

STEAME

FOR SAVING LIFE

Guidelines for developing and implementing Disaster Risk Reduction Education in Elementary School Curriculum

01/A1

**Analysis of European and Global characteristics in terms of
activities and curricula in Elementary Schools relevant to
STEAME DRRE project**

Project Acronym: STEAME-DRREC

Reference number: 2023-2-CY01-KA210-SCH-000169945

Implementation period: 31 August 2024 – 30 August 2026



www.steame-life.eu

✉ steamedrrec@gmail.com

📘 Steame for Saving Life



Co-funded by
the European Union

"Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them."



STEAME-DRREC

“STEAME for Saving Life: Guidelines for developing and implementing Disaster Risk Reduction Education in Elementary School Curriculum”

Reference number: 2023-2-CY01-KA210-SCH-000169945

Implementation period: 31 August 2024 – 30 August 2026

O1/A1

Analysis of European and Global characteristics in terms of activities and curricula in Elementary Schools relevant to STEAME DRRE project

Deliverable leading partner: Competence Center for a Sustainable and Resilient Built Environment using Smart Technologies (SURE)

www.steame-life.eu



**Co-funded by
the European Union**



This content is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International license. Under the terms of the license, you are free to copy and redistribute the material in any medium or format, but only for non-commercial purposes. You must give appropriate credit, provide a link to the license and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. If you remix, transform, or build upon the material, you may not distribute the modified material. You are not allowed to create derivative works based on this material. You may not use the material for commercial purposes.

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Published on: 26 February 2025

Table of Contents

1. BRIEF DESCRIPTION	5
2. INTRODUCTION	6
3. ELEMENTARY SCHOOL STRUCTURE IN EUROPE AND AROUND THE WORLD	6
3.1. Europe: A Diverse but Coherent Framework.....	6
3.2. Global Perspectives: Comparing Structures Across Continents.....	7
4. CHARACTERISTICS OF DRR EDUCATION ACTIVITIES AND CURRICULA IN ELEMENTARY SCHOOLS ACROSS EUROPE.....	7
4.1. Italy.....	7
DRR activities in Elementary School Curriculum.....	8
Incorporation of DRR Education through Educational Programs	8
Collaboration with External Organizations	10
Educational Resources	10
4.2. France.....	12
DRR Activities in the Elementary School Curriculum	12
Incorporation of DRR Education through Educational Programs	12
Collaboration with External Organizations	14
Educational Resources	15
4.3. Germany.....	16
DRR Activities in the Elementary School Curriculum	16
Incorporation of DRR Education through Educational Programs	16
Collaboration with External Organizations	18
Educational Resources	18
4.4. Spain.....	19
DRR Activities in the Elementary School Curriculum	20
Incorporation of DRR Education through Educational Programs	20
Collaboration with External Organizations	22
Educational Resources	22
4.5. Austria	24
DRR Activities in the Elementary School Curriculum	24
Incorporation of DRR Education through Educational Programs	25
Collaboration with External Partners.....	26
Educational Resources and Support	26
4.6. Cyprus	28
DRR Activities in the Elementary School Curriculum	28
Incorporation of DRR Education through Educational Programs	28
Collaboration with External Organizations	30

Educational Resources and Support	30
4.7. Greece	32
DRR Activities in the Elementary School Curriculum	32
Incorporation of DRR Education through Educational Programs	32
Collaboration with External Organizations	34
Educational Resources and Support	34
5. CHARACTERISTICS OF DRR EDUCATION ACTIVITIES AND CURRICULA IN ELEMENTARY SCHOOLS GLOBALLY	36
5.1. California, USA	37
DRR Activities in the Elementary School Curriculum	38
Incorporation of DRR Education through Educational Programs	38
Collaboration with External Organizations	39
Educational Resources	40
5.2. Japan	41
DRR Activities in the Elementary School Curriculum	42
Incorporation of DRR Education through Educational Programs	42
Collaboration with External Organizations	43
Educational Resources	44
5.3. New Zealand	45
DRR Activities in the Elementary School Curriculum	45
Incorporation of DRR Education through Educational Programs	45
Collaboration with External Organizations — New Zealand	47
Educational Resources	47
5.4. Singapore	48
DRR Activities in the Elementary School Curriculum	48
Incorporation of DRR Education through Educational Programs	49
Collaboration with External Organizations — Singapore	50
Educational Resources	50
5.5. Iceland	51
DRR Activities in the Elementary School Curriculum	52
Incorporation of DRR Education through Educational Programs	52
Collaboration with External Organizations	53
Educational Resources	53
6. EUROPEAN FUNDED PROJECTS ON DRR EDUCATION ACTIVITIES	54
Project Title: Education for Disaster Risk Reduction in Europe (EDU-DRR)	54
Project Title: DRR-Youth Empowerment Initiative	55
Project Title: European Master in Disaster Risk and Crisis Management (EUMA)	55

Project Title: Innovating Preparedness by Leveraging Synergies and Enhancing Volunteer Involvement (SYNERGIES)	56
Project Title: Cultures of Disaster Resilience among children and young people (CUIDAR)	57
Project Title: Safer Schools and Kindergartens.....	57
Project Title: Prevention of Disasters ICT (PREDICT)	58
Project Title: Know your city, Reduce seismic risk through non-structural elements (KnowRISK)....	58
7. FREELY AVAILABLE RESOURCES AND TOOLS TO ENHANCE DRR EDUCATION	59
Glossary for Disaster Reduction Terminology	59
ProVention Consortium's YouTube Channel.....	59
United States Federal Emergency Management Agency (FEMA) Children's Page.....	59
IRIS (Incorporated Research Institutions for Seismology) Website	59
Stop Disasters! Online Game	60
8. CONCLUSIONS	60
REFERENCES	62

1. BRIEF DESCRIPTION

The STEAME-DRREC project aims to develop a dynamic and adaptive framework for Disaster Risk Reduction (DRR) education in elementary schools. Its overall goal is to support the integration of DRR concepts into existing curricula, helping young learners develop knowledge, awareness, practical skills and responsible attitudes related to disaster preparedness, prevention and response. Within this broader project framework, the present report O1/A1: Analysis of European and Global characteristics in terms of activities and curricula of Elementary Schools relevant to DRR education aims to provide a structured overview of how DRR education is addressed in elementary education across selected European and global contexts. More specifically, the report examines how DRR-related knowledge, skills and practices are reflected in school curricula, educational activities, age-appropriate learning approaches, school safety procedures and cooperation with external organizations. It also considers examples of good practice, common characteristics of DRR education activities and freely available resources that can support teachers in designing effective DRR learning experiences. Through this overview, O1/A1 provides a foundation for the development of practical, adaptable and curriculum-relevant STEAME-DRREC guidelines for DRR education in elementary schools.

The report first examines the general structure of elementary education in Europe and in selected countries around the world, since grade organization and school stages differ between educational systems. This provides the background needed to understand how DRR education can be adapted to different school structures, age groups and curriculum frameworks. It then explores European approaches to DRR education through country-based sections on Italy, France, Germany, Spain, Austria, Cyprus and Greece. Each country section considers how DRR is connected with the elementary school curriculum, how activities are adapted to different age groups, which external organizations may support schools, and what educational resources are available.

The global part of the report extends the review beyond Europe by examining California, Japan, New Zealand, Singapore and Iceland. These examples provide additional perspectives from countries and regions with different hazard profiles and different approaches to preparedness, school safety, emergency drills, civil protection, environmental learning and community resilience. Through these cases, the report identifies common characteristics of DRR education, including cross-curricular integration, practical and experiential learning, local hazard awareness, progressive age-appropriate activities, and collaboration with emergency services, civil protection agencies, meteorological institutions and other relevant organizations.

The report also includes a section on European-funded projects related to DRR education activities, followed by a section on freely available resources and tools that can support teachers in developing DRR-related lessons and activities. These parts of the report are important because effective DRR education depends not only on curriculum references, but also on accessible teaching materials, institutional support, digital tools, school-based activities and examples of good practice. The resources and projects presented can help educators design learning experiences that are practical, engaging and relevant to pupils' everyday lives.

Overall, O1/A1 provides the foundation for understanding how DRR education can be introduced, organized and strengthened in elementary schools. It shows that DRR education is most often implemented through an interdisciplinary approach rather than as a standalone subject, and that effective practice usually combines classroom learning with drills, simulations, local risk awareness, emergency behaviour and community involvement. In this way, the report supports the development of future STEAME-DRREC guidelines by identifying useful models, common patterns and educational resources that can contribute to safer, more prepared and more resilient school communities.

2. INTRODUCTION

Disaster Risk Reduction (DRR) education is a crucial component in fostering a culture of preparedness and resilience. Natural disasters such as earthquakes, floods, wildfires, and storms are becoming more frequent and severe due to climate change and urbanization. Young learners are particularly vulnerable during disasters, yet they play a pivotal role as active agents of change within their families and communities when equipped with the right knowledge and skills (UNESCO, 2020). Integrating DRR education into elementary schools equips children with the knowledge and tools needed to understand hazards, reduce risks, and respond effectively during emergencies. It fosters a culture of safety, raises awareness about natural hazards, and equips children with practical tools to respond effectively in emergencies.

Educational initiatives worldwide have demonstrated that DRR education not only increases preparedness but also reduces community vulnerability. For example, Japan has successfully implemented school drills and disaster simulations, while California integrates earthquake preparedness and wildfire awareness into its state curricula (MEXT, 2016; CAL FIRE, 2022). Therefore, DRR should become an essential part of elementary school curricula worldwide, as a proactive approach to disaster preparedness and risk reduction. This report explores the characteristics of DRR education activities and curricula across Europe and globally. It highlights how countries like Italy, Cyprus, and Greece have incorporated DRR principles into their educational systems. Additionally, it presents freely available tools and resources that educators can utilize to develop engaging DRR lessons. The findings aim to support the development of effective educational frameworks that promote disaster awareness, prevention, and preparedness.

3. ELEMENTARY SCHOOL STRUCTURE IN EUROPE AND AROUND THE WORLD

Elementary education serves as the foundation for lifelong learning and development, playing a crucial role in the cognitive, social, and emotional growth of children. While the concept of primary or elementary education is globally acknowledged, its structure—particularly the division into grades—varies significantly across countries due to differences in educational philosophy, government policy, and cultural norms. This section explores how elementary schooling is structured across Europe and compares it with systems in other parts of the world.

3.1. Europe: A Diverse but Coherent Framework

In most European countries, elementary or primary education begins at around age 6 and continues until age 11 or 12, spanning about 4 to 6 years. Despite differences, European nations generally follow the guidelines of the European Union and the Bologna Process to ensure some degree of standardization and quality assurance.

- a) Germany: Primary education (Grundschule) begins at age 6 and lasts for four years (Grades 1–4). After this, students stream into different secondary school tracks based on academic performance.
- b) France: Elementary school (école élémentaire) runs from age 6 to 11, comprising five years (Cours préparatoire – CP to Cours moyen deuxième année – CM2). The curriculum is nationally standardized and prepares students for collège (lower secondary school).
- c) United Kingdom: In England and Wales, primary school spans from Year 1 (age 5) to Year 6 (age 11), making up Key Stages 1 and 2 in the national curriculum. Scotland and Northern Ireland follow slightly different systems but retain a similar age structure.

- d) Sweden: The compulsory school system includes nine years of basic education (Grundskola), but formal schooling typically starts at age 7. The first six years correspond to the elementary stage.
- e) Italy: Elementary school (scuola primaria) begins at age 6 and lasts for five years. It is followed by three years of lower secondary school. The focus is on holistic development, including arts and civics education.

Despite regional differences, a common feature across Europe is the emphasis on foundational literacy, numeracy, language, and personal development in the early grades. The use of a national curriculum and standardized teacher training programs helps ensure that children receive a consistent level of education regardless of location.

3.2. Global Perspectives: Comparing Structures Across Continents

Outside of Europe, the structure of elementary education varies even more significantly. Cultural expectations, government resources, and historical influences shape these systems uniquely.

- a) United States: Elementary school typically includes Kindergarten (age 5) through Grade 5 or 6, depending on the state. This corresponds to ages 5 to 11 or 12. The curriculum emphasizes core subjects like math, reading, science, and social studies, with growing attention to emotional and social learning.
- b) Japan: Elementary school begins at age 6 and lasts for six years. The grade levels are labeled Grades 1 to 6, and the system emphasizes discipline, group activities, and moral education alongside academics.
- c) China: Primary school starts at age 6 or 7 and consists of six grades. Academic performance is highly emphasized, with national examinations playing a key role in student progression.
- d) India: Elementary education is divided into Lower Primary (Grades 1–5) and Upper Primary (Grades 6–8). The Right to Education Act mandates free and compulsory education for children aged 6 to 14. Curriculum and quality vary widely between urban and rural areas.
- e) Australia: Primary education begins with Kindergarten or Preparatory (Prep) at age 5 and continues to Grade 6 or 7. The curriculum is determined by individual states but coordinated through a national framework that emphasizes literacy, numeracy, and general capabilities.
- f) South Africa: Primary education comprises Grades R (Reception year) through Grade 7. Children usually enter Grade R at age 5 or 6. The system is bilingual or multilingual and includes indigenous languages in early grades.

4. CHARACTERISTICS OF DRR EDUCATION ACTIVITIES AND CURRICULA IN ELEMENTARY SCHOOLS ACROSS EUROPE

4.1. Italy

Italy has a well-developed approach to disaster risk reduction (DRR) education, reflecting the country's exposure to major natural hazards such as earthquakes, volcanic activity, floods, landslides and wildfires. In Italian schools, DRR is mainly addressed through civil protection education and is connected with civic education, science, geography and environmental education, rather than being taught as a completely separate subject. The Italian Civil Protection Department states that, following Law No. 92 of 19 August 2019, civil protection topics have been included in the national education programme as part of compulsory civic education from the 2020–2021 school year (Dipartimento della Protezione Civile, 2022).

This framework allows schools to introduce pupils to natural and human-made risks, prevention, emergency behaviour, and the role of citizens in the National Civil Protection Service.

At primary-school level, DRR education can combine classroom learning with practical preparedness activities. Pupils may explore natural phenomena and local hazards through science and geography, while civic education can help them understand responsibility, prevention, solidarity and community safety. The Civil Protection Department's institutional textbook for teachers is designed for students aged 6 to 19 and provides historical, technical, scientific, operational and policy-related knowledge about civil protection and the risks it addresses (Dipartimento della Protezione Civile, 2022). Therefore, DRR education in Italy should be understood as both knowledge-based and practice-oriented: it helps students understand why disasters occur and how risks can be reduced, while also encouraging responsible behaviour and preparedness in school and community contexts.

DRR activities in Elementary School Curriculum

DRR education in Italy is mainly integrated into the broader school curriculum through civic education and cross-curricular learning rather than being taught only as a separate subject. Since the 2020–2021 school year, Italian schools have been required to include civil protection topics within compulsory civic education, and civic education is designed to be integrated with other curricular subjects (Dipartimento della Protezione Civile, 2022a; Eurydice, 2024). This cross-disciplinary approach allows elements of disaster risk reduction to be connected with science, through the study of natural hazards and their causes; geography, through the understanding of local landscapes and territorial risks; and social studies or civic education, through themes of responsibility, preparedness, and community engagement. As a result, students can understand DRR as a real-life issue connected to both scientific knowledge and active citizenship. The Italian project EDURISK – Educational Itineraries for Risk Reduction is an example of this approach, as it developed educational tools and activities on seismic and volcanic risk for use in Italian schools (EDURISK Project, 2007). Within this framework, “A prova di terremoto” can be used as a primary-school resource for teaching earthquake risk and safety. In a Grade 5 science context, such activities can be linked to hands-on learning, for example by asking students to construct model buildings with different materials and test which structures better withstand simulated earthquake shaking. This type of activity teaches scientific concepts related to forces, stability, materials, and engineering design, while also developing students' practical awareness of earthquake-resistant construction and disaster risk reduction. A related Emilia-Romagna educational initiative is “Facciamo noi! Una ricostruzione fantastica. Bambini e ragazzi contro il terremoto,” a project curated by EDURISK and the cooperative *Con un gioco*, carried out in the 2012–2013 school year with four comprehensive schools in areas affected by the Emilia earthquake, with the patronage of INGV, Civil Protection, and Regione Emilia-Romagna (Documentazione Sisma Emilia, 2013; INGV, 2013).

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness

At the early stages of elementary education, particularly in Grades 1 and 2, disaster risk reduction (DRR) education focuses on developing basic safety awareness, helping children recognize natural hazards, and encouraging simple protective behaviours in familiar environments such as the home and school. In the Italian context, these aims can be addressed through cross-curricular and experiential learning activities connected with environmental education, science, civic education, and school safety practices. A relevant national initiative is “Io non rischio Scuola,” a civil protection education project for primary school pupils, officially described by the Italian Civil Protection Department as a project on risk prevention addressed to pupils in primary schools (Dipartimento della Protezione Civile, 2022b). More recently, the Department presented a new version of “Io non rischio Scuola” for primary schools, including an educational kit with laboratory activities designed by pedagogists, scientists, educators, and civil protection experts to help teachers develop risk-education pathways with their pupils (Dipartimento della Protezione Civile, 2024a). For younger pupils, the EDURISK resource “Se arriva il terremoto – Guida per gli insegnanti” is particularly

appropriate. EDURISK's official project history states that its first educational tools for schools, including "Se arriva il terremoto," were developed in 2003, while the specific teacher guide provides thirteen educational activities on earthquakes for children aged four and above and is addressed to teachers in preschool and the first years of primary school (EDURISK, 2003). Through storytelling, games, illustrations, guided discussion, and simple school drills, children can learn to identify hazards such as earthquakes, floods, and fires, recognize safe and unsafe behaviours, and understand the role of adults and emergency services during a crisis. In relation to earthquakes, these activities may include learning to take shelter under a table, stay away from furniture, heavy objects, and glass, avoid stairs and elevators during shaking, and follow the school emergency plan, in line with the safety recommendations of the Italian Civil Protection Department (Dipartimento della Protezione Civile, 2024b). At this level, the aim is not to provide technical knowledge of disasters, but to build early protective habits, emotional preparedness, and confidence in following safety routines during emergencies.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention

In the middle grades of primary education, particularly Grades 3 and 4, disaster risk reduction (DRR) education can move beyond basic safety rules and focus more systematically on the understanding of natural hazards, the concept of risk, and the importance of prevention. In the Italian context, this approach is supported by "Io non rischio Scuola," a school-based development of the national "Io non rischio" civil protection campaign. The project was launched in 2017 in collaboration with regional civil protection authorities and regional school offices, with the aim of extending the culture of prevention to primary schools (Io non rischio, 2017). It is designed as an experiential learning pathway for primary school pupils, involving teachers and appropriately trained civil protection volunteers in activities that help children understand natural risks and the actions that can reduce them. Classroom work is supported by a didactic kit combining theoretical inputs and multi-risk workshops; the kit includes ten activity sheets, from which teachers and volunteers select those most suitable for the pupils' age group and local context, usually organizing the pathway into three meetings of one to two hours each. For Grades 3 and 4, such activities may include guided discussions, analysis of local hazards, collaborative tasks, posters or communication activities about prevention, and simple scenario-based exercises. These activities are consistent with the broader educational aim of developing knowledge, critical thinking, and responsible behaviour in relation to civil protection and risk reduction. The institutional volume *La protezione civile in Italia*, published by the Italian Civil Protection Department as a reference text for school teachers, also supports the integration of civil protection themes into civic education, emphasizing knowledge of territorial risks, self-protection measures, and citizens' participation in the National Civil Protection Service (Dolce et al., 2020). Therefore, at this stage, DRR education is not limited to emergency behaviour; it also helps pupils understand why risks exist, how communities prepare for them, and how individual and collective actions can contribute to prevention and resilience.

Upper Grades (Grades 5-6): In-Depth Exploration and Application of DRR Concepts

For Grade 5-6 students, disaster risk reduction (DRR) education can become more detailed and analytical, building on the basic safety knowledge developed in earlier years. At this stage, pupils can be encouraged to examine the causes and effects of natural hazards, understand the relationship between hazards, vulnerability, exposure, and risk, and reflect on the role of individual and collective behaviour in prevention and preparedness. In the Italian context, a relevant and well-documented initiative is "Io non rischio Scuola," a school-based development of the national civil protection campaign for primary schools. The initiative provides teachers with a formative kit designed by pedagogists, psychologists, scientists, educators, and civil protection experts, allowing them to develop risk-education activities within civic education, either independently or with the support of local civil protection volunteers (Dipartimento della Protezione Civile, 2024a). This approach can be connected with Grade 5 activities such as identifying local hazards, discussing school emergency procedures, creating prevention posters, and analysing simple risk scenarios. For earthquake education, the EDURISK guide "A prova di terremoto: Laboratori e attività per la scuola" provides a strong curricular resource, as it is a guide for primary and secondary school teachers based on teaching units developed by teachers who participated in EDURISK activities across

Italy (EDURISK, 2015). Through such activities, Grade 5-6 pupils can explore seismic risk by investigating building vulnerability, emergency behaviour, and the importance of preparedness. In relation to volcanic risk, especially in areas close to active volcanic systems such as Campi Flegrei, Vesuvius, and Etna, DRR education may also include lessons on volcanic activity, monitoring, evacuation planning, and correct behaviour during emergencies. This is supported by the EDURISK volume “Noi e i vulcani,” first published in 2007 and presented as a didactic tool for primary schools (EDURISK, 2007). Therefore, in Grades 5-6, DRR education should not be limited to evacuation drills; it should help students connect scientific understanding, territorial awareness, civic responsibility, and practical preparedness.

Collaboration with External Organizations

Italian elementary schools may collaborate with external organizations in order to connect disaster risk reduction (DRR) education with real-world expertise, practical safety learning, and the broader culture of civil protection. In Italy, this collaboration can involve public institutions, local fire services, civil protection authorities, municipalities, voluntary organizations, and other actors of the National Civil Protection Service. A well-documented example is “Scuola Sicura,” a project developed by the Italian Ministry of the Interior in collaboration with the Ministry of Public Education and the Civil Protection Department, with the aim of introducing civil protection education into compulsory schooling (Corpo Nazionale dei Vigili del Fuoco). The project addresses different types of risk, including risks at home, at school, in the natural environment, and in the human environment, while promoting responsible behaviour, collaboration, solidarity, and self-control in emergency situations.

A key external actor in this context is the Corpo Nazionale dei Vigili del Fuoco, or National Fire and Rescue Service. Local fire brigade commands may support schools through training meetings, educational activities, and guided visits to fire brigade facilities, as shown in local implementations of “Scuola Sicura” (Corpo Nazionale dei Vigili del Fuoco, 2026). These activities can help pupils understand fire safety, emergency behaviour, evacuation procedures, and the role of rescue services. However, it is more accurate to describe these activities as locally implemented forms of school safety and civil protection education, rather than as identical activities carried out in every Italian school.

A related example of collaboration with external civil protection actors is “Anch’io sono la Protezione Civile,” a national camp-school initiative promoted by the Civil Protection Department. The initiative involves young people aged 10–16 in activities on natural risks, civil protection planning, local territory, and good practices for protecting themselves, the environment, and the community. The 2025 edition included more than 340 camps across Italy and over 6,000 participants, with contributions from actors such as the Fire Brigade, emergency medical services, the Italian Red Cross, municipalities, regions, and other members of the National Civil Protection Service (Dipartimento della Protezione Civile, 2025). Therefore, collaboration with external organizations in Italian DRR education should be understood not simply as isolated fire-safety workshops, but as part of a wider civil protection education model involving schools, emergency services, public institutions, local authorities, and voluntary organizations.

Educational Resources

Italy supports disaster risk reduction (DRR) education through a combination of civil protection education, civic education, school-based initiatives, and specialized teaching resources. Rather than functioning as a single standalone subject, DRR-related learning is connected with science, geography, environmental education, civic responsibility, and practical preparedness. A key institutional reference is the Italian Civil Protection Department’s textbook *Civil Protection in Italy: Basic Training in Civil Protection*, which was conceived as a tool for school teachers after civil protection topics were introduced into the national education programme as part of compulsory civic education from the 2020–2021 school year (Dipartimento della Protezione Civile, 2022a). In this way, Italian schools can link knowledge about natural and human-made risks with prevention, emergency behaviour, active citizenship, and the role of the National Civil Protection Service.

This approach is supported by a range of official and educational resources that provide schools with institutional guidance, teaching materials, project-based activities, and practical information on risk prevention and emergency preparedness. The most relevant educational resources include the following:

- a) *Dipartimento della Protezione Civile — Civil Protection Department*
Official national source for civil protection information, risk prevention, emergency planning, preparedness, and educational publications.
Useful for: civil protection education, institutional information, emergency behaviour, teacher resources.
<https://www.protezionecivile.gov.it>
- b) *Civil Protection in Italy: Basic Training in Civil Protection*
Institutional textbook for school teachers, published as the English version of *La protezione civile in Italia*. It supports the teaching of civil protection topics within civic education and is addressed to teachers working with students aged 6 to 19.
Useful for: teacher background knowledge, civic education, civil protection system, risks and preparedness.
<https://www.protezionecivile.gov.it/en/pubblicazione/civil-protection-italy-basic-training-civil-protection-0/>
- c) *Io non rischio / I Don't Take Risks*
National public awareness campaign promoting good civil protection practices and risk awareness.
Useful for: earthquakes, floods, volcanic risk, tsunamis, public preparedness, protective behaviours.
<https://www.iononrischio.gov.it>
- d) *Io non rischio Scuola*
School-oriented section of the *Io non rischio* campaign. It gathers initiatives, learning pathways and didactic activities that students can carry out with teachers or trained civil protection volunteers.
Useful for: school DRR activities, civil protection good practices, active learning, prevention culture.
<https://www.iononrischio.gov.it/it/approfondimento/scuole/>
- e) *Ministero dell'Istruzione e del Merito — Civic Education Guidelines*
The Ministry provides the curricular and policy framework for schools. Its 2024 civic education guidelines are relevant because they support the integration of themes such as responsibility, safety, environmental protection, and active citizenship into school learning.
Useful for: curriculum framework, civic education, policy context.
<https://www.mim.gov.it/documents/20182/0/Linee%2Bguida%2BEducazione%2Bcivica.pdf/9ffd1e06-db57-1596-c742-216b3f42b995?t=1725710190643>
- f) *EDURISK*
Italian educational project providing teaching resources on seismic and volcanic risk for schools.
Useful for: earthquake education, volcanic risk education, primary-school activities, teacher guides.
<https://www.edurisk.it>
- g) *A prova di terremoto: Laboratori e attività per la scuola*
EDURISK guide for primary and secondary school teachers, based on teaching units developed by teachers who participated in EDURISK activities across Italian regions.
Useful for: earthquake-risk education, classroom activities, science-based DRR learning.
<https://www.edurisk.it/book/a-prova-di-terremoto/>
- h) *Noi e i vulcani*
EDURISK didactic resource for primary schools on Italian volcanoes and volcanic risk.
Useful for: volcanic activity, volcanic hazards, science and geography lessons.
<https://www.edurisk.it/book/noi-e-i-vulcani/>

4.2. France

France has a structured approach to disaster risk reduction (DRR) education through school safety planning, education on major risks, and practical preparedness activities. French schools may be exposed to natural hazards such as storms, floods, marine submersion, earthquakes, and landslides, as well as technological risks such as toxic clouds, explosions, and radioactivity (Ministère de l'Éducation nationale, 2015). DRR is not generally presented as a separate school subject; rather, it is addressed through education on major risks within disciplinary teaching, safety education, citizenship education, and the school's *Plan particulier de mise en sûreté* (PPMS). Éduscol provides teaching resources under the title *Éduquer et informer sur les risques majeurs*, including examples for elementary education such as forest-fire prevention in Cycle 2 and marine-submersion flooding in Cycle 3 (Éduscol, n.d.-c).

In practice, each school prepares a PPMS adapted to its local risk context, with the aim of protecting pupils and staff while waiting for emergency services or a return to normal conditions (Ministère de l'Éducation nationale, 2015). The PPMS also has an educational dimension, since official guidance states that school exercises and safety planning provide a context for pedagogical activities that help pupils develop knowledge and appropriate attitudes toward major risks. Current national safety instructions require schools to carry out at least two PPMS exercises each year, including one exercise focused on major risks, in addition to fire drills (Ministère de l'Éducation nationale, 2026). Therefore, DRR education in France combines classroom learning about hazards and risk prevention with practical exercises such as evacuation, sheltering, alert procedures, and discussion of correct behaviour during emergencies. Claims about systematic collaboration with fire brigades, civil protection agencies, or NGOs should be made cautiously and, where possible, supported by local examples.

DRR Activities in the Elementary School Curriculum

In France, disaster risk reduction (DRR) education is integrated into school life through a combination of curriculum-based learning, safety education, and practical preparedness activities. Rather than being taught as a separate subject, DRR-related themes are addressed across different areas of learning, including science, geography, moral and civic education, and education for sustainable development. This cross-curricular approach allows pupils to connect the study of natural phenomena and environmental change with territorial awareness, responsible behaviour, and community safety. The French Ministry of Education's official resources on major risks emphasize both knowledge acquisition and the development of appropriate attitudes and behaviours in the face of hazardous events (Éduscol, n.d.-c).

At elementary level, DRR activities may include classroom discussions on natural and technological hazards, analysis of local risk situations, map-based work, observation of environmental processes, and simple project-based investigations. These activities help pupils understand that risks are not only natural phenomena, but also depend on exposure, vulnerability, land use, preparedness, and collective behaviour. In addition to classroom learning, French schools use the *Plan particulier de mise en sûreté* (PPMS), or Special Safety Plan, to prepare for major risks. The PPMS provides a framework for protecting pupils and staff during major events and gives schools an educational context for developing pupils' knowledge of risks and appropriate emergency behaviours (Ministère de l'Éducation nationale, 2015). Therefore, DRR education in France combines theoretical understanding with practical preparedness, helping pupils gradually develop risk awareness, civic responsibility, and confidence in following safety procedures.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness

At the early elementary level, corresponding broadly to CP and CE1 in the French school system, disaster risk reduction (DRR) education is best understood as part of a wider framework of safety education, prevention, and preparedness. For young pupils, the emphasis is not on technical explanations of disasters, but on recognizing danger, adopting simple protective behaviours, asking for help, and following

adult instructions during emergencies. In France, these aims are supported through school safety education and through the national first-aid awareness framework *Apprendre à porter secours* (APS). Éduscol presents APS as a programme taught from preschool through primary school, helping pupils progressively learn prevention, protection, alerting emergency services, and basic helping behaviours in everyday risk situations (Éduscol, n.d.-a). The official 2006 circular on APS also states that, in Cycle 2, pupils should learn basic rules for dangerous situations, especially how to protect themselves, alert others, and adopt appropriate behaviour (Ministère de l'Éducation nationale, 2006).

For Grades 1–2, APS can support DRR-related learning because it develops essential safety competences that children need during emergencies, including accidents, fire alarms, severe weather events, or school evacuation situations. The programme is integrated into ordinary primary-school learning and is adapted to pupils' age and autonomy, rather than being taught as an isolated technical course (Ministère de l'Éducation nationale, 2016). Activities may include guided discussion, observation of risky situations, role-play, simple classroom scenarios, games, and practice in explaining a situation clearly to an adult or emergency service. These activities should be described as age-appropriate safety and preparedness learning, not as advanced disaster training. Pupils may also be introduced to emergency numbers, including 112, the European emergency number, which French public information services identify as a free number available for emergency calls in Europe and from mobile phones (Service-Public.fr, n.d.). In this way, lower-grade DRR education in France begins with simple but essential habits: recognizing danger, staying safe, alerting an adult or emergency service, and following instructions during school safety procedures.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention

In the middle years of primary education, corresponding broadly to CE2 and CM1 in the French school system, disaster risk reduction (DRR) education can move beyond basic safety rules and introduce pupils to a more structured understanding of hazards, prevention, and appropriate behaviour during emergencies. In France, this learning is better described as education on major risks rather than as a separate national programme called “Éducation à la prévention des risques.” Éduscol, the official educational portal of the French Ministry of Education, presents *Éduquer et informer sur les risques majeurs* as a set of educational resources for teaching major risks, including examples for primary education such as forest-fire prevention in Cycle 2 and marine-submersion flooding in Cycle 3 (Éduscol, n.d.-c). This shows that DRR-related learning can be integrated into science, geography, moral and civic education, and education for sustainable development, while helping pupils connect natural phenomena with local risk awareness and responsible behaviour.

For Grades 3–4, classroom activities may include analysing local hazards, observing environmental phenomena, discussing maps or photographs, comparing safe and unsafe behaviours, and preparing simple communication materials about prevention. These activities should be presented as pedagogical applications consistent with the French framework, not as fixed activities required in every school. The *Plan particulier de mise en sûreté* (PPMS) also supports this educational approach, since each school must prepare its own safety plan for major risks and threats, based on the natural and technological risks identified in its local context (Ministère de l'Éducation nationale, 2023). The 2023 PPMS circular states that successive exercises should vary the scenarios, including natural risks, technological risks, and threats, and that these exercises may involve local authorities, extracurricular-care managers, civil-security actors such as fire and rescue services or civil-security associations, and internal security forces where possible (Ministère de l'Éducation nationale, 2023). Therefore, collaboration with external actors is institutionally supported, but it should not be described as a universal programme in which all schools systematically receive expert-led workshops. In addition, the *Apprendre à porter secours* framework complements DRR education by helping pupils from Cycle 1 to Cycle 3 develop prevention, protection, alerting, and basic helping behaviours (Éduscol, n.d.-a). At this level, the main aim is to help pupils understand risks in their environment, think critically about prevention, and practise appropriate responses during school safety procedures.

Upper Grades (Grades 5-6): In-Depth Exploration and Application of DRR Concepts

For upper-primary pupils, disaster risk reduction (DRR) education can become more analytical by helping pupils connect scientific knowledge, local risk awareness, civic responsibility, and appropriate emergency behaviour. In the French system, CM2 belongs to Cycle 3, the *cycle de consolidation*, which includes CM1, CM2, and 6e (Ministère de l'Éducation nationale, 2024). At this level, pupils can examine natural and technological hazards, discuss how exposure and vulnerability influence risk, and reflect on prevention and preparedness. This is consistent with the official French approach to education on major risks, as Éduscol provides pedagogical resources to help teachers prepare lessons on major risks within the competencies and expected outcomes of the school curriculum (Éduscol, n.d.-c).

A central framework for practical preparedness in French schools is the *Plan particulier de mise en sûreté* (PPMS), or Special Safety Plan. The PPMS is not simply a classroom project; it is an official school safety plan designed to prepare schools for major risks and threats. The 2023 official circular explains that PPMS procedures are unified and cover both *attentat-intrusion* situations and major risks, with responsibility for developing the PPMS transferred to the academic authorities under the 2021 law (Ministère de l'Éducation nationale, 2023). In practice, school exercises are used to test preparedness and help pupils and staff learn appropriate safety behaviours. Éduscol's school-safety guidance states that, in addition to at least two fire drills, schools must carry out two PPMS exercises during the school year: one focused on major risks and the other on threats (Éduscol, n.d.-b).

For Grades 5–6 / CM2, classroom activities may include analysing local risk situations, reading maps or photographs, discussing flood-prone, coastal, wildfire-prone, or seismic environments, comparing safe and unsafe behaviours, and preparing simple communication materials on prevention. These should be presented as pedagogical applications aligned with the French framework, not as fixed national activities required in all schools. Éduscol's resources on major risks confirm that teachers are supported with examples and materials for teaching risks such as forest fires and marine-submersion flooding, which can be adapted to local contexts (Éduscol, n.d.-c). Therefore, it is safer not to claim that all Grade 5–6 pupils systematically study building codes, emergency kits, tsunami safety, or take part in a national "Safety Awareness Day." A more accurate conclusion is that, in upper primary education, DRR in France combines curriculum-based learning, local risk awareness, and practical preparedness through the *éducation aux risques majeurs* framework and the PPMS.

Collaboration with External Organizations

French elementary schools may collaborate with external organizations to strengthen disaster risk reduction (DRR), safety education, and emergency preparedness. This collaboration is mainly framed through the Plan particulier de mise en sûreté (PPMS), the official school safety plan designed to protect pupils and staff during major events while awaiting emergency services (Éduscol, 2023). The 2023 PPMS circular states that school exercises may involve local authorities, extracurricular-care managers, fire and rescue services, civil-security associations, and internal security forces, particularly for coordination and feedback (Ministère de l'Éducation nationale, 2023). Therefore, external collaboration is institutionally supported, but it depends on local contexts rather than on one identical national programme.

A key external actor is the sapeurs-pompiers, or local fire and rescue services, often organized through the SDIS. Their contribution may relate to fire safety, emergency preparedness, evacuation procedures, first-aid awareness, and the broader culture of civil security. This is consistent with Apprendre à porter secours, through which pupils from Cycle 1 to Cycle 3 progressively learn prevention, protection, alerting emergency services, and basic helping behaviours (Éduscol, n.d.-a).). It is more accurate to say that pupils learn to identify danger, follow evacuation instructions, alert adults or emergency services, and understand the role of rescue services, rather than claiming that all pupils are taught to use fire extinguishers.

Schools can also use Météo-France resources to support learning about weather- and climate-related hazards. Météo-France provides educational materials on observation, forecasting, measurement,

weather phenomena, and climate (Météo-France, 2026). Through Météo à l'École, it designs classroom teaching sheets and contributes to teacher training, while its partnership with the Académie du Climat offers a four-module pathway for pupils aged 9–12 on weather, climate, climate change, and adaptation in urban contexts (Météo-France, 2024a; Météo-France, 2024b). Thus, collaboration with external organizations in France combines official school safety planning, local emergency partnerships, and specialist educational resources.

Educational Resources

France supports disaster risk reduction (DRR) education through a combination of curriculum-based learning, school safety procedures, and institutional educational resources. Rather than relying on a single subject or programme, DRR-related learning is connected with science, geography, moral and civic education, first-aid awareness, and practical preparedness activities such as PPMS exercises and fire drills. This approach helps pupils understand major risks, develop appropriate behaviours in emergency situations, and gradually build a culture of prevention, responsibility, and community resilience from an early age. This approach is supported by a range of official and institutional resources, which provide schools with guidance, teaching materials, safety procedures, and practical information on risk prevention and emergency preparedness. The most relevant educational resources include the following:

- a) *Ministère de l'Éducation nationale / Éducol*
Official school-based resources on major risks, school safety, PPMS, and first-aid awareness.
Useful for: curriculum links, school safety planning, PPMS exercises, *Apprendre à porter secours*.
<https://eduscol.education.gouv.fr/4989/eduquer-et-informer-sur-les-risques-majeurs>
- b) *Plan particulier de mise en sûreté (PPMS)*
Official Ministry guidance on school safety planning for major risks and threats.
Useful for: emergency preparedness, school drills, evacuation/sheltering procedures.
<https://www.education.gouv.fr/bo/2023/Hebdo26/MENE2307453C>
- c) *Ministère de l'Intérieur — Sécurité civile*
Public information on major risks, emergency behaviour, preparedness, and emergency kits.
Useful for: practical DRR guidance and preparedness actions.
<https://www.securite-civile.interieur.gouv.fr/reagir>
- d) *Météo-France — Education*
Educational resources on weather, climate, forecasting, extreme weather, and climate change.
Useful for: storms, floods, heatwaves, climate risks, and classroom activities.
<https://meteofrance.com/education>
- e) *Météo à l'École*
Educational partnership providing classroom resources and teacher support related to meteorology.
Useful for: weather observation, school projects, climate and meteorological learning.
<https://meteofrance.com/education/partenaires-educatifs/meteo-lecole>
- f) *Sapeurs-Pompiers de France*
Public safety and prevention resources from the French firefighters.
Useful for: fire prevention, floods, emergency behaviour, rescue services awareness.
<https://www.pompiers.fr/prevention-des-risques/>
- g) *Croix-Rouge française*
First-aid and life-saving skills training resources.
Useful for: *gestes qui sauvent*, emergency response awareness, youth preparedness.
<https://www.croix-rouge.fr/formation/les-gestes-qui-sauvent>

4.3. Germany

Germany approaches disaster risk reduction (DRR) education through civil protection awareness, self-protection education, school safety practices and cross-curricular learning. The country is exposed to natural hazards such as floods, storms, heatwaves, droughts and wildfires, and national policy links disaster resilience with preparedness, risk governance and the Sendai Framework for Disaster Risk Reduction (Federal Government of Germany, 2022). However, because Germany has a federal education system, school curricula are mainly shaped by the Länder, while the Standing Conference of the Ministers of Education and Cultural Affairs (KMK) coordinates education policy matters of supranational importance (KMK, n.d.). Therefore, DRR education in Germany should not be described as one uniform national school subject, but as a cross-curricular and locally adaptable field connected with science, geography, civic education, education for sustainable development, and school safety.

At elementary level, pupils may engage with DRR-related themes through lessons and projects on natural hazards, emergency behaviour, fire safety, first aid, and self-protection. A relevant national resource is the Federal Office of Civil Protection and Disaster Assistance (*Bundesamt für Bevölkerungsschutz und Katastrophenhilfe*, BBK), which provides child-oriented materials such as *Max und Flocke Helferland* for children aged 7–12. These resources introduce children to civil protection and safe behaviour in everyday or emergency situations through age-appropriate materials and activities (BBK, 2021). In this way, DRR education in Germany combines theoretical knowledge with practical safety awareness, helping pupils develop age-appropriate preparedness, responsibility, and resilience.

DRR Activities in the Elementary School Curriculum

In Germany, disaster risk reduction (DRR) education is not generally taught as a separate national school subject. Because education is mainly the responsibility of the Länder, DRR-related learning is better understood as a cross-curricular and locally adaptable field connected with subjects such as Sachunterricht, science, geography, ethics, civic education, education for sustainable development, and school safety activities. This approach allows pupils to encounter topics such as natural hazards, emergency behaviour, self-protection, fire safety, first aid, floods, storms, and climate-related risks in different learning contexts.

At elementary level, official resources from the Federal Office of Civil Protection and Disaster Assistance (BBK) support this cross-curricular approach. The BBK's *Max und Flocke* worksheets can be used in Grades 2–6, across different subjects and during project weeks, including projects on first aid, self-protection, and fire safety (BBK, 2024a). The BBK also provides educational material on floods (*Hochwasser*) that is suitable for Grades 3–5 and includes resources on flood hazards, protective behaviour, warnings, preparedness, and protecting buildings from flood damage (BBK, 2025). Additional materials such as *Pitschnass* support classroom learning on floods and landslides through age-appropriate educational activities (BBK, 2024b). Therefore, activities such as exploring flood protection, discussing storm preparedness, analysing emergency behaviour, or completing project-based tasks on self-protection should be presented as pedagogical applications supported by official resources, rather than as one fixed nationwide curriculum followed identically by all schools.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness

At the early elementary level, disaster risk reduction (DRR) education in Germany is best understood as part of broader safety, self-protection, and civil protection education. For young pupils, the aim is not to provide technical knowledge about disasters, but to introduce basic concepts of safety, hazard awareness, emergency behaviour, and help-seeking. Since responsibility for the German school system is divided between the Federation and the Länder, and school education is mainly regulated by the Länder, DRR education should be described as cross-curricular and locally adaptable rather than as one uniform national programme (Eurydice, 2026).

A reliable national resource is “Max und Flocke Helferland,” developed by the Federal Office of Civil Protection and Disaster Assistance (BBK). In BBK teaching material from the *Max und Flocke* series, pupils in Grades 2–6 are introduced to correct behaviour in emergencies through stories, pictures, games, classroom discussion, and active learning tasks. The material also includes emergency-call activities, helping pupils understand that 112 is the emergency number for both rescue services and the fire brigade (BBK, 2018). For this reason, the resource is particularly suitable for Grade 2, while for Grade 1 teachers may adapt simpler elements such as stories, pictures, guided discussion, games, and classroom safety routines. The importance of 112 can also be supported by European Union educational material, which explains that 112 is the single emergency number, free of charge, available from fixed or mobile phones anywhere in the EU, and suitable for classroom activities on safety and responsibility (European Commission, 2026). At this level, pupils can begin to learn how to recognize danger, respond to fire alarms or severe-weather instructions, understand the role of emergency services, and ask for help appropriately.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention

In Grades 3 and 4, disaster risk reduction (DRR) education in Germany can move beyond basic safety rules and introduce pupils to natural hazards, risk awareness, prevention, and self-protection. Since responsibility for the school system in Germany is divided between the Federation and the Länder, and the school sector is mainly regulated by the Länder, DRR education should be described as cross-curricular and locally adaptable rather than as one uniform national programme (Eurydice, 2026). At this level, DRR-related learning can be connected with *Sachunterricht*, science, geography, environmental education, social learning, and school safety activities. Pupils may discuss local hazards, compare safe and unsafe behaviours, work with pictures or maps, and complete simple project-based tasks on preparedness and emergency behaviour.

Official resources from the Federal Office of Civil Protection and Disaster Assistance (BBK) support this approach. The *Max und Flocke* programme introduces children to civil protection and safe behaviour in everyday and emergency situations through age-appropriate materials (BBK). In addition, the *Arbeitsblätter von Max und Flocke* can be used in Grades 2–6 across different subjects and during project weeks, including activities related to emergency behaviour, self-protection, first aid, and fire safety (BBK, 2024a).

Pupils may also explore hazards such as floods, storms, and landslides through official educational materials. The BBK’s *Pitschnass* module provides age-appropriate activities on floods and landslides (BBK, 2024b), while additional *Hochwasser* materials introduce pupils to flood hazards, warnings, preparedness, and protective behaviour (BBK, 2025). Therefore, activities such as discussing local hazards, comparing safe and unsafe behaviours, analysing maps or pictures, and completing simple project-based tasks on preparedness should be presented as pedagogical applications supported by official resources, rather than as one fixed nationwide curriculum followed identically by all schools.

Upper Grades (Grades 5-6): In-Depth Exploration and Application of DRR Concepts

By Grades 5–6, disaster risk reduction (DRR) education in Germany can become more analytical, helping pupils examine natural hazards, risk awareness, prevention, preparedness, and appropriate emergency behaviour. Since the German school system is mainly regulated by the Länder, DRR education should be described as cross-curricular and locally adaptable rather than as a single uniform national programme (Eurydice, 2026). At this level, DRR-related learning can be connected with *Sachunterricht*, science, geography, environmental education, civic learning, and school safety activities. Pupils may explore how communities prepare for hazards, compare individual and collective responsibilities, and discuss appropriate behaviour before, during, and after emergency situations.

A reliable national resource for this level is the *Max und Flocke Helferland* material of the Federal Office of Civil Protection and Disaster Assistance (BBK). The BBK provides worksheets for Grades 2–6 that can be used across different subjects and during project weeks, including topics such as first aid, fire safety, floods, earthquakes, evacuation, emergency luggage, and power outages (BBK, 2024a). For Grades 5–6,

the BBK's flood-related materials are particularly relevant. The overview *Bildungsmaterial: Hochwasser* states that the teaching material on floods is suitable for Grades 3–5 and includes worksheets, teacher guidance, print materials, films, an emergency-backpack game, crisis-preparedness resources, volunteering materials, and information on protecting buildings from flood damage (BBK, 2025). The related module "*Pitschnass – Baustein zum Thema Überschwemmungen und Erdrutsche*" addresses floods and landslides, warning information, protective behaviour, preparedness, and ways of reducing flood damage (BBK, 2024b). Therefore, Grade 5–6 activities may include analysing flood-risk situations, discussing warning systems, comparing protective behaviours, preparing prevention posters, or reflecting on household and community preparedness. These should be described as pedagogical applications supported by official BBK resources, not as fixed nationwide requirements.

It is also better to avoid claims that all Grade 5–6 pupils develop school emergency plans, participate in a national "Safety Day," or interact with civil-protection professionals as part of a single programme. Such activities may occur locally, but they should not be presented as a general national model unless a specific local source is cited. A more accurate conclusion is that, in upper primary education, DRR education in Germany combines scientific understanding, self-protection, emergency awareness, and locally adapted practical activities supported by official civil-protection resources.

Collaboration with External Organizations

German elementary schools may collaborate with external organizations in order to connect disaster risk reduction (DRR), fire safety, first aid, and self-protection education with practical expertise. However, because educational legislation and school administration in Germany are primarily the responsibility of the Länder, this collaboration should be described as locally adaptable rather than as one uniform national programme (Eurydice, 2026). External partners may include local fire brigades, municipal authorities, aid organizations, and civil protection actors, depending on the school, municipality, and federal state. These partnerships can support pupils' understanding of emergency behaviour, warning procedures, evacuation, first aid, and the role of rescue services.

A key source of support is the Federal Office of Civil Protection and Disaster Assistance (BBK). Its Max und Flocke worksheets can be used in Grades 2–6 across different subjects and project weeks, including projects on first aid and fire safety (BBK, 2024a). Fire brigades are another important external actor. For example, the Stuttgart Fire Department provides fire-prevention education for primary-school pupils, using illustrative examples and practical fire experiments to teach how fires start, how they are extinguished, and how to behave correctly in the event of a fire (Stuttgart Fire Department, 2025). A broader professional resource is the German Firefighters Association's guide *Brandschutzerziehung in der Grundschule*, which includes background knowledge, practical suggestions, and copy templates on topics such as the benefits and dangers of fire, handling ignition sources, fire alarms at school, and visits to the fire brigade (Deutscher Feuerwehrverband, 2008). Therefore, collaboration with external organizations in Germany should be understood as a combination of official BBK educational resources, locally organized fire-safety education, and cooperation with municipal or emergency actors, rather than as a single nationwide school programme.

Educational Resources

Germany supports disaster risk reduction (DRR) education through civil protection resources, self-protection education, first-aid awareness, fire-safety education, and locally adaptable school activities. Because education policy and school curricula in Germany are mainly shaped by the Länder, DRR education should be described as a cross-curricular field supported by national institutions, local authorities, aid organizations, and school-based initiatives rather than as one uniform national school programme. The Federal Office of Civil Protection and Disaster Assistance (BBK) is the most important national source for child-oriented civil protection resources. Its Max und Flocke worksheets can be used in Grades 2–6 across different subjects and project weeks, including topics such as first aid, fire safety,

emergency behaviour, floods, and severe weather (BBK, 2024a).

This approach is supported by a range of official and institutional resources, which provide schools with guidance, teaching materials, safety procedures, and practical information on risk prevention, self-protection, first aid, and emergency preparedness. The most relevant educational resources include the following:

- a) *Federal Office of Civil Protection and Disaster Assistance (BBK)*
Official national authority for civil protection and disaster assistance.
Useful for: civil protection education, preparedness, warning, self-protection, emergency behaviour.
<https://www.bbk.bund.de>
- b) *Max und Flocke Helferland — BBK*
Child-oriented BBK resource with worksheets for Grades 2–6, usable in different subjects and project weeks.
Useful for: first aid, fire safety, emergency behaviour, everyday hazards, floods, storms.
https://www.bbk.bund.de/DE/Infothek/BBK-fuer-Kinder/Arbeitsblaetter/arbeitsblaetter_node.html
- c) *BBK Educational Materials on Storms and Severe Weather*
BBK provides materials on Gewitter und Sturm suitable for Grades 3–5, including worksheets, teacher guidance, videos, and resources on extreme weather and crisis preparedness.
https://www.bbk.bund.de/DE/Warnung-Vorsorge/Sicherheit-durch-Vorsorge/Materialien-Unwetter/materialien-unwetter_node.html
- d) *BBK First Aid with Self-Protection Content (EHSB)*
EHSB courses provide practical skills that help people act quickly and safely in emergencies; they are federally funded and delivered by aid organizations.
Useful for: self-protection, first aid, crisis preparedness, emergency skills.
https://www.bbk.bund.de/DE/Themen/Akademie-BABZ/BABZ-Angebot/Studium-Ausbildung-im-BeVS/EHSB/ehsb_node.html
- e) *German Youth Red Cross / Jugendrotkreuz*
Provides first-aid education materials for schools; the JRK reports cooperation with many schools and offers child-appropriate first-aid materials, including for Grades 3 and 4.
Useful for: first-aid awareness, helping behaviour, primary-school first-aid learning.
<https://jugendrotkreuz.de/die-themenfelder/erste-hilfe/grundschule>
- f) *German Firefighters Association / Deutscher Feuerwehrverband*
Professional resource for fire-safety education in primary schools.
Useful for: fire prevention, emergency calls, evacuation behaviour, visits to fire brigades.
<https://www.feuerwehrverband.de/leitfaden-fuer-brandschutzerziehung-in-grundschule/>

4.4. Spain

Spain approaches disaster risk reduction (DRR) education through civil protection training, school safety, risk awareness, and cross-curricular learning. The country is exposed to a range of natural and climate-related hazards, including floods, wildfires, earthquakes, volcanic activity, coastal risks, storms, heatwaves, and other extreme weather events. At the national level, Spain's National Civil Protection Strategy 2024 links civil protection with disaster risk reduction, resilience, preparedness, and the Sendai Framework for Disaster Risk Reduction, emphasizing the need to strengthen prevention, risk governance, and response capacity across society (Gobierno de España, 2024).

A key recent development for schools is the Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios, developed by the Ministry of Education, Vocational Training and Sports and the Ministry of the Interior in cooperation with the autonomous communities. The plan was approved by the Education Sectoral Conference in June 2025 and aims to extend a culture of prevention

and ensure appropriate training for the educational community in responding to all types of civil protection emergencies, whether caused by natural phenomena or human action (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025). Its official teaching resources include materials for non-university education centres and cover risks such as floods, coastal risks, earthquakes, tsunamis, volcanic risk, adverse meteorological phenomena, wildfires, and industrial or technological risks. Therefore, DRR education in Spain should be understood as a combination of curriculum-based learning, civil protection training, practical preparedness, and locally adapted activities that help pupils develop risk awareness, safe behaviour, and responsibility within their school and community.

DRR Activities in the Elementary School Curriculum

In Spain, disaster risk reduction (DRR) education can be integrated across different areas of primary education rather than being taught as a separate discipline. The national primary curriculum is competency-based and organized through broad areas of learning, allowing themes such as environmental change, natural hazards, safety, responsibility, and civic participation to be addressed across subjects (Ministerio de Educación y Formación Profesional, 2022). In this context, DRR-related learning can be connected with science and environmental studies, geography, civic education, and practical preparedness.

This cross-curricular approach is reinforced by Spain's Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios, which provides official teaching materials for schools and aims to promote a culture of prevention and improve the educational community's response to civil protection emergencies (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025). Its didactic guides cover risks such as floods, coastal hazards, earthquakes, tsunamis, volcanic risk, adverse meteorological phenomena, wildfires, and technological risks. Therefore, elementary-level DRR activities in Spain may include age-appropriate learning on hazard recognition, local risks, warning systems, self-protection, and emergency behaviour, with more specific examples developed in each age group.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness

At the early elementary level, disaster risk reduction (DRR) education in Spain focuses on basic safety awareness, hazard recognition, self-protection, and simple emergency behaviour. For young pupils, the aim is not to provide technical knowledge about disasters, but to help them identify dangerous situations, understand basic protective actions, and follow adult instructions during emergencies. These themes can be connected with environmental learning, science, social and civic education, and classroom routines. The Spanish primary curriculum is organized into broad, integrative learning areas and is oriented toward the development of pupils' competences, which allows safety, responsibility, environmental awareness, and civic participation to be addressed across subjects (Ministerio de Educación y Formación Profesional, 2022).

A reliable national reference is Spain's Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios, developed by the Ministry of Education, Vocational Training and Sports, the Ministry of the Interior, and the autonomous communities. The official portal states that the plan is compulsory in non-university education centres and aims to extend a culture of prevention and ensure appropriate training for the whole educational community in responding to all types of civil protection emergencies (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025a). For lower primary pupils, the most relevant resource is *Guía didáctica 1: Prevención, autoprotección, sistemas de alerta y sistemas 112 de emergencias*, which presents emergency situations as a growing threat and promotes preventive awareness from the earliest stages of the education system (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025b). Through

this framework, Grades 1–2 pupils can learn to recognize risks, identify unsafe behaviours, understand simple self-protection measures, ask for help, and become familiar with the 112 emergency system. Activities such as storytelling, drawings, games, guided discussion, role-play, and classroom scenarios can be used as age-appropriate pedagogical applications, but they should not be presented as one fixed national set of activities.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention

In Grades 3 and 4, disaster risk reduction (DRR) education in Spain can move beyond basic safety awareness and introduce pupils to natural hazards, risk prevention, self-protection, warning systems, and appropriate emergency behaviour. These themes can be connected with science, environmental education, geography, social and civic education, and classroom safety activities. The Spanish primary curriculum is organized into broad learning areas, including Knowledge of the Natural, Social and Cultural Environment, and it allows the integrated development of competences and cross-curricular content across areas of learning (Ministerio de Educación y Formación Profesional, 2022).

A reliable national reference is the Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios, developed by the Ministry of Education, Vocational Training and Sports, the Ministry of the Interior, and the autonomous communities. The official portal states that the plan aims to extend a culture of prevention and ensure appropriate training for the educational community in responding to civil protection emergencies, and that it provides educational materials for use in non-university education centres (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025a). For Grades 3–4, Guía didáctica 1: Prevención, autoprotección, sistemas de alerta y sistemas 112 de emergencias is especially relevant because it presents emergencies as a growing threat and promotes preventive awareness from the earliest stages of the education system. Its general objectives include understanding what emergencies are, identifying risk behaviours, learning basic self-protection measures, valuing prevention and care for the natural environment, and developing responsibility, solidarity and collaboration (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025b).

At this level, pupils may work on age-appropriate activities such as identifying local hazards, discussing warning messages, comparing safe and unsafe behaviours, creating preparedness posters, or analysing simple emergency scenarios. These should be described as pedagogical applications aligned with the official materials, not as a fixed national programme required in every Spanish school. A safer conclusion is that middle-grade DRR education in Spain combines classroom learning, self-protection, civil protection awareness, and locally adapted preparedness activities supported by national educational resources.

Upper Grades (Grades 5-6): In-Depth Exploration and Application of DRR Concepts

For Grades 5-6 students, disaster risk reduction (DRR) education in Spain can become more analytical, helping pupils understand the causes, effects, prevention, and management of natural and technological hazards. At this level, pupils can connect scientific knowledge with local risk awareness, self-protection, civic responsibility, and appropriate emergency behaviour. The Spanish primary curriculum is organized around broad learning areas and key competences, which allows issues such as environmental change, safety, responsibility, and civic participation to be addressed across subjects (Ministerio de Educación y Formación Profesional, 2022).

A reliable national reference is the Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios, developed by the Ministry of Education, Vocational Training and Sports, the Ministry of the Interior, and the autonomous communities. The official portal states that the plan is compulsory in non-university education centres and aims to extend a culture of prevention and ensure appropriate training for the educational community in responding to all types of civil protection emergencies (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025a). The plan's didactic guides cover risks such as floods, coastal risks, earthquakes, maremotos and tsunamis, volcanic risk, adverse meteorological phenomena, wildfires, and industrial or technological risks

(Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025b). For Grades 5-6, these materials can support activities such as analysing local risk situations, discussing warning systems, comparing safe and unsafe behaviours, preparing prevention materials, and reflecting on individual and collective responsibility in emergencies.

The Plan de Autoprotección is also relevant, but it should be described as a school safety and emergency-planning framework rather than as a Grade 5-6 DRR programme. Spanish civil-protection materials include guidance on autoprotección en los centros escolares and specific school programmes on risks such as floods, wildfires, seismic risk and tsunamis, while technical guidance on school self-protection links emergency planning with evacuation, first aid, fire response and coordination with external services (Dirección General de Protección Civil y Emergencias, 2011; Protección Civil, 2014). Therefore, it is safer to state that Grade 5 pupils may participate in age-appropriate evacuation or emergency exercises and classroom reflection on school safety procedures, rather than claiming that all pupils analyse or redesign the school emergency plan. Similarly, a “Preparedness Awareness Day” may be used as a local school activity, but it should not be presented as a national requirement.

Collaboration with External Organizations

Spanish elementary schools may collaborate with external organizations in order to connect disaster risk reduction (DRR), school safety, civil protection, and emergency preparedness with real-world expertise. This collaboration should be described as locally adaptable, rather than as one identical national programme implemented in every school. A key national framework is the Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios, developed for non-university education centres and presented by the Spanish Government in 2025 as a plan to make emergency and civil protection training part of school education (La Moncloa, 2025). Eurydice also notes that the plan is mandatory for non-university educational institutions following nationally regulated programmes, while allowing regional education authorities and schools to adapt and expand the core content according to local natural, social, and economic contexts (Eurydice, 2025a).

Local fire services and civil protection bodies can therefore play an important role in school-based DRR education. In practice, local initiatives may include fire-safety sessions, evacuation exercises, visits to fire stations, demonstrations of rescue work, and activities on prevention and self-protection. However, it is safer not to claim that all pupils are taught to use fire extinguishers, because this is not documented as a general national requirement for elementary schools. A more accurate formulation is that pupils may learn to identify hazards, follow evacuation instructions, understand the role of emergency services, and respond appropriately to fire alarms or other warnings. For example, the Fire and Civil Protection Service of Baza reported receiving students from schools and collaborating in evacuation exercises in educational centres, which supports the idea of local collaboration without making it a nationwide fixed programme (Bomberos Baza, 2025).

Schools can also use resources from AEMET — Spain’s State Meteorological Agency — to support learning about weather- and climate-related risks. AEMET provides meteorological and climatological information, forecasts, warnings, observations, and climate data, which can support classroom work on severe storms, heavy rainfall, droughts, heatwaves, floods, and other adverse meteorological phenomena. Therefore, collaboration with external organizations in Spain should be understood as a combination of official civil protection training, locally organized emergency-service activities, and the use of specialist information from institutions such as AEMET.

Educational Resources

Spain supports disaster risk reduction (DRR) education through civil protection training, school safety, meteorological education, emergency awareness, and first-aid learning. A key official framework is the Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios, developed by the Ministry of Education, Vocational Training and Sports, the Ministry of the Interior, and

the autonomous communities. The plan is intended for non-university education centres and aims to extend a culture of prevention and provide the educational community with training to respond to civil protection emergencies (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025a). Its materials include didactic guides, infographics, videos, and complementary documentation on risks such as floods, coastal hazards, earthquakes, tsunamis, volcanic risk, adverse meteorological phenomena, wildfires, and technological risks (Ministerio de Educación, Formación Profesional y Deportes & Ministerio del Interior, 2025b).

This approach is supported by a range of official and institutional resources, which provide schools with guidance, teaching materials, scientific information, and practical support for prevention, self-protection, emergency awareness, and preparedness. The most relevant educational resources include the following:

- a) *Plan de Formación ante Emergencias de Protección Civil en centros educativos no universitarios*
Official national training plan for civil protection and emergency education in non-university schools.
Useful for: prevention culture, self-protection, alert systems, 112, and civil protection emergencies.
<https://recursosemergencias.educacionfpydeportes.gob.es/portada.html>
- b) *Guías didácticas — Plan de Emergencias*
Official teaching guides covering floods, coastal risks, earthquakes, tsunamis, volcanic risk, adverse meteorological phenomena, wildfires, and technological risks.
Useful for: classroom DRR activities, teacher planning, and age-appropriate risk education.
<https://recursosemergencias.educacionfpydeportes.gob.es/guias-didacticas.html>
- c) *Guía didáctica 1: Prevención, autoprotección, sistemas de alerta y sistemas 112 de emergencias*
Introductory guide on prevention, self-protection, alert systems, and the 112 emergency system.
Useful for: lower and middle primary levels, basic safety awareness, and emergency behaviour.
<https://recursosemergencias.educacionfpydeportes.gob.es/guias-didacticas/1-prevencion-autoproteccion-sistema-alerta.html>
- d) *Dirección General de Protección Civil y Emergencias — Ministerio del Interior*
Official civil protection authority providing information on emergencies, prevention, self-protection, risk management, and national civil protection planning.
Useful for: civil protection framework, emergency preparedness, and public safety information.
<https://www.proteccioncivil.es>
- e) *AEMET — Agencia Estatal de Meteorología*
Spain's State Meteorological Agency, providing weather forecasts, warnings, observations, and climate information.
Useful for: storms, heavy rainfall, heatwaves, droughts, floods, and other adverse weather risks.
<https://www.aemet.es>
- f) *Meteoeduca / Meteoescuela — AEMET*
Educational resources and school-based meteorological activities from AEMET, including materials and school weather-observation activities.
Useful for: weather observation, climate learning, meteorological hazards, and classroom activities.
<https://www.aemet.es/en/conocermas/meteoeduca>
<https://meteoescuela.aemet.es>
- g) *Cruz Roja Española*
First-aid and emergency-response training resources, including courses on basic first aid and first aid for children.
Useful for: first-aid awareness, emergency response skills, prevention, and safety education.
<https://www2.cruzroja.es/cursos-primeros-auxilios>
- h) *Local fire services / Bomberos*
Local fire and emergency services may support schools through visits, evacuation activities, and fire-

safety education. These should be cited as local examples rather than as one national programme. Useful for: fire prevention, evacuation behaviour, emergency calls, and understanding the role of emergency services.

4.5. Austria

Austria approaches disaster risk reduction (DRR) education through civil protection awareness, safety education, environmental learning, and practical preparedness activities. The country's Alpine geography and climatic conditions make it exposed to natural hazards such as floods, avalanches, landslides, storms and other extreme weather events. European environmental and civil-protection reports identify Alpine regions such as Austria as particularly vulnerable to hazards linked to heavy precipitation, flooding, landslides, avalanches and climate-related extreme events (European Environment Agency, 2024). DRR education is therefore relevant from an early age, especially when connected with pupils' immediate environment, local hazards and safe behaviour.

In elementary education, DRR-related learning should be understood as a cross-curricular field rather than as a separate school subject. The Austrian primary curriculum aims to provide a balanced education in the social, emotional, intellectual and physical spheres, and Sachunterricht is especially relevant because it connects pupils' everyday world with social, natural, geographical, historical and technical perspectives (Eurydice, 2025b). In this context, topics such as environmental awareness, natural phenomena, safety, responsibility and community preparedness can be addressed through classroom activities, school safety routines and cooperation with external organizations. A particularly relevant national example is the SAFETY Tour – Children's Safety Olympics, organized by the Austrian Civil Protection Association. The initiative teaches primary-school children how to behave in emergencies through playful learning and practical exercises, and the 2024 edition involved around 20,000 children in preliminary competitions across Austria (Austrian Civil Protection Association, 2024; Union Civil Protection Knowledge Network, 2024). Overall, DRR education in Austria combines knowledge about natural hazards with self-protection, emergency awareness and active citizenship, helping pupils develop age-appropriate preparedness and resilience.

DRR Activities in the Elementary School Curriculum

In Austria, disaster risk reduction (DRR) activities in elementary education are best understood as cross-curricular learning rather than as a separate school subject. The primary curriculum emphasizes the development of pupils' intellectual, social, emotional and physical abilities, while also supporting interdisciplinary learning through areas such as environmental education for sustainable development, health promotion and civic education (Eurydice, 2025b). This makes elementary education suitable for introducing topics such as natural hazards, weather events, environmental awareness, safety behaviour, self-protection and community responsibility. In addition, Austria's exposure to Alpine and climate-related hazards, including floods, landslides, avalanches, storms and extreme weather, provides a relevant context for connecting classroom learning with local risk awareness (European Environment Agency, 2024). At elementary level, DRR activities may therefore include observing weather and environmental changes, discussing safe behaviour during storms or floods, learning basic emergency rules, and exploring how communities prepare for hazards. These activities can also be supported by national civil-protection initiatives such as the SAFETY Tour – Children's Safety Olympics, which teaches especially third- and fourth-grade pupils how to behave in emergencies through playful learning and practical exercises (Austrian Civil Protection Association, 2024; Union Civil Protection Knowledge Network, 2024).

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1–2): Building Awareness and Safe Habits.

In the first years of elementary school, disaster risk reduction (DRR) education in Austria is best understood as part of broader safety education, accident prevention, first-aid awareness, and self-protection. For young pupils, the focus is not on technical explanations of disasters, but on helping children recognize everyday hazards, develop safe habits, ask for help, and follow adult instructions during emergencies. These themes can be connected with classroom routines, Sachunterricht, health education, seasonal topics, and age-appropriate discussions about fire, storms, snow, accidents, and other potentially dangerous situations.

A relevant Austrian resource for this age group is “Helfi – Helfen macht Schule,” developed by the Austrian Youth Red Cross. The programme introduces pupils in the 1st to 4th school years to simple first-aid measures and accident-prevention tips through stories based on everyday danger situations. Children learn how to get help, how to help others in simple situations, and how to avoid common hazards (Austrian Youth Red Cross). In a DRR context, Helfi can support lower-grade preparedness by helping pupils recognize danger, respond appropriately to warnings or school safety instructions, understand the role of emergency services, and learn important emergency numbers. In Austria, these include 112 as the European emergency number, as well as 122 for the fire brigade, 133 for police, and 144 for ambulance services (Oesterreich.gv.at, 2025). Therefore, Helfi should be described as a first-aid and safety-awareness programme that supports DRR-related competences, rather than as a standalone disaster-risk curriculum.

Middle Grades (Grades 3–4): Understanding Natural Hazards and Local Risks

As pupils progress to the middle years of elementary school, especially Grades 3–4, disaster risk reduction (DRR) education in Austria can move beyond basic safety habits and introduce children to natural hazards, local risks, prevention, and appropriate emergency behaviour. These themes can be connected with Sachunterricht, environmental education, health and safety education, and civic responsibility. Austria’s Alpine geography makes hazards such as floods, mudflows, avalanches, rockfalls, landslides, storms and extreme weather particularly relevant for local risk awareness (European Environment Agency, 2024). In this context, pupils can explore how natural phenomena develop, how human activity may increase or reduce risk, and why preparedness is important for individuals and communities.

A well-documented Austrian example for this age group is the SAFETY Tour – Children’s Safety Olympics, organized by the Austrian Civil Protection Association. The initiative teaches third- and fourth-grade pupils how to behave in emergencies through playful learning and practical exercises, and the 2024 edition involved around 20,000 children across Austria (Austrian Civil Protection Association, 2024; Union Civil Protection Knowledge Network, 2024). Classroom activities such as discussing local hazards, creating simple risk-awareness posters, analysing safe and unsafe behaviours, or simulating how floods affect different surfaces can be used as age-appropriate pedagogical applications. Similarly, visits or talks by firefighters, paramedics, meteorologists, or civil protection actors may support learning where available locally, but they should be described as possible community-based activities rather than as a fixed national requirement. Overall, DRR education at this level helps pupils connect knowledge about Austria’s natural environment with practical preparedness and responsible behaviour.

Upper Grades (Grades 5–6): Critical Thinking and Emergency Preparedness

In Grades 5–6, disaster risk reduction (DRR) education in Austria can become more analytical by helping pupils connect natural hazards, emergency preparedness, self-protection, and community responsibility. At this level, pupils may examine how hazards such as floods, storms, landslides, avalanches, and extreme weather affect people, infrastructure, transport, and local communities. Austria’s Alpine and climate-related risk context makes these topics particularly relevant, while classroom learning can be linked with Sachunterricht, environmental education, civic responsibility, and school safety activities (European Environment Agency, 2024; Eurydice, 2025b).

Grade 5-6 pupils may also explore examples of past disasters, such as major floods or severe winter events, but these should be used as case-study applications rather than as a fixed national curriculum requirement. Activities may include discussing warning systems, identifying safe and unsafe behaviour, comparing individual and collective responsibilities, preparing simple emergency checklists, or analysing how communities respond to disruption caused by floods, snowstorms, or severe weather. These activities are consistent with Austria's broader understanding of Zivilschutz as measures to protect the population from hazards arising from natural and technological disasters, and Katastrophenschutz as measures taken before disasters in the field of disaster prevention and preparedness (Federal Ministry of the Interior, 2025).

School safety planning is relevant in this context, but it should not be presented as a specific national "Schulsicherheitsplan" programme in which all Grade 5-6 pupils develop communication protocols or review staff roles. A more accurate formulation is that schools maintain safety and emergency procedures, while pupils may participate in age-appropriate evacuation or safety exercises and reflect on correct behaviour during emergencies. Cooperation with local fire brigades, emergency medical services, or civil protection actors may support these activities where available locally, but it should be described as a possible community-based practice rather than a uniform national requirement. Overall, Grade 5-6 DRR education in Austria can combine case studies, local risk awareness, emergency behaviour, and practical preparedness, helping pupils understand both personal safety and wider community resilience (Federal Ministry of the Interior, 2025; Federal Ministry of the Interior, 2025b).

Collaboration with External Partners

DRR education in Austria can be strengthened through cooperation between schools and external partners such as civil protection organizations, local fire brigades, the Austrian Red Cross, municipalities, and emergency services. This cooperation should be described as locally adaptable, rather than as one uniform national programme implemented in every school. At national level, the Federal Ministry of the Interior is responsible for the coordination of National Crisis Management, National Disaster Management, crisis response, international disaster relief and civil protection (Federal Ministry of the Interior, 2025). The Austrian Civil Protection Association also supports public awareness by informing people about civil protection, self-protection measures and appropriate behaviour in emergency situations (Federal Ministry of the Interior, 2025b). In the school context, the best-documented example is the SAFETY Tour – Children's Safety Olympics, which aims to communicate the concept of prevention to elementary-school children, teachers and parents through competitions and practical activities (Federal Ministry of the Interior, 2025c).

External partners can also support specific areas of safety education. Local fire brigades may contribute to fire-safety awareness, evacuation behaviour, emergency calls, and understanding the role of rescue services. However, activities such as fire-extinguisher practice, simulated rescues or flood-defence demonstrations should be presented as possible local activities, not as national requirements for all elementary schools. The Austrian Red Cross and Austrian Youth Red Cross are also relevant partners, especially for first-aid awareness and responsible helping behaviour. For example, Helfi introduces pupils in the 1st to 4th school years to simple first-aid measures and accident-prevention tips through everyday danger situations (Austrian Youth Red Cross). Therefore, collaboration with external partners in Austria should be understood as a combination of national civil-protection initiatives, local emergency-service involvement, first-aid education, and community-based preparedness activities.

Educational Resources and Support

Austria supports disaster risk reduction (DRR), safety education and emergency preparedness through civil protection institutions, first-aid education, fire-safety awareness, and locally adaptable school or community activities. Rather than relying on one single national DRR school programme, Austrian schools can draw on resources from civil protection bodies, the Austrian Youth Red Cross, local fire services, and

national education authorities. The Federal Ministry of the Interior provides the national institutional framework for civil protection and disaster management, including prevention, preparedness and protection of the population from natural and technological hazards (Federal Ministry of the Interior, 2025a). The Austrian Civil Protection Association supports public awareness by informing people about civil protection, self-protection measures and appropriate behaviour in emergency situations (Federal Ministry of the Interior, 2025b).

This approach is supported by a range of official and institutional resources, which provide schools with guidance, teaching materials, safety activities and practical information on prevention, self-protection, first aid and emergency preparedness. The most relevant educational resources include the following:

- a) *Federal Ministry of the Interior — Civil Protection and Disaster Management*
National institutional reference for civil protection, disaster management, crisis response and disaster preparedness.
Useful for: national civil protection framework, emergency management, prevention and preparedness.
https://www.bmi.gv.at/204_english/start.aspx
- b) *Austrian Civil Protection Association / Österreichischer Zivilschutzverband (ÖZSV)*
Civil-protection organization focused on public awareness, self-protection and correct behaviour in emergency situations.
Useful for: prevention culture, self-protection, emergency behaviour, public safety awareness.
<https://zivilschutz.at>
- c) *SAFETY Tour — Children’s Safety Olympics*
Initiative of the Austrian Civil Protection Association that communicates the concept of prevention to elementary-school children, teachers and parents through competitions and practical activities.
Useful for: primary-school safety education, emergency behaviour, playful preparedness learning.
https://www.bmi.gv.at/204_english/skkm/safety.aspx
- d) *Helphi — Austrian Youth Red Cross*
First-aid and accident-prevention programme for pupils in the 1st to 4th school years.
Useful for: first aid, accident prevention, helping behaviour, everyday safety awareness.
<https://www.jugendrotkreuz.at/kindergarten-schule-lernen/helfi>
- e) *Federal Ministry of Education, Science and Research (BMBWF)*
National education authority and policy reference for schools. It is useful as a general curricular and institutional source, but not as a specific DRR teaching-resource platform.
Useful for: education policy, curriculum context, school framework.
<https://www.bmbwf.gv.at>
- f) *Austrian Federal Fire Brigade Association / Österreichischer Bundesfeuerwehrverband (ÖBFV)*
Umbrella organization for Austria’s fire brigade system. Its Feuerwehrjugend is an extracurricular youth organization and part of the Austrian fire-service system.
Useful for: fire-safety awareness, youth fire-service activities, role of fire brigades.
<https://www.bundesfeuerwehrverband.at/service/feuerwehrjugend/>
- g) *Local fire brigades / Feuerwehr*
Local fire brigades may support schools through visits, fire-safety activities, evacuation awareness and information about rescue services. These should be described as local practices rather than as one national school programme.
Useful for: fire prevention, emergency calls, evacuation behaviour, rescue-service awareness.

4.6. Cyprus

Cyprus, located in the Eastern Mediterranean, is exposed to a range of natural and climate-related hazards, including earthquakes, wildfires, floods, droughts, heatwaves, dust events and other extreme weather conditions. Official disaster-risk and civil-protection documents identify hazards such as earthquakes, floods, fires and technological risks as relevant to national preparedness and response planning, while Cyprus Civil Defence also collects disaster data in connection with the Sendai Framework methodology (Republic of Cyprus, 2016; Cyprus Civil Defence, 2023). As a result, disaster risk reduction (DRR) education is relevant from the early school years, especially when connected with pupils' local environment, safety behaviour and awareness of emergency procedures.

In elementary education, DRR-related learning in Cyprus should be described as a developing and cross-curricular field rather than as a fully separate school subject. Relevant themes can be linked with environmental education, education for sustainable development, health education, social studies, science and school safety procedures. The Ministry of Education, Sport and Youth provides a framework for health and safety in schools, while Cyprus Civil Defence is the national body responsible for protecting the civilian population and supporting preparedness and response in disasters (Ministry of Education, Sport and Youth; European Commission, 2019a). In practice, DRR education in Cyprus may involve cooperation between schools, the Ministry of Education, Cyprus Civil Defence, the Fire Service, the Cyprus Red Cross and local communities. Through curriculum-related learning, school emergency planning, evacuation or safety drills, environmental awareness and community involvement, pupils can gradually develop knowledge, practical skills and a culture of prevention and preparedness. However, further work is still needed to integrate DRR more systematically and efficiently into the primary curriculum.

DRR Activities in the Elementary School Curriculum

In Cyprus, disaster risk reduction (DRR) activities in elementary education are best understood as cross-curricular and still developing, rather than as a separate school subject. DRR-related themes can be linked with environmental education, education for sustainable development, health education, science, social studies and school safety procedures (Ministry of Education, Sport and Youth; UNESCO Cyprus). At elementary level, pupils may explore local hazards such as earthquakes, fires, floods, drought, heatwaves and extreme weather through classroom discussions, environmental observation, simple prevention activities and age-appropriate learning about safe behaviour.

Practical preparedness is also part of school safety. The Cyprus disaster risk management report notes that the Ministry of Education has a Civil Defence, Health and Safety office for schools and that evacuation exercises are organized at least once a year for earthquake or fire scenarios (Cyprus Civil Defence, 2020). Therefore, DRR activities in Cypriot elementary schools can be described as a combination of curriculum-related learning, environmental awareness and school safety procedures, while further work is still needed to integrate DRR more systematically into primary education.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1–2): Developing Safety Awareness and Recognition of Risks

In the first two years of elementary education, disaster risk reduction (DRR) education in Cyprus should be understood as part of broader school safety, health education, environmental awareness, and civil-defence preparedness, rather than as a separate subject or a fixed national programme. For young pupils, the emphasis is not on technical knowledge about disasters, but on helping children recognize everyday risks, understand simple safety rules, ask for help, and follow adult instructions during emergencies. Age-appropriate activities may include storytelling, drawings, classroom discussion, role-play, short videos, and simple routines related to safe behaviour during earthquakes, fires, floods, storms, or other dangerous situations.

The most reliable national evidence comes from Cyprus disaster risk management reporting, which states that the Ministry of Education maintains a special Civil Defence, Health and Safety office for schools, that special material exists for pupils, and that schools organize exercises at least once a year for safe evacuation after an earthquake or a fire incident (Cyprus Civil Defence, 2020; Cyprus Civil Defence, 2023). Therefore, in Grades 1–2, pupils can be introduced to basic protective actions such as recognizing alarm signals, moving safely with their class, listening to teachers’ instructions, staying calm during evacuation, and understanding simple emergency behaviour. Presentations or activities by Civil Defence, the Fire Service, or other emergency actors may support learning where available locally, but they should be described as possible school-community activities rather than as a fixed national programme.

Middle Grades (Grades 3–4): Exploring Natural Hazards and Personal Responsibility

In Grades 3–4, disaster risk reduction (DRR) education in Cyprus can become more structured by helping pupils explore natural hazards, local risks, personal responsibility and appropriate emergency behaviour. At this level, pupils may begin to understand how hazards such as earthquakes, fires, floods, drought, heatwaves and severe weather can affect people, schools and communities. These themes can be connected with environmental education, science, social studies, health education and school safety procedures. Cyprus disaster risk management reports note that the Ministry of Education maintains a special Civil Defence, Health and Safety office for schools, that special material exists for pupils, and that schools organize at least one exercise per year for safe evacuation after an earthquake or fire incident (Cyprus Civil Defence, 2020; Cyprus Civil Defence, 2023).

Classroom activities for this age group may include discussing local hazards, comparing safe and unsafe behaviour, drawing simple risk-awareness posters, identifying safe places in the school, and learning how to follow evacuation instructions calmly. Activities such as simple hazard maps, weather observations, or visits to fire stations and environmental centres may be used as local pedagogical applications, but they should not be presented as fixed national requirements. The Cyprus Fire Service and other emergency actors can support school safety education where such cooperation is organized locally; recent public information also indicates that fire-safety lessons for schoolchildren were being planned through cooperation between the Ministry of Education and the Fire Service (Cyprus Mail, 2025). Therefore, DRR education in Grades 3–4 should be described as a combination of curriculum-related learning, school evacuation practice, personal responsibility and possible cooperation with civil protection or emergency-service actors.

Upper Grades (Grades 5–6): Advanced Preparedness and Community Engagement

In Grade 5 and Grade 6, disaster risk reduction (DRR) education in Cyprus can become more analytical by helping pupils examine local hazards, emergency preparedness, self-protection and community responsibility. At this level, pupils may explore how hazards such as earthquakes, wildfires, floods, droughts, heatwaves and severe weather affect people, infrastructure, schools and local communities. These themes can be connected with science, environmental education, health education, social studies and school safety procedures. Cyprus disaster risk management reporting identifies hazards such as earthquakes, floods, fires and technological risks as relevant to national preparedness and response planning, making them appropriate contexts for age-appropriate DRR learning (Republic of Cyprus, 2016; Cyprus Civil Defence, 2023).

Grade 5-6 pupils may also examine real or realistic case studies, such as local flooding, wildfire risk or earthquake preparedness, but these should be described as pedagogical applications rather than fixed national curriculum requirements. Activities may include discussing warning messages, comparing safe and unsafe behaviour, preparing simple family or classroom preparedness checklists, identifying safe areas in the school, and reflecting on individual and collective responsibilities during emergencies. The Cyprus disaster risk management report notes that the Ministry of Education has a special Civil Defence, Health and Safety office for schools, that special material exists for pupils, and that schools organize exercises at least once a year for safe evacuation after an earthquake or fire incident (Cyprus Civil Defence, 2020; Cyprus Civil Defence, 2023).

School safety planning is therefore relevant, but it should not be presented as a separate Grade 5 programme in which all pupils design or update school emergency plans. A more accurate formulation is that schools maintain safety and evacuation procedures, while Grade 5 pupils may participate in age-appropriate evacuation drills, classroom reflection on emergency behaviour and preparedness activities. At national level, Cyprus Civil Defence also participates in exercise programmes covering earthquakes, adverse weather, search and rescue and population evacuation scenarios, which supports the wider civil-protection context in which school preparedness is situated (European Commission, 2019). Overall, DRR education in Grade 5 can help pupils move from basic safety awareness toward critical thinking, preparedness, responsibility and community resilience.

Collaboration with External Organizations

Cypriot elementary schools may collaborate with external organizations in order to strengthen disaster risk reduction (DRR), school safety, civil-defence awareness, fire safety and first-aid education. This collaboration should be described as locally adaptable, rather than as one fixed national programme implemented identically in every school. The most reliable national evidence comes from Cyprus disaster risk management reporting, which notes that the Ministry of Education maintains a special Civil Defence, Health and Safety office for schools, that special material exists for pupils, and that schools organize at least one exercise per year for safe evacuation after an earthquake or fire incident (Cyprus Civil Defence, 2020; Cyprus Civil Defence, 2023). Cyprus Civil Defence is also the responsible organization for inter-agency civil-protection exercises at national, regional and local level, including scenarios related to earthquakes, adverse weather and population evacuation (European Commission, 2019).

External partners may include Cyprus Civil Defence, the Fire Service, the Cyprus Red Cross, municipalities and other emergency-response actors. The Fire Service can support school safety education through fire-safety awareness and evacuation-related learning where such cooperation is organized locally. Recent public information indicates that fire-safety lessons for schoolchildren were being planned through cooperation between the Ministry of Education and the Fire Service, which supports the idea of school-emergency-service collaboration, but this should not be presented as a long-standing or universal national programme for all schools (Cyprus Mail, 2025; Government of Cyprus, 2025). The Cyprus Red Cross is also relevant mainly for first-aid education and emergency response awareness, since it provides first-aid training courses through qualified instructors (Cyprus Red Cross Society). Therefore, collaboration with external organizations in Cyprus should be understood as a combination of school safety procedures, civil-defence preparedness, fire-safety education, first-aid awareness and locally organized community partnerships.

Activities such as fire-safety sessions, evacuation drills, first-aid demonstrations, emergency-number awareness, or visits by Civil Defence, Fire Service or Red Cross representatives may support DRR learning where available locally. However, initiatives such as a national “Safety Week”, rotating emergency stations, fire-extinguisher practice or simulated rescues should be described only as possible local activities, unless a specific school, municipality or official programme is cited. This careful wording keeps the section accurate while still showing that external cooperation can help pupils connect school learning with real-life preparedness and community resilience.

Educational Resources and Support

Cyprus supports disaster risk reduction (DRR) education through school health and safety procedures, civil-defence guidance, environmental and sustainability education, first-aid training, and public-awareness resources. DRR should not be presented as a separate, fully developed primary-school subject; rather, schools can draw on resources from the Ministry of Education, Sport and Youth, Cyprus Civil Defence, the Cyprus Red Cross, and European civil-protection awareness platforms. The Ministry of Education maintains a Health and Safety framework for schools, while Cyprus disaster risk management reporting notes that there is a special Civil Defence, Health and Safety office for schools and that schools

organize evacuation exercises at least once a year for earthquake or fire scenarios (Ministry of Education, Sport and Youth; Cyprus Civil Defence, 2020; Cyprus Civil Defence, 2023). The most relevant educational resources include the following:

- a) *Ministry of Education, Sport and Youth — Health and Safety*
Official school health and safety framework.
Useful for: school safety, emergency procedures, health and safety policy.
https://www.moec.gov.cy/en/health_safety.html
- b) *Cyprus Civil Defence*
National civil-defence authority under the Ministry of Interior. It provides information on disaster preparedness, self-protection, risk management and emergency response.
Useful for: civil-defence awareness, evacuation, earthquake/fire preparedness, disaster response.
<https://www.gov.cy/moi-cd/en/>
- c) *Cyprus Civil Defence — Disaster Risk Management Reports*
Official reports documenting Cyprus's disaster risk management framework, including school-related Civil Defence, Health and Safety references and annual evacuation exercises.
Useful for: evidence on national risk management, school evacuation practice, Sendai-related reporting.
<https://www.gov.cy/moi-cd/en/documents/>
- d) *Cyprus Red Cross Society*
Provides first-aid training courses through qualified instructors and contributes to emergency response and humanitarian support.
Useful for: first-aid education, emergency response awareness, basic helping behaviour.
<https://www.redcross.org.cy/en/what-we-do/first-aid>
- e) *Cyprus National Commission for UNESCO — Education for Sustainable Development*
Provides information on Cyprus's education for sustainable development and environmental education framework.
Useful for: environmental awareness, sustainability learning, climate/environmental risk connections.
https://www.unesco.org.cy/Programmes-Education_For_Sustainable_Development_Cyprus%2CEN-PROGRAMMES-01-03-01%2CEN
- f) *BeSafeNet — European and Mediterranean Major Hazards Agreement*
Disaster-awareness platform coordinated through the European Centre for Disaster Awareness, integrated within Cyprus Civil Defence.
Useful for: hazard awareness, educational material on natural and technological risks, student awareness activities.
<https://www.coe.int/en/web/europarisks/be-safe-net>
- g) *Cyprus Fire Service / local fire-safety actors*
Fire-safety education may be supported locally through fire-safety lessons, school visits or evacuation-related activities where these are organized.
Useful for: fire prevention, evacuation behaviour, emergency-service awareness.
Use as a local/supporting resource rather than as evidence of one national school programme.

4.7. Greece

Greece approaches disaster risk reduction (DRR) education through school safety planning, earthquake preparedness, environmental education, civil protection awareness and cross-curricular learning. The country is highly exposed to natural hazards such as earthquakes, wildfires, floods, severe weather and landslides, while national risk-assessment sources also identify industrial accidents as a relevant risk (European Commission, 2021; PreventionWeb, 2021). Because of this exposure, DRR education is especially relevant from the early school years, particularly when connected with pupils' local environment, safe behaviour and emergency preparedness.

In elementary education, DRR-related learning in Greece should be understood as a developing and cross-curricular field rather than as a fully separate school subject. DRR themes are present in different parts of the primary-school learning framework, including the Skills Labs, environmental education, civic education and school safety procedures. Greece also has strong institutional support for earthquake preparedness through the Earthquake Planning and Protection Organization (EPPO/OASP), which provides school-oriented guidance on seismic-risk management and emergency planning in school units (Earthquake Planning and Protection Organization (EPPO), 2025). Therefore, DRR education in Greece can be described as a combination of curriculum-related learning, school safety planning, environmental and civic education, and cooperation with civil protection actors. However, further work is still needed to ensure that DRR education is implemented systematically and consistently across all primary schools and regions.

DRR Activities in the Elementary School Curriculum

In the Greek elementary school curriculum, DRR activities can be developed mainly through experiential, inquiry-based and project-based learning. These activities are not limited to learning safety rules; they can help pupils observe hazards, investigate causes and consequences, discuss prevention measures and practise appropriate behaviour. In the Skills Labs, the thematic cycle "Caring for the Environment" includes the sub-theme "Climate change – Natural disasters, Civil Protection," with keywords related to prevention and protection from natural disasters, making it a suitable framework for project-based DRR activities (Institute of Educational Policy, n.d.). In Geography, Grade 5, pupils encounter chapters such as "The role of volcanoes and earthquakes in changes in nature" and "Natural disasters in Greece," which provide opportunities for discussing natural hazards, distinguishing natural from human-related causes, and reflecting on how people can respond to disasters (Ministry of Education /Digital School).

More specific DRR activities may include classroom discussions on earthquakes, floods, wildfires and extreme weather; analysis of images, maps or short videos; preparation of awareness posters; simple preparedness checklists; and role-play on appropriate behaviour during emergencies. These should be described as pedagogical applications supported by the curriculum and teaching materials, not as a fixed national set of activities carried out identically in every school. For earthquake preparedness, the Earthquake Planning and Protection Organization provides school-oriented material on seismic-risk management, school emergency planning, preparedness drills, evacuation procedures and classroom self-protection instructions, including "Drop, Cover, Hold On" and orderly evacuation after the earthquake (EPPO, 2025). Therefore, DRR activities in Greek elementary schools can be described as practical, participatory and cross-curricular tasks that move pupils from hazard awareness to preparedness, safe behaviour and shared responsibility.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1–2): Introducing Safety Basics and Emergency Awareness

In Grades 1–2, DRR education in Greece should be understood as basic safety awareness and early emergency preparedness, rather than as technical disaster-risk instruction. At this level, pupils can be introduced to simple ideas such as recognizing danger, staying calm, following the teacher's instructions, moving safely with the class, and understanding basic protective behaviour during emergencies such as

earthquakes, fires or severe weather. These aims can be linked with classroom routines, environmental awareness, school safety procedures and the broader Skills Labs framework, where the thematic cycle “Caring for the Environment” includes “Climate change – Natural disasters, Civil Protection” and keywords related to prevention and protection from natural disasters (Institute of Educational Policy).

For this age group, the strongest specific source is the Earthquake Planning and Protection Organization (OASP/EPPO), because it provides school-oriented material for seismic-risk management and preparedness. OASP material supports age-appropriate activities such as visual material, storytelling, drawings, discussion, role-play and simple earthquake-safety routines. Pupils can learn basic protective actions such as “Drop, Cover, Hold On”, staying protected during the earthquake and evacuating in an orderly way after the shaking stops according to the school emergency plan (oasp.gr) Therefore, for Grades 1–2 it is safer to describe DRR activities as introductory school-safety and civil-protection learning, not as a separate programme such as “Μένω Ασφαλής” unless a specific official source is cited.

Middle Grades (Grades 3–4): Understanding Local Risks and First Response

In Grades 3–4, DRR education can become more structured by helping pupils understand local risks, everyday safety behaviour and basic first-response actions. These activities can be connected with Skills Labs, environmental education, school safety routines and teacher-led projects. The official Skills Labs repository includes the thematic cycle “Caring for the Environment”, where “Climate change – Natural disasters, Civil Protection” is explicitly listed; this provides a suitable framework for activities on prevention, protection and civil-protection awareness (Institute of Educational Policy).

At this level, suitable activities may include discussing earthquakes, fires, floods and extreme weather; preparing simple safety posters; identifying safe and unsafe behaviours; and exploring local-risk examples. These should be presented as pedagogical applications, not as a fixed national list of activities. For earthquake preparedness, OASP provides strong school-related support through material on seismic-risk management in school units, emergency planning and preparedness activities (oasp.gr) If schools invite firefighters, Red Cross volunteers or civil-protection officers, these visits should be described as possible local school-community activities, not as universal national requirements.

Upper Grades (Grades 5–6): Deepening Preparedness and School-Wide Involvement

By Grades 5–6, disaster risk reduction (DRR) education in Greece can become more analytical and interdisciplinary, as pupils are able to connect natural hazards with causes, consequences, prevention, preparedness and responsible behaviour. DRR-related learning is not limited to one subject. It can be supported by the Skills Labs, where the thematic cycle “Caring for the Environment” includes the sub-theme “Climate change – Natural disasters, Civil Protection”; by Geography, where pupils study earthquakes, volcanoes, changes on the Earth’s surface and natural disasters in Greece; by Environmental Education and Education for Sustainable Development, where natural and technological disasters and environmental crisis management are included; and by Social and Civic Education, where civil defence and civil protection are connected with citizens’ responsibilities and state protection mechanisms (Institute of Educational Policy; Ministry of Education /Digital School, 2011; Ministry of Education / Digital School).

At this level, suitable DRR activities may include analysing local or national disaster examples, comparing causes and impacts of earthquakes, floods, wildfires or extreme weather, preparing awareness material, discussing preparedness measures, and reflecting on individual and collective responsibility. These should be described as pedagogical applications supported by curriculum-related material, not as a fixed national set of activities carried out identically in every school. For earthquake preparedness, the Earthquake Planning and Protection Organization provides school-oriented material on seismic-risk management, school emergency planning, preparedness drills, classroom self-protection instructions and orderly evacuation procedures. Its guidance includes protective actions such as “Drop, Cover, Hold On” and evacuation after the earthquake according to the school emergency plan (EPPO, 2025). Therefore, it is accurate to say that Grade 5 pupils may participate in age-appropriate preparedness activities, evacuation drills and classroom reflection on school safety procedures. However, it is better not to claim that pupils

formally create or update the school's Σχέδιο Έκτακτης Ανάγκης, since this remains a responsibility of the school staff. Similarly, activities such as “Emergency Days,” student-led simulations or visits from emergency professionals may occur locally, but they should be presented as optional school/community practices, not as national requirements.

Collaboration with External Organizations

Greek elementary schools may collaborate with external organizations in order to strengthen disaster risk reduction (DRR), school safety, earthquake preparedness, fire-safety awareness and first-aid education. This collaboration should be described as locally adaptable, rather than as one fixed national programme implemented identically in every school. The strongest institutional support comes from the Earthquake Planning and Protection Organization (EPPO/OASP), which creates printed and digital educational material, participates in earthquake-preparedness drills in school units, carries out informative talks for pupils and supports school-based seismic-risk management. OASP also prepares and updates the memorandum of actions for managing seismic risk in school units and provides guidance for teachers and school leaders involved in emergency planning (OASP; OASP, 2020).

Other external organizations may support specific aspects of preparedness. The Hellenic Red Cross is relevant mainly for first-aid education, since it provides structured first-aid training programmes on basic first aid, cardiopulmonary resuscitation, bleeding, wounds and emergency incidents (Hellenic Red Cross, 2025). Local fire services, municipalities, civil-protection officers, Red Cross branches or other emergency professionals may also support schools through talks, demonstrations, evacuation-related activities or first-aid awareness where such cooperation is organized locally. However, these should be described as possible local school-community activities, not as universal national requirements.

A careful note is needed for the initiative “Προστατεύω τον Εαυτό μου και τους Άλλους.” It is a real initiative related to prevention, preparedness and crisis management, but the available sources present it mainly as training or awareness activity for citizens, volunteers and local communities, not as a widely implemented elementary-school programme. Therefore, it can be mentioned as part of Greece’s broader culture of civil-protection awareness and volunteer training, but not as a core DRR programme for primary pupils. Overall, collaboration with external organizations in Greece should be understood as a combination of school-based earthquake preparedness, locally organized civil-protection cooperation, fire-safety awareness and first-aid education, supported by institutions such as OASP, the Hellenic Red Cross, civil-protection authorities, municipalities and local emergency services.

Educational Resources and Support

Greece has access to a range of official and institutional resources that can support disaster risk reduction (DRR) education, school safety and emergency preparedness. These resources come from the education system, civil protection authorities, scientific organizations and emergency-response bodies. DRR-related content is supported through the Skills Labs, official digital school material, environmental education, earthquake-preparedness resources and school emergency planning. However, these resources should be described as part of a developing support framework rather than as one fully standardized national DRR curriculum implemented identically in all primary schools.

This approach is supported by a range of official and institutional resources, which provide schools with teaching material, safety guidance, civil-protection information, scientific data, first-aid training and practical support for preparedness. The most relevant educational resources include the following:

a) *Institute of Educational Policy — Skills Labs: “Caring for the Environment”*

The Skills Labs include the thematic cycle “Caring for the Environment”, with the sub-theme “Climate change – Natural disasters, Civil Protection.”

Useful for: curriculum-related DRR learning, climate change, natural disasters, civil protection, project-based activities.

<https://www2.iep.edu.gr/el/psifiako-apothetirio/skill-labs/911-frontizo-to-perivallon>

b) *Digital School — Geography, Grade 5*

The Grade 5 Geography material includes topics such as changes on the Earth's surface, earthquakes, volcanoes and natural disasters in Greece.

Useful for: earthquakes, volcanoes, erosion, floods, landslides, environmental change, natural hazards.

https://ebooks.edu.gr/ebooks/v/html/8547/2278/Geografia_E-Dimotikou_html-empl/indexB_27.html

c) *Digital School — Environment and Education for Sustainable Development: Primary Guide*

The primary-school guide includes the thematic area "Natural and Technological Disasters – Environmental Crisis Management."

Useful for: floods, forest fires, earthquakes, extreme weather, technological disasters, environmental crisis management.

<https://ebooks.edu.gr/info/newps/>

d) *Earthquake Planning and Protection Organization — OASP / EPPO*

OASP provides school-oriented material for seismic-risk management, earthquake preparedness, emergency planning and evacuation procedures in school units.

Useful for: earthquake preparedness, school emergency plans, evacuation drills, "Drop, Cover, Hold On," seismic-risk management.

<https://oasp.gr>

e) *OASP / EPPO Manual of Activities for Seismic Risk Management in School Units*

A focused school resource with activities and guidance for seismic-risk management in schools.

Useful for: classroom earthquake education, school preparedness, evacuation procedures, emergency planning.

[https://oasp.gr/sites/default/files/library/2025-09/EPPO Manual of Activities for Seismic Risk Management in Schools%20eng%202026.pdf](https://oasp.gr/sites/default/files/library/2025-09/EPPO_Manual_of_Activities_for_Seismic_Risk_Management_in_Schools%20eng%202026.pdf)

f) *Ministry of Climate Crisis and Civil Protection / General Secretariat for Civil Protection*

Provides public guidance on preparedness and protection from hazards such as earthquakes, fires, floods, severe weather and other emergencies.

Useful for: public safety instructions, civil-protection awareness, emergency preparedness.

<https://civilprotection.gov.gr>

g) *Hellenic Fire Service*

National fire and rescue authority. It is relevant for fire prevention, wildfire risk, emergency response and public safety information.

Useful for: fire safety, wildfire awareness, emergency response, local school cooperation.

<https://www.fireservice.gr>

h) *Hellenic Red Cross*

Provides first-aid training and emergency-response support.

Useful for: first-aid education, emergency response awareness, basic helping behaviour.

<https://www.redcross.gr/protes-voitheies/>

i) *Institute of Geodynamics — National Observatory of Athens*

Scientific institution providing seismic monitoring and earthquake information in Greece.

Useful for: earthquake data, seismic activity, scientific background for earthquake-related learning.

<https://www.gein.noa.gr>

5. CHARACTERISTICS OF DRR EDUCATION ACTIVITIES AND CURRICULA IN ELEMENTARY SCHOOLS GLOBALLY

Disaster Risk Reduction (DRR) education in elementary schools aims to develop children's awareness, preparedness, safety behaviour and resilience from an early age. Although the organization of DRR education differs across countries, international frameworks identify several common characteristics: curriculum integration, age-appropriate learning, practical preparedness, school safety planning, community participation and links with local risks. The Comprehensive School Safety Framework 2022–2030 describes risk reduction and resilience education as learning opportunities through which children, school staff and communities develop individual and collective resilience (GADRRRES, 2022). The framework also adopts an all-hazards, all-risks approach, including natural, climate-related, technological, biological and everyday risks. Similarly, the Sendai Framework for Disaster Risk Reduction 2015–2030 emphasizes understanding disaster risk, strengthening preparedness and promoting disaster-risk knowledge, education and public awareness (UNDRR, 2015). Therefore, DRR education in primary schools is not only about learning facts about hazards; it is also about developing safe habits, responsible decision-making and a culture of prevention.

A central characteristic of DRR education is its interdisciplinary nature. In many countries, DRR is not taught as a separate subject but is integrated into science, geography, environmental education, health education and civic or social studies. Through science, pupils may learn about earthquakes, floods, storms, climate change, weather systems or the physical causes of hazards. Through geography and environmental education, they can explore local landscapes, land use, vulnerability, exposure and the relationship between human activity and risk. Through civic education, they can examine community responsibility, emergency services, public safety and the role of government and humanitarian organizations. This cross-curricular model helps children understand that disasters are not only natural events, but are shaped by environmental, social and institutional factors.

Another important characteristic is the use of interactive and experiential learning. DRR education is most effective when pupils practise what they are expected to do, not only when they hear instructions. Activities may include evacuation drills, simulations, role-play, storytelling, games, group work, posters, hazard mapping and simple problem-solving tasks. These approaches are especially important in elementary education because young children learn more effectively when abstract ideas are connected with concrete actions. For example, in Japan, public elementary schools regularly conduct earthquake drills: children learn to get under their desks, hold on until the shaking stops and evacuate under teacher guidance afterwards ([Web Japan](#)). Japan also uses broader disaster-prevention training in schools and communities, reflecting the country's high exposure to earthquakes and other hazards ([Web Japan](#)). This example shows how repeated practice can help transform safety knowledge into automatic protective behaviour.

DRR education is also place-based and locally relevant. Schools often adapt activities to the hazards that affect their region, such as earthquakes, floods, wildfires, typhoons, landslides, drought or extreme heat. This local focus helps pupils connect classroom learning with their own communities and daily lives. For example, in countries exposed to tropical cyclones and flooding, preparedness education may emphasize early warnings, safe evacuation, family preparedness and school disaster-risk management. In the Philippines, the Department of Education has a dedicated Disaster Risk Reduction and Management Service, which supports DRR, climate change adaptation and education in emergencies within the education sector (Department of Education). This type of institutional support shows how DRR education can be linked with broader school safety systems and national preparedness policies.

A further characteristic is the connection between school-based learning and community engagement.

Schools often function as community hubs for risk awareness, because children can transfer preparedness messages to their families and wider community. DRR activities may involve parents, local authorities, civil protection agencies, firefighters, Red Cross or Red Crescent societies, NGOs and meteorological or geological institutions. The IFRC and Save the Children emphasize that public awareness and public education for DRR should provide clear, consistent and action-oriented safety messages for households and schools, helping communities understand risks and take practical measures to stay safe (IFRC & Save the Children, 2020). Community involvement strengthens the practical value of DRR education because pupils learn not only what to do individually, but also how emergency systems and community actors work together before, during and after disasters.

Technology is increasingly used to support DRR education, although it should be seen as a supplement rather than a replacement for practical drills and teacher-led learning. Digital tools may include videos, online games, interactive maps, weather and hazard platforms, early-warning information, mobile applications and, in some contexts, virtual or augmented reality simulations. These tools can help pupils visualize hazards and practise decision-making in a safe environment. However, technology is most effective when it is age-appropriate, guided by teachers and connected with real school safety procedures. For elementary pupils, digital resources are most useful when they support concrete learning goals, such as recognizing warning signs, understanding local risks, planning safe routes or practising appropriate emergency behaviour.

Overall, DRR education in elementary schools globally is strongest when it is age-appropriate, interdisciplinary, practical, locally relevant and community-connected. Its purpose is not to frighten children, but to empower them with knowledge, confidence and safe routines. When DRR is embedded in the curriculum and reinforced through drills, projects, community partnerships and clear safety messages, schools can help children become active participants in preparedness and resilience. At the same time, international frameworks stress that these efforts should be part of a wider comprehensive school safety approach, including safe learning facilities, school disaster management and risk reduction education (GADRRRES, 2022).

5.1. California, USA

California approaches disaster risk reduction (DRR) education through science learning, school emergency planning, earthquake preparedness, wildfire awareness, tsunami preparedness and community-based resilience activities. The state is exposed to major hazards such as earthquakes, wildfires, floods, severe weather and tsunamis, making preparedness education especially relevant in elementary and middle-school settings. The California Department of Education provides school disaster and emergency management guidance for local educational agencies, while the California Governor's Office of Emergency Services supports student preparedness through school-focused initiatives such as the fourth-grade Preparedness Ambassadors Program (California Department of Education, 2025a; California Governor's Office of Emergency Services, 2025a).

DRR education in California should not be described as one separate school subject. It is better understood as a combination of curriculum-related learning, science and engineering practices, school safety procedures and community preparedness. The California Next Generation Science Standards, adopted by the State Board of Education in 2013, include natural hazards as part of Earth and human activity, while the Science Framework for California Public Schools, adopted in 2016, provides instructional guidance for implementing these standards (California Department of Education, 2013; California Department of Education, 2025b). At the elementary level, pupils learn that natural hazards result from natural processes and that humans can take steps to reduce their impacts. At the middle-school level, students analyse natural-hazard data and consider technologies or strategies that can reduce risk. Therefore, DRR education in California combines scientific understanding, practical preparedness and school-based emergency planning.

DRR Activities in the Elementary School Curriculum

In California, DRR activities can be developed through science, environmental learning, social studies and school safety practice rather than through a standalone DRR subject. In science, pupils can study natural hazards such as earthquakes, tsunamis, floods, wildfires and severe weather, while also exploring how people can reduce harm through preparedness, planning and engineering design. The California Science Framework includes a Grade 4 instructional segment on earthquake engineering, where students use earthquakes as a phenomenon to explore waves, design, modelling and solutions that reduce risk (California Department of Education, 2016; 2025b). This provides a strong curriculum-based example of how DRR concepts can be linked with scientific inquiry and engineering design.

In classroom practice, suitable DRR activities may include analysing local hazards, comparing safe and unsafe behaviours, preparing preparedness messages, discussing emergency supplies, interpreting hazard maps and participating in drills. Earthquake preparedness is especially prominent. The 2025 Great California ShakeOut encouraged schools, districts and county offices of education to participate in a statewide earthquake drill, and the California Department of Education noted that participation could help schools meet state earthquake-drill requirements (California Department of Education, 2025c). Pupils can practise protective actions such as “Drop, Cover, and Hold On,” which Cal OES also identifies as a life-saving earthquake response action (California Governor’s Office of Emergency Services, 2025b). Coastal schools may also connect earthquake learning with tsunami preparedness, since the California Department of Education provides updated tsunami-related school disaster resources explaining what to do before, during and after a tsunami (California Department of Education, 2025d). These activities should be described as curriculum-supported and school-safety practices, not as identical activities implemented in every California school.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness

In Grades 1–2, DRR education in California should focus on basic safety awareness and simple emergency behaviour. At this level, pupils are not expected to analyse disasters technically; instead, they learn how to recognize danger, follow teacher instructions, respond to alarms, move safely with their class and understand that adults and first responders help during emergencies. Activities may include storytelling, drawings, classroom discussion, short videos, emergency-supply pictures, simple role-play and school routines related to earthquakes, fire, smoke, severe weather or evacuation.

For this age group, it is more accurate to use general school safety and earthquake-preparedness resources rather than the Preparedness Ambassadors Program, because that programme is specifically designed for fourth-grade students (California Governor’s Office of Emergency Services, 2025a). Lower-grade pupils can still participate in age-appropriate earthquake and fire drills as part of school emergency preparedness. California regulations require regular fire drills in elementary schools, and California school safety guidance also connects schools with emergency preparedness and response planning (California Code of Regulations, Title 5, § 550; California Department of Education, 2025a). For earthquake safety, pupils can practise simple protective actions such as “Drop, Cover, and Hold On” during school drills, supported by the Great California ShakeOut and Cal OES earthquake-preparedness messaging (California Department of Education, 2025c; California Governor’s Office of Emergency Services, 2025b). Therefore, lower-grade DRR education in California is best described as introductory school-safety learning focused on calm behaviour, following instructions and basic self-protection.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention

In Grades 3–4, DRR education can become more structured. Pupils can begin to understand that natural hazards result from natural processes and that communities can take steps to reduce their impacts. This is directly supported by the California NGSS and the California Science Framework, which connect natural hazards with engineering design, modelling and solutions that reduce risk (California Department of

Education, 2013; California Department of Education, 2016). Activities at this level may include discussing earthquakes, wildfires, floods and tsunamis; analysing simple local-risk examples; creating preparedness posters; comparing emergency supplies; and identifying safe actions before, during and after a hazard.

The most relevant programme for this level is the Preparedness Ambassadors Program, developed by Cal OES in partnership with the California Department of Education, CalRecycle and the Sacramento County Office of Education. This is a statewide fourth-grade disaster preparedness curriculum designed to engage students in developing and promoting preparedness guidelines for their homes, schools and communities (California Governor’s Office of Emergency Services, 2025a). The programme includes classroom-ready resources and encourages pupils to use the Family Readiness Guide, make community posters and connect classroom learning with family and community preparedness. This makes it a strong example for Grade 4, but it should not be presented as a Grades 1–2 programme. The Great California ShakeOut is also relevant at this level, because schools can use it to practise earthquake safety actions and organize age-appropriate earthquake drills (California Department of Education, 2025c).

Upper Grades (Grades 5-6): In-Depth Exploration and Application of DRR Concepts

In Grades 5–6, DRR education in California can become more analytical and application-based. Pupils are able to connect hazards with causes, impacts, preparedness, mitigation and community responsibility. In Grade 5, DRR learning can build on elementary natural-hazards concepts, including the idea that hazards such as earthquakes, floods, severe weather, tsunamis and coastal erosion cannot be eliminated but their impacts can be reduced through planning and protective measures. In Grade 6, the middle-school NGSS deepen this learning by asking students to analyse and interpret data on natural hazards in order to forecast future events and inform mitigation strategies (California Department of Education, 2013).

Suitable activities for Grades 5–6 may include analysing local hazard maps, comparing earthquake, wildfire, flood or tsunami risks in different regions of California, evaluating preparedness strategies, preparing family emergency plans, discussing warning systems and designing awareness materials for the school community. In earthquake-prone areas, pupils may examine why Drop, Cover, and Hold On is recommended and participate in school earthquake drills. In coastal areas, schools may use tsunami-preparedness materials and evacuation-route discussions, while wildfire-prone regions may connect learning with evacuation readiness, air-quality concerns, defensible space and community preparedness. However, these should be presented as locally adapted applications, not as one fixed statewide set of activities.

School-wide preparedness is also relevant in the upper grades, but it should be described carefully. California schools are required to maintain Comprehensive School Safety Plans, which must be reviewed and updated annually; the California Department of Education explains that each school must update and adopt its plan by March 1 each year (California Department of Education, 2026). However, it is not accurate to say that Grade 5 or Grade 6 pupils formally develop or update the school emergency plan; that responsibility belongs to school and district personnel. A more accurate formulation is that older pupils may participate in age-appropriate drills, classroom reflection, preparedness projects and community-awareness activities linked to their school’s emergency procedures. Therefore, DRR education in Grades 5–6 can combine science inquiry, local-risk analysis, preparedness planning and school-safety practice.

Collaboration with External Organizations

California elementary schools may collaborate with external organizations in order to strengthen disaster risk reduction (DRR), school safety, earthquake preparedness, wildfire awareness, first-aid learning and community resilience. These partnerships should be described as locally adaptable, rather than as one uniform statewide programme implemented identically in every school. The most relevant state-level partners are the California Governor’s Office of Emergency Services (Cal OES) and the California Department of Education (CDE). The CDE provides guidance, training and resources for local educational agencies related to natural disasters and emergency hazards, while Cal OES supports school preparedness

and student-focused emergency education through initiatives such as the fourth-grade Preparedness Ambassadors Program (California Department of Education, 2025a; California Governor's Office of Emergency Services, 2025a).

A well-documented example of school-related collaboration is the Preparedness Ambassadors Program, developed by Cal OES in partnership with the California Department of Education, CalRecycle and the Sacramento County Office of Education. It is a fourth-grade disaster preparedness curriculum designed to help students develop and promote preparedness guidelines for their homes, schools and communities (California Governor's Office of Emergency Services, 2025a). The Great California ShakeOut is another important example of statewide school participation in earthquake preparedness. In 2025, the California Department of Education encouraged schools, districts and county offices of education to participate and noted that participation could help schools meet state earthquake-drill requirements (California Department of Education, 2025b). Local fire departments, county emergency managers, American Red Cross chapters and other community partners may also support schools through fire-safety talks, preparedness activities, emergency planning discussions or first-aid awareness where such cooperation is organized locally. However, activities such as fire-extinguisher practice, simulated rescues or specialist-led workshops should be described as possible local practices, not as statewide requirements for all elementary schools.

Educational Resources

California has a wide range of official and institutional resources that can support DRR education, school safety and emergency preparedness. These resources include state school emergency-management guidance, earthquake-drill materials, student preparedness curricula, wildfire-related school resources, tsunami preparedness information and national youth preparedness materials. The California Department of Education provides school disaster and emergency management resources for local educational agencies, while Cal OES supports preparedness education through the Preparedness Ambassadors Program and statewide earthquake preparedness campaigns (California Department of Education, 2025a; California Governor's Office of Emergency Services, 2025a). These resources help schools connect DRR education with both curriculum-related learning and practical school emergency procedures.

The following resources are the most relevant for California elementary schools:

- a) *California Department of Education — School Disaster and Emergency Management*
Provides guidance, grants, training and resources for local educational agencies related to natural disasters and emergency hazards.
Useful for: school emergency planning, disaster response, preparedness resources and school safety policy.
<https://www.cde.ca.gov/ls/ep/>
- b) *California Department of Education — Disaster and Emergency Resources*
Provides disaster preparedness educational materials, lesson plans and emergency-related resources for school districts and county offices of education.
Useful for: classroom resources, emergency preparedness lessons and school disaster planning.
<https://www.cde.ca.gov/ls/ep/schoolemergencyres.asp>
- c) *California Governor's Office of Emergency Services — Preparedness Ambassadors Program*
Fourth-grade disaster preparedness curriculum developed with education and state partners.
Useful for: Grade 4 preparedness education, family readiness, community posters and home-school preparedness.
<https://www.news.caloes.ca.gov/building-up-preparedness-one-classroom-at-a-time-fourth-grade-preparedness-ambassadors-program-available-for-educators/>
- d) *Great California ShakeOut*
Statewide earthquake-drill initiative used by schools to practise earthquake safety actions and meet

drill requirements.

Useful for: earthquake drills, “Drop, Cover, and Hold On,” and school preparedness practice.

<https://www.cde.ca.gov/nr/el/le/yr25ltr1008.asp>

e) *California Department of Education — Tsunamis*

School disaster-management resource explaining tsunami risks and what schools and communities should do before, during and after a tsunami.

Useful for: coastal schools, tsunami awareness, evacuation planning and emergency behaviour.

<https://www.cde.ca.gov/ls/ep/tsunamis.asp>

f) *California Department of Education — 2025 California Wildfire Resources*

Resources for schools, families and students affected by California wildfires.

Useful for: wildfire preparedness, school continuity, family and student support after wildfire events.

<https://www.cde.ca.gov/ls/ep/resforwildfires2025.asp>

g) *FEMA — Youth and Emergency Planning*

National guidance and materials for implementing youth preparedness programmes, including checklists and workbooks.

Useful for: youth preparedness, emergency planning, checklists and family/community preparedness.

<https://www.fema.gov/emergency-managers/individuals-communities/youth>

h) *FEMA Ready Kids Curriculum*

Provides emergency preparedness curriculum resources appropriate for students from pre-kindergarten to high school, including STEP materials for Grade 4 and above.

Useful for: classroom emergency planning, preparedness lessons and family preparedness activities.

<https://www.ready.gov/kids/curriculum>

i) *American Red Cross — Prepare with Pedro*

Youth preparedness resource for younger children; useful as a supplementary activity for emergency preparedness education.

Useful for: lower elementary preparedness, home fire safety, local hazards and family communication.

<https://www.preventionweb.net/publication/prepare-pedro-adventure-emergency-preparedness-game>

5.2. Japan

Japan has one of the most developed approaches to disaster risk reduction (DRR) education because of its high exposure to earthquakes, tsunamis, typhoons, floods, landslides and volcanic hazards. DRR education in Japan is closely connected with school safety education, disaster-prevention learning, evacuation drills and community-based preparedness. National policy documents emphasize the importance of strengthening practical DRR education and evacuation drills in schools according to local disaster risks and pupils’ developmental stages (Cabinet Office, Government of Japan, 2022a).

In elementary education, DRR should not be described as a single standalone subject. It is better understood as part of a wider school-safety and cross-curricular framework, connected with science, social studies, health and physical education, moral/civic learning and special activities. Japan’s national disaster-management policy highlights the need to improve disaster-prevention education in schools, while the Third School Safety Promotion Plan further strengthens safety education and disaster-prevention measures in school settings (Cabinet Office, Government of Japan, 2022a). Therefore, DRR education in Japan can be described as a combination of curriculum-related learning, school disaster management, repeated drills, local hazard awareness and community cooperation.

DRR Activities in the Elementary School Curriculum

In Japan, DRR activities in elementary schools are practical, repeated and closely connected with local risks. Rather than being limited to classroom explanations, disaster education often combines lessons about hazards with evacuation drills, safety routines, community learning and reflection on how to act during emergencies. The Cabinet Office notes that Japan promotes practical DRR education and evacuation drills in schools so that pupils learn local disaster risks, preparedness and appropriate responses according to their developmental stage (Cabinet Office, Government of Japan, 2022a).

Typical DRR activities may include earthquake drills, tsunami evacuation practice in coastal areas, typhoon and heavy-rain preparedness, hazard-map activities, discussion of evacuation routes, emergency-supply awareness and learning how to protect oneself during shaking. In public elementary schools, children practise earthquake drills by taking cover under desks and evacuating under teacher guidance after the shaking stops (Kids Web Japan, 2020). These activities show that Japanese DRR education is not only about knowing what disasters are, but also about practising safe behaviour until pupils can respond calmly and appropriately.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness.

In Grades 1–2, DRR education in Japan focuses mainly on basic safety behaviour, recognition of danger and following adult instructions during emergencies. At this age, pupils are not expected to study disasters in a technical way. Instead, they learn simple routines such as staying calm, listening to the teacher, protecting their head and body, lining up safely and evacuating with the class. These activities may be supported through storytelling, illustrations, classroom routines, songs, simple videos, role-play and repeated drills.

For earthquake preparedness, it is more accurate to refer to general school disaster-prevention education and evacuation drills, rather than to a specific national programme called “Jishin ni Sonoe.” Public elementary schools in Japan regularly conduct earthquake drills, and pupils are taught to take cover under desks during shaking and then evacuate under teacher guidance after the shaking stops (Kids Web Japan, 2020). For lower grades, DRR education is therefore best described as early school-safety learning: pupils practise basic protective actions and become familiar with school emergency routines in a calm, age-appropriate way.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention.

In Grades 3–4, DRR education can become more structured by helping pupils understand that disasters are connected with local geography, weather, community conditions and preparedness. Pupils may begin to discuss why earthquakes, tsunamis, typhoons, floods, landslides or volcanic hazards occur and how communities reduce risk. Activities may include using pictures and maps, comparing safe and unsafe behaviour, discussing evacuation routes, preparing simple preparedness posters and learning how families and schools can prepare.

The term Bosai Kyoiku is useful here, but it should be used carefully. It means disaster-prevention or disaster-preparedness education, not one single national programme implemented identically in every school. The Cabinet Office’s disaster-education handbook emphasizes regional disaster-resilience education and the importance of helping learners protect their own lives, support others and pass on a culture of disaster resilience (Cabinet Office, Government of Japan, 2015). Therefore, workshops, hazard mapping, fire-station visits or talks by meteorological or emergency-service experts may occur where organized locally, but they should be described as local or school-based applications, not as universal national requirements.

Upper Grades (Grade 5): In-Depth Exploration and Application of DRR Concepts.

In Grades 5–6, DRR education in Japan can become more analytical and community-oriented. Pupils are able to connect natural hazards with causes, impacts, mitigation, warning systems and responsible action. At this level, activities may include analysing local hazard maps, comparing earthquake, tsunami, typhoon or flood risks, discussing evacuation shelters, preparing family preparedness plans, examining past disaster case studies and reflecting on the roles of schools, families, local governments and emergency services.

School disaster planning is important in Japan, but it should be described accurately. It is not precise to say that Grade 5–6 pupils formally create or update a national “School Disaster Prevention Plan.” School safety plans and risk-management manuals are school-level responsibilities. However, pupils may participate in drills, preparedness learning and reflection activities connected with their school’s emergency procedures. Japan’s national policy direction calls for practical DRR education and evacuation drills in schools, based on local disaster risks and children’s developmental stages (Cabinet Office, Government of Japan, 2022a). In coastal areas, upper-grade pupils may focus more on tsunami evacuation routes and early warning; in typhoon- or flood-prone regions, they may study heavy-rain warnings, safe evacuation and sheltering; and in volcanic regions, they may learn about volcanic hazards and evacuation information. These should be presented as locally adapted DRR applications, not as one fixed national programme.

Collaboration with External Organizations

Japanese elementary schools may collaborate with external organizations in order to strengthen disaster risk reduction (DRR), school safety, evacuation preparedness and community resilience. This collaboration should be described as locally adaptable, rather than as one identical national programme implemented in every school. Japan’s national disaster-management policy emphasizes the promotion of practical DRR education and evacuation drills in schools, based on local disaster risks and pupils’ developmental stages. It also highlights the importance of cooperation among local governments, boards of education, schools, Fire Corps members and voluntary disaster-management organizations so that children can develop awareness, judgement and the ability to contribute to community resilience (Cabinet Office, Government of Japan, 2022a).

External organizations may include local fire departments, disaster-prevention centres, meteorological agencies, Red Cross groups, community disaster-prevention organizations and local governments. The role of fire departments should be described carefully. Rather than referring to a nationwide “Shobo Gakko” programme, it is more accurate to state that local fire services and disaster-prevention centres may support schools or communities through evacuation practice, fire-safety learning, earthquake-simulation experiences, smoke-evacuation training, fire-extinguishing experiences and first-aid awareness where such cooperation is organized locally. For example, Tokyo’s disaster-prevention learning centres provide hands-on disaster and emergency-preparedness experiences, including earthquake, smoke, fire-extinguishing and lifesaving activities, but these should be cited as local facilities rather than evidence of a single national school programme (Tokyo Metropolitan Government, 2025a; Tokyo Metropolitan Government, 2025b).

The Japan Meteorological Agency is also relevant as a scientific and early-warning institution, especially for information about earthquakes, tsunamis, heavy rain, typhoons, volcanic activity and weather warnings. Schools may use JMA information to support learning about meteorological hazards and warning systems, but it is safer not to claim that all schools directly collaborate with JMA unless a specific local programme is cited. The Japanese Red Cross Society provides another relevant external resource through disaster-prevention education linked to the Junior Red Cross and Red Cross Disaster Prevention Seminar. JRCS reports describe disaster-prevention education based on lessons from past disasters, including the Great East Japan Earthquake, and activities in which children learn about earthquake and tsunami preparedness through group work and presentations (Japanese Red Cross Society, 2022;

Japanese Red Cross Society, 2024). Overall, collaboration with external organizations in Japan should be understood as a combination of school disaster-prevention education, local emergency-service cooperation, meteorological information, Red Cross educational resources and community-based preparedness.

Educational Resources

Japan has a strong set of official and institutional resources supporting DRR education, school safety and disaster-prevention learning. These resources include national disaster-management guidance, MEXT school-safety policy, disaster-resilience education handbooks, meteorological information, Red Cross educational materials and local disaster-prevention learning centres. The Cabinet Office's 2022 disaster-management white paper states that the Third School Safety Promotion Plan was approved by Cabinet decision on March 25, 2022, and that practical DRR education and evacuation drills should be promoted in schools according to local disaster risks and pupils' developmental stages (Cabinet Office, Government of Japan, 2022a).

The following resources are the most relevant for Japanese elementary schools:

- a) *Cabinet Office, Government of Japan — Disaster Management / Bosai Kyoiku*
Provides national disaster-management policy and guidance on practical DRR education and evacuation drills in schools.
Useful for: national DRR framework, evacuation drills, local-risk-based education, school disaster preparedness.
<https://www.bousai.go.jp>
- b) *Disaster Resilience Education at the Regional Level — Cabinet Office Handbook*
A practical handbook for regional disaster-resilience education, emphasizing learning that helps pupils protect their own lives, support others and pass on a culture of disaster resilience.
Useful for: local hazard learning, school-community cooperation, disaster-resilience education planning.
https://www.bousai.go.jp/kyoiku/pdf/h27bousaikyoiku_guidline_en.pdf
- c) *MEXT / School Safety Policy*
MEXT is responsible for school safety policy. The Third School Safety Promotion Plan, approved in 2022, strengthened safety education, including disaster prevention, school crisis-management measures and cooperation with local communities.
Useful for: school safety policy, disaster-prevention education, crisis-management manuals, teacher training.
<https://anzenkyouiku.mext.go.jp>
- d) *Japan Meteorological Agency (JMA)*
Provides official information, forecasts and warnings on weather, earthquakes, tsunamis and volcanic activity.
Useful for: early-warning systems, meteorological hazards, earthquakes, tsunamis, volcanic information, typhoon and heavy-rain preparedness.
<https://www.jma.go.jp>
- e) *Japanese Red Cross Society — Junior Red Cross / Disaster Prevention Education*
Provides disaster-prevention and humanitarian education resources, including materials and seminars based on lessons from past disasters.
Useful for: preparedness behaviour, humanitarian education, earthquake and tsunami awareness, group work and community learning.
<https://www.jrc.or.jp/english/activity/junior/>
- f) *Tokyo Fire Department / Disaster Prevention Learning Centres*
Local disaster-prevention centres provide experiential learning such as earthquake simulation, smoke-evacuation, fire-extinguishing and lifesaving activities. These are useful as local examples, not as evidence of a national programme.

Useful for: fire safety, earthquake simulation, smoke evacuation, first-aid/lifesaving learning, local disaster-prevention education.

<https://tokyo-resilience.metro.tokyo.lg.jp>

g) *Government of Japan — Disaster Preparedness Education*

Public communication material explaining how disaster-preparedness education builds children's ability to think, decide and act to protect life.

Useful for: explaining the educational purpose of DRR, self-protection, decision-making and life-protection skills.

5.3. New Zealand

New Zealand places strong emphasis on disaster risk reduction (DRR) education because of its exposure to natural hazards such as earthquakes, tsunamis, volcanic activity, floods, landslides, severe weather and other climate-related events. DRR education in New Zealand is closely linked with emergency preparedness, school emergency planning, natural-hazard education and community resilience. The National Emergency Management Agency provides school-focused preparedness resources through Get Ready and What's the Plan, Stan?, while the Ministry of Education provides guidance for schools on emergency planning and preparedness (Get Ready, 2025a; Ministry of Education, 2024).

In elementary education, DRR should not be described as a separate subject. It is better understood as a cross-curricular field connected with science, social sciences, health and physical education, environmental learning and school safety procedures. What's the Plan, Stan? is especially important because it is a free national resource designed to help schools, teachers and students develop the knowledge and skills needed to prepare for emergency events. It supports teaching and learning for Years 1–8, and focuses on emergency events and the impacts they may have on communities (Get Ready, 2025a; Get Ready, 2025b). Therefore, DRR education in New Zealand can be described as a combination of curriculum-related learning, practical emergency preparedness, local-hazard awareness, school emergency planning and community participation.

DRR Activities in the Elementary School Curriculum

In New Zealand, DRR activities in elementary schools are practical, local and action-oriented. They are not limited to learning facts about hazards; rather, they help pupils understand how hazards can affect their community and what actions they can take before, during and after an emergency. What's the Plan, Stan? provides teaching and learning suggestions for primary and intermediate students and supports teachers in designing curriculum-based emergency education linked to students' own communities (Get Ready, 2025a; Get Ready, 2025b).

Typical DRR activities may include discussing local hazards, learning emergency messages, preparing classroom or family emergency plans, identifying safe places, creating emergency kits, practising evacuation procedures and participating in earthquake or tsunami drills. New Zealand ShakeOut is a national earthquake drill and tsunami hīkoi / evacuation exercise. In 2025, it took place on 16 October, and schools were encouraged to practise Drop, Cover and Hold and, where relevant, tsunami evacuation routes (Get Ready, 2025c; Auckland Council, 2025). Such activities show that DRR education in New Zealand combines classroom learning with practical preparedness and locally relevant action.

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness.

In Grades 1–2, DRR education in New Zealand should focus on simple safety awareness, recognition of danger and basic emergency behaviour. At this age, pupils are not expected to analyse hazards technically. Instead, they learn how to stay calm, follow teacher instructions, respond to alarms, identify safe places

and understand that adults and emergency services help during emergencies. Activities may include storytelling, drawings, classroom discussion, songs, visual material, role-play and simple routines related to earthquakes, fire, storms, floods or evacuation.

Two particularly relevant resources for this age group are What's the Plan, Stan? and Get Firewise. What's the Plan, Stan? helps teachers develop children's knowledge, skills and attitudes to prepare for and respond to emergencies, including through age-appropriate learning for younger pupils (Get Ready, 2025b). Get Firewise, developed by Fire and Emergency New Zealand, is specifically designed for Year 1 and Year 2 students and aims to give five- and six-year-old children the knowledge, attitudes and behaviours needed to stay safe around fire (Fire and Emergency New Zealand, 2025a; 2025b). Therefore, lower-grade DRR education in New Zealand is best described as early emergency-awareness and safety education, focused on simple routines, fire safety, listening to instructions and basic self-protection.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention

In Grades 3–4, DRR education can become more structured by helping pupils understand that emergencies are connected with local hazards, community conditions and preparedness. At this level, pupils may begin to discuss earthquakes, floods, tsunamis, storms, volcanic activity or landslides; compare safe and unsafe behaviours; create preparedness posters; identify safe places; and talk about what families and schools can do before an emergency. These activities should be presented as pedagogical applications supported by national resources, not as a fixed set of activities carried out identically in every school.

What's the Plan, Stan? is again relevant because it provides suggestions for teaching and learning programmes for Years 1–8 and focuses on emergency events and their effects on communities (Get Ready, 2025a; 2025b). New Zealand ShakeOut also supports middle-grade learning through practical earthquake and tsunami preparedness. Schools are encouraged to identify safe places to Drop, Cover and Hold, practise with staff and students, check whether they are in a tsunami evacuation zone and practise tsunami hīkoi if relevant (Get Ready, 2025c). In addition, natural-hazard education can be supported by teaching resources developed with schools, such as the 2025 Natural Hazards Commission resource hub, which covers earthquakes, volcanoes, tsunamis and general preparedness and is suitable for primary through secondary students (Natural Hazards Commission Toka Tū Ake, 2025a). These resources help pupils connect classroom learning with local risk and preparedness.

Upper Grades (Grades 5-6): In-Depth Exploration and Application of DRR Concepts

In Grades 5–6, DRR education in New Zealand can become more analytical and community-oriented. Pupils are able to connect natural hazards with causes, impacts, preparedness, mitigation and community responsibility. At this level, activities may include analysing local hazard maps, comparing earthquake, tsunami, flood, volcanic or severe-weather risks, discussing warning systems, identifying evacuation routes, preparing family emergency plans and reflecting on how communities respond to disruption.

For this age group, What's the Plan, Stan? can be used more deeply because it encourages students to explore emergency events and their effects on communities and supports curriculum-based emergency education (Get Ready, 2025a; 2025b). New Zealand's national ShakeOut exercise is also relevant for Grades 5–6, since older pupils can better understand why Drop, Cover and Hold is practised and why tsunami evacuation may be necessary in coastal areas (Get Ready, 2025c). Schools are expected to have emergency planning systems, but pupils should not be described as formally creating or updating the school emergency plan. The Ministry of Education states that all schools must have an emergency management plan, and that the board is responsible for ensuring that emergency plans are in place and that all staff know and understand them (Ministry of Education, 2024). A more accurate formulation is that older pupils may participate in drills, preparedness projects, classroom reflection and community-awareness activities linked to their school's emergency procedures.

Collaboration with External Organizations — New Zealand

New Zealand schools may collaborate with external organizations in order to strengthen DRR education, school safety, fire safety, emergency preparedness and community resilience. This collaboration should be described as locally adaptable, rather than as one uniform national programme implemented identically in every school. The most relevant national partners include the National Emergency Management Agency through Get Ready and What's the Plan, Stan?, the Ministry of Education, Fire and Emergency New Zealand, local Civil Defence Emergency Management groups, councils, and scientific institutions such as GeoNet and the Natural Hazards Commission Toka Tū Ake.

Fire and Emergency New Zealand is especially relevant for school fire-safety education. Its Get Firewise programme is a curriculum-based resource for primary-age children, specifically designed for Year 1 and Year 2 students to develop fire-safety knowledge, attitudes and behaviours (Fire and Emergency New Zealand, 2025a; 2025b). Schools may also work with local emergency management staff, councils or Civil Defence groups on emergency planning, local hazard awareness and evacuation preparedness. GeoNet and the Natural Hazards Commission are important for scientific information on earthquakes, volcanoes, tsunami and other natural hazards. The Natural Hazards Commission's 2025 teaching resources, developed with schools, cover earthquakes, volcanoes, tsunami and general preparedness for primary through secondary students (Natural Hazards Commission Toka Tū Ake, 2025a). However, activities such as first-aid demonstrations, field visits, emergency-service workshops or hazard-mapping exercises should be described as possible local activities, not as mandatory nationwide practices.

Educational Resources

New Zealand has a strong set of official and institutional resources supporting DRR education, school emergency planning, fire-safety education and natural-hazard learning. These resources include national emergency-preparedness materials, school emergency-planning guidance, earthquake and tsunami drill resources, fire-safety programmes and scientific natural-hazard teaching materials. The most relevant resources include the following:

- a) *Get Ready / What's the Plan, Stan? — National Emergency Management Agency*
A national resource supporting schools, teachers and students to develop knowledge and skills for emergency preparedness.
Useful for: Years 1–8 emergency preparedness, classroom activities, local hazards, family and community preparedness.
<https://getready.govt.nz/prepared/school/whats-the-plan-stan>
- b) *New Zealand ShakeOut*
National earthquake drill and tsunami hīkoi / evacuation exercise.
Useful for: Drop, Cover and Hold, earthquake drills, tsunami evacuation practice, school preparedness.
<https://getready.govt.nz/involved/shakeout>
- c) *Ministry of Education — Prepare for an Emergency or Traumatic Incident*
Guidance for schools on emergency management planning, responsibilities and preparedness.
Useful for: school emergency planning, emergency procedures, board responsibilities, school preparedness.
<https://www.education.govt.nz/education-professionals/schools-year-0-13/health-and-safety/prepare-emergency-or-traumatic-incident>
- d) *Ministry of Education — Planning and Preparing for Emergencies*
Practical guide and templates for schools and early learning services.
Useful for: emergency planning, school preparedness, emergency management templates.
<https://web-assets.education.govt.nz/s3fs-public/2025-01/PLANNING%20AND%20PREPARING%20FOR%20EMERGENCIES%20%281%29.pdf>

- e) *Fire and Emergency New Zealand — Get Firewise*
Curriculum-based fire-safety programme for Year 1 and Year 2 students.
Useful for: fire safety, home escape planning, safe behaviour around fire, lower-primary safety education.
<https://www.fireandemergency.nz/teachers-and-schools/get-firewise/>
- f) *Natural Hazards Commission Toka Tū Ake — Natural Hazards Teaching Resources*
Teaching resources developed with schools on earthquakes, volcanoes, tsunami and general preparedness.
Useful for: primary and secondary natural-hazard education, local context, hands-on learning.
<https://www.naturalhazards.govt.nz>
- g) *GeoNet*
Scientific monitoring and public information on New Zealand’s geological hazards.
Useful for: earthquakes, volcanoes, tsunami, real-time hazard information, scientific background.
<https://www.geonet.org.nz>

5.4. Singapore

Singapore has relatively low exposure to large-scale natural disasters compared with countries located on major seismic or volcanic zones, but it places strong emphasis on emergency preparedness, civil defence, public safety and national resilience. The country’s risk context includes urban emergencies, fires, flash floods, haze, heat stress, public-health emergencies, technological disruptions and climate-related risks. Because Singapore is a dense, low-lying island city-state, official climate and water-management policies emphasize long-term climate adaptation, flood resilience, coastal protection and collective preparedness (National Environment Agency, 2023; PUB, 2023a).

In elementary education, DRR-related learning in Singapore should not be described as a standalone subject. It is better understood as part of a wider framework of school safety, science learning, environmental education, health education, citizenship education, Total Defence and civil defence awareness. The Singapore Civil Defence Force provides school and student resources, but these should be used carefully as support for civil-defence awareness rather than as evidence of one compulsory DRR curriculum for all primary schools (Singapore Civil Defence Force, 2024). Total Defence also provides a broad national framework for resilience and preparedness. In 2025, Exercise SG Ready was conducted as part of Total Defence, and schools participated in simulated disruption scenarios such as power and digital-connectivity disruptions (Total Defence, 2025a; 2025b). Therefore, DRR education in Singapore is best described as a combination of curriculum-related learning, school safety procedures, civil-defence awareness, environmental education, practical preparedness and national resilience education.

DRR Activities in the Elementary School Curriculum

In Singapore, DRR activities in elementary schools are integrated across different areas of learning rather than taught as a separate DRR subject. Relevant activities can be linked with science, environmental education, health education, citizenship education, school safety routines and Total Defence. These activities help pupils connect everyday safety, environmental risks, emergency behaviour and community responsibility.

At elementary level, DRR-related activities may include fire-safety learning, evacuation practice, emergency-number awareness, hygiene and public-health routines, discussions on haze or heat stress, and simple projects on water, weather, drainage and environmental sustainability. Singapore’s urban context makes flood prevention and water management especially relevant. PUB’s sustainability reporting highlights the importance of water sustainability, drainage and flood-resilience work in Singapore, while the ABC Waters approach supports learning about waterways, reservoirs and water-sensitive urban

design (PUB, 2023a). These topics can help pupils understand how urban infrastructure and environmental planning contribute to resilience. Total Defence activities such as Exercise SG Ready can also help pupils think about preparedness for disruptions in daily life, including power or digital-connectivity disruptions, while school safety routines reinforce calm and responsible behaviour during emergencies (Total Defence, 2025a; 2025b).

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness.

In Grades 1–2, DRR education in Singapore should focus on simple safety awareness, recognition of danger and basic emergency behaviour. At this age, pupils are not expected to analyse risks technically; instead, they learn how to stay calm, follow teachers’ instructions, respond to alarms and understand that adults, first responders and emergency services help during crises. Activities may include storytelling, drawings, classroom discussion, short videos, role-play and simple routines connected with fire safety, evacuation, haze, heat, flooding or public-health hygiene.

It is safer not to refer to a national programme called “Learn to Protect Yourself,” because this title is not clearly documented as an official school programme. A stronger reference is the Singapore Civil Defence Force school and student resource framework, which can support basic civil-defence awareness, fire-safety messages and understanding the role of emergency responders (Singapore Civil Defence Force, 2024). Pupils may also be introduced to emergency numbers such as 995 for ambulance and fire emergencies, but this should be framed as basic safety awareness rather than as a formal national curriculum unit.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention.

In Grades 3–4, DRR education in Singapore can become more structured by helping pupils understand urban hazards, prevention and community preparedness. Relevant topics may include fire safety, flash floods, haze, heat stress, public-health risks and disruptions to essential services. Pupils can compare safe and unsafe behaviours, discuss emergency messages, prepare simple preparedness posters, identify safe actions during evacuation and learn how families and schools can respond to emergencies.

The Community Emergency Preparedness Programme and related SCDF emergency-preparedness initiatives should be used carefully. They are real community-preparedness efforts, but they should not be presented as compulsory Grades 3–4 school curricula. SCDF resources can support age-appropriate civil-defence learning where schools use them or where local activities are organized (Singapore Civil Defence Force, 2024). Singapore’s environmental agencies also provide useful content: the National Environment Agency’s heat-stress advisory highlights the need to reduce risks from heat-related illness, while PUB resources support learning about water, drainage and flood resilience (National Environment Agency, 2023; PUB, 2023a). Therefore, middle-grade DRR education in Singapore is best described as practical urban-safety and preparedness learning, supported by civil-defence, environmental and public-health resources.

Upper Grades (Grades 5-6): In-Depth Exploration and Application of DRR Concepts.

In Grades 5–6, DRR education in Singapore can become more analytical and connected with national resilience. Pupils are able to examine how urban systems, emergency services, environmental management and community responsibility reduce risk. At this level, activities may include analysing flash-flood risks, discussing drainage and coastal protection, examining haze or heat-stress responses, preparing family preparedness checklists, reflecting on public-health measures and considering how communities respond to disruptions.

Total Defence Day and Exercise SG Ready provide a relevant national framework for this level. In 2025, Exercise SG Ready focused on simulated disruptions such as power and digital-connectivity disruptions, with participation from schools and community partners (Total Defence, 2025a; 2025b). These activities should not be described as a fixed “Preparedness Awareness Day” culminating in student presentations

unless a specific school example is cited. A more accurate formulation is that older pupils may participate in school-based Total Defence or emergency-preparedness activities, reflect on crisis scenarios and connect classroom learning with preparedness at home and in the community. For environmental resilience, pupils can also study Singapore's flood and coastal-protection challenges. PUB launched Singapore's first Centre of Excellence for coastal protection and flood-management research in 2023, reflecting the national importance of long-term flood resilience and coastal adaptation (PUB, 2023b).

Collaboration with External Organizations — Singapore

Singapore schools may collaborate with external organizations in order to strengthen civil-defence awareness, fire safety, public-health preparedness, environmental resilience and community emergency preparedness. These partnerships should be described as locally adaptable, rather than as one identical programme implemented in every school. The most relevant partners include the Singapore Civil Defence Force, Ministry of Education, National Environment Agency, PUB, Total Defence / MINDEF and community emergency-preparedness actors.

The Singapore Civil Defence Force is the most important external partner for civil defence and emergency preparedness. SCDF provides school and student resources, and its materials can support learning about emergency response, fire safety and the role of first responders (Singapore Civil Defence Force, 2024). However, activities such as extinguisher use, simulated rescues or advanced first-aid demonstrations should be described as possible age-appropriate or local activities, not as universal requirements for all elementary pupils.

Other agencies can support specific aspects of DRR-related learning. PUB provides water and flood-resilience content through its water-management and ABC Waters-related resources, helping students understand water systems, drainage and environmental design (PUB, 2023a). The National Environment Agency provides authoritative information on heat stress, haze, climate change and environmental health, which can support learning on climate-related and public-health risks (National Environment Agency, 2023; 2024). Total Defence provides a broader national-resilience platform, including Exercise SG Ready, in which schools may participate through simulated disruption and preparedness activities (Total Defence, 2025a; 2025b). Overall, collaboration with external organizations in Singapore should be understood as a combination of civil-defence education, school safety, environmental learning, urban resilience and national preparedness.

Educational Resources

Singapore has a strong set of official and institutional resources supporting emergency preparedness, civil-defence awareness, fire safety, environmental education, water resilience and national resilience. These resources include SCDF school resources, Total Defence materials, PUB water-learning and flood-resilience resources, NEA climate and heat-stress information and school-based preparedness activities. Key Educational Resources for Singapore are the following:

a) *Singapore Civil Defence Force — School & Student Resources*

Provides school and student resources related to civil defence and emergency awareness.

Useful for: civil-defence awareness, fire safety, emergency response and the role of first responders.

<https://www.scdf.gov.sg/home/community-volunteers/school-and-student-resources>

b) *Total Defence / Exercise SG Ready*

National resilience platform. Exercise SG Ready helps schools and other organizations practise responses to disruptions such as power or digital-connectivity disruptions.

Useful for: crisis preparedness, national resilience, disruption scenarios and community responsibility.

<https://www.totaldefence.gov.sg/exercise-sg-ready/>

- c) *PUB — ABC Waters / Water Sustainability and Flood Resilience Resources*
Provides water and environmental learning resources connected with Singapore’s waterways, drainage, reservoirs and water-sensitive urban design.
Useful for: water sustainability, stormwater management, drainage, flood resilience and environmental education.
<https://www.pub.gov.sg>
- d) *PUB — Coastal Protection and Flood Resilience Institute*
Supports research and public understanding on coastal protection and flood management in Singapore.
Useful for: flood resilience, coastal adaptation and climate-risk learning.
<https://www.pub.gov.sg/Resources/News-Room/PressReleases/2023/09/Centre-of-Excellence-to-drive-coastal-protection-and-flood-management-research>
- e) *National Environment Agency — Heat Stress Advisory*
Provides public guidance on minimizing heat-related illness and understanding rising heat risks.
Useful for: heat stress, climate adaptation and health preparedness.
<https://www.nea.gov.sg/media/news/news/index/new-heat-stress-advisory-launched-to-guide-public-on-minimising-risk-of-heat-related-illnesses>
- f) *National Environment Agency — Climate and Environmental Resources*
Provides information on climate change, extreme weather, haze, environmental health and sustainability.
Useful for: climate resilience, heat, haze, public-health risks and environmental education.
<https://www.nea.gov.sg>
- g) Ministry of Health Singapore - Pandemic Preparedness Guidelines: <https://www.moh.gov.sg>
- h) Smart Nation Singapore - Digital Preparedness and Cybersecurity: <https://www.smartnation.gov.sg>

5.5. Iceland

Iceland has a strong need for disaster risk reduction (DRR) education because of its exposure to multiple natural hazards, including volcanic eruptions, earthquakes, storms, floods, landslides and avalanches. The Civil Protection Act defines civil protection as measures intended to prevent and limit injury, harm to public health, environmental damage and property damage caused by natural catastrophes, epidemics or other emergencies (Government of Iceland, 2017). Iceland’s recent volcanic activity on the Reykjanes Peninsula has also highlighted the importance of public warning, evacuation planning and community preparedness.

In elementary education, DRR-related learning in Iceland should not be described as a separate school subject. It is better understood as part of a broader cross-curricular framework connected with natural sciences, geography, environmental education, health and wellbeing, life skills, sustainability and school safety. The Icelandic National Curriculum Guide for Compulsory Schools identifies health and welfare and sustainability as fundamental pillars of education, while Environmental Studies in Grades 1–6 integrates biology, geography, physics, chemistry and health education (Ministry of Education, Science and Culture, 2012; Jónsson et al., 2021). Therefore, DRR education in Iceland can be described as a combination of curriculum-related learning, local hazard awareness, school emergency routines, scientific monitoring information and cooperation with civil protection and rescue organizations.

DRR Activities in the Elementary School Curriculum

In Iceland, DRR activities in elementary schools can be connected with pupils' immediate environment and the country's distinctive natural hazards. Rather than being limited to classroom explanations, these activities may help pupils understand how volcanic eruptions, earthquakes, extreme weather, floods, avalanches, landslides and glacial processes affect people, infrastructure and communities. Because Iceland's compulsory curriculum gives schools flexibility to develop school curricula based on national aims and local conditions, DRR activities can be adapted to local hazard profiles, such as volcanic areas, coastal communities, avalanche-prone settlements or regions affected by severe winter weather (Ministry of Education, Science and Culture, 2012).

Relevant classroom activities may include studying volcanic landscapes, observing weather and warning information, discussing safe behaviour during storms or earthquakes, learning about evacuation messages, preparing simple emergency checklists and using maps to identify local hazards. Activities such as lava-flow demonstrations, earthquake-safe-building tasks, avalanche-awareness discussions, flood-risk studies or survival-skills learning should be described as possible pedagogical applications, not as a fixed national list of activities carried out identically in every school. The Icelandic Meteorological Office is responsible for natural-hazard monitoring and public warnings, including monitoring related to earthquakes, volcanic activity, weather hazards and glacial outburst floods, which makes its information a valuable support for age-appropriate learning about Iceland's monitored natural hazards (Icelandic Meteorological Office, 2024).

Incorporation of DRR Education through Educational Programs

Lower Grades (Grades 1-2): Introducing Basic Concepts of Safety and Preparedness.

In Grades 1–2, DRR education in Iceland should focus on simple safety awareness, recognition of danger and basic emergency behaviour. At this age, pupils are not expected to analyse volcanic or meteorological hazards technically. Instead, they learn how to stay calm, listen to teachers and adults, recognise warning messages or emergency routines, and follow instructions during evacuation or sheltering. Activities may include storytelling, drawings, classroom discussion, role-play, weather observation, simple maps and routines connected with earthquakes, storms, snow, fire or evacuation.

It is safer not to refer to national school programmes called “Eldgos og Jarðskjálftar” or “Veðurvaktin” unless a specific official school programme is cited. A stronger approach is to connect lower-grade learning with the national curriculum's emphasis on health, welfare, sustainability and pupils' own environment, together with school safety routines and child-appropriate information from public authorities. The Civil Protection Act provides the wider national framework for prevention, preparedness and emergency response, while Iceland's curriculum allows schools to connect learning with local conditions and pupils' lived environment (Government of Iceland, 2017; Ministry of Education, Science and Culture, 2012). Therefore, lower-grade DRR education in Iceland is best described as early safety and environmental-awareness learning, focused on calm behaviour, basic preparedness and following adult guidance.

Middle Grades (Grades 3-4): Understanding Natural Phenomena and Risk Prevention

In Grades 3–4, DRR education in Iceland can become more structured by helping pupils understand that natural hazards are connected with Iceland's geology, weather, landscape and settlement patterns. Pupils may begin to discuss why volcanic eruptions, earthquakes, storms, floods, landslides and avalanches occur, how communities monitor hazards, and how people can reduce risk through preparedness and safe behaviour. Environmental Studies provides a suitable curriculum context because it integrates natural sciences, geography and health education in Grades 1–6 (Jónsson et al., 2021).

Suitable activities may include comparing safe and unsafe behaviour during storms or earthquakes, discussing volcanic and weather warnings, preparing preparedness posters, examining local maps or identifying safe routes and meeting points. In snow-prone or mountain communities, pupils may discuss avalanche awareness and winter safety; in volcanic or seismic areas, they may focus more on earthquake

and eruption preparedness; and in coastal or low-lying areas, they may examine storms, flooding or evacuation. These activities should be presented as locally adapted applications supported by Iceland's hazard context, not as nationally identical classroom requirements. The Icelandic Meteorological Office's monitoring and warning responsibilities, together with the civil protection system's role in preparedness and response, provide a reliable institutional basis for such learning (Icelandic Meteorological Office, 2024; European Commission, 2019b).

Upper Grades (Grade 5): In-Depth Exploration and Application of DRR.

In Grades 5–6, DRR education in Iceland can become more analytical and community-oriented. Pupils are able to connect natural hazards with causes, impacts, monitoring, evacuation, mitigation and community responsibility. At this level, activities may include analysing local hazard maps, comparing volcanic, seismic, avalanche or flood risks, discussing warning systems, preparing family preparedness checklists, examining recent volcanic events or severe weather cases, and reflecting on how schools, families, municipalities and emergency services work together during crises.

School emergency planning is relevant, but it should be described carefully. It is not accurate to say that pupils formally create or update official emergency plans; that responsibility belongs to school leaders, municipalities and relevant authorities. A more accurate formulation is that older pupils may participate in drills, preparedness projects, classroom reflection and local-risk discussions linked to their school's emergency procedures. Iceland's civil protection system works through national and local coordination, involving municipal authorities, civil protection committees, first responders and volunteer organizations (European Commission, 2019b). Therefore, upper-grade DRR education in Iceland can connect scientific understanding of hazards with practical preparedness, community resilience and responsible action.

Collaboration with External Organizations

Icelandic elementary schools may collaborate with external organizations in order to strengthen DRR education, local hazard awareness, school safety and community preparedness. These partnerships should be described as locally adaptable, rather than as one uniform national programme implemented identically in every school. The most relevant partners include the Department of Civil Protection and Emergency Management, the Icelandic Meteorological Office, local municipalities, emergency services, search-and-rescue organizations and scientific institutions.

The Icelandic Meteorological Office is especially important because it monitors and provides warnings for natural hazards, including weather, earthquakes, volcanic activity, hydrological hazards and avalanches. Its monitoring and warning role makes it a useful institutional source for schools when discussing hazard information, alerts and scientific observation (Icelandic Meteorological Office, 2024). The Department of Civil Protection and Emergency Management provides the national coordination framework for prevention, preparedness and response, while the European Commission describes Iceland's civil protection system as involving local authorities, first responders and volunteer organizations (European Commission, 2019b). Search-and-rescue and emergency-service actors may also support public-safety awareness, outdoor safety and preparedness where local cooperation is organized. However, rescue training, survival training or specialist demonstrations should be described as possible local or community-based activities, not as national requirements for all elementary schools.

Educational Resources

Iceland has a set of official and institutional resources that can support DRR education, school safety, environmental learning and local hazard awareness. These resources include civil protection information, meteorological and geological hazard monitoring, search-and-rescue safety guidance, curriculum frameworks and public safety resources. The key Educational Resources are the following:

- a) *Department of Civil Protection and Emergency Management / Almannavarnir*
Provides national civil-protection information, public warnings and emergency guidance.

Useful for: civil protection, public warnings, evacuation information, preparedness and emergency response.

<https://www.almannavarnir.is/english/>

b) *Icelandic Meteorological Office / Veðurstofa Íslands*

Provides monitoring, forecasts and warnings for weather, earthquakes, volcanic activity, hydrology and avalanches.

Useful for: natural-hazard monitoring, early warnings, earthquakes, volcanoes, floods, storms and avalanches.

<https://en.vedur.is/>

c) *Icelandic National Curriculum Guide for Compulsory Schools*

Provides the national curriculum framework, including fundamental pillars such as health and welfare and sustainability.

Useful for: curriculum context, environmental learning, health and safety, sustainability.

https://www.government.is/library/01-Ministries/Ministry-of-Education/Curriculum/adskr_grsk_ens_2012.pdf

d) *Civil Protection Act No. 82/2008*

Defines the legal basis of civil protection in Iceland, including prevention and measures to limit harm from natural catastrophes and other emergencies.

Useful for: national civil-protection framework, preparedness, response and institutional responsibilities.

<https://www.government.is/publications/legislation/act/2017-12-21-Civil-Protection-Act-No.-82-2008>

e) *European Commission — Iceland National Disaster Management System*

Provides an overview of Iceland's civil protection and disaster management system.

Useful for: institutional structure, national/local coordination, emergency management actors.

https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/national-disaster-management-system/iceland_en

6. EUROPEAN FUNDED PROJECTS ON DRR EDUCATION ACTIVITIES

Project Title: Education for Disaster Risk Reduction in Europe (EDU-DRR)

Description:

EDU-DRR aims to develop innovative educational approaches for disaster risk reduction (DRR) in European schools. The project focuses on integrating DRR into school curricula through interactive digital tools, hands-on learning experiences, and teacher training programs.

Duration:

2021 - 2024 (3 years)

Budget:

€4 million (co-funded by the European Commission's Horizon 2020 program)

Partners:

a) European Civil Protection and Humanitarian Aid Operations (ECHO)

- b) University of Copenhagen, Denmark
- c) National Research Institute for Disaster Risk Management, Italy
- d) Ministry of Education, France
- e) Red Cross EU Office

Results:

The project developed a disaster risk reduction curriculum framework adaptable across European educational systems. It also created an online learning platform offering interactive DRR training modules for students and teachers and implemented pilot programmes in 10 European countries to improve school emergency preparedness. In addition, it published a best-practices manual on DRR education for policymakers and educators.

Project Title: DRR-Youth Empowerment Initiative

Description:

This initiative aims to engage young people in disaster risk reduction through education, community participation, and social media awareness campaigns. The project promotes youth-led initiatives for DRR and fosters collaboration between schools, local authorities, and disaster response agencies.

Website:

<https://youth4drr.com/>

Duration:

2019 - 2023 (4 years)

Budget:

€3 million (funded by European Social Fund and national contributions)

Partners:

- a) Youth Disaster Resilience Network, Sweden
- b) European Youth Parliament on DRR
- c) NGOs for Disaster Preparedness, Belgium
- d) Local Government Associations in Poland and Hungary
- e) European Broadcasting Union

Results:

The project trained 5,000 students in disaster risk reduction principles and community engagement strategies. It also established youth DRR task forces in 15 European cities and developed social media campaigns that reached more than 2 million people. In addition, it created a youth-focused DRR policy guide for EU institutions.

Project Title: European Master in Disaster Risk and Crisis Management (EUMA)

Description:

EUMA aims to enhance disaster risk management in Europe by developing a high-level postgraduate Master's degree program tailored for disaster managers. The project focuses on providing advanced education and training to civil protection authorities and private sector disaster management professionals, addressing the increasing complexity of disasters due to environmental and societal changes.

Websites:

<https://civil-protection-knowledge-network.europa.eu/projects/euma>

<https://postgraduatecenter.univie.ac.at/en/euma>

Duration:

2023 - 2026 (3 years)

Budget:

€2.5 million (co-funded by the European Union Civil Protection Mechanism)

Partners:

- a) University of Copenhagen, Denmark
- b) Technical University of Munich, Germany
- c) University of Ljubljana, Slovenia
- d) European Civil Protection and Humanitarian Aid Operations (ECHO)
- e) National School of Civil Protection, Spain

Results:

The project developed and accredited a standardized Master's curriculum in Disaster Risk and Crisis Management. It also enrolled 150 students across the partner universities in the first cohort and established an online platform for resource sharing and collaboration among students and professionals. In addition, it organized annual workshops and simulation exercises to provide practical experience.

Project Title: Innovating Preparedness by Leveraging Synergies and Enhancing Volunteer Involvement (SYNERGIES)

Description:

SYNERGIES focuses on enhancing disaster management preparedness by consolidating outcomes from previous projects and best practices. The project emphasizes the role of volunteers in disaster management and explores innovative channels for disseminating disaster preparedness information to communities.

Websites:

<https://synergiesproject.eu/>

<https://cordis.europa.eu/project/id/101121172>

Duration:

2024 - 2027 (3 years)

Budget:

€3.8 million (co-funded by the European Union)

Partners:

- a) UNESCO Regional Bureau for Science and Culture in Europe
- b) International Federation of Red Cross and Red Crescent Societies (IFRC)
- c) European Volunteer Centre (CEV)
- d) National Civil Protection Departments from Italy, Greece, and Portugal
- e) European Broadcasting Union

Results:

The project created a comprehensive toolkit for volunteer engagement in disaster preparedness and response. It also trained 2,000 volunteers across the participating countries and developed multimedia awareness campaigns that reached more than 5 million European citizens to raise awareness about disaster preparedness. In addition, it published policy recommendations for integrating volunteerism into national disaster management frameworks.

Project Title: Cultures of Disaster Resilience among children and young people (CUIDAR)

Short description:

CUIDAR was a Horizon 2020 project focused on the participation of children and young people in disaster risk reduction and disaster management. It addressed the exclusion of children from disaster planning and developed creative ways for children's voices to be heard by disaster-management actors. The project produced a child-centred disaster management framework for Europe and worked with children, young people, policymakers and emergency-planning stakeholders. ([CORDIS](#))

Website:

<https://www.lancaster.ac.uk/cuidar/>

Duration:

July 2015 - June 2018.

Budget:

€2.009.653,50

Partners:

- a) University of Lancaster
- b) Fundació per a la Universitat Oberta de Catalunya
- c) Instituto de Ciências Sociais, Universidade de Lisboa
- d) Save the Children Italia ETS
- e) University of Thessaly
- f) The Save the Children Fund. ([CORDIS](#))

Results:

CUIDAR developed child-centred approaches to disaster management, organized consultative workshops/dialogues with children and young people, mutual learning exercises with disaster practitioners, national and European policy dialogues, and produced a child-centred disaster management framework for Europe. ([CORDIS](#))

Project Title: Safer Schools and Kindergartens

Description:

The Safer Schools and Kindergartens project was an Erasmus+ co-financed project aiming to improve disaster preparedness, first aid and school safety in kindergartens and primary schools. It focused on children, teachers, Red Cross volunteers and school/kindergarten staff in Austria, Bulgaria, Croatia, North Macedonia and Serbia.

Website:

<https://redcross.eu/projects/making-schools-and-kindergartens-fit-for-natural-disasters>

Duration:

November 2018 – January 2021

Partners:

- a) Austrian Red Cross, Austrian Youth Red Cross
- b) Bulgarian Red Cross
- c) Croatian Red Cross
- d) Red Cross of North Macedonia
- e) Red Cross of Serbia

Results:

The project created an online DRR and first-aid platform for primary schools and kindergartens, including emergency checklists, general safety information, DRR tools, first-aid resources and psychosocial-support material. It piloted activities in 57 schools and 67 kindergartens, reaching more than 3,500 pupils and 260 teachers. It also trained 380 teachers and Red Cross volunteers to use the platform and support implementation. ([Red Cross EU Office](#))

Project Title: Prevention of Disasters ICT (PREDICT)

Description:

PREDICT was an Erasmus+ KA201 Strategic Partnership for school education. It focused on disaster-prevention education using ICT, open educational resources, a mobile application and games. Its aim was to promote a culture of disaster-risk prevention, especially for children, youth and persons with disabilities, with attention to inclusive and accessible materials.

Website:

<http://www.projectpredict.eu>

Alternative archived/project site: <https://project-predict.doozyx.com>

Duration:

Start date: 15 December 2019. Duration: 30 months.

Partners:

The project document identifies the coordinator as University “Goce Delcev” Stip / Military Academy “General Mihailo Apostolski” Skopje. The project dissemination page lists the consortium as including the Main Directorate of Fire Safety and Protection of the Population, Bulgaria, Association of IT Solutions for All, Spain, DUKOR “Partenija Zografski”, and primary school “Steve Naumov” Skopje.

Results:

The project produced a methodological framework for inclusive training of children, youth and persons with disabilities, and developed materials on natural disasters such as **earthquakes, floods and fires**. It also created/used an OER platform, mobile app and games, with materials designed to be understandable and accessible for people with impaired vision and hearing. Dissemination activities trained teachers and presented materials in schools so that children could learn about a natural disaster and appropriate protective behaviour within a lesson.

Project Title: Know your city, Reduce seismic risk through non-structural elements (KnowRISK)

Description:

KnowRISK was an EU Civil Protection / DG ECHO prevention and preparedness project focused on seismic-risk communication. It aimed to help local communities access expert knowledge on seismic risk and non-structural protective solutions, transforming this into practical communication tools for disaster risk reduction. The project is relevant to DRR education because it specifically targeted communities and schools through risk communication and awareness-raising tools.

Website:

<https://knowriskproject.com/>

Duration:

Start date: 1 January 2015

End date/duration: not clearly stated on the verified European Commission project page

Budget:

€513,297

Partners:

- a) Instituto Superior Técnico / Portugal.
- b) Laboratório Nacional de Engenharia Civil — Portugal
- c) Istituto Nazionale di Geofisica e Vulcanologia — Italy
- d) University of Iceland — Iceland

Results:

The project developed risk-communication strategies and tools focused on seismic risk and non-structural elements. It worked with pilot areas in Portugal, Italy and Iceland and addressed schools and communities through awareness-raising, participatory risk communication and practical guidance on reducing non-structural earthquake risk.

7. FREELY AVAILABLE RESOURCES AND TOOLS TO ENHANCE DRR EDUCATION

Glossary for Disaster Reduction Terminology

The United Nations Office for Disaster Risk Reduction (UNDRR) provides a comprehensive glossary of disaster reduction terminology, available in multiple languages, including English, French, Spanish, Arabic, Russian, Chinese, Japanese, and Korean. This glossary serves as a fundamental resource for educators to understand and accurately use the specific terms related to DRR. It helps in standardizing the language used in teaching materials and ensures consistency in how DRR concepts are communicated to students ([UNDRR, 2009](#)).

ProVention Consortium's YouTube Channel

The ProVention Consortium has developed a YouTube channel featuring over 40 videos on community-based disaster risk reduction, climate change adaptation, and education. These videos provide practical examples and case studies from around the world, demonstrating how communities can adapt to and prepare for various disasters. The channel is a valuable tool for educators looking to incorporate real-life examples and multimedia content into their DRR lessons, making learning more engaging for elementary school students ([ProVention Consortium](#)).

United States Federal Emergency Management Agency (FEMA) Children's Page

FEMA offers a children's page with activities and resources designed to teach children about disaster preparedness. This page includes a child-friendly booklet that explains how to respond to different types of disasters, such as earthquakes, floods, and hurricanes. The materials are tailored to young learners and can be used by both teachers and parents to promote disaster awareness and readiness at home and in the classroom ([FEMA](#)).

IRIS (Incorporated Research Institutions for Seismology) Website

The IRIS website offers a seismic monitor tool that allows students to see where earthquakes are currently occurring around the world. It also provides a wealth of educational resources, including lesson plans, interactive activities, and data visualization tools. These resources help educators teach students about seismic activity, plate tectonics, and the science behind earthquakes, fostering a deeper understanding of natural hazards and their impacts ([IRIS](#)).

Stop Disasters! Online Game

"Stop Disasters!" is an interactive online game developed to teach principles of disaster prevention and community preparedness for various natural hazards, including earthquakes, floods, cyclones, and wildfires. The game allows students to engage in simulated disaster scenarios, making decisions that affect the outcome and learning about the importance of preparedness and risk reduction in a fun and interactive way. It is an excellent tool for reinforcing DRR concepts in the classroom and enhancing critical thinking and problem-solving skills among elementary students ([Stop Disasters! Game](#)).

8. CONCLUSIONS

The integration of Disaster Risk Reduction (DRR) education into elementary school curricula across Europe and globally shows a growing recognition of the importance of early preparedness, risk awareness and safety behaviour. Across the countries examined, DRR education is rarely treated as a completely separate subject. Instead, it is usually integrated into existing areas such as science, geography, environmental education, health education, civic education and school safety procedures. This cross-curricular model allows pupils to understand disasters not only as natural events, but also as phenomena connected with human behaviour, infrastructure, community preparedness and institutional response.

A common pattern across the examined cases is the use of progressive, age-appropriate learning. In the lower grades, DRR education usually focuses on simple safety routines, recognition of danger, emergency numbers, evacuation signals and following adult instructions. In the middle grades, pupils begin to understand local hazards, prevention measures and personal responsibility. In the upper grades, especially Grades 5–6, DRR learning becomes more analytical, with activities related to hazard mapping, case studies, preparedness planning, school drills, family emergency plans and community resilience. This gradual progression supports long-term retention and helps children move from basic awareness to more active and responsible participation in preparedness.

Another important feature is the central role of practical and experiential learning. Countries with well-developed DRR education systems, such as Japan, New Zealand, California and Singapore, place strong emphasis on drills, simulations, school emergency procedures, evacuation practice, hazard-based projects and community preparedness activities. These practical elements are important because they help pupils transform knowledge into behaviour. DRR education becomes more effective when children do not only learn what a hazard is, but also practise what they should do before, during and after an emergency.

External partnerships also emerge as a key feature of effective DRR education. Civil protection agencies, fire services, Red Cross organizations, meteorological services, scientific institutions, local authorities and emergency-response actors often support schools through educational material, awareness campaigns, drills, demonstrations and preparedness programmes. These partnerships provide real-world relevance and specialized knowledge that schools may not be able to offer alone. However, they vary significantly between countries and are often locally adaptable rather than uniformly implemented at national level. This is why it is important to describe them carefully: in many cases, they are valuable supporting practices rather than compulsory national school programmes.

At the same time, differences between countries remain clear. Japan, New Zealand, California and Singapore show strong links between school safety, national preparedness policies and practical emergency education. European countries such as Italy, France, Germany, Spain and Austria demonstrate important institutional frameworks and educational resources, although implementation may differ by region and school. In Cyprus and Greece, DRR-related content exists through environmental education, school safety, civil protection, earthquake preparedness, Skills Labs, health and safety procedures and cooperation with emergency actors, but the integration of DRR into primary education still appears less

systematic. These cases point to the need for stronger national coordination, updated teaching resources, more consistent teacher training and clearer implementation frameworks.

The European-funded projects examined also show that DRR education is becoming an important field of international cooperation. Projects focusing on child participation, school preparedness, volunteer engagement, digital tools, teacher training and disaster-risk communication demonstrate that DRR education can be strengthened through shared resources and cross-border collaboration. Such initiatives provide useful models for developing adaptable curriculum frameworks, online learning platforms, training materials, school toolkits, best-practice manuals and policy recommendations. Broader engagement in European-level initiatives and funded programmes can therefore support countries that still need more structured and consistent DRR education in primary schools.

Overall, the countries examined show that effective DRR education in elementary schools is usually age-appropriate, practical, interdisciplinary, locally relevant and community-connected. It should begin with simple safety habits in the early years and gradually develop pupils' ability to understand risks, evaluate preparedness measures and participate responsibly in school and community resilience. For countries where DRR education is still fragmented, the priority should be to strengthen national investment in structured DRR frameworks, provide teacher support, develop accessible and updated resources, and ensure that all pupils receive consistent opportunities to learn and practise life-saving preparedness skills.

Taken together, DRR education is not only a matter of emergency response; it is part of building a broader culture of prevention, responsibility and resilience from an early age. The STEAME-DRREC project highlights the urgency and value of equipping students with life-saving knowledge while promoting an adaptive DRR education framework that can respond to diverse regional hazards and align with global resilience goals. Such a framework can help schools prepare children not only to protect themselves, but also to contribute meaningfully to safer and more resilient communities.

REFERENCES

- Auckland Council (2025, October 14). *ShakeOut drill 2025 a chance to prepare for a real-life earthquake*. <https://ourauckland.aucklandcouncil.govt.nz/news/2025/10/shakeout-drill-2025-a-chance-to-prepare-for-a-real-life-earthquake/>
- Austrian Civil Protection Association (2024, July 26). *360,000 children and over 1,300 events: The SAFETY Tour celebrates its 25th birthday*. <https://zivilschutz.at/en/360000-children-and-over-1300-events-the-safety-tour-celebrates-its-25th-birthday/>
- Austrian Youth Red Cross. *Mit Helfi kann ich helfen! Österreichisches Jugendrotkreuz*. <https://www.jugendrotkreuz.at/kindergarten-schule-lernen/helfi>
- BBK (2018). *Max und Flocke: Hilfreich – Baustein zum richtigen Verhalten im Notfall*. Bundesamt für Bevölkerungsschutz und Katastrophenhilfe. https://www.bbk.bund.de/SharedDocs/Downloads/DE/Mediathek/Publikationen/MuF/Bildungsunterlagen/bildungsunterlagen-muf-hilfreich-kommentar.pdf?__blob=publicationFile&v=7
- BBK (2021). *10 Jahre Max und Flocke – Kinder fit machen für den Notfall*. <https://www.bbk.bund.de/SharedDocs/Pressemitteilungen/DE/2021/09/pm-09-15-10-jahre-max-und-flocke.html>
- BBK (2024a). *Arbeitsblätter von Max und Flocke*. Bundesamt für Bevölkerungsschutz und Katastrophenhilfe. https://www.bbk.bund.de/DE/Infothek/BBK-fuer-Kinder/Arbeitsblaetter/arbeitsblaetter_node.html
- BBK (2024b). *Pitschnass – Baustein zum Thema Überschwemmungen und Erdrutsche*. Bundesamt für Bevölkerungsschutz und Katastrophenhilfe. https://www.bbk.bund.de/SharedDocs/Downloads/DE/Mediathek/Publikationen/MuF/Bildungsunterlagen/bildungsunterlagen-muf-pitschnass.pdf?__blob=publicationFile&v=7
- BBK (2025). *Bildungsmaterial: Hochwasser*. Bundesamt für Bevölkerungsschutz und Katastrophenhilfe. https://www.bbk.bund.de/SharedDocs/Downloads/DE/Mediathek/Publikationen/MuF/Bildungsunterlagen/uebersicht-bildungsmaterial-hochwasser.pdf?__blob=publicationFile&v=5
- Bomberos Baza (2025). *Tres actividades formativas en el Parque de Bomberos y dos ejercicios de evacuación en centros educativos*. <https://www.bomberosbaza.es/tres-actividades-formativas-en-el-parque-de-bomberos-y-dos-ejercicios-de-evacuacion-en-centros-educativos/>
- Cabinet Office, Government of Japan (2015). *Disaster resilience education at the regional level: Implementation handbook for disaster management education challenge plan*. https://www.bousai.go.jp/kyoiku/pdf/h27bousaikyoiku_guidline_en.pdf
- Cabinet Office, Government of Japan (2022a). *White paper on disaster management 2022: Section 5, Further enhancement of disaster risk reduction education*. https://www.bousai.go.jp/en/documentation/white_paper/pdf/2022/SF3-5.pdf
- CAL FIRE (2022). *Fire safety outreach*. California Department of Forestry and Fire Protection. <https://www.fire.ca.gov/what-we-do/fire-safety-outreach>
- California Code of Regulations, Title 5, § 550. *Fire drills*. <https://www.law.cornell.edu/regulations/california/5-CCR-550>
- California Department of Education (2013, September 4). *NGSS for California public schools, K–12*. <https://www.cde.ca.gov/ci/pl/ngssstandards.asp>
- California Department of Education (2016). *Science framework for California public schools: Kindergarten through grade twelve, Chapter 4*. <https://www.cde.ca.gov/sc/cf/documents/scifwchapter4.pdf>

- California Department of Education (2025a, January 10). *School disaster and emergency management*. <https://www.cde.ca.gov/ls/ep/>
- California Department of Education (2025b, July 2). *2016 Science framework*. <https://www.cde.ca.gov/ci/sc/cf/cascienceframework2016.asp>
- California Department of Education (2025c, October 8). *The 2025 Great California ShakeOut*. <https://www.cde.ca.gov/nr/el/le/yr25ltr1008.asp>
- California Department of Education (2025d, September 23). *Tsunamis — School disaster and emergency management*. <https://www.cde.ca.gov/ls/ep/tsunamis.asp>
- California Department of Education (2026, February 5). *Comprehensive school safety plans*. <https://www.cde.ca.gov/ls/ss/vp/cssp.asp>
- California Governor's Office of Emergency Services (2025a, September 10). *Building up preparedness one classroom at a time: Fourth Grade Preparedness Ambassadors Program available for educators*. <https://www.news.caloes.ca.gov/building-up-preparedness-one-classroom-at-a-time-fourth-grade-preparedness-ambassadors-program-available-for-educators/>
- California Governor's Office of Emergency Services (2025b). *The Great California ShakeOut Tour 2025*. <https://www.news.caloes.ca.gov/the-great-california-shakeout-tour-2025/>
- Corpo Nazionale dei Vigili del Fuoco (2026, March 19). *Riprendono gli incontri di "Scuola Sicura"*. Ministero dell'Interno. <https://www.vigilfuoco.it/comando-vvf-frosinone/notizie/riprendono-gli-incontri-di-scuola-sicura>
- Cyprus Civil Defence (2020). *Report on disaster risk management in the Republic of Cyprus*. Ministry of Interior, Republic of Cyprus.
- Cyprus Civil Defence (2023). *CY 2023 disaster risk management report*. Ministry of Interior, Republic of Cyprus. [https://www.moi.gov.cy/moi/CD/cd.nsf/All/BD47B33F00A0ED5AC2258D01002EA598/\\$file/CY_2023%20DRM%20REPORT.pdf?OpenElement](https://www.moi.gov.cy/moi/CD/cd.nsf/All/BD47B33F00A0ED5AC2258D01002EA598/$file/CY_2023%20DRM%20REPORT.pdf?OpenElement)
- Cyprus Mail (2025, August 19). *Schoolchildren to receive fire safety lessons*. <https://cyprus-mail.com/2025/08/19/schoolchildren-to-receive-fire-safety-lessons>
- Cyprus National Commission for UNESCO. *Education for sustainable development: Cyprus*. <https://www.unesco.org.cy/Programmes-Education-For-Sustainable-Development-Cyprus%2CEN-PROGRAMMES-01-03-01%2CEN>
- Cyprus Red Cross Society. *First aid*.
- Department of Education. *About DepEd DRRMS*. Republic of the Philippines. <https://www.deped.gov.ph/about-deped-drrms/>
- Deutscher Feuerwehrverband (2008, February 8). *Leitfaden für Brandschutzerziehung in Grundschule*. <https://www.feuerwehrverband.de/leitfaden-fuer-brandschutzerziehung-in-grundschule/>
- Dipartimento della Protezione Civile (2022a). *Civil Protection in Italy: Basic Training in Civil Protection*. Presidenza del Consiglio dei Ministri. <https://www.protezionecivile.gov.it/en/pubblicazione/civil-protection-italy-basic-training-civil-protection-0/>
- Dipartimento della Protezione Civile (2022b). *Io non rischio Scuola*. Presidenza del Consiglio dei Ministri – Dipartimento della Protezione Civile. <https://iononrischio.protezionecivile.it/it/scuola/>
- Dipartimento della Protezione Civile (2024a). *Io non rischio Scuola: Kit didattico per la scuola primaria*. Presidenza del Consiglio dei Ministri – Dipartimento della Protezione Civile. <https://iononrischio.protezionecivile.it/it/scuola/>

- Dipartimento della Protezione Civile (2024b). *Cosa fare in caso di terremoto*. Presidenza del Consiglio dei Ministri – Dipartimento della Protezione Civile. <https://www.iononrischio.gov.it/it/preparati/terremoto/cosa-fare/>
- Dipartimento della Protezione Civile (2025, June 5). *“Anch’io sono la protezione civile”: I campi scuola 2025*. Presidenza del Consiglio dei Ministri. <https://www.protezionecivile.gov.it/it/approfondimento/anchio-sono-la-protezione-civile-i-campi-scuola-2025/>
- Dirección General de Protección Civil y Emergencias (2011). *Autoprotección en los centros escolares: Programa para centros escolares. Guía didáctica para profesores*. Ministerio del Interior. <https://www.interior.gob.es/opencms/gl/archivos-y-documentacion/documentacion-y-publicaciones/publicaciones/publicaciones-descargables/proteccion-civil/>
- Documentazione Sisma Emilia (2013). *Facciamo noi! Una ricostruzione fantastica: Bambini e ragazzi contro il terremoto*. Regione Emilia-Romagna. <https://www.documentazioneismaemilia.it>
- Dolce, M., Miozzo, A., Alessandrini, L., Bastia, S., Bertuccioli, P., Bilotta, D., Ciolli, S., De Siervo, G., Di Bucci, D., Fabi, D., Madeo, L., Panunzi, E., & Silvestri, V. (2020). *La protezione civile in Italia: Testo istituzionale di riferimento per i docenti scolastici*. Dipartimento della Protezione Civile, Presidenza del Consiglio dei Ministri. <https://www.protezionecivile.gov.it/static/1d96c7a7b9ee0868112bdd9a05db8c69/volume-pc-ita-14-09-2022-low.pdf>
- Earthquake Planning and Protection Organization (EPPO) (2025). *Earthquake Planning and Protection Organization (EPPO/OASP). School safety and seismic risk guidance*. <https://www.oasp.gr/>.
- EDURISK. *Se arriva il terremoto – Guida per gli insegnanti*. <https://www.edurisk.it/book/se-arriva-il-terremoto-guida-per-gli-insegnanti/>
- EDURISK (2003). *Se arriva il terremoto: Guida per gli insegnanti*. Istituto Nazionale di Geofisica e Vulcanologia (INGV). <https://www.edurisk.it/materiali/dettaglio/guida-per-gli-insegnanti-se-arriva-il-terremoto/>
- EDURISK (2007). *Noi e i vulcani*. EDURISK. <https://www.edurisk.it/book/noi-e-i-vulcani/>
- EDURISK Project (2007). *EDURISK – Percorsi educativi per la riduzione del rischio*. Istituto Nazionale di Geofisica e Vulcanologia.
- EDURISK (2015). *A prova di terremoto: Laboratori e attività per la scuola*. EDURISK. <https://www.edurisk.it/book/a-prova-di-terremoto/>
- Éduscol (2023). *Le plan particulier de mise en sûreté*. Ministère de l’Éducation nationale. <https://eduscol.education.gouv.fr/sites/default/files/document/fascicule-1-pmps-notice-explicative-104910.pdf>
- Éduscol (a). *Apprendre à porter secours — Premier degré*. Ministère de l’Éducation nationale. <https://eduscol.education.fr/4950/apprendre-porter-secours-premier-degre>
- Éduscol (b). *Assurer la sécurité des écoles et des établissements*. Ministère de l’Éducation nationale. <https://eduscol.education.gouv.fr/4782/assurer-la-securite-des-ecoles-et-des-etablissements>
- Éduscol. (c). *Éduquer et informer sur les risques majeurs*. Ministère de l’Éducation nationale. <https://eduscol.education.gouv.fr/4989/eduquer-et-informer-sur-les-risques-majeurs>
- European Commission (2019a, December 19). *Republic of Cyprus: National disaster management system*. Directorate-General for European Civil Protection and Humanitarian Aid Operations. https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/national-disaster-management-system/republic-cyprus_en

- European Commission (2019b). *The Sendai Framework for Disaster Risk Reduction 2015–2030 and the EU approach to disaster risk management*. Publications Office of the European Union. <https://ec.europa.eu/>
- European Commission (2021, September 21). *Greece: National disaster management system*. Directorate-General for European Civil Protection and Humanitarian Aid Operations. https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/national-disaster-management-system/greece_en
- European Commission (2026, February 11). *One number, one reflex: Why 112 day matters for your students?* Learning Corner. https://learning-corner.learning.europa.eu/news-and-competitions/one-number-one-reflex-why-112-day-matters-your-students-2026-02-11_en
- European Environment Agency (2024). *European climate risk assessment*. Publications Office of the European Union. <https://www.eea.europa.eu/publications/european-climate-risk-assessment>
- Eurydice (2024). *Italy: New guidelines for teaching civic education*. European Commission.
- Eurydice (2025a). *Spain: New civil protection training plan for schools*. European Commission. <https://eurydice.eacea.ec.europa.eu/news/spain-new-civil-protection-training-plan-schools>
- Eurydice (2025b). *Austria: Teaching and learning in primary education*. European Commission. <https://eurydice.eacea.ec.europa.eu/eurydice/austria/teaching-and-learning-primary-education>
- Eurydice (2026). *Administration and governance at central and/or regional level: Germany*. European Commission.
- Federal Government of Germany (2022). *German Strategy for Strengthening Resilience to Disasters*. Bundesamt für Bevölkerungsschutz und Katastrophenhilfe. https://www.bbk.bund.de/SharedDocs/Downloads/EN/Mediathek/Publikationen/german-strategy-resilience-long-eng_download.html
- Federal Ministry of the Interior (2025, October 6). *Civil protection and disaster management*. Republic of Austria. https://www.bmi.gv.at/204_english/start.aspx
- Federal Ministry of the Interior (2025b, January 23). *Austrian Civil Protection Association*. Republic of Austria. https://www.bmi.gv.at/204_english/skkm/association.aspx
- Federal Ministry of the Interior (2025c, January 23). *Children's Safety "Olympics" "SAFETY-Tour"*. Republic of Austria. https://www.bmi.gv.at/204_english/skkm/safety.aspx
- Fire and Emergency New Zealand. (2025a, September 15). *Get Firewise turns 25*. <https://portal.fireandemergency.nz/notices-news-and-events/news/get-firewise-turns-25/>
- Fire and Emergency New Zealand (2025b). *Teachers and schools: Programmes and resources*. <https://www.fireandemergency.nz/teachers-and-schools/>
- GADRRRES (2022). *Comprehensive school safety framework 2022–2030 for child rights and resilience in the education sector*. Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector. https://gadrrres.net/files/cssf_2022-2030_en.pdf
- Get Ready (2025a). *What's the Plan, Stan? Kia Takatū*. National Emergency Management Agency. <https://getready.govt.nz/prepared/school/whats-the-plan-stan>
- Get Ready (2025b). *Information for teachers: What's the Plan, Stan?* National Emergency Management Agency. <https://getready.govt.nz/prepared/school/whats-the-plan-stan/information-for-teachers>
- Get Ready (2025c). *New Zealand ShakeOut Whakahaumaru Aotearoa*. National Emergency Management Agency. <https://getready.govt.nz/involved/shakeout>

- Gobierno de España (2024). *Estrategia Nacional de Protección Civil 2024*. Departamento de Seguridad Nacional. <https://www.dsn.gob.es/sites/default/files/2025-01/ACCESIBLE%20CASTELLANO%20ESTRATEGIA%20NACIONAL%20PROTECCION%20CIVIL%202024%20.pdf>
- Government of Cyprus (2025, August 18). *Meeting about fire safety issues in primary and secondary schools*.
- Government of Iceland (2017). *Civil Protection Act (No. 82/2008, as amended)*. <https://www.government.is>
- Hellenic Red Cross (2025). *Πρώτες βοήθειες*. <https://www.redcross.gr/protes-voitheies/>
- Icelandic Meteorological Office (2024). *Hazards*. <https://en.vedur.is/>
- IFRC & Save the Children (2020). *Public awareness and public education for disaster risk reduction: Action-oriented key messages for households and schools*. <https://www.ifrc.org/sites/default/files/PAPE-2.0-English.pdf>
- Institute of Educational Policy. Skill Labs. <https://www2.iep.edu.gr/el/psifiako-apothetirio/skill-labs>
- Io non rischio. *Scuole: Le iniziative per portare tra i banchi di scuola le buone pratiche di protezione civile*. Dipartimento della Protezione Civile. <https://www.iononrischio.gov.it/it/approfondimento/scuole/>
- Istituto Nazionale di Geofisica e Vulcanologia (INGV). (2013). *Facciamo noi! Una ricostruzione fantastica: Bambini e ragazzi contro il terremoto*. EDURISK Project. <https://ingvterremoti.com/progetti/edurisk>
- Japanese Red Cross Society (2022). *Summary of annual report 2022–2023*. https://www.jrc.or.jp/english/pdf/AR2022-2023_ENver_web_rev.pdf
- Japanese Red Cross Society (2024). *Summary of annual report 2023–2024*. https://www.jrc.or.jp/english/pdf/AR2023-2024_En_fix-comp.pdf
- Jónsson, A., Guðmundsdóttir, G. B., & Ólafsson, R. (2021). *Environmental studies in Icelandic compulsory education: Integration of science, geography and sustainability*.
- Kids Web Japan (2020). *Preparing for natural disasters to protect kids' lives*. Ministry of Foreign Affairs of Japan. https://web-japan.org/kidsweb/cool/20/202011_disaster-prevention-education_en.html
- La Moncloa (2025, September 11). *Pedro Sánchez sets Spain as a benchmark by making the culture of emergency and civil protection training compulsory in non-university education*. Gobierno de España. <https://www.lamoncloa.gob.es/lang/en/presidente/news/paginas/2025/20250911-schools-emergency-plan.aspx>
- Météo-France (2026, April 3). *Comprendre la météo*. <https://meteofrance.com/education>
- Ministère de l'Éducation nationale (2006). *Mise en œuvre d'“Apprendre à porter secours” à l'école primaire*. *Bulletin officiel de l'Éducation nationale*, n° 33. <https://www.education.gouv.fr/bo/2006/33/MENE0601175C.htm>
- Ministère de l'Éducation nationale (2015). *Plan particulier de mise en sûreté face aux risques majeurs*. *Bulletin officiel de l'Éducation nationale*, n° 44. <https://www.education.gouv.fr/bo/15/Hebdo44/MENE1528696C.htm>
- Ministère de l'Éducation nationale (2016). *Sensibilisation et formation aux premiers secours et gestes qui sauvent*. *Bulletin officiel de l'Éducation nationale*, n° 30. <https://www.education.gouv.fr/bo/16/Hebdo30/MENE1617837C.htm>

- Ministère de l'Éducation nationale (2023, June 29). *Plan particulier de mise en sûreté (PPMS)*. *Bulletin officiel de l'Éducation nationale*, n° 26. <https://www.education.gouv.fr/bo/2023/Hebdo26/MENE2307453C>
- Ministère de l'Éducation nationale (2024, October 31). *Programmes et horaires à l'école élémentaire*. <https://www.education.gouv.fr/programmes-et-horaires-l-ecole-elementaire-9011>
- Ministère de l'Éducation nationale (2026, January 5). *Consignes de sécurité applicables dans les établissements relevant du ministère de l'Éducation nationale*. <https://www.education.gouv.fr/consignes-de-securite-applicables-dans-les-etablissements-relevant-du-ministere-de-l-education-456201>
- Ministerio de Educación y Formación Profesional (2022). *Real Decreto 157/2022, de 1 de marzo, por el que se establecen la ordenación y las enseñanzas mínimas de la Educación Primaria*. *Boletín Oficial del Estado*. <https://www.boe.es/buscar/act.php?id=BOE-A-2022-3296>
- Ministerio de Educación, Formación Profesional y Deportes, & Ministerio del Interior (2025a). *Plan de Formación ante emergencias de Protección Civil en centros educativos no universitarios*. Gobierno de España. <https://recursosemergencias.educacionfpydeportes.gob.es/portada.html>
- Ministerio de Educación, Formación Profesional y Deportes, & Ministerio del Interior (2025b). *Guía didáctica 1: Prevención, autoprotección, sistemas de alerta y sistemas 112 de emergencias*. Gobierno de España. <https://recursosemergencias.educacionfpydeportes.gob.es/guias-didacticas/1-prevencion-autoproteccion-sistema-alerta.html>
- Ministerio de Educación, Formación Profesional y Deportes, & Ministerio del Interior (2025). *Guías didácticas: Plan de Emergencias*. Gobierno de España. <https://recursosemergencias.educacionfpydeportes.gob.es/guias-didacticas.html>
- Ministry of Education (2024, August 12). *Prepare for an emergency or traumatic incident*. <https://www.education.govt.nz/education-professionals/schools-year-0-13/health-and-safety/prepare-emergency-or-traumatic-incident>
- Ministry of Education, Culture, Sports, Science and Technology (MEXT) (2016). *Enhancing disaster prevention and mitigation measures*. Government of Japan. <https://www.mext.go.jp/en/policy/education/lawandplan/title01/detail01/sdetail01/1373805.htm>
- Ministry of Education / Digital School (2011). *Περιβάλλον και Εκπαίδευση για την Αειφόρο Ανάπτυξη — Οδηγός Δημοτικού*. <https://ebooks.edu.gr/info/newps/>
- Ministry of Education / Digital School. *Διαδραστικά Σχολικά Βιβλία*. <https://ebooks.edu.gr/ebooks>
- Ministry of Education, Science and Culture (2012). *The national curriculum guide for compulsory schools: General section*. <https://www.government.is>
- Ministry of Education, Sport and Youth. *Health and safety*. Republic of Cyprus. https://www.moec.gov.cy/en/health_safety.html
- National Environment Agency (2023, July 24). *New heat stress advisory launched to guide public on minimising risk of heat-related illnesses*. <https://www.nea.gov.sg/media/news/news/index/new-heat-stress-advisory-launched-to-guide-public-on-minimising-risk-of-heat-related-illnesses>
- National Environment Agency (2024, November 11). *Singapore's first biennial transparency report 2024*. <https://www.nea.gov.sg/docs/default-source/cmd-documents/ghg-documents/singapore%27s-first-biennial-transparency-report-2024.pdf>

- Natural Hazards Commission Toka Tū Ake (2025a, June 3). *Designed with schools, for schools: New resource engages students to learn about natural hazards*. <https://www.naturalhazards.govt.nz/news/designed-with-schools-for-schools-new-resource-engages-students-to-learn-about-natural-hazards/>
- Oesterreich.gv.at (2025, April 15). *Emergency numbers*. Republic of Austria. https://www.oesterreich.gv.at/en/themen/notfaelle_unfaelle_und_kriminalitaet/notrufnummern
- Οργανισμός Αντισεισμικού Σχεδιασμού και Προστασίας (OASP) (2020). *Διαχείριση του σεισμικού κινδύνου στις σχολικές μονάδες*. https://oasp.gr/sites/default/files/library/2021-02/OASP_Sxedia_Ektaktis_Anagkis_Sxoleio_covid%2019_2020.pdf
- Οργανισμός Αντισεισμικού Σχεδιασμού και Προστασίας (OASP). *Εκπαιδευτική Κοινότητα*. <https://oasp.gr/tomeas-endiaferontos/Εκπαιδευτική%20Κοινότητα>
- PreventionWeb (2021). *Greece national platform*. United Nations Office for Disaster Risk Reduction. <https://www.preventionweb.net/national-platform/greece-national-platform>
- Protección Civil (2014). *Autoprotección en centros escolares*. Ministerio del Interior. <https://www.proteccioncivil.es/catalogo/autoproteccion/IIjornadastecnicas/presentaciones/p1.pdf>
- ProVention Consortium. *YouTube Channel on Community-Based Disaster Risk Reduction*. <http://www.proventionconsortium.org/>
- PUB (2023a). *Sustainability report 2023*. <https://www.pub.gov.sg/-/media/PUB/PDF/To-Publish-PUB-SR-23-Final.pdf>
- PUB (2023b, September 7). *Singapore's first Centre of Excellence to drive coastal protection and flood management research*. <https://www.pub.gov.sg/Resources/News-Room/PressReleases/2023/09/Centre-of-Excellence-to-drive-coastal-protection-and-flood-management-research>
- Regione Emilia-Romagna. "Progetti di Educazione alla Sicurezza". Available at: Regione Emilia-Romagna
- Republic of Cyprus (2016). *National risk assessment: Final report*. Ministry of Interior. [https://www.moi.gov.cy/moi/CD/cd.nsf/47F9E8D8471FFEE5C225858A0030DC67/\\$file/NRA_National_Risk_Assessment_En.pdf](https://www.moi.gov.cy/moi/CD/cd.nsf/47F9E8D8471FFEE5C225858A0030DC67/$file/NRA_National_Risk_Assessment_En.pdf)
- Singapore Civil Defence Force (2024, December 8). *School & student resources*. <https://www.scdf.gov.sg/home/community-volunteers/school-and-student-resources>
- Stuttgart Fire Department (2025, March 24). *Brandschutzerziehung*. <https://feuerwehr.stuttgart.de/sicherheit/vorbeugender-brandschutz/brandschutzerziehung>
- Tokyo Metropolitan Government (2025a, June 18). *Hands-on disaster and emergency preparedness experience at Tokyo Fire Department's Ikebukuro Life Safety Learning Center*. <https://www.tokyoupdates.metro.tokyo.lg.jp/en/post-1544/>
- Tokyo Metropolitan Government (2025b, December 24). *Disaster prevention experience tour for foreigners held and participants wanted*. <https://tokyo-resilience.metro.tokyo.lg.jp/en/event/3802/>
- Total Defence (2025a, January 24). *Exercise SG Ready 2025*. https://www.totaldefence.gov.sg/newsroom/24jan25_fs/
- Total Defence (2025b, February 15). *Singaporeans come together to prepare for disruptions in commemoration of Total Defence*. <https://www.totaldefence.gov.sg/newsroom/singaporeans-come-together-to-prepare-for-disruptions-in-commemoration-of-total-defence/>

- UNDRR (2015). *Sendai framework for disaster risk reduction 2015–2030*. United Nations Office for Disaster Risk Reduction. <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>
- UNESCO (2020). *Disaster risk reduction, climate change and education*. UNESCO. <https://www.unesco.org/en/disaster-risk-reduction/education>
- UNESCO Cyprus. *Education for sustainable development: Cyprus*. Cyprus National Commission for UNESCO. <https://www.unesco.org.cy/Programmes-Education-For-Sustainable-Development-Cyprus%2CEN-PROGRAMMES-01-03-01%2CEN>
- Union Civil Protection Knowledge Network (2024, October 14). *Youth at the heart of the 2024 International Day for DRR*. European Commission. <https://civil-protection-knowledge-network.europa.eu/news/youth-heart-2024-international-day-drr>
- United Nations Office for Disaster Risk Reduction (UNDRR) (2009). *Terminology on Disaster Risk Reduction*. <http://www.unisdr.org/eng/terminology/terminology-2009-eng.html>