

# 1 **From Storytelling to Resilience: A Transdisciplinary Approach** 2 **to empowering children in Disaster Risk Reduction**

## 3 **Abstract**

4 This paper describes the decade-long evolution and wide reach of COPE Disaster Champions (COPE), a  
5 transdisciplinary, child-centred initiative that delivers Disaster Risk Reduction (DRR) education through a  
6 globally accessible series of free children’s picture books. Created to address an existing gap in age-appropriate  
7 DRR materials, the books combine storytelling with scientific accuracy, cultural sensitivity, and distinctive  
8 illustrations tailored to young learners. Grounded in Narrative Theory, their unique design succeeds in making  
9 complex evidence-based DRR concepts simple and relatable to children. The first section of the paper showcases  
10 the way transdisciplinary collaboration can be applied to the content creation process, involving scientists,  
11 educators, UN agencies, NGOs, artists, and children themselves, to increase the disaster resilience of children  
12 around the world. The paper further examines the way COPE has expanded beyond traditional printed media into  
13 interactive digital formats, such as audiobooks, animated trailers, e-books, jingles, and training manuals, designed  
14 to reach children across diverse learning styles and linguistic contexts.

15  
16 COPE’s transdisciplinary approach and use of a global dissemination model, resulted in an open-access,  
17 multilingual approach and cross collaborative strategic partnerships. Its impact is apparent in the contextualisation  
18 and distribution of its materials across both digital spaces and community-based programmes, effectively reaching  
19 children in high-risk regions such as Nepal, Madagascar, Egypt, and the Pacific Islands. By situating COPE within  
20 the priorities of the *Sendai Framework for Disaster Risk Reduction (2015–2030)*, the paper demonstrates how a  
21 creative, children’s rights-based inclusive approach to DRR education can empower the next generation to become  
22 disaster resilient champions in their communities.

23  
24 **Keywords: COPE Disasters Champions, Disaster Risk Reduction, DRR, Child Centred**  
25 **Disaster Risk Reduction, Disaster Resilience, Transdisciplinary, Culturally Sensitive**  
26 **Storytelling.**

# 1 INTRODUCTION

A wide range of hazards, from earthquakes and floods to heatwaves and blizzards, can occur globally, often unexpectedly. These events frequently cause widespread destruction, loss of life, and disruption to communities, infrastructure, and ecosystems [1]. Children and youth are among the vulnerable populations in disaster contexts, often experiencing the most immediate and severe impacts when crises occur. These impacts can include significant disruptions to physical and mental health, nutritional status, access to education, future economic opportunities, and increased exposure to abuse and violence, among other adverse outcomes [2]. Disaster Risk Reduction [3] seeks to minimize these impacts through proactive measures that prevent harm, reduce disruption, and protect lives, homes, and livelihood, and strengthens people’s capacity to respond effectively when disasters occur [4]. The *Sendai Framework for Disaster Risk Reduction*, adopted by United Nations member states in Sendai (Japan) in 2015, underscores the vital role children play in reducing disaster risks, enhancing community resilience, and influencing policy to improve disaster protection [4]. Research indicates that fostering children’s agency and participation not only supports their psychological well-being but also contributes to the development of broader community resilience [5]. Moreover, despite their heightened vulnerability, children possess unique strengths, such as creativity, adaptability, and effective communication that can meaningfully support DRR efforts at both the household and community levels [6].

According to The World Meteorological Organisation (WMO), the frequency, intensity, and duration of extreme weather events have increased fivefold between 1970 and 2023, leading to more significantly escalating disaster risks [7]. In 2023 alone, such events disrupted the education of over 240 million students globally [8]. Considering these escalating challenges, there is a pressing need to identify and implement effective strategies that motivate individuals and communities to actively participate in climate adaptation and DRR initiatives [9, 10]. It is essential that today’s children are equipped with the necessary knowledge, skills, and values to serve as resilience-builders, empowering them to advocate for safety and preparedness in the face of disaster [11].

Among the most effective strategies for cultivating this resilience and engagement in children is storytelling. Narrative Theory [12] underscores the role of storytelling in education, demonstrating that narratives help learners construct meaning and make abstract concepts more accessible, memorable and meaningful. Within the context of DRR, this theory supports the integration of compelling, relatable stories to communicate preparedness strategies effectively to children. Moreover, the critical importance of embedding DRR into formal education systems should be highlighted. This approach advocates for free and compulsory primary education as a foundational step in ensuring that all children, regardless of socioeconomic status, have access to life-saving knowledge and skills [13].

Responding directly to this dual imperative of the pedagogical strength of storytelling and the urgent need for accessible, child-centred DRR education, the COPE Disaster Series was created in 2015 (Figure 1), starting with the *Earthquakes* book. The series takes its name from its four protagonists, **Candy, Ollie, Ping, and Eddy**, COPE, a squad of DRR agents on a mission to build a new generation of resilient champions with the urgency and capacity to protect themselves and others. By embedding scientifically accurate preparedness messages within engaging, age-appropriate narratives, COPE bridges the gap between policy and practice by providing contextually grounded, inclusive educational resources that empower children to understand hazards, develop resilience, and take proactive roles in disaster preparedness. With its tagline, *Make the Difference. Be*

1 *Ready!* COPE exemplifies how narrative-based learning can transform children from passive recipients of  
2 information into confident DRR advocates.

3 [Figure 1]  
4

5 This paper aims to highlight the impact of transdisciplinarity through inter-disciplinary, cross-sector, local and  
6 international collaboration in increasing the disaster resilience of children. It also highlights the need to expand  
7 beyond traditional print into the additional, innovative and interactive formats and examines how its collaborative  
8 multi-lingual dissemination model supports localisation, curriculum integration, inclusive design for children with  
9 disabilities, and recognition by global DRR frameworks. It concludes by reflecting on COPE's strengths and  
10 limitations, emphasizing that a transdisciplinary storytelling approach is essential for effectively engaging  
11 children in disaster preparedness.

12 **2 CONTEXT AND LITERATURE REVIEW**

13 Understanding the current landscape of DRR education for children, who are increasingly vulnerable to disasters  
14 reveals that there are still gaps in accessibility, relevance, and global reach. This context is important for  
15 appreciating COPE's contribution, which not only addresses these shortcomings but does so through a child-  
16 centred approach blending narrative and distinctive illustrations to encourage active participation of young  
17 learners in disaster preparedness.

18  
19 **Filling Existing DRR Education Gap.** Current literature show that although DRR resources for children do  
20 exist, the overall availability of free, age-appropriate, and globally accessible learning materials remains limited  
21 [14]. Nevertheless, nation specific initiatives have significantly advanced disaster education. For instance, Iran is  
22 one of the most disaster-prone countries in the world and is a notable example of producing earthquake education  
23 programmes, highlighted in the training books by Ghafory-Ashtiany [15] which were among the earliest efforts  
24 to engage the public, particularly schoolchildren, in seismic safety through public education campaigns. Further  
25 studies have demonstrated innovative ways of teaching even preschool aged children with DRR concepts. In both  
26 formal and informal learning environments puppet gloves, songs, maquettes and board games [16] and comic  
27 strips [17] become means to enhance knowledge and convey life-saving messages. These interactive approaches  
28 reflect the power of multi-sensory learning and storytelling in improving children's retention of safety knowledge  
29 and enhancing emotional resilience. Outside of Iran, important initiatives are still emerging. In the United States,  
30 organizations such as the Federal Emergency Management Agency (FEMA) through *Ready Kids* [18] and the  
31 American Red Cross with *Prepare with Pedro* [19] offer disaster-themed storybooks and digital activities for  
32 school-age children. Sesame Street's *Here for Each Other* offers disaster preparedness through family workshops  
33 with tips for during and after emergencies, including interactive printable activities to help children remember  
34 their phone numbers and home address [20]. In Australia, the popular *Tree* series by Children's Health Queensland  
35 [21] supports and help young children prepare for emergency situations through storybooks, puppets and  
36 animations that address various hazards, floods, storms, cyclones, droughts and wildfires. In China, collaborative  
37 initiatives such as the *Homecoming Earthquakes* comic [22] uses a scenario about how a strong earthquake affects  
38 a family with 'left behind' children to communicate risk and preparedness to communities in ways that are both  
39 locally grounded and graphically appealing.

1 Globally, the *Sendai Framework for Disaster Risk Reduction: For Children* [23] remains an internationally  
2 recognised efforts to adapt DRR frameworks into child-accessible language and formats. Other leading  
3 organizations such as UNDRR, UNICEF, and the International Federation of Red Cross and Red Crescent  
4 Societies (IFRC) have developed important child-focused resources. These include educational games such as  
5 *Riskland*, introduced in 2002 and adapted into an online version in 2011 [24], as well as broader toolkits and  
6 informative materials aimed at raising awareness and promoting disaster preparedness [25].

7  
8 Despite these valuable contributions, significant gaps in relevance and engagement persist. Many DRR education  
9 materials remain limited in scope, often focused on single hazards, and are anchored in traditional, data-heavy  
10 delivery models that lack interactivity [9]. They are often text-based, assume adult-level comprehension, and  
11 seldom account for cultural diversity. Moreover, much of the existing content is neither freely available nor easily  
12 adaptable for different regions. In response to these challenges, COPE was conceptualised in 2015 as an inclusive  
13 education initiative specifically designed to address these shortcomings. Developed through a transdisciplinary  
14 collaboration between author Martha Keswick, illustrator Mariko Jesse, and editor Professor Timothy Sim  
15 (Singapore University of Social Sciences), COPE merges evidence-based DRR content with narrative-driven,  
16 visually engaging storytelling. Each COPE hazard book delivers practical, easy-to-understand DRR strategies  
17 through carefully crafted characters and appealing illustrations, effectively bridging the gap between scientific  
18 knowledge and child-friendly communication. COPE's core objective is to make disaster preparedness fun,  
19 memorable, and empowering, providing children worldwide with the knowledge and skills needed to respond  
20 confidently and safely to increasing hazards.

21  
22 **Target Audience.** The COPE Disaster Series is primarily designed for children aged 6-10 [26]. However, its target  
23 audiences extend to all ages including parents, educators and community leaders who can benefit by remembering  
24 key DRR instructions in the vital moment should a disaster occur. Early engagement in DRR is crucial, and even  
25 pre-school aged children can actively participate in activities in ways that might help mitigate disaster risks [27].  
26 Children do not necessarily need to live in disaster prone areas to benefit from DRR education. A compelling  
27 example is Tilly Smith, a 10-year-old British girl who was on vacation with her parents in Phuket, Thailand, on  
28 December 26<sup>th</sup>, 2004, when the Indian Ocean Tsunami hit [28]. Recognizing the warning signs from a geography  
29 lesson, she alerted people on the beach to run in land and **GET UP TO HIGH GROUND**, ultimately saving  
30 hundreds of lives that day [29, 30]. Tilly's experience reinforces the importance of fostering a global perspective,  
31 and the role of children in DRR, rather than automatically assuming that certain hazards are too remote or distant.  
32 COPE encourages an inclusive approach, embracing the value that disaster education is important for everyone  
33 regardless of age, background and geographical locale.

34  
35 **Unique Design.** COPE's significant reach can be attributed in part to its illustrations, which address a notable gap  
36 in the visual communication strategies employed by other children's DRR educational materials. COPE's  
37 distinctive style, shown in (Figure 2), uses charming drawings with detailed landscapes, expressive characters,  
38 and dynamic actions to bring each story to life and effectively motivate children in DRR actions (Figure 2, left),  
39 In this way, it uses the transformative power of art to provide innovative strategies to make complex and disaster  
40 related issues simple, clear, and accessible for children, by turning scientific information (Figure 2, centre) and

1 preparedness strategies into visually engaging and age-appropriate imagery—as suggested by Parsons [9]. These  
2 images help young readers understand what natural hazards are, how they happen, and what actions they can do  
3 to stay safe (Figure 2, right).

4  
5 **[Figure 2]**  
6

7 Likewise, in the *Landslides* book, the characters are depicted running from the mountainous landslide prone areas  
8 to reinforce the importance of the key message **IN HEAVY RAINS, KEEP AWAY FROM STEEP SLOPES**,  
9 (Figure 3, right). Meanwhile in *Floods*, the main characters help villagers off a boat to **EVACUATE** up to higher  
10 ground, making key DRR instructions instantly understandable and unforgettable through visual storytelling,  
11 (Figure 3, left). COPE’s illustrations even go so far as to transcend language barrier [9], to connect with readers  
12 on an emotional level, enabling them to explore the abstract concepts of climate change and disaster risk in  
13 tangible and impactful ways.

14  
15 **[Figure 3]**  
16

17 **Background and Central Characters.** The Great Wenchuan Earthquake struck on May 12, 2008, with magnitude  
18 7.9, and killing over 69,000 people [31]. It left hundreds of thousands injured and millions homeless. This  
19 backdrop provided the initial narrative of COPE with the central fictional character of Grand Mistress Fu, a  
20 respected martial arts teacher from Mount Emei, Sichuan, narrowly escaping death as her village school collapses  
21 around her. Witnessing a lack of preparedness among children, Fu dedicates her life to educating them, and over  
22 the years rebuilds her school into *The COPE Academy*, an international DRR hub. Grounded in the belief that  
23 children are powerful educators for their peers, Grand Mistress Fu, recruits four teenage orphans, Candy, Ollie,  
24 Ping, and Eddy, each of whom have tragically lost their parents in disasters across South Africa, New Zealand,  
25 Hong Kong, and Brazil respectively. Trained up by scientists and DRR experts at The COPE Academy, they form  
26 the *COPE Squad*, whose mission is to increase disaster preparedness worldwide, alongside Grand Mistress Fu’s  
27 beloved pets, Rescue the dog, and Sense the snake.

28 The deliberate selection of squad members from diverse geographical and cultural backgrounds reflects  
29 COPE’s commitment to global representation and reinforces the message that disaster preparedness is a universal  
30 concern. Among the team, Eddy, who has a hearing disability, communicates using *Libras*, the Brazilian sign  
31 language (LSB). His presence within the squad not only emphasizes the importance of disability inclusion in DRR  
32 education but also serves to model equitable communication practices. By featuring a character who navigates  
33 disasters with a hearing disability, COPE promotes the message that no one should be left behind, a key principle  
34 aligned with the *Sendai Framework*, [32]. This principle will be elaborated later in the paper. The Squad thus  
35 functions not only as a narrative device but as an embodiment of diversity and inclusion, demonstrating that  
36 children from all walks of life have the potential to lead and inspire resilience within their communities. The  
37 imaginary world of COPE and its colourful characters help young readers to make sense of the Wenchuan disaster  
38 and learn from its example, thus reinforcing the power of storytelling [12], in educating children in DRR.

1 **Narrative Format.** Each title in the COPE Disaster Series is crafted around a compelling three-part narrative  
2 structure that harnesses the power of storytelling to empower children in DRR. Rooted in Narrative Theory [12],  
3 which emphasizes that people, especially children, understand and remember concepts more deeply through  
4 meaningful stories. Every story begins at The COPE Academy, where the COPE Squad undergoes specialized  
5 training focused on a specific hazard. This is followed by a mission to a hazard-prone region, where an actual  
6 disaster occurs, and the Squad must put their training into practice therefore modelling practical DRR skills for  
7 local children. The story concludes with a return to The COPE Academy and a reflection on their experience,  
8 reinforcing key lessons learned and preparing for future missions. An exception to this structure is COPE's  
9 *Climate Change* book, published in 2025 in collaboration with the World Meteorological Organization (WMO),  
10 which follows a different narrative format with the Squad attending the United Nations Climate Conference to  
11 learn more about climate change and how it connects with increasing natural hazards as well as disasters.

12 The COPE Academy training itself is rigorous and age appropriate, covering all phases of disaster -  
13 before, during and after (Figure 4), in ways that are engaging for young audiences. Children are introduced to  
14 scientific and historical insights into each hazard, for instance, how earthquakes can trigger secondary hazards  
15 like landslides and tsunamis. They learn about *Early Warning Systems* through real-life examples and practice  
16 packing survival kits and planning evacuation routes. To promote emotional and psychological resilience,  
17 mindfulness practices, yoga, and breathing exercise sessions are also included. The training builds on  
18 communication skills, with lessons on how to deliver DRR presentations in schools and clubs. The Squad  
19 members receive leadership training to empower them to inspire others and recruit more *COPE Champions*. The  
20 program includes essential physical and psychological first aid knowledge, promotes physical well-being and  
21 fitness, and teaches outdoor survival through culturally relevant games and unique adventures. A respect for  
22 cultural diversity and traditional DRR practices are fostered with emphasis on how to contribute to post-disaster  
23 clean-up efforts and recovery processes in a safe manner.

24  
25 **[Figure 4]**  
26

27 In the example of the *Earthquakes* book, once training is complete, the COPE Squad, led by Grand Mistress Fu  
28 in her iconic red helicopter, travels to Colima (Mexico), a region at risk of seismic activity. As they visit homes,  
29 schools, and community clubs across the country, the squad demonstrate children lifesaving DRR strategies, such  
30 as using whistles and mapping evacuation routes. The squad recruits *COPE Champions*, so that local children can  
31 become “agents of change,” as outlined in the *Sendai Framework*, [32] in their own communities. And as the story  
32 unfolds, the squad's teachings are put to the test when a 6.5 magnitude earthquake hits while they are in a  
33 classroom. Instantly the pupils follow the key DRR instruction of **DROP, COVER, and HOLD!**, taking shelter  
34 under and holding onto the legs of sturdy desks. Though the classroom partially collapses, their preparedness  
35 ensures a timely and safe evacuation, reinforcing the vital importance of their mission. Back at The COPE  
36 Academy, the Squad reflect on their experience, armed with knowledge and confidence in the belief that they can  
37 make a difference (Figure 5).

38 **[Figure 5]**

### 3 TRANSDISCIPLINARY COLLABORATION

The quality and inclusivity of COPE’s content are rooted in its foundation of extensive cross-sector collaboration. This section details how experts from meteorology, disaster risk science, education and arts worked alongside NGOs, global institutions, and regional contributors to co-create scientifically accurate and culturally relevant materials. Youth participation, inclusive design, and locally adapted messaging were also integral to shaping content that is both accessible and impactful for children worldwide.

**Content Creation.** Achieving the goals of *The Sendai Framework* requires a collective, cross-sectoral effort [33]. COPE was built on this very principle since its inception; bringing together a diverse, transdisciplinary team of key stakeholders from all over world, as discussed in [34], each contributing unique perspectives and expertise to ensure the content is valid, inclusive, and child focused (*Please see Appendix A for COPE Key Stakeholders.*) COPE sought early guidance from the Hong Kong Observatory, and in 2020, welcomed the World Meteorological Organization as scientific advisor to contribute the highest standards in weather-related content. WMO Secretary-General Celeste Saulo underscored the protective dimension of this collaboration [35], noting that by enhancing children’s understanding of risks and their ability to respond, the partnership actively contributes to the development of more resilient communities [36]. UNDRR Asia and the Pacific has also contributed significantly providing ongoing DRR expertise since 2018 on commissioning the *Tsunamis* booklet to commemorate World Tsunami Awareness Day. UNICEF East Asia and the Pacific offer input on inclusivity, particularly in integrating perspectives on disabilities and children’s rights. In addition, UNESCO advised on the accurate representation of World Heritage Sites such as the banks of the River Seine, Paris, which feature in *Heatwaves* to guarantee that the stories reflected the historical significance of these globally protected locations (Figure 6). Furthermore, COPE collaborates closely with leading academic institutions to ensure content accuracy with current DRR knowledge and best practises for each hazard. These include The University of Oxford, Earth Sciences Department, who worked on *Volcanoes*, *Tsunamis* and *Earthquakes*, James Cook University for *Cyclones* and The University of Pretoria for *Wildfires*, The University of Stirling and University of Malaysia for *Floods*.

#### [Figure 6]

International NGOs’ have played a key role in shaping the creative process, with World Vision Nepal collaborating on the *Landslides* book by providing local risk insights in Lamjung Province. They also supported the translation of the book into Nepali, and facilitated community-based feedback, ensuring the story reflected the lived experiences of children in vulnerable regions, such as the characters of Raj and Gita, whose family was displaced after the landslide and were temporarily living in tents.

Local experts brought authenticity and were featured in the stories, for example, the Javanese geologist, Munasri, advised on the *Volcanoes* by ensuring the accurate depiction of volcanic activity, local early warning methods, and indigenous terminology, (which will be further explored later in the paper). Similarly, renowned Alpine forecaster Scott Redwood, contributed to the *Avalanches* book by providing expertise on avalanche risks specific to the Milford Sound region. He advised on local safety strategies, and explained how tourists are protected along the Milford Road, where controlled avalanches are triggered by helicopters dropping explosives to safely release unstable snow, thereby preventing larger, unmanageable events.

1 Young people were also actively involved in the development process. For example, students at Te Anau  
2 Primary School in New Zealand contributed feedback on early drafts of the *Avalanches* book, while children at  
3 the International French Lycée of Saint Genis Pouilly in Geneva provided input during the creation of the Climate  
4 Change book, helping to ensure the stories were engaging, age-appropriate, and relevant to young readers.  
5 UNICEF EAP's Youth Climate Action group (YPAT) also ensured a strong children's rights perspective, while  
6 local young children in Thailand, helped shape messages to resonate with children from their own communities.  
7 In addition to its narrative content, the COPE series is grounded in key DRR principles. These include instructional  
8 messages, early warning systems, cultural sensitivity, and the protection of children's rights (Figure 7).

9  
10 **DRR Principles.** At the core of each hazard book are essential DRR principles, including *Key Instructional*  
11 *Messages* [37], *Leave No One Behind* [38], *Early Warning Systems* [39, 40], *Cultural Sensitivity* [41] and  
12 *Children's Rights Perspectives* [42]. These principles were carefully discussed and integrated by the  
13 transdisciplinary team among COPE key stakeholders, ensuring that each story educates, empowers, and includes  
14 every child, regardless of background or ability. By embedding DRR concepts within an engaging narrative, the  
15 COPE stories allow readers to see themselves as problem-solvers rather than passive recipients of information.

16  
17 **Key Instructional Messages.** Each title highlights simple one-word or short sentence messages, carefully  
18 designed to be practical and easy to recall in the critical moments before or during a disaster. Through engaging  
19 storytelling and clear visual cues [43]. COPE delivers concise, age-appropriate guidance on the nature of different  
20 hazards and the steps children can take to prepare themselves, support their families, and help protect their  
21 communities. Some of these DRR messages, such as **GET UP TO HIGH GROUND** in *Tsunamis*, were already  
22 globally recognized and widely promoted, however, others had to be custom developed by COPE's team to  
23 address the specific nature of different hazards. It was important to make these key messages as age appropriate  
24 and relatable to children as possible. For example, the University of Oxford's Earth Sciences Department,  
25 UNDRR, and a local Javanese geologist assisted COPE in the creation of **LISTEN. PREPARE. STAY AWARE**  
26 for the *Volcanoes* book, strengthening the importance of vigilance and readiness in volcanic zones. These  
27 potentially life-saving messages lie at the heart of each narrative, blending scientific accuracy with child-centred  
28 communication so that children understand such risks and feel confident to respond in the case of an emergency.

29 COPE's main objective is to increase disaster resilience among children and communities across the  
30 world, with the Squad travelling to high-risk areas, spreading the key DRR messages through a mix of education,  
31 community outreach, and media engagement. The book *Storm Surges* depicts COPE's widespread media presence  
32 in Hong Kong, where they appear on TV, radio, and in newspapers, engaging students in schools through  
33 educational sessions and by providing preparedness stickers and activity books, emphasizing the life-saving  
34 instruction: **KEEP CLEAR FROM THE COAST**. In *Floods*, they visit Kelantan State (Malaysia) where they  
35 go to villages, shopping malls, markets and beaches, promoting early action through floods hazards maps and  
36 practice drills to the evacuation centres: **EVACUATE**. COPE therefore uses interactive, role-modelling  
37 experiences to deliver DRR messages, fostering young people's ability to take informed action and actively build  
38 disaster resilience from awareness.

1 **Leave No One Behind.** Aligned with *The Sendai Framework*, COPE promotes awareness of vulnerable groups,  
2 including the elderly, people with disabilities, migrants and those living in poverty, ensuring that no one is left  
3 behind in an emergency. As mentioned earlier in the paper, inclusivity features include disability friendly content  
4 such as Eddy who has a hearing disability and from Brazil, so sometimes communicates with the squad using  
5 Libras Sign Language (LSB). These signs were developed in partnership with The University of Brasilia [44] and  
6 are present through images of key DRR words such as *Ready*, *Cyclones*, or *Disaster* (Figure 7, left). Eddy always  
7 packs extra batteries for his hearing aid in his survival bag highlighting the importance of preparedness in  
8 emergency situations. In *Avalanches*, a teenage boy puts special snow tyres on his wheelchair when visiting the  
9 slopes, while in *Heatwaves* there is a girl who has a visual disability. She counts the number of steps it takes to  
10 get to the water foundation in the park, remembering to go right when she smells the bakery.

11  
12 COPE's stories also emphasize a balanced portrayal of boys and girls working together in leadership roles,  
13 challenging traditional gender norms that often position males as primary decision-makers in crisis situations.  
14 This aligns with research that highlights the gendered nature of disaster response, particularly in the aftermath of  
15 events such as the 2004 Indian Ocean Tsunami, where women and girls were disproportionately affected, not only  
16 in terms of mortality but also in limited participation in recovery and leadership processes [45]. In *Blizzards*,  
17 Nomu, a teenage girl, is shown making key decisions alongside the boys on how to prepare for Mongolia's winter  
18 'dzud'. In *Wildfires*, the COPE Squad encounters South Africa's 'Working on Fire' initiative, an inspiring team of  
19 young firefighters comprising both male and female members, who exemplify bravery, teamwork, and community  
20 service in the face of disaster. In *Droughts*, boys and girls work together to support their *Aini* community, (a Hani  
21 ethnic minority in China). They take initiative by carrying water from a distant well to help those in need,  
22 highlighting the importance of collective action and resilience in times of need. The Squad generally consider  
23 everyone's needs to make sure no one is left behind, offering guidance, partnership and the importance of  
24 accessibility and preparedness in emergency situations.

25  
26 **Cultural Sensitivity.** The transdisciplinary team ensures that regional disaster preparedness practices and cultural  
27 references are accurate. COPE's stories take the reader on a journey to disaster-prone regions, where the squad  
28 respectfully learns not only about hazards but also about the people, customs, and traditions that shape how  
29 communities prepare and respond (Figure 7, right). The illustrations capture the cultural essence by incorporating  
30 region-specific architecture, traditional clothing, local landscapes and indigenous design elements, so that the  
31 young reader is transported from country to country, whilst learning culturally relevant disaster preparedness  
32 strategies: In Java, Indonesia, a wooden clapper is used by the village chief to signal a volcanic eruption  
33 (*Volcanoes*) while the pyroclastic flow is named as 'wedhus gembel' which means 'shaggy goat' in Javanese. In  
34 the fishing village of Tai O Hong Kong Great Auntie Chen's house is built on stilts so is less likely to flood (*Storm*  
35 *Surges*). In each disaster location the squad sample local foods such as dumplings (or *buuz*) in Mongolia  
36 (*Blizzards*), Kobe beef in Japan (*Tsunamis*) or Mealie Pap and Bobotie in South Africa (*Wildfires*).

37 By showing children working alongside communities, learning from elders, understanding cultural  
38 practices, and embracing different ways of thinking, the stories teach that disaster preparedness is not one-size-  
39 fits-all. Instead, it is shaped by history, environment, culture and traditions. Through these adventures, children  
40 develop empathy and appreciation for diverse cultures, seeing that disaster resilience is a shared, global effort.

1 **Early Warning System.** The United Nations Secretary-General’s global initiative on universal Early Warning  
2 Systems (EWS) aims to ensure that, by 2027, all nations have reliable and actionable risk information. COPE is  
3 recognized as WMO’s special contribution to EWS Pillar One (Disaster Risk Knowledge and Management),  
4 specifically empowering children in disaster preparedness. This recognition was included in WMO’s *Guide for*  
5 *National Meteorological and Hydrological Services in Support of National Multi-hazard Early Warning*  
6 *Systems* [46]. By featuring COPE, WMO highlighted the importance of integrating educational initiatives into  
7 national strategies for early warning systems. Evidence shows that children and youth are eager to be actively  
8 involved in household and community DRR, often sharing their knowledge with family members, friends, and  
9 neighbours [47]. COPE reinforces these principles by integrating practical early warning applications across the  
10 narratives (Figure 7, centre). In *Floods*, children learn to map, memorise and follow evacuation routes in flood-  
11 prone areas. In *Wildfires*, *Storm Surges*, *Cyclones*, and *Earthquakes*, survival kits are assembled with emergency  
12 essentials such as a contact card, water bottle, mobile phone etc. In *Cyclones*, children recognize the early warning  
13 signals such as government or weather alerts on the radio, TV or social media, and take action by helping their  
14 families **STAY SAFE** to secure their homes before the impact of the storm (e.g. boarding up the windows, putting  
15 away garden pots, making sure pets are out of danger).

16  
17 **Children’s Rights Perspectives.** The COPE Disaster Series integrates a strong children’s rights perspective to  
18 ensure that children are not passive recipients of information but active participants in their own safety and  
19 preparedness, aligned with key articles of the *UN Convention on the Rights of the Child* (CRC) [48]. COPE  
20 empowers children with knowledge, skills and values that encourage their active participation, and safeguard their  
21 well-being in disaster contexts. Experts from UNICEF East Asia and Pacific have carefully reviewed the series,  
22 ensuring the DRR content remains child-centred, participatory, and inclusive. The right to life, survival, and  
23 development is underscored in books like *Floods*, where children are taught to evacuate early, avoid floodwaters,  
24 and prevent waterborne illness, actions essential for safety and survival (CRC, *Article 6*). COPE reinforces the  
25 right to information and participation by replacing traditional top-down messaging with interactive formats that  
26 encourage leadership and reflection (CRC, *Articles 12, 13, 17*). In *Wildfires*, for example, young members of  
27 “Working on Fire” help plan evacuation routes and lead community drills, demonstrating meaningful involvement  
28 in preparedness. The right to education and disaster preparedness is central to the series, as seen in *Blizzards*,  
29 where children are taught about early warning systems and emergency protocols (CRC, *Articles 28, 29*). Health  
30 and well-being are also addressed in line with the right to health, water, and nutrition. In *Droughts*, children learn  
31 how to conserve water, prevent dehydration, and maintain hygiene, equipping them with life-saving health  
32 knowledge (CRC, *Articles 24, 27*). COPE’s *Climate Change* title upholds children’s right to a safe environment  
33 and climate action and raises awareness of environmental risks, and the role children can play in building  
34 resilience (CRC, *Article 26*).

35  
36 **[Figure 7]**

37  
38 By advocating that children are both learners and leaders, the books align with their right to be heard and involved  
39 in decisions that affect their safety [49]. With UNICEF EAP’s expert guidance, COPE ensures that DRR education  
40 is not just about preparedness but empowerment, participation, and resilience-building for the next generation.

1 Beyond education, COPE supports UNICEF’s commitment to empowering children and youth by helping them  
2 translate knowledge into action which advocates for children’s rights in local and international disaster  
3 management policies, fostering capacity-building initiatives, strengthening protection laws, creating engagement  
4 opportunities, and investing in youth-led solutions [11].

#### 5 **4 AN APPROACH TO INTERACTIVE LEARNING**

6 Over this past decade, COPE has partnered with a wide range of organizations to expand its DRR content beyond  
7 printed books into innovative, interactive formats. This section exemplifies a transdisciplinary approach which  
8 blends science, education, science, technology and the arts to creatively make disaster preparedness more  
9 accessible and impactful for children worldwide.

10  
11 **Animated Trailers.** Developed to complement each title in the COPE Disaster Series, these 45-second animated  
12 trailers provide engaging visual summaries to introduce the specific hazard and to reinforce the key DRR messages.  
13 The trailers offer a concise and playful insight into the narrative approach, showcasing that complex DRR  
14 scientific topics are being made relatable to young audiences. Each trailer credits the advisors and collaborators  
15 involved in the book’s development, reinforcing COPE’s collaborative commitment to producing evidence-based  
16 DRR educational content [26], (Figure 8, left).

17  
18 **Audio Books.** Available in multiple languages, the development of audiobooks has provided an accessible way  
19 to absorb critical DRR information through storytelling, particularly benefiting those who prefer auditory learning  
20 or have limited access to printed materials. A notable example is UNICEF Egypt’s Arabic versions, which cover  
21 ten hazards as well as the COVID-19, expanding access to disaster preparedness education for Arabic-speaking  
22 children. Additionally, the *Wildfires* audiobook is available in Spanish via YouTube and Spotify, thanks to a  
23 collaboration with the Instituto Interamericano para la Reducción de Riesgo de Desastres—IIARRD (*Inter-*  
24 *American Institute for Disaster Risk Reduction*) in Argentina [50]. By committing to using innovative,  
25 collaborative methods to ensure that disaster education, the series reach a diverse audience across linguistic,  
26 cultural, and technological barriers.

27  
28 **Interactive E-books.** The Singapore University of Social Sciences (SUSS), in collaboration with COPE and  
29 UNICEF Egypt, is in the process of transforming the COPE Disaster Series into animated, interactive e-books  
30 [51]. These digital resources feature audio narration and engaging games designed to enhance young learners’  
31 understanding of disaster preparedness around the world. The interactive elements bring the COPE Squad and  
32 COPE *Champions* to life, presenting them as DRR role models thereby immersing children in meaningful  
33 storytelling. This approach draws on Narrative Theory [12], which highlights how stories effectively help learners  
34 make sense of complex concepts by placing them within familiar and emotionally resonant contexts. Through  
35 narrative-driven learning, children can more easily relate to the characters, internalize key preparedness messages,  
36 and apply them in real life. Freely accessible to the public via the SUSS UniLEARN Portal, UNICEF’s Learning  
37 Passport platform and the COPE Disaster Champions website, these e-books ensure that children everywhere can  
38 benefit (Figure 8, centre).

1 **Jingles.** Created by The TENG Company in collaboration with Widewall Pictures and the COPE creative team,  
2 these jingles are 40-60 second animated songs which are designed to teach children the key disaster preparedness  
3 messages, such as STAY COOL AND HYDRATED in-*Heatwaves* [52, 53]. Using a child-focused, bottom-up  
4 approach, the TENG team performed the melodies live in schools, gathering feedback from children on their  
5 music preferences. This input directly influenced the final compositions, ensuring the jingles were both engaging  
6 and memorable. These catchy tunes act as effective memory aids, helping children retain and recall critical DRR  
7 actions during emergencies. Available on YouTube<sup>i</sup>, the UNDRR Prevention Web<sup>ii</sup>, and within SUSS<sup>iii</sup> interactive  
8 e-books, the jingles demonstrate the role of music in DRR education (Figure 8, right).

9  
10 **[Figure 8]**  
11

12 **Train The Trainer Manuals.** To strengthen DRR education across South America, COPE partnered with the  
13 Instituto Interamericano para la Reducción de Riesgo de Desastres (IIARRD) in Argentina, PRESENTES in  
14 Colombia, and MCR2030 UNDRR Advisory Group in Paraguay to create a series of Train the Trainer (ToT)  
15 educational manuals to complement the storybooks. Developed using content from the COPE Disaster Series, the  
16 manuals, originally produced in Spanish, equip teachers with easy-to-use DRR materials, interactive activities,  
17 and practical tools. They offer a hands-on learning approach through games, videos, puppetry, and colouring  
18 exercises, stressing the power of regional partnerships in advancing DRR education [54, 55].

19 **5 A UNIQUE TRANSDICIPLINARY APPROACH TO GLOBAL DISSIMINATION**

20 Effective governance in DRR increasingly calls for policy shift from traditional emergency response, to  
21 proactive risk reduction with transparency, accountability, and joint oversight guided by *The Sendai Framework*  
22 [56]. Key policies must focus on strengthening human resource capacity, community empowerment, and disaster  
23 regulations among others [56]. Empirical evidence suggests that the involvement and empowerment of local  
24 entities and community, positively contributing to effective policies. This requires systematic, adaptable  
25 frameworks based on collaboration, trust, and integration of all stakeholders [57, 58]. COPE operationalises these  
26 principles through its transdisciplinary co-production model which contributes to widespread use and adaptation  
27 across diverse geographic and linguistic contexts. Through partnerships in localising and translating materials,  
28 COPE's content has been embedded into projects on the ground and learning centres while developing inclusive  
29 formats for children with disabilities. Additionally, its integration into high-level DRR frameworks and online  
30 platforms validates international recognition of both its pedagogical approach as well as the content by leading  
31 agencies.

32  
33 **Multilingual Model.** The COPE Disaster Series of books has so far been translated and contextualised into 23  
34 different languages to date, enabling vulnerable communities across 40 different countries to benefit from the vital  
35 DRR information. (*See Appendix B – COPE's Translations & Distribution*). This expansion has been made  
36 possible through collaborations with institutions and volunteering individuals alike, all dedicated to the DRR  
37 cause. The WMO has played a key role by localising the books into the six official UN languages: English, Spanish,  
38 French, Russian, Arabic, and Chinese [36]. Other translated versions such as *Blizzards* in Mongolian, *Cyclones* in  
39 Filipino and *Volcanoes* in Bahasa, have all been made available by partner organizations and individuals. Through

1 these cross-collaborative efforts, COPE expands its global impact, ensuring that children, regardless of their  
2 location or language, can have access to critical disaster preparedness messages.

3  
4 **Dissemination Model.** COPE partners with UN agencies, ministries of education, NGOs', universities and  
5 schools to distribute the content to achieve the mission of ensuring that the key DRR instruction messages reach  
6 communities most at risk, supplying children, parents and educators alike. (*See Appendix C – COPE's*  
7 *Dissemination Efforts*). COPE intentionally keeps its content 'copyright free' so that interested partners can easily  
8 and quickly utilize the materials, whether online or offline, without intellectual property restrictions. After  
9 collaborators translate and contextualize the text, the COPE creative team reviews the translated version back into  
10 English, to ensure that the scientific facts, key DRR information, and illustrations remain intact, and that the  
11 translation protocols are properly followed [59]. Small text changes are usually accommodated within the  
12 localised version, (e.g. referring to hurricanes instead of cyclones in The Caribbean), however, modifications to  
13 the artwork are not permitted to preserve the original intent of the illustrations.

14  
15 **Projects on the Ground.** COPE's collaborative model has materialised into localized, community-based projects  
16 that have already advanced child-centred disaster resilience in some of the world's most vulnerable regions. In  
17 Assam, India, the UN Major Group for Children and Youth translated the *Floods* and *COVID-19* books into  
18 Assamese, distributing 2,400 copies to schools in flood-prone regions along the Brahmaputra River. Through  
19 interactive reading sessions and preparedness workshops, children and teachers were equipped with critical DRR  
20 knowledge. This initiative influenced local policy, prompting annual COPE sessions to be integrated into  
21 educational planning. In Kelantan (Malaysia), COPE *Floods* were used in community activities in partnership  
22 with Dr. Masayu Dzainudin of Sultan Idris Education University and local government agencies reaching  
23 indigenous children during National Children's Day with flood preparedness kits, bilingual books, and storytelling  
24 using finger puppets (Figure 9, left). Building on this collaboration, Sultan Idris Education University and  
25 UNICEF Malaysia are together supporting the development of a COPE *Floods* initiative specifically tailored for  
26 children with hearing and visual disabilities. This inclusive project involves the innovative production of Braille  
27 materials and an interactive audio-video in Malaysian Sign Language (MSL). A school outreach tour is scheduled  
28 from June 2025 to January 2026, aiming to distribute these revised resources and raise awareness among  
29 vulnerable groups across selected educational settings.

30  
31 WMO and Meteo Madagascar, supported the localisation of COPE *Cyclones* and *Floods* in Malagasy. Officially  
32 presented to the Ministry of Education of Madagascar on World Meteorological Day. Meanwhile, in the  
33 Democratic People's Republic of Korea (North Korea), a collaboration between Birkbeck University and the  
34 Mount Paektu Research Centre enabled the translation of *Volcanoes*, *Floods*, *Droughts*, and *Landslides* into  
35 Korean. In Lamjung (Nepal) through a collaboration with World Vision Nepal and Durham University, 42,000  
36 copies of *Landslides* were translated and distributed across eight districts, including 170 reading camps that  
37 engaged over 20,000 children. This initiative improved disaster literacy and fostered community-wide awareness  
38 and response capacity in a region vulnerable to landslides (Figure 9, centre). In Providencia (Colombia), following  
39 the devastation of Hurricanes Eta and Iota, COPE's *Hurricanes* book was localized and disseminated through a  
40 partnership with Medellín-based NGO *Presentes*, with teacher training and awareness campaigns equipping local

1 educators and authorities to guide children in hurricane preparedness (Figure 9, right). According to Catalina Diaz,  
2 Director of Risk Intelligence at Presentes, “*Now, in Providencia and Santa Catalina, there is a greater response*  
3 *capacity thanks to COPE and Presentes. Our children are better prepared, and our community is more resilient.*”  
4 (C. Diaz, personal communication, February 3, 2025).

5 [Figure 9]

6  
7 **Digital Reach.** COPE’s commitment to accessible DRR education extends beyond on-the-ground initiatives to a  
8 global digital presence, maintaining its transdisciplinary and inclusive approach. Its resources are currently hosted  
9 on 24 online platforms, including WMO (Figure 10, left), WeAdapt<sup>iv</sup>, UNDRR PreventionWeb<sup>v</sup> (Figure 10,  
10 centre), Hong Kong Observatory<sup>vi</sup>, World Vision<sup>vii</sup>, and other educational, governmental, and digital library sites,  
11 broadening access to key DRR messages for children, educators, and policymakers across classrooms, homes,  
12 and communities worldwide. A notable example is in the Philippines, the Department of  
13 Education uploaded the COPE COVID-19 booklet, to its official Learning Resource Portal<sup>viii</sup>, therefore  
14 ensuring that educators, learners, and school communities across the country had online access to COPE’s content,  
15 further advancing digital equity in disaster risk education. Furthermore, COPE’s inclusion in the UNICEF  
16 Learning Passport (Figure 10, right), a platform designed to transform education through online, mobile, and  
17 offline technology. COPE’s Disaster Series and Jingles feature across global and regional libraries, including East  
18 Asia and the Pacific, Egypt, Lebanon, Timor-Leste, Ghana, Sierra Leone, and the Philippines, helping to address  
19 the challenge of delivering critical disaster preparedness education to children through multiple languages and  
20 formats [60].

21  
22 [Figure 10]

23  
24 Additionally, COPE’s partnership with UNICEF Egypt adapted audiobooks for offline learning and integrated  
25 them into STEAM education camps, reaching over 160,000 children. Using *Heatwaves* and *Droughts*, students  
26 developed practical models and solutions for climate-related challenges, fostering critical thinking, innovation,  
27 and resilience. In alignment with the continuous expansion of digital education, COPE maintains its commitment  
28 to enhancing its virtual footprint. This strategic focus aims to facilitate the global preparedness of children to  
29 comprehend risk and effectively serve as agents of change within their respective communities.

30  
31 In summary, these examples demonstrate how COPE’s unique transdisciplinary dissemination model is  
32 transforming policy frameworks and scientific knowledge into practical, narrative-driven, and inclusive learning  
33 experiences to empower children to understand risk, build resilience, and contribute actively to safer communities  
34 around the world.

35  
36 **6 STRENGTHS AND LIMITATIONS**

37 This paper has described COPE’s wide-ranging contribution to children’s DRR education, driven by its  
38 storytelling approach, evidence based distinctive illustrations, and the commitment of dedicated collaborators.

1 This organic expansion, marked by flexibility, has enabled the global dissemination of free DRR content, reaching  
2 vulnerable children worldwide.

3 While COPE's open-access model is a key strength, it requires significant coordination to maintain the integrity  
4 of the original content and ensure alignment with scientific and cultural standards. A central element is COPE's  
5 translation protocol, including back-translation and expert scientific review, to guarantee linguistic accuracy and  
6 child comprehensibility. Although the text can be adapted to local terminology and context, the illustrations are  
7 non-modifiable to protect artwork integrity and character-consistency. This can limit visual tailoring to specific  
8 settings (e.g., depicting the COPE Squad in Fijian national dress). At the same time, it is also a strength: consistent  
9 artwork preserves global recognisability, reinforces brand identity, and ensures that children everywhere engage  
10 with the same familiar characters and backgrounds, while also helping them understand that hazards occur across  
11 the world and that children living in disaster-prone areas face and cope with different types of disasters. This  
12 emphasises the message that disasters are not confined to their own country or community but are a shared global  
13 reality.

14 Despite COPE's demonstrated impact in advancing child-centred DRR materials, its ability to scale and sustain  
15 this success is constrained by funding and a small core operational team. These imitations have affected the pace  
16 at which new content can be developed and distributed to meet the growing global demand for children's DRR  
17 education. Moving forward, to fully realise its potential and respond to the rising frequency and severity of  
18 climate-related disasters, the initiative recognises the need for more sustainable resources to enhance its  
19 operational capacity and impact, and to continue delivering lifesaving messages, to high-risk communities  
20 worldwide. Most importantly, the project needs to embark on a rigorous and systemic evaluation of its impact on  
21 children from around world, both in terms design effectiveness, and its influence on children's resilience and  
22 competence of disasters risk reduction, Further research should aim to attribute measurable changes in knowledge,  
23 attitudes and behaviours directly to COPE. This could include assessing learning outcomes such as pre/post  
24 knowledge of "DROP, COVER, HOLD," evacuation route recall, EWS comprehension, household kit preparation,  
25 alongside behavioural indicators like participation in drills, family preparedness planning, and teacher led practice  
26 changes. Generating such evidence will be essential to demonstrate COPE's educational value, strengthen its  
27 global credibility, and inform ongoing improvements to building child-centred disaster resilience.

28

## 29 **7 CONCLUSION**

30 This paper provides a detailed examination of the COPE initiative which address significant gaps in the  
31 availability of free, easily accessible and age appropriate DRR materials. It emphasises how a unique  
32 transdisciplinary approach to the creation of scientifically grounded yet child-friendly content, delivered through  
33 the combination of storytelling with distinctive and culturally sensitive illustrations, translates complex hazard  
34 knowledge into simple, memorable key instructional messages, that children can easily recall and apply during  
35 emergencies.

36 The paper also exemplifies how COPE's contribution to educating a generation of children, and disaster-  
37 preparedness approach to assist them, is evident in specific interrelated areas. First, by addressing vulnerability

1 and beyond the information dissemination, the books intend to foster emotional and psychological resilience  
2 through elements such as mindfulness and psychosocial first aid, supporting children’s well-being before,  
3 during, and after disasters. Second, it advances inclusion and equity, consistent with the *Sendai Framework’s*  
4 people-centred approach and commitment to *leave no one behind*. Disability-inclusive formats (e.g., Braille  
5 materials, sign-language and audio resources), gender-balanced portrayals of leadership, and a multilingual,  
6 open-access model, enables communication and access for all. Third, COPE empowers children as agents of  
7 change. By positioning young people as active participants rather than passive recipients, and in line with the  
8 *UN Convention on the Rights of the Child*, COPE supports children’s agency and meaningful contributions to  
9 household and community resilience. Fourth, it demonstrates clear policy and practice relevance adoption by  
10 ministries, UN platforms and NGOs, and adaptable formats, (e-books, audiobooks, jingles), that enable delivery  
11 across diverse technological and educational contexts.

12 As climate-related disasters escalate and educational disruption persists, child-centred and engaging DRR  
13 content is essential, not optional. While COPE faces constraints in operational capacity, the open-access ethos  
14 and partnership-driven implementation still indicates strong potential for global and sustainable impact. By  
15 equipping children to act with knowledge and confidence, protecting themselves, their families, and even their  
16 communities, COPE demonstrates how DRR education can cultivate a generation of resilient champions,  
17 capable of navigating an increasingly hazardous world. From localised editions in North Korea and Malaysia to  
18 community-based initiatives in Colombia and India, illustrating how international organisations can work with  
19 local actors to promote DRR resilience. The global importance of this work was underscored in August 2024,  
20 when UN Secretary-General António Guterres launched the *Cyclones* book in Tongan during a primary-school  
21 visit, a powerful international endorsement of COPE’s relevance and reach [61, 62]. *Let’s Make the Difference.*  
22 *Be Ready.*

### 23 **Declaration of generative AI and AI-assisted technologies in the writing process**

24 During the preparation of this work the author(s) used ChatGPT to refine language and improve the tone of the  
25 text. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility  
26 for the content of the publication.

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1 **Figure 1.** COPE Disaster Champions series.

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4 **Figure 2.** Three illustrations from the COPE Avalanches book. **Left:** Illustrations highlighting the key DRR  
5 message. **Centre:** Scientific information and preparedness strategies. **Right:** Mistress Fu preparing the squad with  
6 actions that children can do to stay safe during an avalanche.

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9 **Figure 3.** Two illustrations from the COPE Floods and Landslides books. **Left:** 'Evacuate' key DRR message for  
10 Floods. **Right:** Illustrations highlighting the key DRR message for Landslides.

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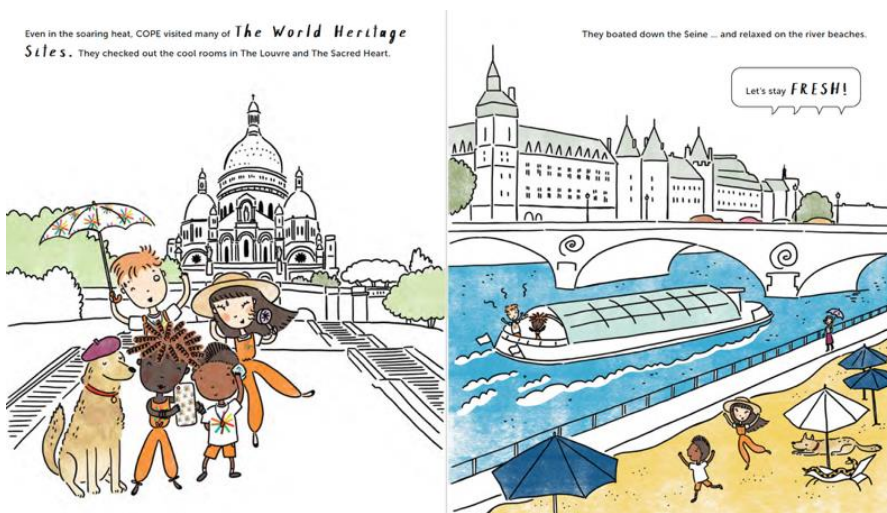
1 **Figure 4.** Illustrations from the COPE Landslides book. What to do before, during and after a landslide.

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4 **Figure 5.** Illustrations from the COPE Earthquakes book. Scenes from the Earthquakes book.

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7 **Figure 6.** Spread from the Heatwaves book showing two World Heritage Sites: The Sacred Heart church  
8 and the Banks of the Seine.

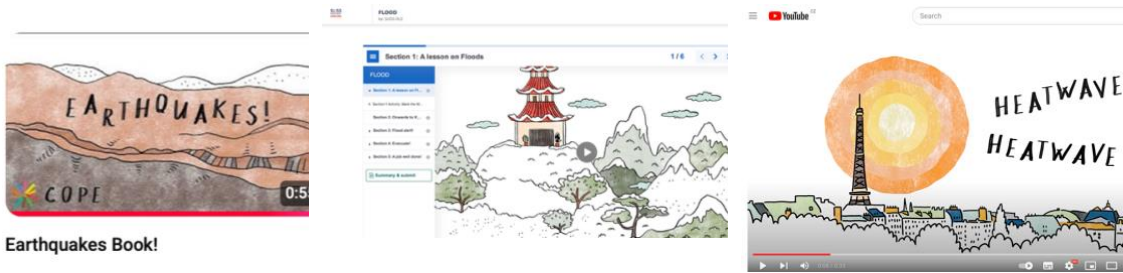
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2 **Figure 7.** Illustrations from the COPE books. **Left:** Eddy and Ollie signing “Cyclone”. **Centre:** Early Warning  
 3 **Systems.** **Right:** Selection of character from different cultural backgrounds.

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6 **Figure 8.** **Left:** Animated COPE Trailers. **Centre:** Interactive COPE books. **Right:** COPE Jingles.

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9 **Figure 9.** COPE projects on the ground. **Left:** In Malaysia: Storytelling sessions and workshops with puppets.  
 10 **Centre:** Landslides workshops in schools. **Right:** Hurricanes workshops and colouring activities with kids in  
 11 Colombia. Images courtesy of Dr Masayu Dzainudin, World Vision Nepal and Presentes Corporation.

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1 **Figure 10.** Some of the online platforms where COPE is available. **Left:** The World Meteorological Organization.  
 2 **Centre:** UNDRR Prevention Web. **Right:** UNICEF Learning Passport.  
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1 **APPENDIX A - COPE DISASTER SERIES' CONTENT DEVELOPMENT &**  
 2 **STAKEHOLDERS**

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| <b>Disaster Book</b> | <b>Key Message</b>                          | <b>Location (Story Setting)</b> | <b>Year Published</b> | <b>Collaborators / Experts</b>   | <b>Universities / Institutions</b>  |
|----------------------|---|---------------------------------|-----------------------|--|---|
| <i>Earthquakes</i>   | DROP, COVER, HOLD!                          | Mexico                          | 2019                  | Dr Janise Rodgers, Prof Philip England & Prof Barry Parson   | University of Oxford, Geo Hazards International   |
| <i>Tsunamis</i>      | GET UP TO HIGH GROUND                       | Japan                           | 2018, 2024            | UNDRR, Hong Kong Observatory, Dr Wang Dong Ming, Prof Philip England, Prof Tamsin Mather, Prof David Pyle                              | University of Oxford, National Disaster Reduction Centre of China                           |
| <i>Floods</i>        | EVACUATE                                    | Malaysia                        | 2019                  | Hong Kong Observatory, Prof Lena Dominelli   | National University of Malaysia, University Pendidikan Sultan Idris, University of Stirling |
| <i>Cyclones</i>      | STAY SAFE                                   | Australia                       | 2020                  | Hong Kong Observatory, Prof Caryn West, Andrea Grimes  | James Cook University   |
| <i>Storm Surges</i>  | KEEP CLEAR FROM THE COAST                   | Hong Kong                       | 2020                  | WMO, Hong Kong Observatory Prof Caryn West   | James Cook University, Hong Kong Jockey Club Disaster Preparedness Response Institute       |
| <i>Landslides</i>    | IN HEAVY RAINS, KEEP AWAY FROM STEEP SLOPES | Nepal                           | 2021                  | WMO, Hong Kong Observatory, World Vision Prof Alex Densmore  | University of Durham  |
| <i>Wildfires</i>     | BE READY TO GO                              | South Africa & California       | 2021                  | UNICEF South Africa, San Francisco Fire and Public Health Department Prof Antoinette Lombard   | University of Pretoria  |
| <i>Droughts</i>      | EVERY DROP COUNTS                           | China                           | 2022                  | WMO, Hong Kong Observatory, China Meteorological Administration, UNICEF East Asia and Pacific Assoc. Prof Yang Wanqiu Prof Ziqiang Han | Yunnan University, Shandong University  |
| <i>Volcanoes</i>     | LISTEN. PREPARE. STAY AWARE                 | Indonesia                       | 2022                  | UNDRR, WMO, Hong Kong Observatory, UNMGCY, Munasri, Prof Tamsin Mather & Prof David Pyle   | University of Oxford  |
| <i>Heatwaves</i>     | STAY COOL AND HYDRATED                      | France                          | 2022                  | WMO, Hong Kong Observatory, City of Paris, UNICEF East Asia and Pacific, UNESCO, METEO France, Prof Diana Mangalagiu                   | University of Oxford  |
| <i>Blizzards</i>     | WRAP UP! STAY INSIDE                        | Mongolia                        | 2023                  | WMO, MET Services Mongolia, UNICEF   | Shandong University   |
| <i>Avalanches</i>    | KNOW BEFORE YOU GO                          | New Zealand                     | 2024                  | WMO, Hong Kong Observatory, MET Services NZ, UNICEF NZ, NZ Mountain Safety   | Te Anau school  |

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|-----------------------|-----------------------|-----------|------|--|--|
| <i>Climate Change</i> | ACT NOW, FOR TOMORROW | Worldwide | 2025 | Council, Milford Road<br>WMO, UNICEF, UNDRR<br>Prof Diana Mangalagiu   | University of Oxford   |
| <i>COVID-19</i>       | STAY SAFE AND SMILING | Worldwide | 2020 | UNICEF East Asia and Pacific, Readable Singapore<br>Prof Sonoe Mashino<br>Prof Lena Dominelli<br>Prof Caryn West | University of Hyogo, University of Stirling, James Cook University |

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1 **APPENDIX B - COPE'S TRANSLATIONS & DISTRIBUTION**

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| <b>Book Title</b>   | <b>Language</b>                                    | <b>Translation Partner</b>                          | <b>Region Covered</b>   |
|---|--|---|---|
| <i>Tsunamis, Earthquakes, Floods, Cyclones, Storm Surges, Landslides, Wildfires, Droughts, Volcanoes, Heatwaves, Blizzards &amp; Avalanches</i> | English, Spanish, French, Russian, Arabic, Chinese | WMO -   | North America, Latin America, Caribbean, Middle East, Asia, Europe, East Africa |
| <i>Earthquakes, Landslides &amp; COVID-19</i>   | Nepali   | Word Vision / UNMGCY                                | South Asia  |
| <i>Cyclones</i>   | Tongan   | WMO – MET Office                                    | Pacific Islands   |
| <i>Blizzards &amp; Earthquakes</i>  | Mongolian  | UNICEF Mongolia                                     | Mongolia  |
| <i>Cyclones, Tsunamis &amp; COVID-19</i>  | Filipino   | NGO - Volunteer                                     | Southeast Asia  |
| <i>Earthquakes, Volcanoes, Floods, Cyclones, Landslides, Tsunamis</i>   | Bahasa   | Volunteer in Indonesia                              | Southeast Asia  |
| <i>COVID-19</i>   | Cantonese  | UNICEF HK   | Southeast Asia  |
| <i>Earthquakes</i>  | Italian  | NGO - Volunteer                                     | Southern Europe   |
| <i>Heatwaves, Volcanoes, Droughts, Wildfires, Landslides, Cyclones, Earthquakes</i>   | Urdu   | NGO - Volunteer                                     | South Asia  |
| <i>Landslides</i>   | Portuguese   | Volunteer   | Southern Europe   |
| <i>Floods &amp; COVID-19</i>  | Malay  | Sultan Idris Education University                   | Southeast Asia  |
| <i>Floods</i>   | Malagasy   | WMO – MET Office                                    | Southeastern coast of Africa  |
| <i>Floods &amp; COVID-19</i>  | Assamese   | UN Major Group for Children and Youth               | South Asia  |
| <i>Tsunamis, COVID-19</i>   | Japanese   | Prof Sonoe Mashino - Hyogo Univ.                    | East Asia   |
| <i>COVID-19</i>   | Vietnamese   | VDMA  | Southeast Asia  |
| <i>COVID-19</i>   | Thai   | Volunteer   | Southeast Asia  |
| <i>Volcanoes, Droughts, Landslides, Floods</i>  | Korean   | Prof. James Hammond – Birkbeck University of London | Northeast Asia  |
| <i>Landslides, Floods &amp; Earthquakes</i>   | Hindi  | Words. Rhythms. Images                              | South Asia  |
| <i>Floods</i>   | Sinhala  | Save the Children                                   | South Asia  |
| <i>Floods &amp; Heatwaves</i>   | Czech  | COPE  | Czech Republic  |

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1 **APPENDIX C - DISSEMINATION EFFORTS: STRENGTHENING GLOBAL**  
2 **DISASTER RESILIENCE**  
3 **DISSEMINATION EFFORTS:**

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| Date / Country                     | Book / Activity   | Collaborator   | Language  | Reach   | Innovative format / What is unique about it   |
|------------------------------------|---|--|-----------|---|---|
| <b>Nepal (2021)</b>                | <i>Landslides</i> - Reading camps and school distribution   | World Vision and MGCY  | Nepalese  | 42,000 books in 470 schools, 170 camps, 20,000+ reached | Integrated reading camps across 8 districts   |
| <b>Hong Kong (2021)</b>            | <i>Earthquakes</i> - Storytelling Programme" conducted 60 sessions for parents, kindergartens, and schools on disaster prevention and earthquakes drill | HKJCDPRI   | Cantonese | 2,000+ primary students                                 | Parent and kindergarten engagement  |
| <b>Philippines (2021)</b>          | <i>COVID-19</i> - Book  | Philippines Ministry of Education  | Filipino  | Online reach  | Booklet available nationwide on the Ministry's learning page                        |
| <b>Indonesia (2022)</b>            | <i>Volcanoes</i> - Students engaged in DRR programs focused on volcanic events, learning safety protocols before and after eruptions                    | UNESCO and the Tanjung Benoa Disaster Risk Reduction Forum                   | Bahasa    | Public school - 16 participants                         | Mount Merapi-based volcano safety learning  |
| <b>Argentina (2022)</b>            | <i>Floods</i> - Workshop in Punta Lara  | IIARDD, UNLP Faculty of Social Work  | Spanish   | Local children in flood-prone area – 15 participants    | Storytelling in a picnic setting  |
| <b>Malaysia (2022)</b>             | <i>Floods</i> - Storytelling sessions on flood preparedness, crafting puppets featuring COPE characters   | Sultan Idris Education University – Dr. Masayu Dzainudin                     | Malay     | Primary schools   | Puppets and discussion-based learning   |
| <b>Egypt COP27 (2022)</b>          | Session: Be ready for disasters - Empowering future generations with practical knowledge in DRR   | COPE - WMO   | English   | 15 Global leaders                                       | Practical Knowledge on DRR  |
| <b>Colombia (2023)</b>             | <i>Hurricanes</i> - Workshops with teachers and local officials on hurricanes and Disaster Risk Management  | Presentes Corporation  | Spanish   | 1,000 books to schools, libraries, and the police.      | Localized DRR training; educators trained; long-term recovery resilience focus      |
| <b>India (2023)</b>                | <i>Floods</i> and <i>COVID-19</i> into Assamese, conducted reading sessions   | UN Major Group for Children and Youth  | Assamese  | 2,400 books to 7 institutions                           | Snowball sampling of flood-prone areas; storytelling led to local DRR policy shifts |
| <b>Tonga (2023)</b>                | <i>Cyclones</i> in Tongan at the Sixth Pacific Meteorological Council Meeting   | WMO  | Tongan    | 100+ participants to implement a national rollout       | Sixth PMC event focus on kids   |
| <b>Switzerland (Geneva) (2023)</b> | <i>Heatwaves</i> - Interactive sessions promoting DRR knowledge through colouring activities  | WMO – COPE   | French    | Children at WMO outreach – 400+ participants            | Visual learning approach  |
| <b>Czech Republic (2023)</b>       | COPE Disaster Risk Reduction workshop at ISB School   | COPE   | English   | 40 ISB Students   | Workshop-based engagement   |
| <b>Ecuador (2023)</b>              | <i>Volcanoes</i> - distributed to teachers  | University of Oxford (Professor Tamsin Mather & Professor David Pyle), IGEPN | Spanish   | National education network                              | Collaboration with IGEPN for science-education outreach                             |

|                                       |  |   |          |   |  |
|---------------------------------------|--|---|----------|---|--|
| <b>Montserrat (2023)</b>              | <i>Volcanoes</i> - Shared with local schools, the volcano observatory, and the National Trust  | University of Oxford (Professor Tamsin Mather & Professor David Pyle) | English  | Local schools                                 | Strengthened volcanic DRR awareness in Caribbean   |
| <b>The Bahamas (2023)</b>             | <i>Cyclones</i> - Adapted to Hurricanes  | Local school request  | English  | One school                                    | Localized version created specifically for Caribbean use   |
| <b>Dubai COY18 (2023)</b>             | Session: Empowering children and youth for resilience through DRR education  | COPE - UMGCY  | English  | 25 youth leaders                              | Youth-led DRR empowerment  |
| <b>Dubai COP28 (2023)</b>             | Session: Communicating around early warnings: from disinformation to acceptance  | COPE - WMO  | English  | 50 Global leaders                             | Early Warning Systems Education  |
| <b>Dubai COP28 (2023)</b>             | Session: Preparing a future generation of resilient children: capacity building session with practical knowledge in Disaster Risk Reduction. | COPE - UMGCY  | English  | 50 participants                               | Youth-led DRR empowerment  |
| <b>Guatemala (2024)</b>               | COPE books presented at the Cities on Volcanoes conference   | University of Oxford (Professor Tamsin Mather & Professor David Pyle) | Spanish  | 100+ participants                             | COPE's journey from Guatemala to Ecuador emphasized  |
| <b>Argentina (2024)</b>               | <i>Floods</i> - Risk management class for two rural primary schools in Castelli, Buenos Aires  | IIARDD  | Spanish  | 2 rural schools<br>10 participants per school | Environment Day celebration  |
| <b>Colombia (2024)</b>                | COPE at First Congress on DRM in Manizales   | Presentes Corporation   | Spanish  | National stakeholders – 200 participants      | COPE showcased as community empowerment strategy   |
| <b>Nicaragua (2024)</b>               | <i>Volcanoes</i> - Introduced to preschool "Los Carlitos" to educate children on volcanic preparedness                                       | University of Oxford (Professor Tamsin Mather & Professor David Pyle) | Spanish  | 10 students                                   | Hands-on learning about volcanoes for children under six   |
| <b>France (2024)</b>                  | <i>Heatwaves</i> at an exhibition during the Olympic Games   | Climate Academy   | French   | Olympic-linked exhibition                     | Interactive climate adaptation exhibition for youth  |
| <b>Egypt (2024)</b>                   | <i>Earthquakes</i> - Storytelling sessions and earthquake prevention video clip  | UNICEF Egypt – CARE   | Arabic   | Learning Hub - 360 Students                   | Pop-up books and multimedia – The workshops took place after the period of earthquakes in Turkey and Syria |
| <b>Egypt (2024)</b>                   | <i>Droughts and Heatwaves</i> - STEAM camps  | UNICEF Egypt  | Arabic   | 160,000 primary school children               | DRR integrated into STEAM with group projects  |
| <b>Colombia, Argentina (2024)</b>     | <i>Launch of Train the Trainers materials</i>  | COPE – IIARDD – PRESENTES - UNDRR                                     | Spanish  | Teachers in Latin America – 341 Views         | New materials for teachers to teach DRR topics in schools  |
| <b>Madagascar (2024)</b>              | <i>Hurricanes and Floods</i> presented to the Ministry of Education  | WMO, Météo Madagascar   | Malagasy | Nationwide Schools                            | Possible integration into school curricula, launched on World Meteorological Day                           |
| <b>Malaysia (2024)</b>                | <i>Floods</i> - Flood Community Activity in Tanjong Malim, providing flood kits and books  | Dr. Masayu Dzainudin, UPSI, NCDRC                                     | Malay    | Indigenous communities – 24 participants      | Finger puppets, storytelling, flood kits on National Children's Day  |
| <b>Malaysia (Kuala Lumpur) (2024)</b> | Early Warnings for Youth - COPE Disaster Series contribution   | WMO   | English  | Youth session participants                    | Contribution to ESCAP/WMO Typhoon Committee  |
| <b>Bangladesh (2024)</b>              | Tsunamis book - Storytelling session with interactive games and arts   | RIMES   | English  | Local children -18 participants               | Drop, Cover, Hold taught via fun activities  |
| <b>Indonesia (2024)</b>               | Tsunamis book - Presented at UNESCO IOC Global Tsunami Symposium   | UNDRR   | English  | Global experts                                | Highlighted community empowerment via DRR books  |

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|---|--|---|---------------------|---|---|
| <b>Philippines (2024)</b>                       | COPE at APMCDRR, Tsunamis book launch  | COPE - APMCDRR  | English             | Regional ministers, NGOs<br>400+ participants   | New book launch + youth focus   |
| <b>Philippines (2024)</b>                       | 3-day youth advocacy training featuring COPE   | UNICEF, Bureau Community College                                  | Filipino            | 40 youth leaders  | Youth-led DRR empowerment   |
| <b>Tonga (2024)</b>                             | UN Secretary-General António Guterres highlighted COPE's <i>Cyclones</i> book during his visit to a local school | WMO   | English             | Local school children – 100+ participants   | Highlighted by António Guterres   |
| <b>Maldives (2024)</b>                          | COPE <i>Tsunamis</i> book launch on Dec 26   | NDMA, Equinox Media   | English             | Tsunami anniversary event   | Tsunami commemoration through book gifting  |
| <b>Geneva (2025)</b>                            | COPE <i>Floods, Heatwaves and Droughts</i>   | UNDRR Global Platform   | English             | Workshop for more than 60 youth leaders   | Book dive and activities with the COPE books  |
| <b>Costa Rica (2025)</b>                        | COPE <i>Train the Trainers</i>   | Costa Rican Red Cross   | Spanish             | Workshops in 11 schools, more than 250 students   | Special materials design for teachers and students with activities to do during the classes   |
| <b>Malaysia (2025)</b>                          | COPE <i>Floods</i>   | Sultan Idris Education University – Dr. Masayu Dzainudi<br>UNICEF | Malay               | School book tour  | Floods book in Braille and interactive audio video in Malaysian Sign Language   |
| <b>Egypt (2025)</b>                             | COPE <i>Floods, Heatwaves, Earthquakes</i> – Arabic<br>Videos on Platform  | UNICEF Learning Passport – Egypt                                  | Arabic              | 625 lessons registrations   | Interactive books - videos targeted to Arabic speakers  |
| <b>Egypt (2025)</b>                             | COPE <i>Floods, Heatwaves, Earthquakes</i> – Arabic<br>Videos on Ministry of Education                           | MOE Learning Passport - UNICEF                                    | Arabic              | 865 Community schools<br>91 teachers - Each teacher had 40–45 students in multi-grade classes | Interactive books - videos targeted to Arabic speakers  |
| <b>Globally COPE's website (2022-2025)</b>      | COPE Books   | COPE  | Different languages | 23,700 reported visits  | Books, Videos and Animations  |
| <b>COPE's YouTube (2025)</b>                    | COPE Books   | COPE  | Different languages | 10,634 views  | COPE Jingles and Animations   |
| <b>Hong Kong (2025)</b>                         | COPE <i>Covid-19</i>   | UNICEF Hong Kong  | Cantonese           | 10,000 views  | COVID-19 video  |
| <b>UNDRR Prevention Web</b>                     | COPE Books   | UNDRR   | Various languages   | Views: 1,149<br>Downloads: 1,233  | Online Books  |
| <b>Globally UNICEF learning Passport (2025)</b> | COPE Books   | UNICEF  | English             | 15 libraries:<br>15,093 learners engaged  | Online Books  |
| <b>Sri Lanka (2025)</b>                         | COPE <i>Floods</i>   | Save the Children Sri Lanka                                       | Sinhala             | 8 school libraries<br>20 Village Disaster Management Committees                               | Schools where clubs have been established to introduce children to environmental conservation, disaster risks and community awareness |

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## 1 ENDNOTES

<sup>i</sup> **COPE's Jingles** [https://youtu.be/6lhE6TBYNwA?si=8h20EgAhSstD\\_HjW](https://youtu.be/6lhE6TBYNwA?si=8h20EgAhSstD_HjW)

<sup>ii</sup> COPE on the **UNDRR Prevention Web** <https://www.preventionweb.net/publication/tsunamis-2024>

<sup>iii</sup> SUSS platform under development: <https://sussole.h5p.com/content/1292139002131334489>

<sup>iv</sup> **WeAdapt** is a collaborative platform on climate change adaptation issues: <https://weadapt.org/knowledge-base/disasters-and-climate-change/cope-books-for-children-heatwaves/>

<sup>v</sup> **The PreventionWeb** is a global platform created to share knowledge for disaster risk reduction and resilience: <https://www.preventionweb.net/publication/droughts>

<sup>vi</sup> **HK Observatory** is a website created to teach children about climate-related topics:

<https://kids.weather.gov.hk/en/index.html>

<sup>vii</sup> **World Vision** implemented Disaster Risk Reduction programs with the COPE content:

<https://www.wvi.org/stories/nepal/cope-landslides-book>

<sup>viii</sup> **UNICEF Learning Passport** <https://global.learningpassport.org>