by Professor Kevin Ronan. The aim of the project is to conduct a nationwide evaluation of programmes and strategies based on a Child Centred-Disaster Risk Reduction framework. Although children are considered as part of the stakeholder group, and research is based on experiential, interactive and participatory forms of learning, a participatory approach is not detailed in the project's final report. However, some findings could be highlighted on children's perspectives about participation, as for example, that:

- They wanted "to know more about how to stay safe from disasters" (96%).
- They were also seeking a more participatory role in school-based CC-DRR/DRE programmes and safety initiatives (83%),
- They wanted to be more involved in making their homes prepared for disasters (86%).

Another interesting finding was that there was a notable discrepancy between children's perceptions of the extent to which they would be able to keep themselves safe during a hazard event (children were overoptimistic) and their factual knowledge about how to stay safe.

Resilient Children/Resilient Communities. United States of America.

The National Centre for Disaster Preparedness (NCDP) has formed a partnership with Save the Children, funded by a grant from GSK (a pharmaceutical company), to develop a model for child-focused disaster planning for communities, with a strong emphasis on building resilience over the long term. 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, which can be scaled and replicated across the nation. The Project is divided in main activities:

- Developing pilot programmes in two USA counties, where Community Resilience Coalitions (CRC) focused on children will be convened and will

develop a sustainable, child-focused action plan to build community resilience, forming the basis of a practical, scalable model. Impact will be informed and measured using the Community Preparedness Index (CPI), an evidence-based measure of community preparedness previously developed by Save the Children in collaboration with NCDP.

- Establishing a National Children's Resilience Board (NCRB), composed of public officials, thought leaders, and innovators from the public and private sectors. The purpose of this group will be to promote awareness and visibility for work that aims to increase the resilience of children at the community level, and advocate for policies that facilitate this at a national level.

This project is still ongoing and thus, there are not many published results. However, a webpage exists on Preparedness Tools that, along with a few links to resources previously developed by Save the Children and by the National Centre for Disaster Preparedness on Children & Disasters, includes a short list of recommendations for "Meeting the Unique Needs of Children During & After a Disaster":

- Keep familiar routines to the extent possible.
- Take care of yourself: children do better when their caretakers are not stressed.
- Talk about the event with your child and as a family in an age appropriate manner.
- Engage children in play activities such as drawings and story telling
- Provide older children with constant updates of what is going on in regards to their ability to return to school and other activities that have been temporarily suspended.
- Notice changes in sleep, appetite, mood, and overall disposition.
- Do not expose children to news and/or images of the disaster.
- Provide opportunities for children to see friends and supportive adults.
- Encourage children to express their thoughts and feelings through words, play, writing, drawing, and other mediums as appropriate.
- Listen carefully and observe your child's behaviour.

- If you notice a significant change in your child's behaviour after 4 weeks, consider seeing a professional counsellor

Despite being a child-centred project, these recommendations are addressed to adults and about how to protect their children, rather than as envisaging any participatory mechanism to gather children's experiences and recommendations. Similarly, the national survey '*Children In Disasters: Do Americans Feel Prepared?*' undertaken as part of the project, regardless of including questions about children, was designed to only collect data about the adult's perspective. In this sense, for instance, nearly 35% of the households were not very familiar, or not familiar with the emergency or evacuation plan at their child or children's day-care or school, and over 40% of the participants did not know where their child or children would be evacuated to if their school had to evacuate. Regarding their perceived vulnerabilities, 51% of respondents were not confident in the government's ability to meet the unique needs of children in disasters, being more confident in their communities, schools and other child-serving institutions abilities.

3.4 Concluding remarks

Child-centred and participatory research on disasters is a young and emergent field, seldom focused on European contexts. While some EU-level research projects have addressed the needs of children in disaster management, most of these have been devoted to developing educational tools, strategies and materials. Moreover, great emphasis is put on preparedness and prevention (awareness raising, education and self-protection), reinforcing instructional and training approaches rather than participatory objectives.

Nonetheless, new research frameworks accompanied by new policy frameworks such as Sendai 2015 are giving citizens a greater prominence in disaster management and policy-making. These new trends are increasingly reflected in recently approved European research projects, where bottom-up processes and knowledge-exchange practices between experts and lay citizens are gaining importance at every phase of disaster management. This participatory approach has opened the door to address

children's needs from a different point of view, not seeing them only as a vulnerable group that needs to be protected in disaster situations, but increasingly as allies and even as leaders of some community-based preparedness and resilience strategies. However, CUIDAR is the first research project at a European level that places children and young people at the centre of this participatory turn in disasters management.

Regarding the national experiences:

- Only the UK has some experience in participatory research projects involving children in disasters situations, in fact, being that the basis of CUIDAR.

- In Italy it seems that there has been some significant research done in the last years in the field of children and disasters, however, more focused on education than in participatory methodologies or addressed to improve the resilience and preparedness in schools (though not involving children directly).

- In the case of Portugal, scarce examples of research have been collected and they mainly involve children indirectly.

- In Spain, although research projects as such have not been found, there is a short collection of publications on children in relation to 2 recent disasters (an earthquake and a terrorist attack). Their focus is on developing psychological intervention models for professionals.

- No research projects have been found in Greece.

- Finally, if we want to find previous or ongoing research projects comparable with CUIDAR we need to look for these at the international level. In the USA and Australia we found some other research/intervention projects based on child-centred disaster management-models that include a participatory approach. Nevertheless, it is important to note that in these projects the "participatory" approach does not necessarily align with the one that promoted through CUIDAR, or related previous UK-based projects, where children gain an active

role not only in educational or preparedness activities, but also in decision-making processes.

4 SCIENTIFIC EVIDENCE

4.1 Concept

This section characterizes literature interventions/research involving children in disaster-related research across different frameworks and approaches, from Disaster Risk Reduction, to Emergency Management and Resilience, along a continuum from expanding knowledge, to enhancing voice, and/or to taking action. Participatory-oriented disaster research on/with children and young people is an innovative and emergent approach that fosters the agency of children and youth, in groups and as individuals, and to works towards making their lives safer and their communities more resilient to disasters.

4.2 Background

As Anderson (2005) argues, it has been traditionally difficult to find children and young people in disaster research. Specifically, it has been difficult to find evidences derived from the active role of children in disaster management. Such knowledge would provide a more complete understanding of disasters, of children and young people's strengths and vulnerabilities, and contribute to informing policy and practice across the entire mitigation, preparedness, and response and recovery spectrum. In this section we aim to conduct a specific review of the main research findings found in studies about the active role of children in disaster management. As reported in previous literature reviews (Ager et al. 2010; Weissbecker et al. 2008; Pfefferbaum et al. 2013; Johnson et al. 2014; Peek, 2008), the nature of this field has traditionally been large, complex and heterogeneous. In this context, we consider whether this has changed in the recent years. What is the extent of the research available? Who are the most relevant authors and countries involved in this emerging field? In which contexts and disasters do they work? What are the key concepts underpinning this research area? What methods and designs do they promote to understand the views, knowledge and capacities of children and young people? What kind of children do they involve? What kind of participation do they promote? What are the main findings of the

research that puts children at the heart of disaster management? What are the main gaps and areas not covered by this research?

4.3 Objectives

Specifically our objectives are:

- To bring together the main literature in this field.
- To map (or chart) the literature in this field (nature, features and volume).
- To summarize the main research findings.
- To identify research gaps
- To make recommendations for future research.

4.4 Inclusion criteria

At the broadest level, our main aim is to bring together the literature concerned with understanding children's active participation in disaster management. This criterion brings together all the literature that explores/reviews/assesses/experiments with the spaces, methods, and modalities for children and young people to contribute to DRR, emergency management (prevention, preparedness, response and recovery) and resilience. This excludes papers that despite revolving around children and disasters do not advocate, include or ask about the voices, capacities and knowledge of children in these situations. For instance, we have excluded the extensive work done 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 have also excluded some work done to assess and measure the impact of hazard education campaigns (to raise awareness, to 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 literatures have been crucial to advocate for children's inclusion in disaster management we have preferred to focus intensively on research which engages more directly, thematically but also methodologically, with the

central concern of CUIDAR. There is also another reason for this decision. The literatures about the impacts of disasters and of the effectiveness of hazard education campaigns have been previously reviewed as they have a longer historical background (Ager et al. 2010; Weissbecker et al. 2008; Pfefferbaum et al. 2013; Johnson et al. 2014; Peek, 2008). The more emergent condition of participatory approaches to age-sensitive disaster management, on the contrary, justifies the need for a more specific review.

4.5 Type of participation (sample)

This selected literature review includes a range of academic and NGO research work published between 2000 and 2015. There is a clear growth in such work from 2008 to 2015, this time-frame coincides with an increase in major disasters (occurring in USA, New Zealand, Japan and Philippines) and the new premises and guidelines promoted by two influential international policy frameworks: Hyogo 2005 (UNISDR, 2005) and Sendai (UNISDR 2015), both clearly devoted to promote the engagement and involvement of the most vulnerable groups and communities in disaster management, with a special focus on children and young people.

The selected literature extends across international contexts, disciplines, and types of disasters. All literature is publicly available online, either through library journal access or on websites of the various organisations.

The sample comprises different types of research outputs, mostly articles and literature reviews, but it also includes position papers and policy briefings. This review also includes some central grey literature.

4.6 Searching

The literature search was designed to be as broad and inclusive as possible. It is important to note that this is not a comprehensive and systematic literature review but a section of a broader scoping review. This means that the exercise has been mainly conducted to summarize research findings, to identify research gaps, and to make recommendations for future research in this field (Peters et al. 2015; Arksey & O'Malley, 2005).

We started with a search on the SCOPUS database. To tailor our search strategy we started by conducting a pilot study searching for papers containing "Child*" AND "Disaster" AND "Participat*", only in social sciences. This gave us 21 positive results. After reading all the sample of papers from the pilot study, we widened and refined our search by including other keywords such as "Evaluation", "Hazard", "Youth", "Teen", "Educat*", "Participat*", "Engage*", "involve*", "earthquakes", "tsunamis", "floods", "fires", "volcano", "hurricane", "storm", "tornado". We've compiled the different outputs coming from these searches, selecting those papers more aligned with our main aim. This compilation has also been improved with a snowballing strategy, selecting references directly mentioned in the papers within the scope of this research. After reading titles and abstracts of all the papers we've reduced the sample to 94 papers.

This review also includes some central grey literature. It is known that grey literature is usually difficult to find due to its ephemeral nature and the fact that it is not collected and indexed by libraries or databases. Much of it is simply published online. To collect the most relevant documents, we have followed two complementary strategies. First we asked some partners and practitioners to provide information about the most relevant documents. Second, we have selected key documents that recurrently appear in the scientific literature analysed. Grey literature, as we will report, has been important to complement the work already published in scientific journals. It has also been important to confirm the main tendencies summarised in this report.

4.7 Extracting and charting the results

To chart and summarize the main findings of this phase we will combine a visual and "narrative review" (Pawson, 2002).

4.7.1 Authors and Countries.

In the selected group of papers we have found **222** different authors. Most of them co-authoring the work under analysis. **168** of them appear only in one publication, while **54** authors are responsible for two or more publications. The following chart summarizes the names of these authors with two or more publications along with their affiliated country:

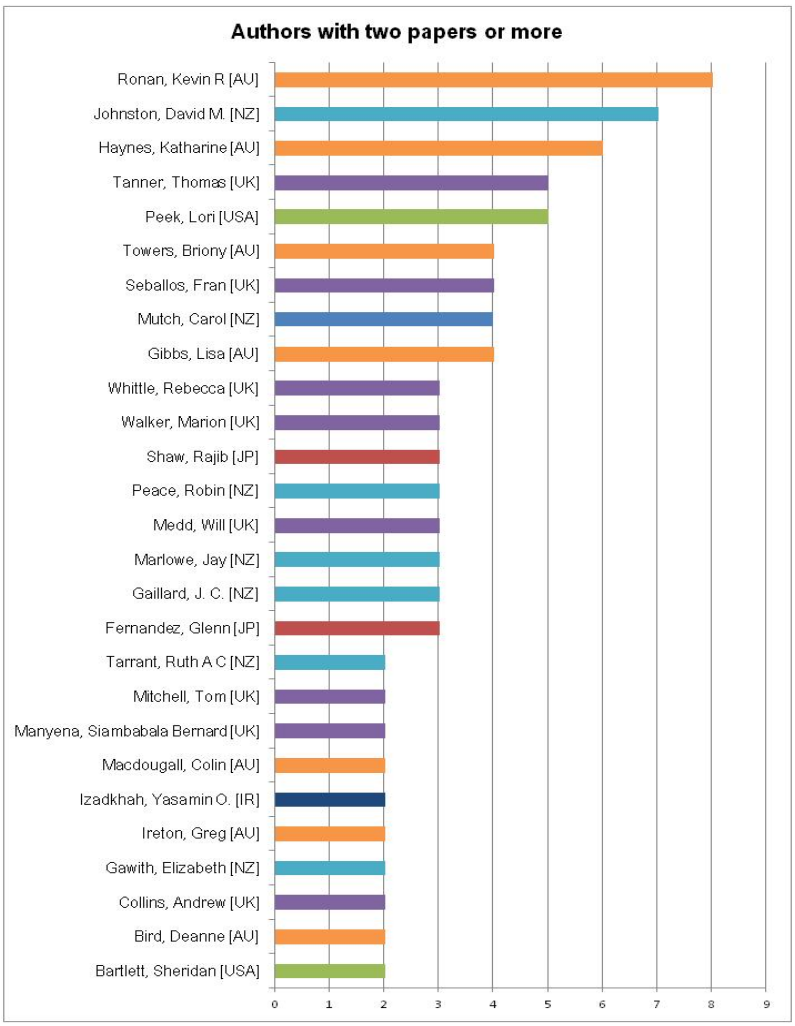
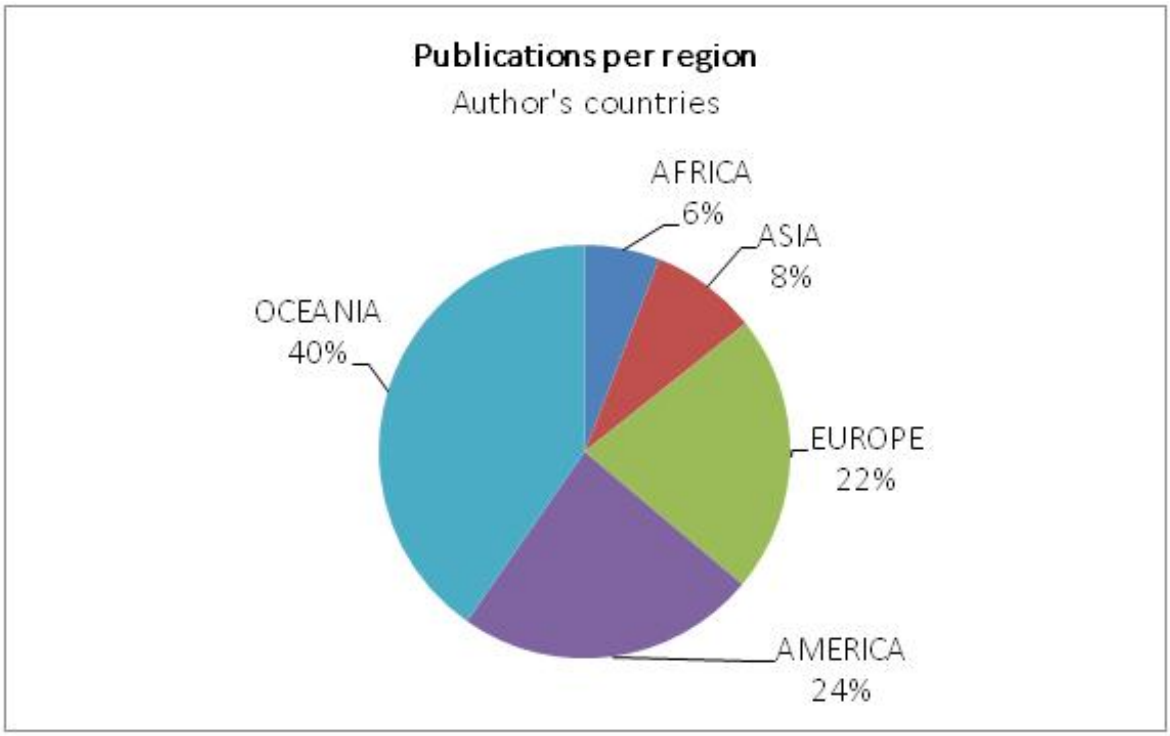


Fig. 18: Authors with two papers or more

The chart helps us to identify some leading countries, mostly **Australia**, **New Zealand**, **UK** and **USA** and also the names of the more prominent authors and teams in this field such as Ronan & Johnston (AUS/NZ); Haynes & Tanner (AUS/UK); Tanner & Seballos (UK); Peek (USA); Mutch (NZ); Gibbs (AUS); Walker (UK). The different authors scoped come from various disciplinary backgrounds such as anthropology, education, environmental science, geography, psychology, public health, sociology and urban planning.

Fig. 19: Publication per region



Although not all the publications have or mention their context of study, the following chart shows the most significant scenarios analysed (by continents):

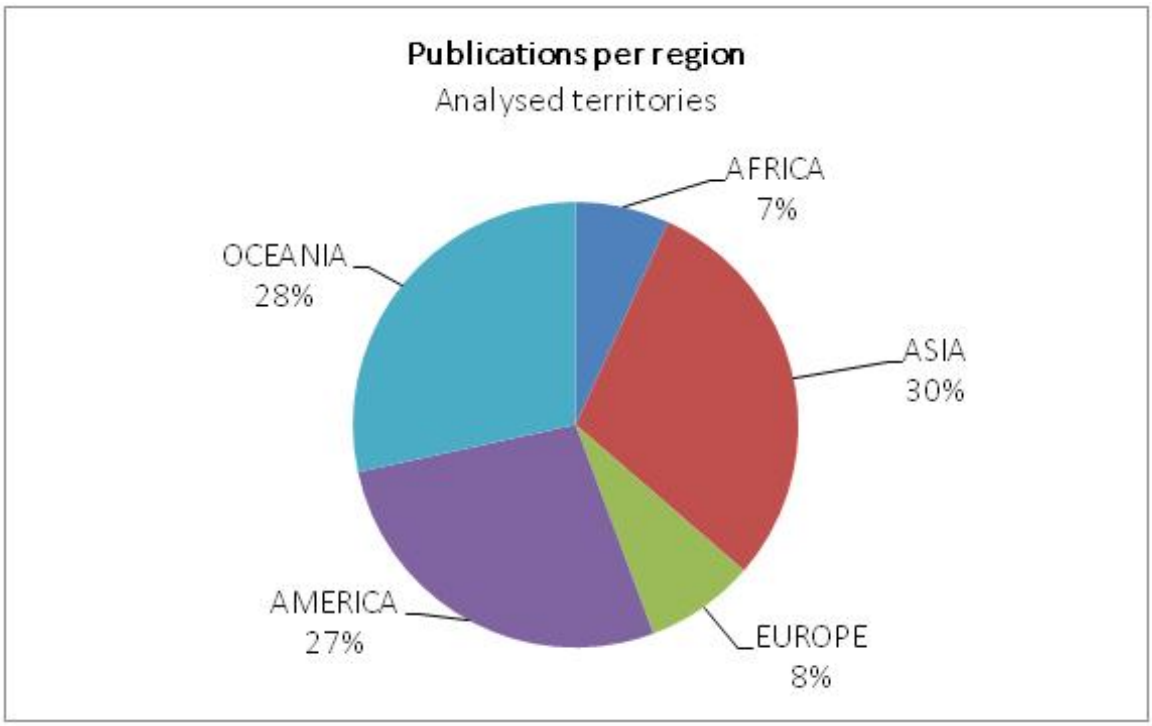


Fig. 20: Publications per region

Interestingly, Europe has a more prominent role as a disaster research producer than as a scenario of research. It is worth mentioning that UK is the most productive country in Europe with almost the half of the output (see Fig 21). Portugal, Iceland, Italy and Poland are the other countries with publications in our sample. In contrast to Europe, Asia tends to be more studied by researchers from other parts of the world. The next chart clarifies a bit more such a contrast. On the vertical axis there are the countries of origin; on the horizontal axis the reader can see the countries object of research.

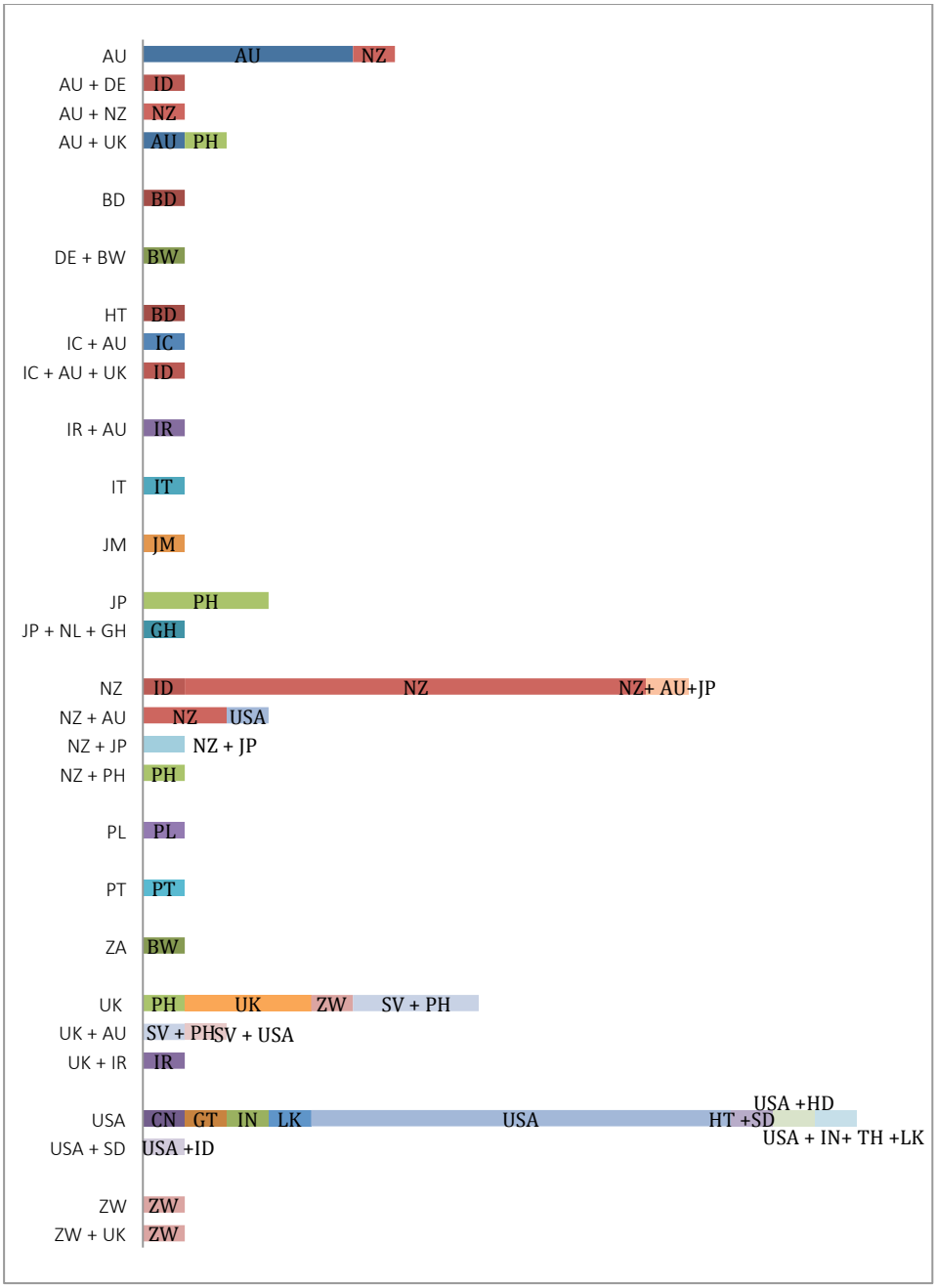


Fig. 21: Authors' countries and countries object of research

As it can be seen, while authors from Oceania, America and Africa seem more interested in studying disasters which happen within their own geographical area, European authors, with the exception of UK scholars studying floods in their own country, tend to focus on more "distant" disasters (mostly in Asia and Africa). This could be explained by the occurrence of major natural disasters in the countries/continents more studied. The magnitude and effects of these disasters, as well as the traditional tendency to associate disaster research with the study of natural

(or naturalized) disasters, may account for the greater attention and research funding they attract.

4.7.2 Years

This chart shows the growing and emergent nature of the literature in this field -with a significant increase in production since 2008-, and the influx of major natural disasters occurred in 2011, particularly the earthquake in New Zealand.

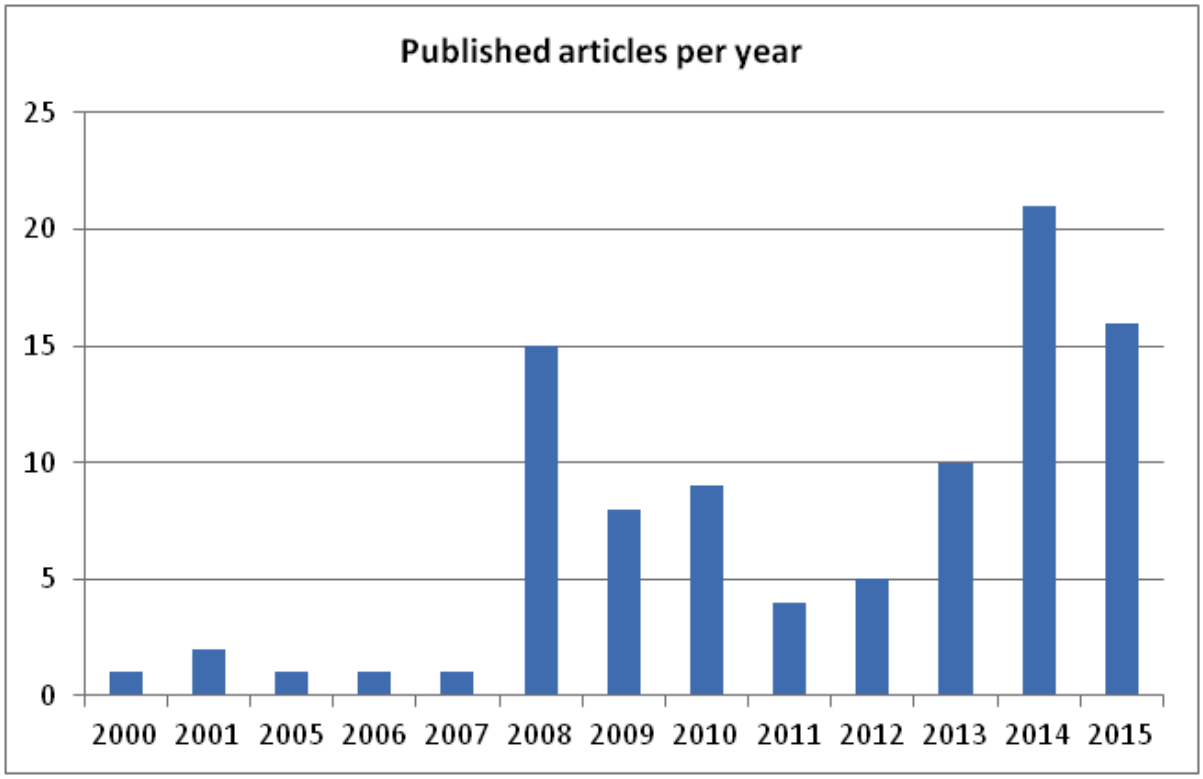


Fig. 22: Published articles per year

4.7.3 Journals and types of papers

When analysing by journal, two journal special issues stand out: a special issue of *Children, Youth, Environment* (2008) on children and disasters; and a special issue of *Australian Journal of Emergency Management* (2014) on children and disasters. But our review also shows the centrality of other journals such as *International Journal of Disaster Risk Reduction*, *Pastoral Care in Education*, as well as the influence of the publications produced by the *Institute for Development Studies*.

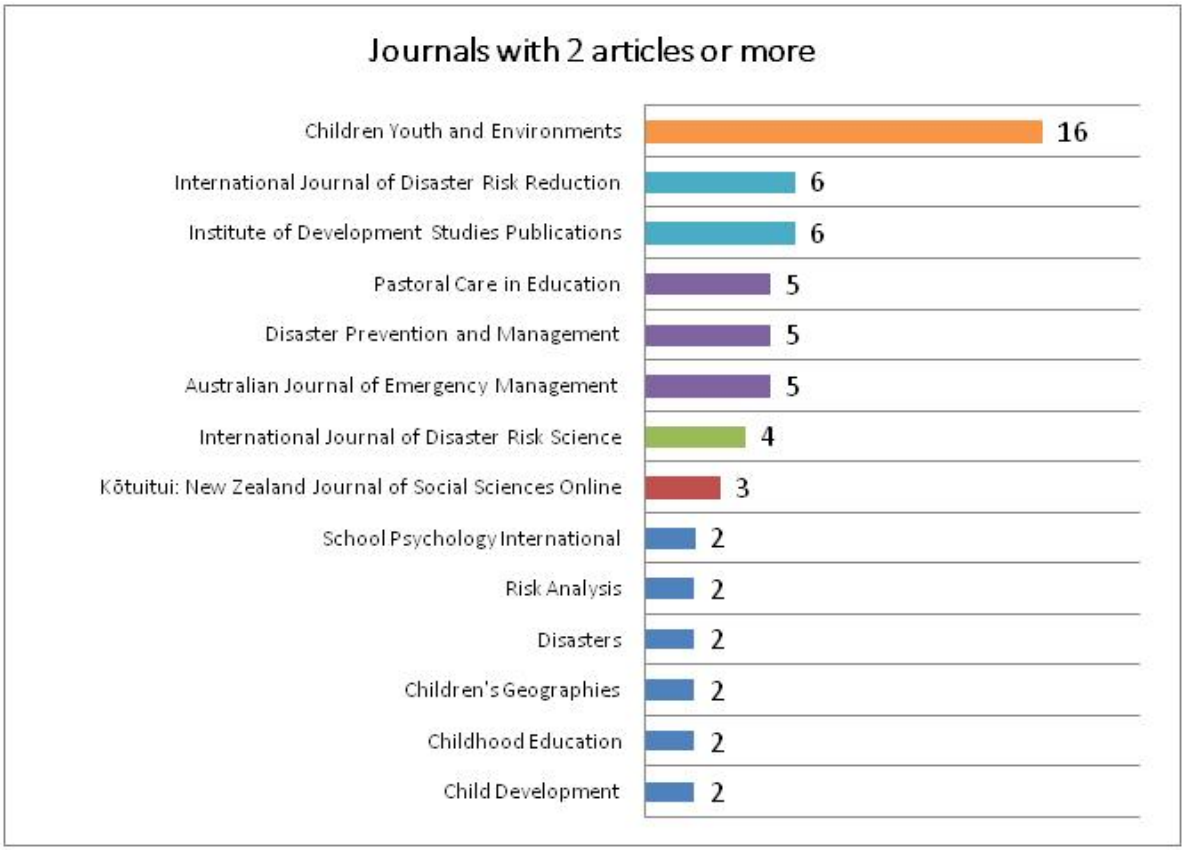


Fig. 23: Journal with 2 articles or more

By far, most 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 that are recurrently cited in the rest of the papers (for instance Peek, 2008; Boon et al. 2011; López et al. 2012; Johnson et al. 2014; Tatebe & Mutch, 2015).

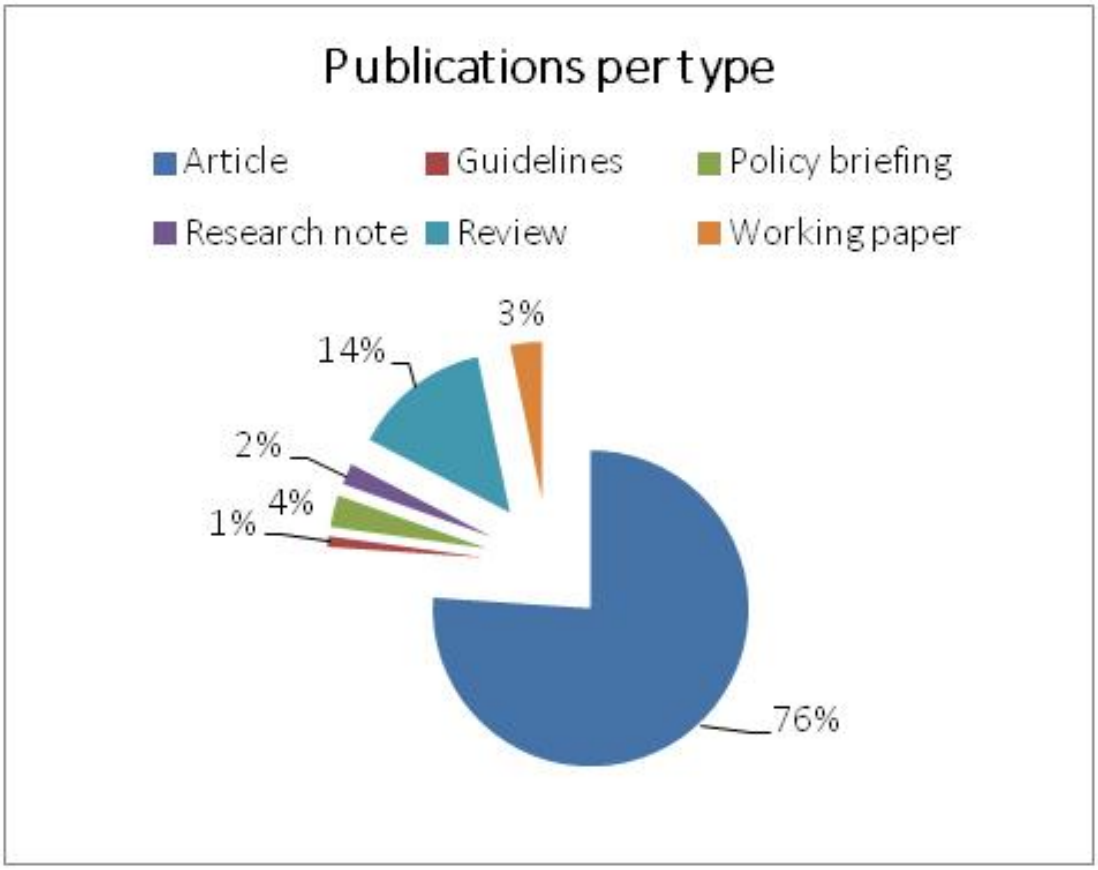
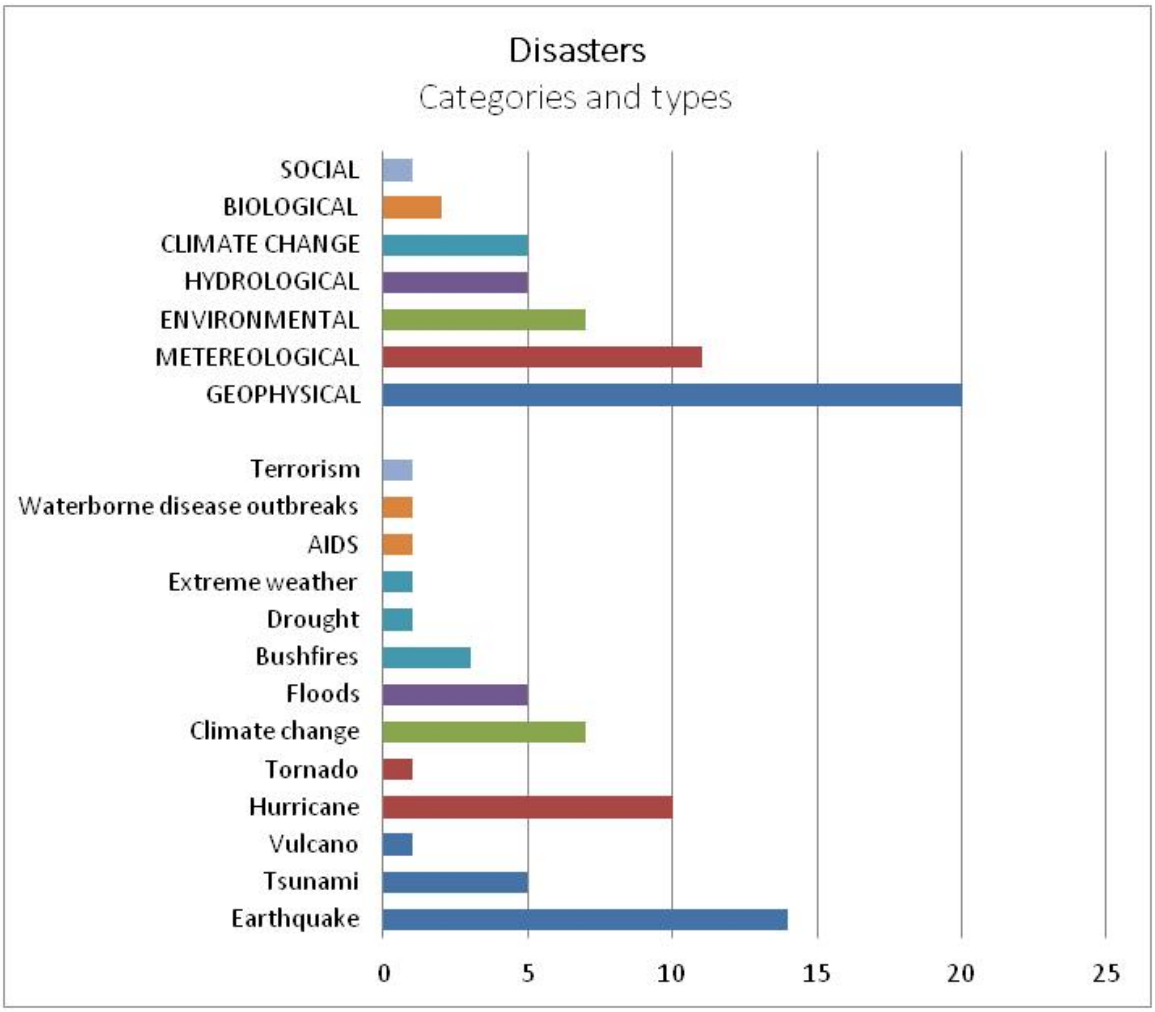


Fig. 24: Publications per type

4.7.4 Types of disaster

Earthquakes, tsunamis and hurricanes are the disaster forms most discussed. Again, this reflects the impact of recent major disasters in the literature: Indonesia's earthquake and Indian Ocean tsunami (2004), Hurricane Katrina (2005), Christchurch earthquake (2011) and Japan's earthquake and tsunami (2011). Climate change also appears as a recurrent preoccupation. It is also worth to mention Australia's focus on bushfires and Africa's interest on droughts and AIDS. At the European level, it is worth to mention the influx of floods, especially in the UK.

Fig. 24: Disasters



4.7.5 Keywords/Topics/Fields of research

By analysing the papers' keywords we observe that:

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

- There is also a growing interest in methods/tools for research and intervention with/on children. Participative methods are particularly mentioned. Artistic and creative methods, such as drawing, storytelling, comics and storyboard are mentioned. Also focus groups and more conventional quantitative methods.
- Last but not least, Disaster Risk Reduction emerges as a significant and key concept for the literature reviewed. It encompasses the more innovative and emergent participatory-oriented disaster research on/with children and young people.

AGE GROUPS	
Children	25
Youth	8
Adolescents	4
Children and Young people	3
Early-childhood	1
Teenagers	1
Very-young-children	1
SOCIAL CATEGORIES/ AGENTS	
Children-and-families	1
Civil-Society	1
Councils	1
Evacuees	1
Gender	1
Migrants	1
Orphans	1
Refugee	1
Youth and families	1
Disability	1
SOCIAL/CULTURAL	
Vulnerability	10
Culture(s)	5
Community	4
Family	4
Rights	2
Care	1
Development	1
Housing	1
Labor	1
Power-relations	1
Religion	1
Services	1
Social-support	1

EDUCATION/TRAINING	
Education	16
School(s)	11
Educational-tool	1
Engaged-learning	1
Instruction	1
Kindergarten	1
Learning	1
Pedagogy	1
Preschool	1
School-based	1
Sylllabi	1
PSYCHOLOGICAL	
Resilience	15
Coping	4
Emotions	2
Stress	2
Affect	1
Agency	1
Capacity-building	1
Cognitions	1
Emotional-work	1
Knowledge	1
Language	1
Memory	1
Perceived Social Support	1
Personal-experiences	1
Prior-knowledge	1
Proactive	1
Psychosocial	1
Role-taking	1
Trauma	1
Awareness	1
Risk-perceptions	3

PARTICIPATION	
Participation	9
Participatory-action-research	1
Participatory tools	1
Participatory-research	1
Participatory-video	1
METHODS/TOOLS	
Methods	3
Design	2
Evaluation	2
Storytelling	2
Art	1
Comics	1
Conversation-analysis	1
Drawing	1
Ethics	1
Focus-groups	1
Forum	1
Fragments	1
Interactive-models	1
Methodology	1
Models	1
Mosaic	1
Museology	1
Place-based	1
Play	1
Qualitative-methods	1
Qualitative-research	1
Samples	1
Storyboard	1

DISASTERS				CASE ESTUDIES/LOCATIONS	
Disaster(s)	19	STRATEGIES/POLICY		Katrina	6
Emergency	2	Disaster-Risk-Reduction	13	Botswana	2
Risk	1	Adjustment	2	Christchurch	2
PHASES		Child-centered-DRR	2	Hull	2
Recovery	9	Drills	2	Iran	2
Preparedness	6	Risk-communication	2	Philippines	2
Response	5	Child-led-DRR	1	Zimbabwe	2
Prevention	3	Disaster education	1	9/11	1
Intervention	2	Communication	1	Binga	1
Impacts	1	Emergency-management	1	Canterbury	1
TYPES		Hazard Education Programs	1	China	1
Earthquake (s)	8	Help-provided	1	El-Salvador	1
Hazard(s)	8	Hyogo	1	Ghana	1
Natural-disasters	7	Programs	1	Guatemala	1
Hurricane	6	Promotion	1	Haiti	1
Flooding	4	Protection	1	Honduras	1
Climate change adaptation	3	Protection Psychosocial	1	India	1
Climate change	3	Reconstruction	1	Indian-Ocean	1
Wildfire(s)	2	Relief	1	Indonesia	1
Drought	1	Risk-assessment	1	Jamaica	1
Displacement	2	Risk-education	1	New-Orleans	1
HIV	1	Safe-Spaces	1	Solomon-Islands	1
Nature	1	Safety	1	Sri-Lanka	1
Terrorism	1	Sendai Framework of DRR	1	Washington	1
Tsunami	1	Strategic-planning	1		

4.7.6 Methods

Regarding the methods used and/or discussed in the sample of papers, we find that they mostly address a population of children comprised between **10** and **16** years old (with a clear peak at children of **12** years old).

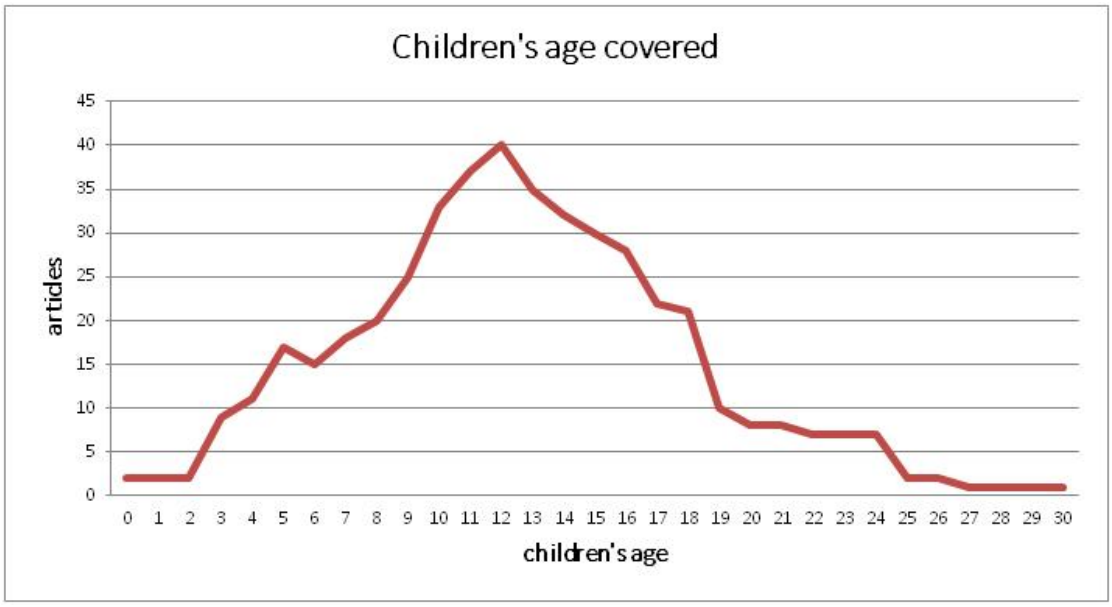


Fig. 25: Children's age covered

In the following chart we can see the most socio-cultural variables addressed in the population studied are (apart from age) **gender** and **ethnic diversity**[11]. Although there are some papers that focus on **disability** issues this is not a very frequent variable used to select or contrast the sample of children and young people studied.

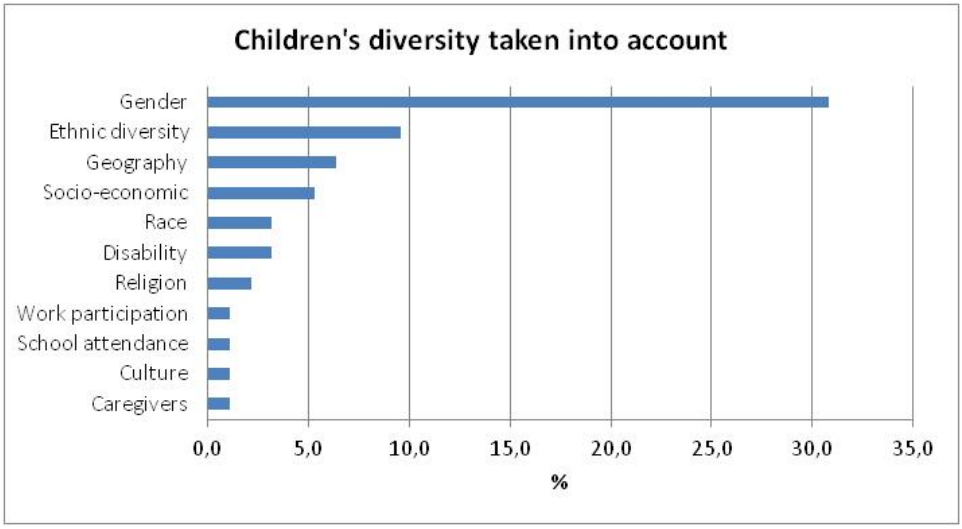


Fig. 26: Children's diversity taken into account

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

We have also considered the different methods and data collection techniques addressed and used in the papers analysed. As the following chart shows**, semi-structured interviews** and **quantitative questionnaires** are clearly more prevalent than other more innovative and creative methods/tools. However, as we discuss later, there is a growing engagement with **participatory** and more **creative research**, particularly in this field.

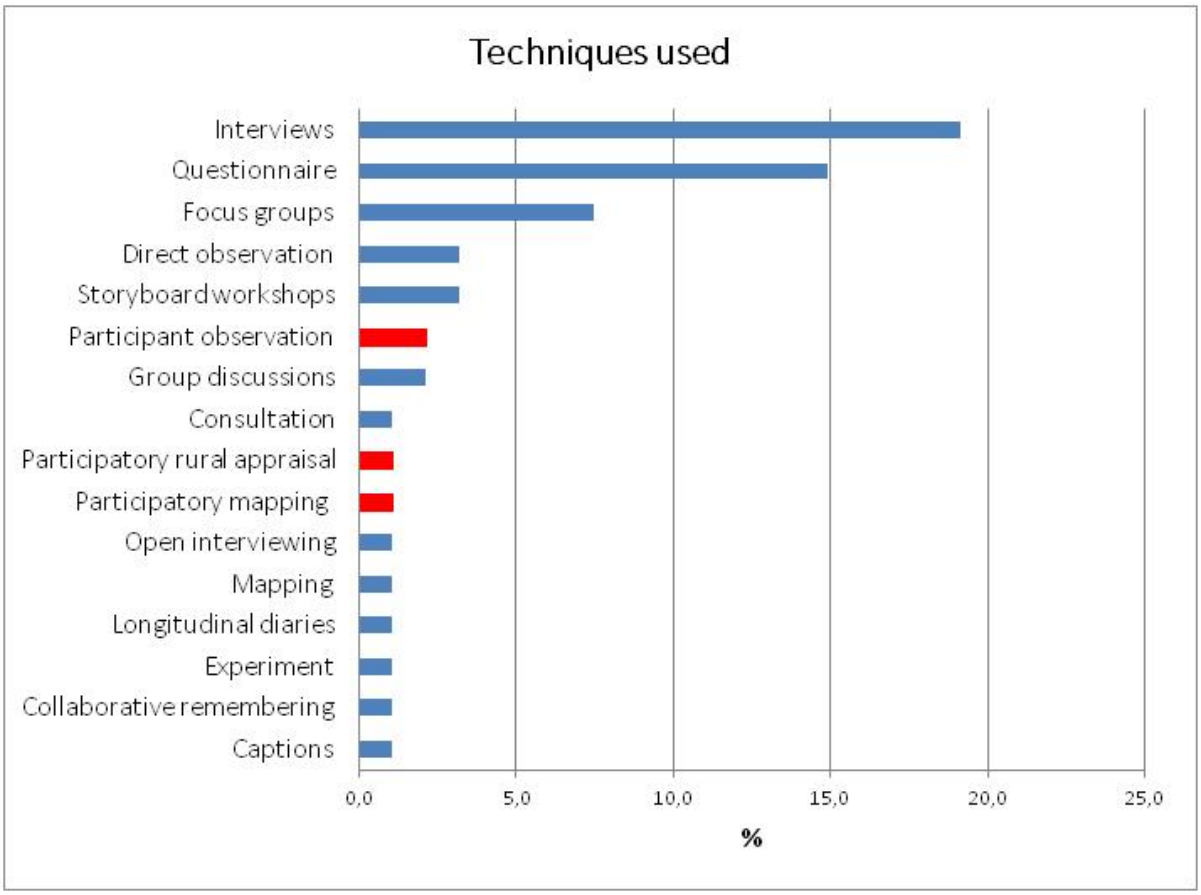
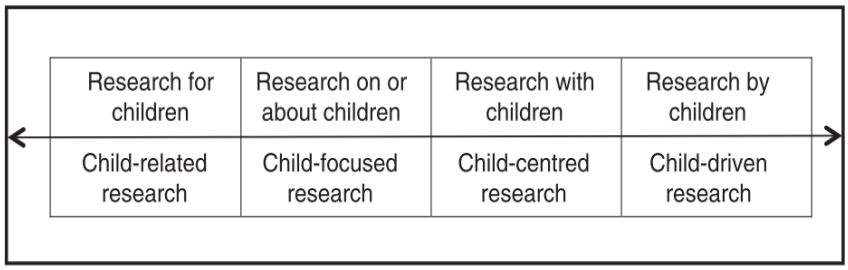


Fig. 27: Techniques used

As an example of this participatory turn, we have found that the **33%** of the articles are based on child-centred research. That is following the "continuum of engagement" proposed by Mutch (2013), we have identified those papers that rather than being only focused on/about children they involves children more directly ("research with"), fostering their voice and agency to contribute to the design of research itself (for instance, through participatory action research). The reader can see the "continuum of the engagement" in the following figure (taken from Mutch, 2013: 449)



Another interesting finding is that the **52%** of the articles mention to be based on children's direct experience with disasters. Although not all these papers build upon embodied forms of knowledge, it clearly points towards the growing importance of studying real (rather than potential or abstract) scenarios of disaster, where risks and effects of disasters can be more vivid, and to give direct voice to children and young people (rather than use relatives, adults and/or educators as spokespersons).

4.7.7 Findings and evidences

Participation

Most of the papers reviewed characterize children as highly vulnerable group in disaster contexts. But they also agree on the importance of representing children and young people as active agents with capacity and knowledge to contribute to disaster management. Among the contributions of children and young people as active agents in disaster management the literature highlights:

- Children have a strong potential to raise awareness, contextualising knowledge, using analytical tools and prioritising actions and therefore making significant long-term contributions to resilience of communities. They are skilled at organizing events such as drama, music, art exhibitions and community meetings to increase community knowledge, build coalitions with parents and other stakeholders, advocate for Disaster Risk Reduction and political mobilization (Cumskey et al. 2015; Back et al. 2009; Benson & Bugge, 2007).

Evidences show that there are mental health and wellbeing benefits arising from this involvement (Peek 2008; Fothergill & Peek, 2015; Anderson 2005; Mitchell, Tanner & Haynes 2009).

- Children introduce fresh and new ideas (Bolton & Neuwelt, 2014) and perceptions of the surrounding world. They can have a sophisticated understanding about disasters (Harwood et al. 2014). Bartlett (2008a) reports on a study conducted in India that involved children and parents in the reconstruction of their homes and neighbourhood after the 2004 Indian Ocean tsunami. He explains how children brought fresh perspectives and practical common sense to discussions, contributing, together with parents, to design spaces for children to play and study, and for adult members to socialize and hold social celebrations. Children's significant participation in the decision-making processes was also reported in Bangladesh (Martin, 2010; Mitchell & Borchard, 2014; Plan Bangladesh, 2009), showing how they came up with important interventions such as tree planting, boat building, and bridge construction.

- Children are key players in many areas of disaster preparedness: creating educational murals, developing a disaster management school curriculum (including a school emergency response plan), disseminating warnings, preparedness measures and reaction capacities, and planning for the protection of the environment to their parents and the wider community (Ronan et al. 2015; Bolton & Neuwelt, 2014; Finnis et al. 2010).

- They 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). Of particular importance is their role as translators, as cultural brokers (Marlowe & Bogen, 2015), as mediators and bridges between generations, communities and resources (Mitchell et al. 2008). For instance, Michell et al. (2009) mention the role of the Vietnamese community in New Orleans and how young people from

this community assisted in the evacuation and relief efforts, as they were able to translate central information (food distribution, access to relief supplies, etc.) from formal English sources (Mitchell et al. 2008). Marlowe & Bogen (2015) also provides 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 also play an active role as informant first responders, engaging in search and rescue, providing food, participating in emergency activities (Sunal & Coleman, 2013; Fernández & Shaw, 2015).

- Children and young people are excellent social networkers and community-builders: they are good at mobilizing people and resources (Geiselhart et al. 2008), volunteering, raising funds, but also at mutual help and peer counselling (Nikku et al. 2006). Actually, young people perceive themselves as effective in helping others and promoting resilience (Bocksczain, 2012). Caring for children and young people's social networks appear to be central to forming and strengthening social relationships possible and stronger in the event of a disaster, preventing marginalization and facilitating social cohesion (Ensor, 2008).

- Children's participation can also be beneficial at recovery and rebuilding phases (Bartlett, 2008; Pine et al. 2015). It has been found that following severe flooding, children and young people appeared to cope better with changes to their home when they were provided emotional processing opportunities (Mutch, 2013; Walker et al. 2010) and were given some involvement in the decision-making about the repairs (Walker et al. 2010; Whittle et al. 2012). Additionally, children's accounts have proved to be important to raise subtle and unconsidered questions and dimensions about the impact of disasters, such as who is actually affected by the disaster and how vulnerability is produced during the recovery process (Walker et al. 2012).

Research shows that their participation is influenced by a combination of community and institutional dynamics (Tanner et al. 2009; Fernandez & Shaw, 2013; 2014; Haynes et al. 2010) but also of 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 factors such as age, gender, socio-economic factors (Grotberg, 2001), culture (Haynes et al. 2010; Taylor & Peace, 2015), ethnic diversity (Bolton & Neuwelt, 2014), race and class (Brown et al. 2007), religion (Haynes et al. 2010; Taylor & Peace, 2015), and geographic location (Towers, 2015; Gaillard, 2010). Overall, these factors speak of the importance of power relations for understanding the possibilities of children's participation. Modes of participation that do not contest adult-patriarchal-wealthy-white-colonial hegemony are more likely to be put in practice than those that do challenge those relations.

Disability and gender are aspects of particular interest for disaster researchers. Although emerging, there is agreement on the effect of gender and disability (Ronoh et al. 2015a; Ronoh et al. 2015b; Boon et al. 2011) in contributing to social vulnerability (Peek & Stough, 2010; Peek, 2008). For instance, despite their considerable number in schools, disabled children and young people have been largely 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 that they 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). Although girls may seem to be more resilient, they tend to be more vulnerable were they are denied basic rights and opportunities to participate (Bartlett, 2008). Some authors advocate for the need of more gender sensitive research in this field (Haynes et al. 2010).

Although more emergent than other subareas of research, there are some papers pointing to the importance and effectiveness of involving younger children,

particularly in ‘meaning making’ and ‘sense making’ (Gawith; 2013; Mutch, 2013; Freeman et al. 2015). This research summarizes the importance of using artistic and creative methods, such as drawing, mosaic making (Locke & Yates, 2015) and play, and positively assesses the role of these materials and activities for addressing very young children’s sense of loss and for engaging them in rebuilding and recovery activities (Plan International, 2013; Shah, 2013). Actually, as Mort et al. (in press) put forward there is a need for further research about the possibilities and limitations in this work of creative methods, which though well-documented in art therapy settings appear less so in the context of involving children (and with adults) in exploring disaster recovery, resilience and planning. As they have found in their Children, Young People and Flooding project, 3D activities, such as sandplay, modelling and sculpture, can offer an ease of creative facilitation that allows the potential for deeper individual and group engagement than relying only on 2D, such as drawing.

Another crucial aspect mentioned is the role of adults in child participation. For instance, there is significant evidence of adult resistance to children and young people participation (Mitchell, Tanner and Haynes, 2009). A study in Zimbabwe reported that children's attempts at impacting adult decision-making can even result in emotional or physical harm (Manyena et al. 2008). Several reasons are provided: from the “still small” approach (Haynes et al. 2010) that tends to underestimate children’s perceptions (Delap, 2000), ideas and knowledge (Sewell et al. 2014), to the social and cultural factors that frame children’s participation as a challenge to adult authority (Martin, 2010; Mudanvhanu et al. 2015). This deeply affects children’s motivation to participate and undermines their confidence, creating a perception that parents, educators and policy makers don’t take them seriously. Some of this research suggests that the best way to combat this is to conduct participation in close collaboration with adults and with the community (Pujadas & Kulig, 2014; Reich & Wadsworth, 2008). Equally important, some studies put forward the negative effects that Eurocentric conceptions of participation and children’s rights, or of humanitarian assistance, may have in other distant contexts (Martin, 2010; Manyena et al. 2008). In contrast, they vindicate the importance of bringing about meaningful modes of children's participation, more adapted to cultural and organisational variables governing and structuring the communities that sustain the interests of the children who live in these

communities (Haynes et al. 2010; Mitchell et al. 2009). Tanner (2010) also suggests facilitating multiple modes of participation for children in order to capture their everyday cultural practices and their constant remaking of themselves and their environments. Finally, Martin (2010) emphasizes that Disaster Risk Reduction is a long-term process, which should not be considered a stand-alone event, but should be repeatedly worked end reinforced over time.

Related to this, some research points to the effect that notions of childhood and children's rights have in thinking about and promoting participation. Although children are increasingly acknowledged as having the capacity to take active roles and responsibilities in disaster management, this does not automatically mean there is recognition of children as holders of rights. Furthermore, children's participation depends on the ways in which their rights and the very notion of childhood are constructed/interpreted (Nikku, 2013). Frequently, a poor notion of children's rights turns into a tokenistic and "adultist" idea of children's participation (Hart, 1997). The rise of Youth Councils is an example of this, also the obstacles these interventions encounter in making significant contributions (Fernández & Shaw, 2013; 2014). Finally, Lautent & Lietz (2008) warn about the traumatising effects of doing an intervention without a proper rights approach, as was the case of Katrina in contrast to Indian Ocean tsunami. Despite eschewing international agreements, standards and partnerships, US government's response to Katrina showed a disturbing ignorance to threats to children's physical security during and after the storm. Also, ignorance about the affected population prevented officials from identifying culturally appropriate solutions to the challenges they were facing after the storm. On the contrary, the Government in Indonesia developed a long-term protection plan for children that included equitable distribution, family tracing and reunification, etc. This finding points to the critical role of government agencies and NGOs working in this field and to the importance of critically examining the ideas of childhood, children's rights and children's citizenry, and of incorporating lessons learned abroad (as it is the case of Indonesia).

Education

Another important topic in this field is education. There is agreement on the importance of educational campaigns for DRR, and of assessing their impact directly on children (not that often assessed). Research by Ronan and colleagues shows that children who have been involved in hazard education have more realistic perceptions of risk, reduced fears of hazards and increased knowledge of how to build preparedness, particularly when they have the opportunity to receive constructive feedback during practices (Ronan et al. 2015; Ronan et al. 2008; Ronan & Johnston, 2001; Ronan et al. 2010). Additionally, it's been shown that these children have a significant role in transferring this knowledge to their family and community (Wisner, 2006; Selby, & Kagawa, 2012). Finnis et al. (2004) argue that children's knowledge of protective behaviour can reduce their vulnerability when they are alone or unsupervised, and can reduce community vulnerability when they educate household members on the correct actions to take during an emergency. Also, children who are involved in multiple hazard education campaigns over time are more knowledgeable than those who are involved in just one program, one time (King & Tarrant, 2013; Ronan & Johnston, 2011). Young people have also the ability to share and apply this information and knowledge within their households and in the wider community. This can be extended also to knowledge and information learned beyond school and formal spaces of education. Disaster Risk Reduction education is also important for sustained knowledge creation and dissemination from primary to tertiary settings, and to the wider community (Tatebe & Mutch, 2015).

Research done in this field, however, warns about an underlying and largely erroneous assumption: hazard education always translates into preparedness action. Also, the lack of constructive and integrative dialogue among stakeholders has been identified in literature as a major problem to DRR education. In this regard, the studies advocate for increasing the frequency and number of activities as well as for diversifying the scenarios and disasters (Bird & Gísladóttir, 2014) for a better embedding of preparedness and response skills. A commitment to listening to children's voices

needs also to be maintained at all times, not only in the "easy" pre-disaster period (Gibbs et al. 2013).

Apart from having an educational role in DRR, schools appear to have an integral role in promoting community preparedness and resilience, as they are often a meeting point in communities (Mutch, 2014; UNISDR, 2005; Tripler et al. 2010). When accessible, schools are also used as emergency management sites, as shelters or as communication centres. In this regard, some papers also stress the central role of teachers and principals 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 the community (Tatebe & Mutch, 2015). In the event of a disaster this role can also be played by 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 (see Save the Children 2013a, 2013b; Ager & Metzler, 2012; Dale & Wilson, 2011).

Research design and methodologies

Although school based education has improved a lot, especially in Australia, New Zealand, the USA and Japan, the papers reviewed put forward that there is still a strong emphasis on hazard and risk education, school capacity and protection from natural hazards. School curricula are mainly about preparedness and focused on one-single-recent disaster. Practical teaching is mainly focused on hazards identification, emergency equipment and drills (Johnson et al. 2014). Apart from the debate about the effectiveness or not of these measures, there are two methodological problems that seem particularly important. Firstly, there is minimal room given to the voices of children. Generally speaking, there is still a tendency to use principals, teachers and parents as children's spokespersons. In this regard, one of the conclusions that many of the papers reviewed achieve is that there is need for greater participation of children

in the design, development and assessment of the effectiveness of DRR educational programmes.

Secondly, some of these papers also challenge the importance that has been placed on the role of questionnaires. Most of what is known about the effectiveness of disaster education programmes for children is based on the results of quantitative studies with children that generally focus on measuring children's knowledge of disaster risk and protective actions and children's reports of preparedness actions (Johnson et al. 2014). In this regard, it is worth highlighting the contribution of NGOs such as Save the Children and Plan International as they have pioneered the introduction of more ethnographic and participatory approaches. Other papers also argue that a firm grounding for children's participation in DRR needs to begin/invest in participatory/child-centred research methods (Zeng & Silverstein, 2011) and approaches that acknowledge children's efforts, capacities and understandings, which includes and respects the voices and experiences of all children (Gawith, 2013; Gibbs et al. 2013; 2014a; 2014b). As they argue, there is a big difference between "hearing" and "listening" to children (Bartlett, 2005). There is a big difference between researching about children and researching with children (Mutch, 2013; Towers, 2015).

In this context, some of these papers also explore the role and significance of more interactive (Mangione et al. 2014), artistic (Gangi & Barowsky, 2009; Locke & Yates, 2015; Looman, 2006) and creative tools/data collection methods[12]: from drawings (Izadkhah, 2015 Sunal & Coleman, 2013), to storytelling (Bateman & Danby, 2013), mosaics (Locke & Yates, 2015), games, comics (Sharpe & Izadkhah, 2014), etc. to document fears, combat educational vulnerability, raise sensitive issues or unexpected variables, such as hidden vulnerabilities or longer timescales involved in disaster recovery (Whittle et al., 2012). For instance Haynes & Tanner (2013) underlines the importance of participatory video as it strengthens community networks, making

[12] This review also helped us to identify an interesting special issue in related topics: Special issue of *International Journal of Social Research Methodology 15(2)* 2012 devoted to "creative methods with young people".

space for storytelling about sensitive issues and to communicate to parents, adults and other concerned actors (Margolin, 2010). The films produced through participatory video have also the ability to transcend scales and to promote in-country advocacy (Haynes & Tanner, 2013). Gaillard (2010) also speaks about the important contribution of participatory mapping in materializing hazard, vulnerability and risk. How this is particularly important among 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 disaster risk as it makes disaster-related concepts tangible to everyone.

Interestingly, Peek & Fothergill (2009) also analyse the utility of focus groups as a means of studying children in disaster situations. Although there are other articles also reviewing the importance of this tool to understand children and young people's views and relationships from their own perspectives, they underline that focus group not only provides the opportunity to hear children's voices but to minimize status differentials between adult researchers and young participants. Besides, the distinctive contribution of Peek & Fothergill (2009) is to introduce focus groups as particularly useful methods for researchers studying vulnerable, stigmatized and marginalized groups (Fothergill & Peek, 2015). Focus groups in these contexts are also tools for offering support, providing a setting where people listen, share and empathize with each other. Apart from their therapeutic potential, these processes and practices turn focus groups into an opportunity for collective action and empowerment, as these authors showed in their post-9/11 and Hurricane Katrina research projects.

Finally, the importance of telling stories is also mentioned in several researches (Brown, 2012; Walker et al. 2012; Gawith, 2013; Mutch, 2103; Bateman & Danby, 2013). As most of these author remark, sharing and telling stories collectively can be important for young children, particularly very young children, but also for teachers, parents and the wider community. Through storytelling they can come to terms with what happened and share and create a common narrative that contributes to the recovery process and to build resilience. Stories and narratives are also crucial to conduct timely emotional work with and by children and young people, leading to

more-nuanced understanding of what disaster mean and how is involved and/or affected (Walker et al. 2012; Whittle et al. 2012).

4.8 Gaps and recommendations

Among the gaps and recommendations for further research identified in this review we will list the ones we consider most important:

- Although this is an emergent and quite productive field, particularly in the recent years, there is need for a move from anecdotal evidence to more analytical and long-term evidence (Peek, 2008; Mitchell et al. 2008; Ronan et al. 2015). There is still limited empirical evidence of how children and young people's participation or DRR programmes (Johnson et al. 2014) contribute to improve preparedness, response, recovery or resilience (Pfefferbaum et al. 2013). This situation is even more apparent for specific groups, such as children and young people with disabilities, very young children, girls and children and young people from minorities and/or socio-economically deprived groups and communities.

- Most of the papers emphasize the need to use methods and tools for intervention that are more participative, more inclusive and more developmentally and life-course-oriented (Gibbs et al. 2014). Also, more ecologically and situated methods (Bonati & Mendes, 2014; Pellier et al. 2014; Ager & Metzler, 2012). Apart from allowing more children to give their voice more directly, it is argued that participatory, situated and age-sensitive forms of research contribute to provide informal education, build community resilience and provide better psychological support to children and young people who participate (Gibbs et al. 2014; Davie et al. 2014; Madfis et al. 2010). Participatory processes, however, must be recognized as long-term efforts, in terms of both empowerment and risk reduction impact (Haynes & Tanner, 2013).

- A commitment to listening to children's voices needs also to be maintained at all times, not only in the "easy" pre-disaster period (Gibbs et al. 2013). Children and young people may be also active and crucial in the response and rebuild period.

- Little is said about the role of children in deepening/problematizing our understanding of disasters themselves (Walker et al. 2012). Up to now the definition of disaster seems very attached to expert-oriented, adult-oriented, dimensions and variables (Winterbottom, 2008). Also, it would be useful to investigate how children conceptualize particular disaster types in their own environment and how these ideas are more or less mediated by children's exposure to media (King et al. 2013). Together with this, there is need for research and interventions that consider and integrate a more cross-cultural approach (Anderson, 2005; Tatebe & Mutch, 2015). This includes interventions and research that goes beyond individual and school-oriented approaches, particularly for those working in contexts of disaster that differ from European or North American contexts.

- There is also need for a more subtle understanding of children and young people's participation. It is well-accepted that participation is not simply to "give voice" but beyond that there's need for exploring wider and more nuanced ideas of participation. There is also need for a deeper research on the historical, cultural and socio-political factors shaping notions of childhood, and children's rights and how these notions inform and perform ideas about participation (Gibbs et al. 2013; Tanner, 2010). Equally important, we need a more critical engagement with notions such as disability or special needs, which depending on how they are defined can be an important obstacle for participation (Boon et al. 2012). And finally, there's need of a more integrated and comprehensive perspective on the common/differential causes of social vulnerability in the event of a disaster (Anderson, 2005; Peek, 2008).

- Regarding education, there is need for a more explicit connection between prevention and preparedness education and response and recovery (Ronan et al. 2015). Knowledge is poor about how educational programmes affect/reduce social vulnerability, how disaster education programmes facilitate children's roles in household preparedness, their self-protective capacities or their likelihood of preparing for disasters as adults (Johnson et al 2014b); and there is little evidence of the type of training and materials that teachers and educators would need to improve and build more resilient communities (Apronti & Babugura, 2015; Barrett et al., 2008). Some papers argue about the important role schools may play in providing emotional processing activities, which help children gain perspective and distance as part of their recovery form disaster events (Mutch & Gawith, 2014). There is also a need for extending the delivery of risk and hazard education to preschool aged children (Towers et al. 2014) and for research and intervention beyond schools, studying and integrating other informal places into DRR and resilience. Beyond basic education on the more realistic emergency scenarios, it is important to hold drills and other activities at more unexpected times and locations, practicing in less familiar scenarios (Johnson et al., 2014). Some papers also highlight the importance of a more integral and comprehensive approach to children and young people's education in disaster management (Morris & Edwards, 2008).

5 CONCLUSIONS

Participatory research into children and young people in disaster management is still an emergent and young field. Although progress has been notable in the last few years, particularly from 2008 onwards, the research literature in this field shows an asymmetrical growth in several dimensions: geographical distribution of research outcomes (with a clear leadership of New Zealand, Australia, USA and UK); disasters and countries of study (with a predominance of research on earthquakes, tsunamis, hurricanes, bushfires and floods, mostly in Oceania, Asia and America); children's and young people's ages (with a predominance of children aged from 10 to 16); notions of participation and children's rights (with a predominance of adult, tokenistic and Eurocentric conceptions of participation and children's rights); and a tendency to focus on education, preparedness and prevention.

However, this literature also shows that there is a growth in research about European disaster scenarios. This research explores more explicitly the role of sociocultural factors, particularly ethnic diversity, gender and disability; relies on more participatory and creative methods and forms of engagement; expands research to very young children and adolescents; and tends to focus also on response and long-term recovery after a disaster. This recent turn towards more child-centred forms of disaster management is clearly influenced by the impact of major recent disasters and international frameworks such as Hyogo (UNIDSR, 2005) and Sendai (UNIDSR, 2015). It is also worth mentioning the role of NGOs such as Save the Children and Plan International in shaping and trialling Child-Centred Disaster Risk Reduction programmes; and in providing important anecdotal and empirical evidence of their value for policy, research and practice in this field.

As the different scopings done in this workpackage show, participation is an emergent and important heuristic in contemporary disaster management. Particularly from 2008 onwards there is a growing global concern about putting children and young people at the heart of disaster management. Among the factors explaining this shift there is the influence of the Hyogo (2005) and Sendai (2015) international frameworks, together with the impact of major disasters in USA, New Zealand and Australia, and the evidence brought forward by important NGOs such as Save the Children and Plan International in developing countries. Although this tendency can also be seen at the European level, and particularly in the UK and Italy, there is still a significant difference in relation to the leading countries in this field (New Zealand, Australia, USA and Japan). As we have shown in the first part of this report, there is no national risk reduction strategy in the European countries analysed. Although practitioners and experts deem children and young people's participation as crucial, our scoping shows that factors such as tokenistic ideas of children's participation and rights, institutional fragmentation, lack of continuity, a poor strategy in curriculum implementation and an excessive focus on abstract training are obstacles to further and more significant implementation of children-centred approaches. This points to the critical role of government agencies and to the importance of critically examining the ideas of childhood, children's rights and

children's citizenship, and of incorporating lessons learned abroad (particularly from developing countries).

However, this scoping also shows that there are signs of change in Europe. This is specially so in the field of research, where there are promising projects exploring participatory and creative methods and forms of engagement; expanding research to seldom explored ages, such as very young children and adolescents, and understanding more comprehensively the role of children throughout the different phases of disaster management. The knowledge coming out from these projects, together with the influence of international frameworks and the positive predisposition of practitioners and experts to incorporate children and young people in disaster management, may contribute to positioning Europe as a leading area in this field in the mid-term.

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