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Children in Disaster Risk Reduction in Portugal: Policies, Education, and (Non) Participation

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Abstract International agencies and scientific research have been calling for the inclusion of children in disaster preparedness and risk reduction, to hear their voices in order to address their specific needs and vulnerabilities and harness their capabilities in terms of building community resilience. This article assesses the roles ascribed to children in policy and education for disaster risk reduction in Portugal. The approach is based on a scoping methodology that encompasses document analysis and interviews with national and local stakeholders and policymakers in the disaster risk reduction field. The research is carried out within the scope of a European funded project, CUIDAR Cultures of Disaster Resilience among Children and Young People. More specifically, the article provides an overview of the discourses on the roles ascribed to children in urban disaster risk reduction (DRR). The authors maintain that although children are often taken as a target group in urban disaster prevention and management, they are seldom considered in terms of active participation in disaster risk reduction programs in the Portuguese context. Nevertheless, our analysis shows that there is a growing awareness of the relevance of active participation by children in order to create successful DRR.

Keywords Children's nonparticipation · Disaster risk reduction · Emergency planning · Portugal · Risk education

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1 Introduction

Natural, large-scale disasters are becoming more salient. Climate change increases the intensity and frequency of some events (heavy storms, tornados, hurricanes, floods, droughts, wildfires) and draws them nearer to Western countries, where casualty lists may be smaller but the economic impacts are more severe (Tierney 2014). Events such as the 2005 hurricane Katrina in New Orleans, bushfires in Australia in 2009, or even the 2004 tsunami in the Indian ocean (worsened by global trends in coastal urbanization and tourism) affected Western societies and citizens, and caused large numbers of persons to be killed, injured, and displaced (Peek 2008; Gibbs et al. 2013; Fothergill and Peek 2015). The magnitude of these dramatic events also caught the attention of politicians and media as never before and yet the impact of disasters in Western societies is still understudied.

Children are among the groups that suffer more dramatically the devastating consequences of disasters. According to Peek (2008, pp. 3–4) children "are physically vulnerable to both sudden-onset and chronic disaster events due to their partial or total dependence on adults. Older children and adolescents are also at risk for injury or death, and they may develop various behavioral, psychological, and emotional issues in the aftermath of disaster. […] disasters can affect children's personal growth and development. Disasters not only disrupt children's daily routines, they may also result in missed school and delayed academic progress; missed social opportunities; and increased exposure to various life stressors" (see also Anderson 2005; Lopez et al. 2012; Peek and Fothergill 2014; Mudavanhu et al. 2015).

Children have been very often portrayed as passive and helpless victims or as vulnerable recipients of aid, a

representation often amplified by the media (Tanner 2010). Moreover, very little attention is paid to their particular experiences and needs in disasters, to their competence in participating in disaster preparedness and emergency plans, in disaster management, and in the recovery of their families or communities, and to their contribution to disaster risk reduction (DRR) and resilience building.

Children's citizenship and participation are major themes in contemporary social policy, as well as in scientific debates. The rights of children, their agency, and their "superior interest" have gradually emerged as benchmarks for many national, regional, or local policy narratives, in line with the UN Convention on the Rights of the Child (CRC), adopted in 1989. This document stresses the importance of considering children as active and competent actors in social relationships, giving them a voice and introducing their own perspectives in research, irrespective of those of adults. But the progress of a participatory agenda with children is far from being fully implemented in all institutional settings, social contexts, or political processes. Despite some timid steps forward, this is the case of disaster risk reduction policies (Cumiskey 2015).

Much like in other arenas of a sociotechnical nature, disaster risk reduction has undergone a "participatory turn" in recent years. The Hyogo Framework for Action 2005–2015 (UNISDR 2005) and the more recent Sendai Framework for Disaster Risk Reduction 2015–2030 (UNISDR 2015) of the United Nations International Strategy for Disaster Reduction (UNISDR) emphasize community participation as a crosscutting issue in its priorities for action (Tozier de la Poterie and Baudoin 2015). According to the Hyogo Framework, "Disasters can be substantially reduced if people are well informed and motivated towards a culture of disaster prevention and resilience, which in turn requires the collection, compilation and dissemination of relevant knowledge and information on hazards, vulnerabilities and capacities" (UNISDR 2005, p. 9).

The United Nations have been working increasingly to include children's necessities and perspectives in DRR policies. In 2000, UNISDR launched the first Disaster Prevention, Education and Youth campaign, which highlighted the importance of youth participation. Five years later, in the Hyogo Framework for Action 2005–2015, the UN member states agreed to five priority actions to reduce disaster risks and impacts, including action 3, which conveys a clear message: "Use knowledge, innovation and education to build a culture of safety and resilience at all levels" (UNISDR 2005, p. 9). In the case of education and training, the framework advocates that children and young people must be actively engaged, and that it is necessary to promote the inclusion of DRR in school curricula at all levels and to use other formal and informal channels to reach youth and children with information (UNISDR 2005).

Thus, this article aims to assess the inclusion/exclusion of children in disaster risk reduction (DRR), in particular, how they are envisaged in DRR policies, in risk education programs, and as active participants in DRR. The article focuses on the case of mainland Portugal, a European country that has been mostly spared recent significant disasters[1] but a nation state that is torn between the push to follow international trends and guidelines and the pull to hold on to traditional top-down approaches, which mistrust participation and resist giving an active role to children.

The article begins by tracing a brief literature review on children's participation in DRR. The authors then proceed to explain the methodology followed to retrieve empirical data for the Portuguese case. The findings' section is divided into three main themes: children in disaster risk reduction policy in Portugal; children in risk education programs; and children as active participants in disaster risk reduction. A short conclusion closes the article.

Research for this article was carried out within the scope of the international project CUIDAR Cultures of Disaster Resilience among Children and Young People. The project aims to enhance the resilience of children, young people, and urban societies to disasters and enable disaster responders to meet more effectively the needs of children and young people. It is led by the University of Lancaster (UK) and has the participation of five other institutions across Europe, including in Portugal the Instituto de Ciências Sociais of the Universidade de Lisboa.[2]

2 Literature Review

According to Fothergill and Peek (2006, p. 99), "social science research on disasters has largely overlooked children." A decade later, this no longer seems to hold true, since multiple publications have addressed this issue through different perspectives in varied locations.

In general terms, scientific research has undergone a shift from a paradigm of a children at risk discourse towards a paradigm of a children participatory agenda (Gibbs et al. 2013; see also Lopez et al. 2012). Protection and provision structure the first paradigm: children are perceived as helpless victims, vulnerable recipients of aid,

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[1] After fieldwork was conducted, this situation changed somewhat. Over 60 people died in forest fires in June 2017. The island autonomous territories of Madeira and Açores have a recent history of more significant disasters, such as earthquakes, landslides, forest fires, and hurricanes.

[2] For more information, see project website: http://www.lancaster.ac.uk/cuidar and https://twitter.com/cuidarproject.

suffering the impact of external forces, exogenous shocks, and stresses. As Johnson et al. (2014, p. 108) underline "they are targeted as an audience for disaster education" and so working with children in this case consists of training prevention and emergency rules and procedures at school and in communities and providing them with tools to overcome their physical, psychological, educational, and social vulnerabilities as they face the impacts of disasters (Peek 2008): deaths, injuries, illness, malnutrition, abuse, abduction; depression, anxiety, emotional distress, sleep disorders, somatic complaints; missed school, delayed progress, failure, poor academic performance; and disruption of daily routines and friendships, separation, death of loved ones, family violence. All these disaster impacts are described and explained. The message is clear: children require protection from the adults, the actors playing a leading role in disaster risk reduction.

The second paradigm departs from the principle that we can learn more about children's experiences from children themselves and children's perceptions of risks and disasters are to be studied in their own right, not least because children's needs are not necessarily met if adult requirements are satisfied. In this perspective, children are conceived as agents and coproducers of social life, either on a regular basis or through disruptive events.

Children do not constitute a homogeneous group: age, gender, ethnicity, and disability introduce diversity and require specific attention (Peek and Stough 2010; Ronoh et al. 2015). Recent disasters revealed dramatic gaps, in first world countries, between "affluent and low-income childhoods" (Thorne 2006). Therefore, a larger scope and an inclusive and multidimensional perspective for intervention are required. Children's experiences are crucial for promoting resilience in all stages: preparing for disasters, responding, and recovering.

Some of the more recent studies have focused on children who have experienced living through disasters, understanding their perceptions and promoting their recovery through art, music, photography, videography, and other tools (Walker et al. 2012; Bonati and Mendes 2014; Fothergill and Peek 2015; Freeman et al. 2015; Fletcher et al. 2016; Cox et al. 2017). Other studies take children as a group in context, whose collective action in their familiar settings (household, neighborhood, and school) and their wider (online and offline) networks can generate agency and action benefiting their communities. In all stages of DRR procedures, they can help adults, they can help other children, and they can help themselves (Fothergill and Peek 2006). Engaging children both in the prevention and mitigation stages of potential disasters and in the rescue, relief, and rehabilitation phases of a disaster has been shown to have positive effects over risk and impact reduction. Mitchell et al. (2008) examine the role of children as informants within informal and formal risk communication networks based on studies in El Salvador and New Orleans. Tanner (2010) builds on evidence from examples from the Philippines and El Salvador of child-centered initiatives led by children's groups to show the relevance of understanding their perceptions and the roles they can play in communicating risks and preventing and adapting to climate change-related risks. Lopez et al. (2012) refer to case studies in South Asia and Mozambique that highlight the benefits of participation by children in terms of improved risk mitigation and enhanced community ownership and sustainability of DRR programs. But such results are not exclusive to developing countries. In Japan, Shaw et al. (2004) link children's earthquake awareness to a more active learning that includes not only school, but family, community, and self-education. Towers et al. (2014) and Ronan et al. (2016) describe several child-centered policy programs that have proven to be more effective than traditional DRR approaches in building resilience. Community-based programing for youth on the issue of forest fires has shown positive impacts on knowledge, attitudes, and behavior and child-led campaigns educating the community about hazards have influenced decision making (Towers et al. 2014). Participatory techniques, such child-produced videos in which they investigate and discuss natural risks in their communities, result not only in increased knowledge but also in the introduction of mitigation measures (Ronan et al. 2016).

It can be said that this participatory turn on how the social sciences address children and disasters has been partly encouraged by the actions (and documents and frameworks detailing them) of aid agencies working in the field. In 2007, the United Nations Children's Fund, which works directly with children in many disasters risk context, in partnership with other leading child-centered development and humanitarian organizations (Child Fund Alliance, Plan International, Save the Children, and World Vision International) created the Changing Climate Coalition,[3] an organization whose primary mandate is to advocate for the rights of children in global agreements (CCC 2008).

In 2015, the Third UN World Conference on Disaster Risk Reduction (WCDRR) was held in Sendai. Children and young people were recognized by the UNISDR as designated stakeholders throughout the discussions, and the Major Group of Children and Youth (UNMGCY), a UN platform that engages young people's voices in the UN sustainability negotiations,[4] had the responsibility to ensure their participation. This led to the organization of a parallel

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[3] http://www.childreninachangingclimate.org/.

[4] http://childrenyouth.org/.

Children and Youth Forum during the Sendai conference, where 200 young delegates participated in round tables to guarantee that their views and priorities were included in the Sendai Framework for Disaster Risk Reduction 2015–2030 (Cumiskey 2015). This participation culminated with children and youth delegates presenting their positions at a special working session entitled: Children and Youth—Don't Decide My Future without Me (UN Major Group for Children and Youth 2015).

These efforts were successful in including children's perspectives in disaster risk management in the Sendai Framework. The final document acknowledges that in the last decade children have been disproportionately affected by disasters, together with other social groups such as women and people in vulnerable situation. But it also states that in order to attain effectiveness in DRR practices governments must have a more people-centered approach to disaster risk reduction and include children and youth as relevant stakeholders (UNISDR 2015).

Therefore, child-led DRR is gaining recognition as a critical component of community-based disaster management (Lopez et al. 2012). As children interact with other children and adults, if they are well informed and supported, they can be effective channels of information, role models, and agents for change and building resilience.

3 Methodology

This article relies on the methodology of scoping, an approach to reviewing literature or data that consists of "mapping," a process that summarizes a range of evidence in order to convey the breadth and depth of a field (Levac et al. 2010; see also Arksey and O'Malley 2005). In this case, scoping was applied to disaster policies, practices, and programs relating to children in Portugal. Based on internet searches, 250 documents (legislation, newsletters, programs, emergency plans, manuals, leaflets, among others) were identified and uploaded to the software Evernote. Each document was tagged according to a list defined by the team of UOC (Universitat Oberta de Catalunya), who lead the respective work package of project CUIDAR and included: type of item, organization, type of disaster, stages, target, age group of children, type of document, geographical scale, and type of participation awarded to children (Rodríguez-Giralt et al. 2017). The documents also underwent qualitative analysis to ascertain the conceptualization and the roles ascribed to children in disaster risk reduction.

In order to supplement the information provided by the documents, interviews were conducted with 16 key informants from public and private organizations, who were identified via the scoping exercise. Table 1 contains the list

of interviews performed. The interviews followed a common script in which issues, such as activities in the area of DRR and risk education, evaluation of activities, networks and collaborations, and opinions on children's participation, were addressed. As needed, additional questions were added according to the specific responsibilities and experience of individual interviewees. The interviews were carried out between December 2015 and May 2017 and mostly took place at the interviewees' workplaces and lasted an average of 1 h and 15 min, with the longest lasting 2 h and the shortest 37 min. They were fully transcribed and subjected to qualitative content analysis.

The analysis presented below retrieves information from documents and interviews in order to answer the following questions: how are children conceptualized in DRR policy documents and plans; what roles are ascribed to them in emergency situations; is there a participatory dimension in risk education in Portugal.

4 Findings and Discussion

The results from document analysis and interviews allow us to draw a panorama of how children are considered in disaster risk reduction policies and in risk education programs in Portugal, as well as how their participation is envisaged (or rather not) in these matters.[5]

4.1 Children in Disaster Risk Reduction Policies in Portugal

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

For instance, in the Technical Notebooks (a collection of manuals that contain technical information on emergency planning) published by the Autoridade Nacional de Proteção Civil (ANPC/National Authority for Civil Protection), children are only mentioned as potential victims—for example, "Nitrates in water are not a health hazard below 50 mg/l, except for young children, in which case n-nO2 should not go above 10 mg/l" (ANPC 2010, p. 103)—or as targets for special measures—for example, "Focusing on

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[5] All citations from documents and interviews were translated from Portuguese by the authors.

Table 1 Interviews with key informants on the participation of children in disaster risk reduction in Portugal

Institution	Position	Interview date
Autoridade Nacional Proteção Civil (ANCP/National Authority for Civil Protection)	National Director for Emergency Planning	22/12/2015
	Director of the Communication and Awareness Unit	22/12/2015
Regional authorities for civil protection	Education officer from the Regional Command for Relief Operations in the district of Setúbal	09/02/2016
Local authorities for civil protection	Head of the municipal services of civil protection in Lisbon	08/03/2016
	Head of the prevention and public awareness unit of civil protection in Lisbon	08/01/2016
	Commander of the municipal services of civil protection in Amadora	17/12/2015
	Head of the municipal services of civil protection in Albufeira	07/07/2016
	Two officers of the municipal services of civil protection in Loures	13/09/2016
Ministry of Education	Former head of the Safety Department	16/12/2015
	Representative from the Educational Department	19/02/2016
Nongovernmental organizations	Red Cross—Youth Department	14/03/2017
	Scouts—Department of Civil Protection and Safety	21/03/2017
	Inter-Agency Network for Education in Emergencies (INEE)	04/05/2017
	UNICEF Portugal	16/03/2017
Business	Portuguese Association of Insurers	23/03/2017

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" (ANPC 2009a, p. 23); "Step 2: To keep families together and to ask adults to help children and others in need of assistance" (ANPC 2009b, p. 48).

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: "Evacuation of at risk population, with a special focus on the sick, bedridden, elderly, children, disabled and others in at risk situations" (ANPC 2013, p. 37). Therefore, children are viewed in disaster policy as potential victims and recipients of assistance, not as active agents.

The civil protection domain in which children are addressed as the main target is school safety. There is legislation on self-protection measures in schools, including a mandatory rule for the creation of emergency plans. The Ministry of Education (ME) published a safety manual for schools in 1999, updated in 2003 (ME 2003), which establishes a set of rules for safety against risks in the regular operation of schools, health and hygiene, fires, and earthquakes. Students in this manual are again defined solely as targets for prevention measures. In the chapter about earthquakes, their vulnerability is highlighted: "Earthquakes cause fear and unsafety, especially among young pupils who have a tendency for panicking, so before an earthquake happens it is important to ensure that students as well as teachers are perfectly aware of the

procedures to be followed, in order to naturally apply the basic safety principles" (ME 2003, p. 70). The document then 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. The following pages make perfectly clear that agency lies exclusively with teachers, who are tasked with instructing and steering the behaviors of students during an emergency. Each school has a safety delegate who is always one of the teachers. If individual school emergency plans sometimes award responsibilities to class representatives (students elected by their peers to represent the class), for instance on evacuation procedures, the students must receive specific training. This shows, again, that even in a context in which they are a core element, the agency and capabilities of a school's children are not taken into account, and they are relegated to a passive role.

In 2005 the ANCP and the municipal authority of Lisbon published an updated version of the 1999 manual for designing prevention and emergency plans for schools (Lencastre and Pimentel 2005). As well as establishing a set of requirements that prevention and emergency plans should include, the 2005 manual contained a video on school evacuation in emergencies that aimed "to raise awareness of the whole school community, teachers, staff and especially students. In addition to being the duty of all to contribute to avoid accidents, everyone should know exactly what to do in an emergency situation and understand the fundamental usefulness of their actions. Thus we will be training discerning adults with a new safety attitude" (Lencastre and Pimentel 2005, p. 7). Therefore

children are seen as "adults in the making" (de Almeida 2009) and not "beings in the present," actors on their own right.

4.2 Children in Risk Education Programs

As Benadusi (2015, p. 553) puts it, "education represents a sort of universal passkey or panacean solution within current strategies of disaster risk reduction and disaster management." And this seems to hold true in Portugal, a country where there is a great emphasis on the issue of risk education for children. Children and young people of school age are considered a prime target for public programs aimed at raising awareness on matters of prevention and mitigation of major accidents and disasters.

This concern also is present at the legislative level. At the national level, Article 7 of the basic law on civil protection (Law number 80/2015) states that: "Education programs, at their different levels, must include civic training, civil protection and self-protection matters, in order to disseminate practical knowledge and rules of behavior to adopt in the case of severe accident or disaster."[6] At the local level, the law that defines the institutional and operational framework of civil protection 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" (Law 65/2007, Article 2, point 2c)[7] 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" (Law 65/2007, Article 10, point 3e).[8]

The ANCP has a wide array of initiatives aimed at promoting information and education about risk among children. For instance, it 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 sessions in schools and public libraries.

In 2006, the ANCP launched the Civil Protection Clubs program. This initiative aimed to stimulate the creation of such clubs in schools (from the 5th to the 12th grade), by providing information and training resources for acquiring

specific skills and developing actions. Its core document (ANPC 2006) included the definitions of main concepts and risks, the purposes and rules for creating a civil protection club, and a list of indoor and outdoor activities, as well as suggestions for practical actions. The objectives of civil protection clubs are defined as "to raise awareness of children for civil protection; to know stakeholders and actors; to identify natural and technological risks; to acquire safety habits; to develop skills in terms of civil protection; and to promote suitable attitudes and behaviors in case of emergencies" (ANPC 2006, p. 27). These clubs are led by a teacher and are supposed to include between 15 and 20 students. Cooperation agreements between schools and local civil protection services are mandatory and cooperation with fire brigades are recommended, "with the purpose of contributing to the strengthening of the relationship between the school and its environment and to the development of children and young people's skills in the areas of protection and rescue, volunteering and community spirit training" (Order No. 13993/2009).[9] Furthermore, "these agreements, framed by educational projects and the activity plans of schools, may concern: (a) activities to be undertaken in the subject area of civic education; (b) implementation of joint actions for the prevention and awareness of existing risks; (c) participation in exercises and drills; (d) conducting diversified practical activities that motivate students to safety issues; (e) the creation of civil protection clubs." Therefore, these clubs aim to provide hands-on training and drills, though not necessarily following a participatory approach to risk education, since children's perspectives, opinions, or previous knowledge do not seem to be taken in account.

Hundreds of civil protection clubs were thus created across the country, though the actual number is not known (Inácio 2010, p. 15). Their effectiveness in terms of knowledge acquired by children was assessed in a Master's thesis (Pestana 2014), which concluded that the clubs bring an added value in terms of raising awareness, although not in all subject matter of civil protection. Moreover, civil protection clubs were dependent on schools and teachers' engagement with the project. According to the interviews with ANCP staff and local civil protection officers, teacher turnover in schools and recent changes in education policy (during the right wing government that held office between 2011 and 2015 and introduced several expenditure cuts) had an impact on the sustainability of the program. Particularly detrimental were the reduced numbers of hours

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[6] Law number 80/2015. Article 7 "Citizen information and formation," Diário da República No. 146, 1st series, 3 August 2015. https://dre.pt/application/conteudo/69927759. Accessed 8 Sept 2017.

[7] Law number 65/2007. Article 2 "Objectives and action domains," Diário da República No. 217, 1st series, 12 November 2007. http://data.dre.pt/eli/lei/65/2007/11/12/p/dre/pt/html. Accessed 8 Sept 2017.

[8] Law number 65/2007. Article 10 "Competences of municipal civil protection services," point 3e, Diário da República No. 217, 1st series, 12 November 2007. http://data.dre.pt/eli/lei/65/2007/11/12/p/dre/pt/html. Accessed 8 Sept 2017.

[9] Order No. 13993/2009, point 1, Diário da República No. 117, 2nd series, 19 June 2009. http://www.prociv.pt/bk/PROTECAOCIVIL/LEGISLACAONORMATIVOS/BOMBEIROS/Documents/Despacho%20n.%C2%BA%2013993_2009.pdf. Accessed 8 Sept 2017

allotted to extracurricular activities and the termination of some school disciplines (Project Area, Civic Education, and Citizenship) in which civil protection content was included; as a result, many clubs ceased to exist.

> We are always dependent on having people inside the schools who are more motivated for these matters, either because they were volunteer firefighters or had some connection with Civil Protection or had lived in a country where there is more awareness of the need to work before these situations happen. So we are much too dependent of the initiative of schools. (Interview with the Director of the Communication and Awareness Unit of ANCP)

> Three or four years ago we had Civil Protection Groups in schools. We would go there, give some training and then they would go on, doing games and dynamics. But there was no continuity. Why? Because teachers changed, they all went to other schools. We had good results for three or four years and then we could not ensure the continuity of the project. (Interview with the Commander of the municipal services of civil protection in Amadora)

Portugal has a delegation of the Inter-Agency Network for Education in Emergencies that translated into Portuguese in 2004, and updated six years later, the handbook *INEE Minimum Standards for Education: Preparedness, Response, Recovery* (INEE 2010). The aim of the translation was to reach the broadest possible Portuguese language-speaking community, and not just the national Portuguese audience, since according to the interview, education in emergencies in the context of humanitarian response is more relevant to African countries because Portugal had not at the time experienced any recent significant disasters.

> In Portugal we don't have concrete actions other than training for working in development cooperation. INEE members in Portugal all work in development cooperation or education for global citizenship, we are more concerned with people in Portuguese speaking countries and with global inequalities […] we have a group working on education in contexts of fragility, such as Guiné Bissau, Angola or Mozambique […] using OECD's concept of fragility. So we translate the materials and include inputs from local practices. (Interview with INEE representative)

In 2015 the ANCP and the Ministry of Education published the Framework for Education on Risk, which provides guidelines for inclusion in the school curricula of issues that pertain to civil protection and risk reduction (Saúde et al. 2015). The creation of this reference frame

had been suggested in a recommendation of the Conselho Nacional de Educação (CNE/National Council of Education) in 2011, which stated "to know and to act in this paradigm of 'risk society' requires new personal skills, [as a] basis for a more active, participatory and informed citizenship."[10] School is seen in this report as "an engine for mobilizing society […] through the students, their families and the education community" and debates among students and with scientists are proposed as the main tool for addressing uncertainty.

The aims of the Framework for Education on Risk are: "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; to promote suitable attitudes and behaviors in case of emergencies; to promote internal risk safety plans; to promote personal safety" (Saúde et al. 2015, p. 6). Within the reference frame, children and young people are conceptualized as potential "agents for change, not just by acquiring knowledge, but also as conveyors of a prevention culture to their families, thus being powerful partners of the institutional agents of civil protection" (Saúde et al. 2015, p. 7). This notion of children as mediators for their families (a way to reach adults indirectly) is also present in the interviews with stakeholders.

At the local level, municipal services develop their own educational programs aimed at children and schools, but noticeable variations can be found between municipalities. For instance, Lisbon has one of the oldest educational programs. Its Growing up in Safety program has been in existence since 1992. It comprises several publications (books, leaflets, videos, and board games), a website with information aimed at children and parents, interactive games, and a house open for school visits, where children learn fundamental concepts about safety at home and on the street, how to act in case of an earthquake, fire, and other seasonal themes that are addressed throughout the year, for instance, security on the beach or forest fire prevention in Summer (Oliveira 2014). Loures also has a similar infrastructure.

Other municipalities, such as Amadora and Albufeira, have a different approach. Local civil protection staff conduct workshops in schools, mostly at the elementary education level, as part of their awareness and training programs. These programs are based on the principle that "the children are at the center of the neighborhood network, able to disseminate information to their families" (Carvalho and Leitão 2015, p. 18; Burnside-Lowry and

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[10] Recommendation No. 5/2011, Preamble, Diário da Reública No. 202, 2nd series, 20 October 2011. https://dre.pt/application/dir/pdf2sdip/2011/10/202000000/4165941662.pdf. Accessed 10 Sept 2017.

Carvalho 2015). Classes receive the visit of civil protection officers, firemen, or Red Cross volunteers who provide training on self-protection in case of emergency and first-aid. Usually school visits end with an emergency drill for fire or earthquake. These educational activities seldom have a participatory nature. The workshops include hands-on activities in which children are taught how to act in case of an emergency but no formal feedback mechanisms are in place. Nevertheless, interviews have shown that on an informal level some mutual learning occurs. Trainers try to adjust their activities in reaction to the background and experiences of children. Some of the children's responses and comments during the activities are included in reports sent by facilitators to their superiors.

> We are reducing the amount of time devoted to explanations [in workshops]. [...] Then we divide them [the children] in groups, there is a team leader and we encourage them to do team work and then they present what they had been discussing. [...] Sometimes it's just brainstorming, others we ask them to devise a TV ad to raise awareness among people at home [...] sometimes the results are extraordinary, they have fabulous ideas. [...] then we write reports to our superiors and we include recommendations that children had made, but we just gather information, decisions are made at the political level. (Interview with the Commander of the municipal services of civil protection in Amadora)

Other actors are also involved in risk education, in particular companies and nongovernmental organizations. The Associação Portuguesa de Seguradores (APS/Portuguese Association of Insurers) develops some activities concerning risks that are aimed at children, such as the publication of books and digital games. For the APS, the best way to talk about prevention and protection (namely insurance) with younger children is to introduce them to the notion of risk. To convey this message the APS has published and distributed illustrated books, one of which is dedicated to "great disasters," written by two well-known Portuguese children's authors, about 14 large-scale disasters throughout history, including the Great Fire of London and the 2011 tsunami in Japan.

> We believe that we have to raise awareness among young people on risk, because if they have an idea of the risks they incur and the consequences of events that may happen throughout their lives, they will have a tendency to protect themselves. There are several ways of self-protecting, prevention is one of them, but there is also protection through insurance, because not everything can be prevented. We thought this was the best approach for a younger audience

> [...]. We aim to tell them that risks exist, people can protect themselves and one way of doing that is with insurance. (Interview with a representative of the Portuguese Association of Insurers)

Some research centers develop activities with schools focused on risk education, particularly in the case of earthquakes: from lectures to open days at the universities during Science and Technology week. For instance, the Faculty of Sciences of the University of Lisbon holds a Day of Natural Risks, and receives visits by school groups for hands-on activities under the label CSI Planet Earth: Disasters under Investigation.[11] Researchers also visit schools with an "earthquake simulator" to train children on earthquake self-protection actions (Custódio et al. 2016). Again, these initiatives are adult initiated and adult driven, leaving little room for children to express themselves.

Overall, an emphasis on younger children, more pliable and susceptible to education efforts, is noticeable. There are far fewer programs aimed at teenagers, and interviewed officials recognize that young adults are a more difficult group with whom to work. Risk education in Portugal still tends to follow a traditional, top-down approach that envisages children as the recipients of training, but that has little if any say on the content or format of learning. At most, they are seen as "conveyor belts" that can pass on relevant information to their families or as unfinished "adults of tomorrow," duly trained to act appropriately when facing danger. What adults can learn from children is completely left out of the picture.

4.3 Children as Active Participants in Disaster Risk Reduction

In Portugal, the issue of children's participation is fairly recent, even though the country signed the Convention on the Rights of the Child in 1990. According to Tomás (2012, p. 82), the culture of participation by children in Portugal is weak and it is just "in the twenty-first century that we witness the implementation of a set of programs concerning participation rights, though not always converging, integrated, effective, or even sustained." The author further explains that this situation is due to the persistence of an authoritarian culture, the weakness of social movements, the action of pressure groups, and a slow justice system.

Our analysis also has shown that little consideration is given to public participation in disaster prevention and management, even in the case of adults. 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

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[11] https://ciencias.ulisboa.pt/pt/semana-ci%C3%AAncia-e-tecnologia-um-planeta-nossa-casa-2013. Accessed 8 Sept 2017.

the authorities (Article No. 4, point 2c).[12] 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 No. 7, point 1).[13] 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 No. 25/2008,[14] all civil protection emergency plans (the nonconfidential parts) have to undergo public consultation procedures. The PROCIV Technical Notebooks No. 3 (ANPC 2008) and No. 7 (ANPC 2009a) also mention public consultation as mandatory for emergency plans, but do not go into details on how to conduct formal interaction with the public, other than setting a minimum period of 30 days after public publication. The National Civil Protection Emergency Plan (ANPC 2013) underwent public consultation in June 2012, and in it is mentioned that several contributions were received and integrated into the final version of the plan. Several municipal emergency plans give similar information. But citizen participation in this kind of processes is usually low and no specific actions for children are included. Furthermore, according to the interview with ANPC officers, only 145 of the 309 municipalities in the country complied with the requirement to produce a municipal emergency plan.

The above mentioned Framework for Education on Risk also underwent public consultation, but again children were not specifically targeted in the consultation process; despite that unfortunate defect, the document 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 organizations" (Saúde et al. 2015, p. 7).

An assessment of local level engagement in DRR based on the case study of Amadora (Burnside-Lawry and Carvalho 2015), one of the few Portuguese cities (alongside Lisbon and a handful of others) that are part of the Resilient Cities Program (United Nations Office for Disaster Risk Reduction—see ANPC 2016), has shown that children are already included in public communication and public consultation events, but the level of public participation is yet to be achieved: "the majority of DRR events involve public communication, described as information conveyed from the team to publics, followed by a high number of public consultation events, where information is conveyed from publics to the team. Social media initiatives and university initiatives are consistent with public participation as there is evidence that information is exchanged between publics and the team, and that dialogue takes place" (Burnside-Lawry and Carvalho 2015, p. 92). School lessons, school evacuation drills, DRR International Day Conference, and child care are classified as activities targeted at children that have a public communication and public consultation nature, but not a public participation one.

UNICEF Portugal develops quite a few initiatives concerning children's participation but none in the area of DRR, since it is not considered a pressing need in the country:

> It's not that disasters are not a priority but we are really a very small team, with reduced human and financial resources, so an identification of what are the most pressing areas for the Committee is made and those areas are chosen. It's never a water-tight thing, we don't say at the beginning of the year "we will go this way and will not follow other routes that we come across," of course not. But we do this reflection and this evaluation and try to figure out what we can do with the team we have. (Interview with the UNICEF representative)

Volunteering is another form of participation in disaster risk reduction, albeit far from frequent in Portugal, a country where volunteering levels are very low (according to the latest survey, in 2011 only 12% of over-15 year olds did any volunteering work)[15] and where the topic is not considered a priority. Nevertheless, some initiatives aimed at young people include volunteering programs related to civil protection. For instance, the Portuguese Institute of Youth and Sport funds a program aimed at young people between 12 and 17 years old. The objective is to occupy the free time of youth with "community interest projects, for developing personal and social skills and acquiring knowledge on the socioeconomic world,"[16] including in the environment and civil protection field. Another example is the Young Volunteers for the Forest, created in

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[12] Law number 80/2015. Article 4 "Objectives and action domains," point 2c, Diário da República No. 146, 1st series, 3 August 2015. https://dre.pt/application/conteudo/69927759. Accessed 08 Sept 2017.

[13] Law No. 80/2015. Article 7 "Citizen information and formation," point 1, Diário da República No. 146, 1st series, 3 August 2015. https://dre.pt/application/conteudo/69927759. Accessed 8 Sept 2017.

[14] Resolution No. 25/2008, Diário da República No. 138, 2nd series, 18 July 2008. https://dre.pt/application/file/a/3086290. Accessed 10 Sept 2017.

[15] Eurobarometer 75.2 (April–May 2011) Economic Crisis, Volunteer Work, the Environment, Audiovisual Interests, and Helplines for Social Services.

[16] Ordinance No. 205/2013, Diário da República No. 116, 1st series, 19 June 2013. https://dre.pt/application/file/a/496823. Accessed 10 Sept 2017.

2005,[17] which aims to preserve forest resources and ecosystems by raising awareness among the population and preventing forest fires. This program was discontinued for some years, but it was recently reactivated by the national government and is being implemented in several municipalities. Although it is aimed at young people between 18 and 30 years old, in some cases the local initiatives include younger participants.

Other organizations such as the Red Cross Youth,[18] volunteer fire departments,[19] or the Scouts[20] also have programs and activities that include young people in civil protection activities. These initiatives include participation in risk awareness campaigns, first-aid training sessions, cleanup actions after disasters, and forest protection. These activities are mostly done by teenagers and young adults. Younger children are excluded from the initiatives or have a secondary and sporadic role.

> Children participate in sporadic actions, for instance collecting food donations […] at Christmas they wrap up presents in stores […] in these cases we involve younger children, 7 or 8 years old […]. But when we talk about more continuous actions we want volunteers with some maturity, we believe the ideal is to have 14, 15 year olds. (Interview with a representative of the Red Cross' Youth Department)

Nevertheless, 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 to implement risk prevention and impact mitigation.

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[17] Resolution of the Council of Ministers No. 63/2005, Diário da República, 1st series, 14 March 2005. https://dre.pt/application/file/a/575240. Accessed 10 Sept 2017.

[18] The Red Cross Youth carries out an awareness campaign on the risks of sun exposure every summer (http://www.cruzvermelha.pt/actualidades/campanhas/692-campanha-qexposicao-solar-excessivaq.html), and has a program "Toni Socorrista" where trained volunteers go to schools to teach basic life support notions to students from all ages.

[19] Many voluntary firefighter corporations have schools for children (6–13 years old) and cadets (14–16 years old) who receive training in volunteering, protection, and first aid. However, the pupils are not allowed to have any operating activity. See Decree-Law No. 247/2007, Article 24, Diário da República No. 122, 1st series, 27 June 2007. https://dre.pt/legislacao-consolidada/-/lc/75386702/201704071846/73333197/element/diploma/2?consolidacaoTag=Prote%C3%A7%C3%A3o+Civil+e+Socorro&did=75452698%2Fen. Accessed 8 Sept 2017.

[20] Although the Scouts have assigned roles in the national and local emergency plans, these activities are mostly carried out by adults. For example, the back-up support teams that support the various civil protection entities present in the fight against forest fires, namely firefighters, with the distribution of food and in some cases in the aid of evacuation of the population, are composed of more experienced scouts and can only integrate teenagers over 15 years old.

5 Conclusions

International frameworks and scholarship in DRR have elected community participation as one of its priorities (UNISDR 2005, 2015; Fothergill and Peek 2006). Citizens are more likely to abide by plans and rules they have helped build and that can be an important element for strengthening resilience.

Children are a key part of communities but their perceptions and needs are not the same as those of adults and they have an important role to play in risk prevention and mitigation. The experience of international agencies in the field, as well as case studies in the scholarly literature (Shaw et al. 2004; Mitchell et al. 2008; Tanner 2010; Lopez et al. 2012; Towers et al. 2014; Ronan et al. 2016) show that engaging children both in the prevention and mitigation stages of potential disasters and in the rescue, relief, and rehabilitation phases of a disaster has had positive effects in terms of risk and impact reduction. Thus international programs and recommendations tend to highlight the need to involve children as active participants in DRR.

But in practice, this article has demonstrated that, in Portugal, civil protection and risk education culture still tends to see children mainly as a passive and vulnerable group, to be safeguarded and educated, rather than listened to and engaged in the protection of their community. This is due to two main factors: the absence of major disasters in recent history (at the time of the interviews), which has led local offices of international organizations working in DRR (Red Cross, UNICEF, and INEE) to deprioritize this issue, and a weak participatory culture in Portugal (and this is true not just for children but for adults as well). Exposure to international best practices may be slowly changing this situation, but there is still a lot to be done in this field.

References

Almeida, A.N. de. 2009. For a sociology of infancy—Looks and clues for research (*Para uma Sociologia da Infância—Jogos de*

Olhares, Pistas para a Investigação). Lisbon: Imprensa de Ciências Sociais (in Portuguese).

Anderson, W. 2005. Bringing children into focus on the social science disaster research agenda. *International Journal of Mass Emergencies and Disasters* 23(3): 159–175.

ANPC (Autoridade Nacional de Proteção Civil/National Authority for Civil Protection). 2008. Information guide for designing external emergency plans (*Manual de apoio à elaboração e operacionalização de Planos de Emergência de Protecção Civil*). Technical Notebook No. 3. Lisbon: ANPC (in Portuguese).

ANPC (Autoridade Nacional de Proteção Civil/National Authority for Civil Protection). 2009a. Information guide for designing external emergency plans ("Seveso II Directive") (*Manual de Apoio à Elaboração de Planos de Emergência Externos ("Directiva Seveso II")*). Technical Notebook No. 7. Lisbon: ANPC (in Portuguese).

ANPC (Autoridade Nacional de Proteção Civil/National Authority for Civil Protection). 2009b. Intervention manual for radiological emergencies (*Manual de Intervenção em Emergências Radiológicas*). Technical Notebook No. 8. Lisbon: ANPC (in Portuguese).

ANPC (Autoridade Nacional de Proteção Civil/National Authority for Civil Protection). 2010 Coastal risks—Strategies for prevention, mitigation and protection in the context of emergency planning and spatial planning (*Riscos Costeiros—Estratégias de prevenção, mitigação e protecção, no âmbito do planeamento de emergência e do ordenamento do território*). Technical Notebook No. 15. Lisbon: ANPC (in Portuguese).

ANPC (Autoridada Nacional de Proteção Civil/National Authority for Civil Protection). 2006. The civil protection club (*O Clube de Proteção Civil*). Lisbon: ANPC. http://www.prociv.pt/clube/index.html. Accessed 29 Dec 2015 (in Portuguese).

ANPC (Autoridade Nacional de Proteção Civil/National Authority for Civil Protection). 2013. Civil protection national emergency plan (*Plano Nacional de emergência de Proteção Civil*). Lisbon: ANPC. http://www.prociv.pt/bk/RISCOSPREV/Documents/Componentes_p%C3%BAblicas.pdf. Accessed 8 Sept 2017 (in Portuguese).

ANPC (Autoridade Nacional de Proteção Civil/National Authority for Civil Protection). 2016. Resilient cities in Portugal (Cidades Resilientes em Portugal). Lisbon: ANPC. http://www.prociv.pt/bk/RISCOSPREV/REDRISCOCATASTROFE/Documents/Cidades_Resilientes_em_Portugal_2016_PNRRC.pdf. Accessed 10 Sept 2017.

Arksey, H. and L. O'Malley. 2005. Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology* 8(1): 19–32.

Benadusi, M. 2015. Learning to survive in Sri Lanka: Education and training in times of catastrophe. In *International handbook of interpretation in educational research*, ed. P. Smeyers, D.Bridges, N.C. Burbules and M. Griffiths, 551–578. Dordrecht: Springer.

Bonati, S. and M.P. Mendes. 2014. Building participation to reduce vulnerability: How can local educational strategies promote global resilience? A case study in Funchal—Madeira Island. *Procedia Economics and Finance* 18: 165–172.

Burnside-Lawry, J. and L. Carvalho. 2015. Building local level engagement in disaster risk reduction: A Portuguese case study. *Disaster Prevention and Management: An International Journal* 24(1): 80–99.

Carvalho, L. and N. Leitão. 2015. The importance of schools in disasters risk reduction. Encouraging results in the municipality of Amadora, Portugal. Input paper. *Global assessment report on disaster risk reduction 2015*. Amadora. https://www.unisdr.org/we/inform/publications/49891. Accessed 8 Sept 2017.

CCC (Children in a Changing Climate). 2008. A right to participate: Securing children's role in climate change adaptation. http://www.preventionweb.net/files/11619_righttoparticipate1.pdf. Accessed 10 Sept 2017.

Cox, R.S., L. Scannell, C. Heykoop, J. Tobin-Gurley and L. Peek. 2017. Understanding youth disaster recovery: The vital role of people, places, and activities. *International Journal of Disaster Risk Reduction* 22: 249–256.

Cumiskey, L., T. Hoang, S. Suzuki, C. Pettigrew and M.M. Herrgård. 2015. Youth participation at the Third UN World Conference on Disaster Risk Reduction. *International Journal of Disaster Risk Science* 6(2): 150–163.

Custódio, S., G. Silveira, L. Matias, I. Mata, C. Matos, J.M. Palma-Oliveira, F. Rocha and F.C. Lopes. 2016. Educating for earthquake science and risk in a tectonically slowly deforming region. *Seismological Research Letters* 87(3): 773–782.

Fletcher, S., R. Cox, C. Scannell, C. Heykoop, J. Tobin-Gurley, L. Peek. 2016. Youth Creating Disaster Recovery and Resilience: A Multi-Site Arts-Based Youth Engagement Research Project. *Children, Youth and Environments* 26(1): 148–163.

Freeman, C., K. Nairn and M. Gollop. 2015. Disaster impact and recovery: What children and young people can tell us. *Kōtuitui: New Zealand Journal of Social Sciences Online* 10(2): 103–115.

Fothergill, A. and L. Peek. 2006. Surviving catastrophe: A study of children in Hurricane Katrina. In *Learning from catastrophe: Quick response research in the wake of Hurricane Katrina*, ed. Natural Hazards Center, 97–129. Boulder: Institute of Behavioral Science, University of Colorado.

Fothergill, A. and L. Peek. 2015. *Children of Katrina*. Austin: University of Texas Press.

Gibbs, L., J. Brockhoff, C. Health, W. Program, P.O. Connor and C. Macdougall. 2013. Research with, by, for and about children: Lessons from disaster contexts. *Global Studies of Childhood* 3(2): 129–141.

Inácio, M.C.A.G. 2010. Promoting a safety culture among children: A case study in the 2nd and 3rd grades (*A promoção de uma cultura de segurança nos alunos do ensino básico: um estudo de caso nos segundo e terceiro ciclos*). MA thesis, Universidade de Coimbra, Coimbra (in Portuguese).

INEE (Inter-Agency Network for Education in Emergencies). 2010. Minimum standards for education: Preparedness, response, recovery (*Requisitos mínimos para Educação: Preparação, Resposta, Reconstrução*). http://toolkit.ineesite.org/toolkit/INEEcms/uploads/1012/MS_2010_Portuguese_lowres_final.pdf. Accessed 8 Sept 2017 (in Portuguese).

Johnson, V.A., D.M. Johnston, K.R. Ronan and R. Peace. 2014. Evaluating children's learning of adaptive response capacities from ShakeOut, an earthquake and tsunami drill in two Washington State school districts. *Journal of Homeland Security and Emergency Management* 11(3): 347–373.

Lencastre, A. and I. Pimentel (coord.). 2005. Prevention and emergency plan for schools (*Plano de Prevenção e Emergência para Estabelecimentos de Ensino*), 4th edn. Lisbon: Lisbon Municipality and the National Service of Firefighters and Civil Protection. http://www.prociv.pt/educid/Documents/PPEEE.pdf. Accessed 21 Jul 2015 (in Portuguese).

Levac, D., H. Colquhoun and K. O'Brien. 2010. Scoping studies: Advancing the methodology. *Implementation Science* 5: 69. http://doi.org/10.1186/1748-5908-5-69.

Lopez, Y., J. Hayden, K. Cologon and F. Hadley. 2012. Child participation and disaster risk reduction. *International Journal of Early Years Education* 20(3): 300–308.

ME (Ministério da Educação/Ministry of Education). 2003. Manual on school safety, users manual, and security and maintenance of schools (*Guião Segurança nas Escolas, Manual de Utilização, Manutenção e Segurança das Escolas*). Lisbon. http://www.dge.

mec.pt/sites/default/files/Esaude/manual_utilizacao_seguranca_escolas.pdf. Accessed 8 Sept 2017 (in Portuguese).

Mitchell, T., K. Haynes, N. Hall, W. Choong and K. Oven. 2008. The roles of children and youth in communicating disaster risk. *Children, Youth and Environments* 18(1): 254–279.

Mudavanhu, C., S. Manyena, A. Collins, P. Bongo, E. Mavhura and D. Manatsa. 2015. Taking children's voices in disaster risk reduction a step forward. *International Journal of Disaster Risk Science* 6(3): 267–281.

Oliveira, M.I. 2014. *Local progress report on the implementation of the 10 essentials for making cities resilient (2013–2014)*. Lisbon. http://www.preventionweb.net/files/41055_LGSAT_10Ess-Lisbon (2013-2014).pdf. Accessed 8 Sept 2017.

Peek, L. 2008. Children and disasters: Understanding vulnerability, developing capacities, and promoting resilience—An introduction. *Children Youth and Environments* 18(1): 1–29.

Peek, L. and A. Fothergill. 2014. Post-disaster decline: Understanding children's vulnerability before, during, and after Katrina. *The Dialogue* 10(3): 2–4.

Peek, L. and L.M. Stough. 2010. Children with disabilities in the context of disaster: A social vulnerability perspective. *Child Development* 81(4): 1260–1270.

Pestana, E.C. 2014. The impact of the civil protection clubs in children of 2nd and 3rd cycles of basic school (*Impacto do clube de protecção civil nos alunos do 2° e 3° ciclos do ensino basico*). MA thesis, Lisbon: Instituto Superior de Educação e Ciências (in Portuguese).

Rodríguez-Giralt, I., D. Lopez and M. Arenas. 2017. Scoping and review report, D 2.1 CUIDAR Cultures of Disaster Resilience among Children and Young People, Universitat Oberta de Catalunya. http://www.lancaster.ac.uk/cuidar/wp-content/uploads/2016/05/WP2_Scoping-Report_v2.pdf. Accessed 8 Sept 2017.

Ronan, K., K. Haynes, B. Towers, E. Alisic, N. Ireland, A. Amri, S. Davie and M. Petal. 2016. Child-centred disaster risk reduction: Can disaster resilience programs reduce risk and increase the resilience of children and households? *Australian Journal of Emergency Management* 31(3): 49–58.

Ronoh, S., J. Gaillard and J. Marlowe. 2015. Children with disabilities and disaster preparedness: A case study of Christchurch. *Kōtuitui: New Zealand Journal of Social Sciences Online* 10(2): 91–102.

Saúde, A., E. Costa, J.J. Fernandes, M.J. Esteves, M.L. Amaral, P. Almeida and T.L. André. 2015. Framework for education on risk (*Referencial de Educação para o Risco*). Lisbon: Ministério da Educação e Ciência. http://www.dge.mec.pt/sites/default/files/ECidadania/educacao_Risco/documentos/referencial_risco.pdf. Accessed 8 Sept 2017 (in Portuguese).

Shaw, R., S. Hirohide, M. Kobayashi and M. Kobayashi. 2004. Linking experience, education, perception and earthquake preparedness. *Disaster Prevention and Management: An International Journal* 13(1): 39–49.

Tanner, T. 2010. Shifting the narrative: Child-led responses to climate change and disasters in El Salvador and the Philippines. *Children & Society* 24(4): 339–351.

Thorne, B. 2006. Editorial, US disasters and global vulnerability. *Childhood* 13(1): 5–9.

Tierney, K. 2014. *The social roots of risk: Producing disasters, promoting resilience*, Stanford: Stanford University Press.

Tomás, C. 2012. "Portugal of the little ones." A sociological analysis of children's rights in Portugal summary. *Issues in Early Education* 18(3): 72–85.

Towers, B., K. Haynes, F. Sewell, H. Bailie and D. Cross. 2014. Child-centred disaster risk reduction in Australia: Progress, gaps and opportunities. *Australian Journal of Emergency Management* 29(1): 31–38.

Tozier de la Poterie, A. and M.-A. Baudoin. 2015. From Yokohama to Sendai: Approaches to participation in international disaster risk reduction frameworks. *International Journal of Disaster Risk Science* 6(2):128–139.

UN Major Group for Children and Youth. 2015. *Summary report—Children and youth in the post-2015 framework for DRR process*. http://www.preventionweb.net/files/45686_reportsummarychildrenandyouthinwcdr.pdf. Accessed 8 Sept 2017.

UNISDR (United Nations International Strategy for Disaster Reduction). 2005. *Hyogo framework for action 2005–2015: Building the resilience of nations and communities to disasters*. http://www.unisdr.org/files/1037_hyogoframeworkforactionenglish.pdf. Accessed 8 Sept 2017.

UNISDR (United Nations International Strategy for Disaster Reduction). 2015. *Sendai framework for disaster risk reduction 2015–2030*. http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf. Accessed 8 Sept 2017.

Walker, M., R. Whittle, W. Medd, K. Burningham, J. Moran-Ellis and S. Tapsell. 2012. It came up to here: Learning from children's flood narratives. *Children's Geographies* 10(2): 135–150.