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RECOMMENDATIONS FOR PREPAREDNESS EDUCATION IN EARLY CHILDHOOD AND PRIMARY SCHOOLING IN THE EUROPEAN UNION

TAFF

Technical Assistance Financing Facility
for Disaster Prevention and Preparedness



**SUPPORTING THE IMPLEMENTATION OF
ACTION 29 OF THE EU PREPAREDNESS UNION
STRATEGY ON INCLUDING PREPAREDNESS IN
SCHOOL EDUCATION CURRICULA**

This study is part of
the Technical Assistance Financing Facility (TAFF)
Phase 2 on Enhancing Policy and Investments
for EU Disaster and Climate Resilience Study

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This report was prepared by a group of World Bank staff and experts, under supervision of **Elif Ayhan** (Lead Disaster Risk Management Specialist), **Carina Fonseca Ferreira** (Disaster Risk Management Specialist), and **Farah-Soraya Ridanovic** (Disaster Risk Management Analyst). Inputs were provided by **Anda Georgiana Anica** (Disaster Risk Management Specialist), **Aysenur Acar Erdogan** (Education Consultant), **David Finnigan** (Interactive Educational Performances and Games Consultant), **Delia Elena Moles** (Disaster Risk Management Consultant), **Evandro Gurgel** (Knowledge Management and Communication Consultant), **Jasmin Sadegh** (Disaster Risk Management Consultant), **Lara Hamer** (Education Consultant), **Leventcan Gultekin** (Disaster Risk Management Analyst), **Tara Katarina Juarros Lukic** (Disaster Risk Management Consultant), **Thomas Radhuber** (Disaster Risk Management Consultant), **Yiying Wang** (Monitoring and Evaluation Consultant), and **Tamas Istvan Torok** (Graphic Designer).

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1818 H Street NW, Washington, DC 20433

Telephone: +1-202-473-1000; Internet: www.worldbank.org

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Key Terms

Adaptive Response: The ability to act and modify decisions during a crisis to manage uncertainty and reduce impact.

‘Build back better’ (BBB) principle: The use of the recovery, rehabilitation, and reconstruction phases after a disaster to increase the resilience of nations and communities. ‘Building back better’ means integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems and into the revitalisation of livelihoods, economies, and the environment. Note: The term ‘societal’ is not to be interpreted as a political system of any country.¹

Continuous Professional Development: Ongoing learning undertaken by educators to maintain and improve their professional knowledge, skills and competencies. Continuous professional development includes formal, non-formal, and informal learning activities, such as training courses, mentoring, workshops, peer collaboration, and support educators to evolving educational priorities and improving student learning outcomes.

Coping capacity: The ability of people, organisations and systems to manage adverse conditions, risks, or disasters.²

Early childhood education: School-based or otherwise institutionalised programmes for a group of children (e.g. centre-based, community-based, home-based and corresponds to the International Standard Classification of Education levels 0. Within ISCED 0, early childhood educational development programmes are targeted at children aged 0 to 2 years; and pre-primary education programmes are targeted at children aged 3 years until the age to start ISCED 1. The upper age limit for the pre-primary education category depends

in each case on the theoretical age of entry into ISCED level 1.

Early warning system (EWS): An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication, and preparedness activities. These systems enable individuals, communities, governments and businesses to take action to reduce disaster risks in advance of hazardous events. Note: Multi-hazard EWSs address multiple hazards in contexts where hazardous events may occur alone, simultaneously, in a cascading manner, or cumulatively over time, taking potential interrelated effects into account.

European Union Civil Protection Mechanism (UCPM): A system established in the European Union in 2001 for coordinating rescue and humanitarian assistance in the event of natural and man-made disasters whose scale or nature exceeds the response capabilities of the affected country.

Exposure: The degree to which people, infrastructure, housing, production capacities, and other tangible human assets are located in hazard-prone areas.

Hazard: An event that has the potential to cause harm. This encompasses any process, phenomenon, or human activity that may lead to loss of life, injury or other health impacts, property damage, social and economic disruption, or environmental degradation. The EU addresses a wide range of hazards, which may be natural (e.g. floods, earthquakes), human-induced/anthropogenic (e.g., industrial accidents, pollution, cyberattacks), or a combination of both (socio-natural e.g., climate change impacts).³

¹ Definition as per the NSDRR 2024–2035, GoR. <https://igsu.ro/Resources/COJ/ProgramaStrategii/Strategia%20nationala%20de%20reducere%20a%20riscurilor%20de%20dezastre%202024%20-%202035.pdf>.

² United Nations Office for Disaster Risk Reduction (UNDRR), Coping Capacity. UNDRR Terminology. [Link](#).

³ United Nations Office for Disaster Risk Reduction (UNDRR), "Hazard," UNDRR Terminology. <https://www.undrr.org/terminology/hazard>.

Initial Teacher Education: The formal education that prepares individuals to become qualified teachers. It includes subject knowledge, pedagogical training, and practical teaching experience and provides the foundation for professional teaching practice and continuous professional development.

Preparedness education: Structured process as part of national education systems through which learners acquire knowledge, skills, attitudes, and values needed to prevent, prepare for, respond to, and recover from hazards.

Preparedness: The capacity to anticipate, prevent, and respond quickly and effectively to crises, utilising a whole-of-government and whole-of-society "all-hazards" approach.⁴

Primary education: First stage of compulsory education, with legal age of entrance being not younger than five years and not older than 7 years and corresponding to the International Standard Classification of Education level 1. Programs at level 1 mark are normally designed to give students a basic education in reading, writing and mathematics along with an elementary understanding of subjects such as history, geography, natural science, social science, art and music. This level covers, in principle, six years of full-time schooling.

Resilience: The ability of a system and its component parts to absorb or recover from the effects of a hazardous event, and resume its essential basic functions.⁵

Vulnerability: The conditions determined by physical, social, economic, and environmental factors or processes which increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards.



⁴ European Commission, Joint Communication on the European Preparedness Union Strategy, JOIN(2025) 130 final European Commission. Brussels, 2025. 3–5. [Link](#).

⁵ World Bank and European Commission. *Investment in Disaster Risk Management in Europe Makes Economic Sense. Economics for Disaster Prevention and Preparedness*. 2021. <https://civil-protection-knowledge-network.europa.eu/system/files/2023-03/Investment%20in%20Disaster%20Risk%20Management%20-%20Background.pdf>.



EXECUTIVE SUMMARY



Preparedness education is a practical way to protect children, sustain learning continuity amid growing risk, and build more resilient societies. This report supports Action 29 of the Preparedness Union Strategy by translating EU ambition into an evidence-informed roadmap: helping Member States embed age-appropriate preparedness into early childhood and primary education through routine teaching, whole-school practice, and enabling system supports. It does so within an integrated all-hazards approach, with a particular focus on natural hazards and civil protection.

Purpose

Europe's education systems face rising, multi-hazard risks that disrupt learning, threaten safety and strain school operations. The Intergovernmental Panel on Climate Change (IPCC) findings confirm Europe is warming faster than the global average with more heat extremes, heavy precipitation, and droughts. To sustain learning continuity, strengthen safety culture, and advance the EU Preparedness Union, it is recommended that preparedness be integrated into early childhood and primary education. This report distils actionable guidance for EU-level curriculum standards and system supports to accelerate that integration. A rapid, comparative review was conducted of 20 case studies across EU Member States and Union Civil Protection Mechanism (UCPM) Participating States, plus four global comparators (Japan, New Zealand, Canada and the United States). The aim is to inform EU-level curriculum guidelines and teacher support for preparedness education, using EU country examples illustratively rather than exhaustively.

What is preparedness education?

In the context of this study, preparedness education is a structured process as part of national education systems through which learners acquire knowledge, skills, attitudes and values needed to prevent, prepare for, respond to, and recover from hazards. It is a core pillar of resilience frameworks and its approach includes attributes such as:

- Curriculum integration across existing subjects,
- Synergies with school disaster management (plans, standard operating procedures (SOPs), evacuation and family reunification, continuity of learning),
- Inclusive approaches (gender-sensitive water, sanitation, and hygiene WASH, safe spaces, psychosocial support),
- Community engagement, and
- Efficiency to minimize the burden on national education systems.

Headline findings from the case studies

Curriculum integration works: Embedding preparedness within existing subjects in primary and early childhood education (ECE) avoids creating new subjects and reduces burden on teachers and timetables. Examples include Italy, which mandates preparedness through Civic Education, while Poland integrates safety from preschool onward via compulsory learning outcomes and a dedicated ‘Education for Safety’ subject. This approach reduces timetable pressure, but implementation quality depends on teacher capacity, usable materials, and clear learning progression, especially where content is cross-curricular.

Ready-to-use materials matter: National toolkits (lesson plans, workbooks, child-friendly resources) tailored to local hazards improve consistency and uptake. Examples include France’s multidisciplinary ‘Quand la Terre gronde’ teaching sequence, New Zealand’s Get Ready portal for schools and families, and Croatia’s use of board games, digital tools, and simulators to make Disaster Risk Reduction tangible and engaging.

Teacher development is pivotal: In-service training and regular school-based drills are universal. France requires two preparedness exercises per year in all schools; Romania mandates first-aid training for selected staff; Portugal reinforces preparedness through professional development and external evaluation. Japan stands out for anchoring preparedness more systematically, including through initial teacher education.

Assess what students can do: Systems monitor school plans and drills, but advanced approaches (e.g., Japan’s student capability assessments, or Czechia’s thematic inspections) test recognition of risks and safe responses beyond documentation and drill compliance.

Legal anchoring elevates expectations: National strategies (e.g., New Zealand) and legislation (e.g., school safety legislation in Japan, France, and law-based civic education in Italy) can strengthen mandates and accountability, especially when paired with teacher support, tools, and monitoring.

Schools as local hubs: Partnerships with emergency services, NGOs, and families extend preparedness behaviours into homes and communities. Czechia leverages firefighter-led school programmes; Romania and Bulgaria rely on civil protection agencies and NGOs; Sweden and New Zealand demonstrate strong child-to-household spillover through national campaigns and school engagement.

Implications for the EU

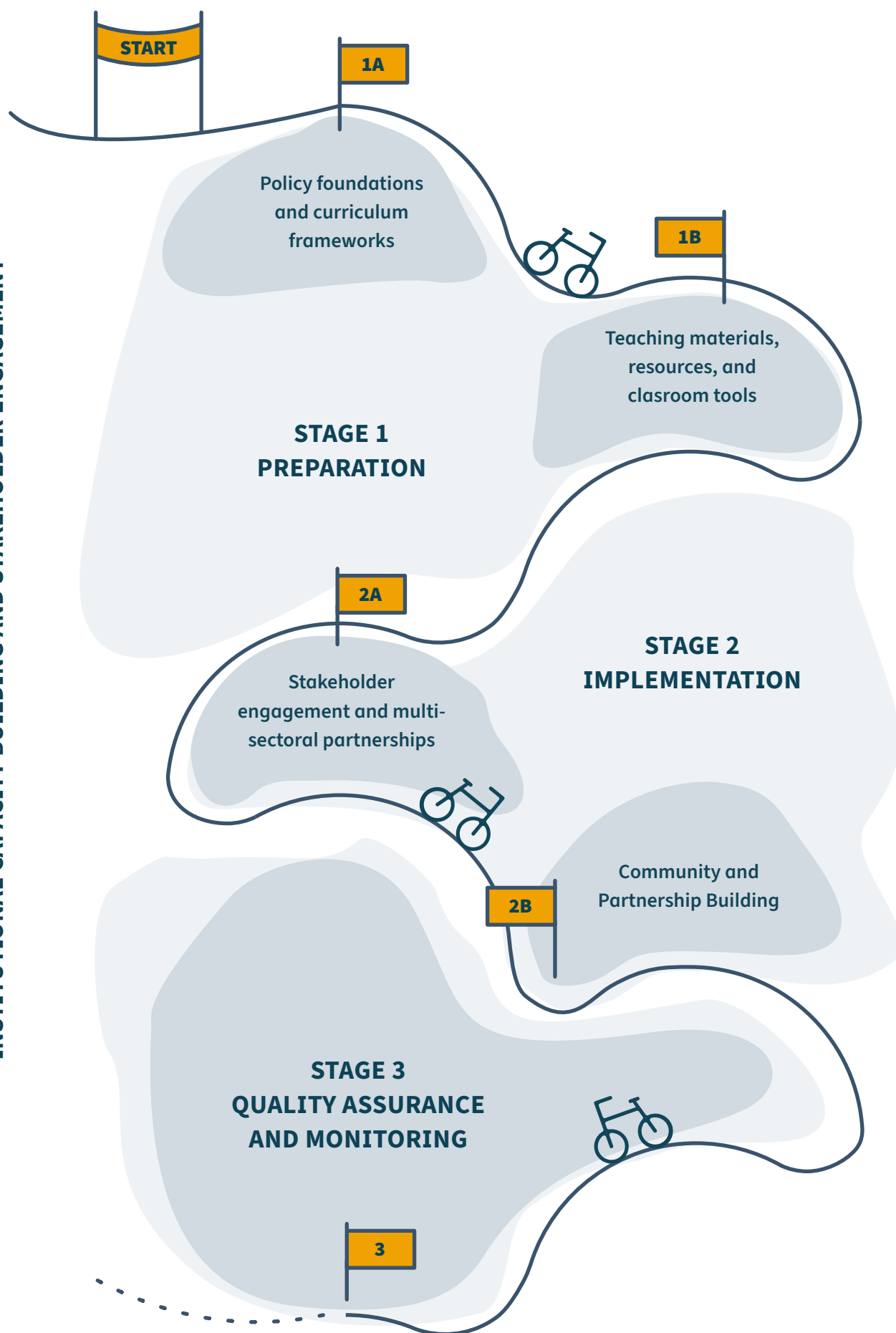
Preparedness education is a core building block of the EU's resilience architecture, protecting children and communities. The strategic framework is already in place through the EU Preparedness Union Strategy, which promotes an all-hazards, whole-of-society approach to anticipating and managing crises. The civil protection dimension of this strategy is reinforced by the Union Disaster Resilience Goals, particularly DRG 2 ("Prepare"), which aim to increase risk awareness and preparedness of the population and are operationalised through initiatives such as PreparEU (including school-facing risk "icons/visuals," a European Risk Atlas concept, and a month of disaster preparedness).

Starting preparedness learning early (from the youngest age group) creates measurable spillovers: children bring risk knowledge home, normalise preparedness behaviours, and strengthen community-level readiness over time. Equipping children with basic life-saving knowledge and skills helps keep them safe at school, at home, and in their communities, supporting DRG 2 outcomes and reinforcing the Union's collective resilience (the UCPM as "the whole of its parts," where national systems are strengthened through EU-level coordination, knowledge, and co-financing). In practice, European cooperation and peer learning can facilitate (i) curriculum integration paired with practical, age-appropriate tools and exercises; (ii) sustained teacher training and learning resources; (iii) quality assurance/monitoring to ensure content is consistent and actionable; and (iv) structured links to community actors (civil protection, municipalities, NGOs, and volunteers) so schools become local preparedness hubs, allowing schools to play a protective role without becoming operational responders or replacing the role of agencies in emergency management.

The combined survey evidence points to an emerging implementation gap: preparedness policy discussions are outpacing the implementation conditions required for consistent delivery in schools.

This package is also value-for-money: evidence finds that prevention and preparedness investments deliver very high returns. Combining curriculum integration, practical resources, sustained teacher support, quality assurance, and community engagement is feasible and cost effective; evidence indicates every euro invested can save up to €15 in post-disaster recovery.

INSTITUTIONAL CAPACITY BUILDING AND STAKEHOLDER ENGAGEMENT



Action-oriented Roadmap

The Roadmap provides a practical, sequenced approach to embed preparedness education into early childhood and primary schooling. It translates policy intent into actionable steps across curriculum, teacher support, and quality assurance, offering a flexible structure that Member States can adapt to their own contexts. Its purpose is to make preparedness education scalable, sustainable, and integral to Europe's resilience agenda. The following image and table describe the stages of the Roadmap.

The Roadmap connects standards, evidence and action, enabling Member States to move from isolated initiatives to resilient systems that protect children and secure education continuity amid growing risk.

STAGE 1

Focuses on curriculum preparation, establishing policy and financing foundations

Joint governance with disaster risk management; grade-progressive preparedness competencies embedded in curricula from early childhood through primary, using level-appropriate pedagogy (play-based routines in early childhood; more structured progression in primary); and high-quality, inclusive, and accessible teaching materials developed, peer-reviewed, shared via an EU repository, and translated/adapted to local languages and needs.

STAGE 2

Turns policy and curriculum into practice through teacher professional development and multi-sector partnerships

Accredited micro-credentials and blended CPD pathways established (disaster literacy, trauma-informed practice, participatory methods, community engagement); ready-to-use classroom resources provided; incentives linked to career frameworks where feasible; partnerships institutionalised with civil protection, local authorities, and communities to routinise drills, shared routines, and coherent public messaging beyond the classroom.

STAGE 3

Establishes quality assurance and monitoring to ensure consistent, high-quality implementation

Shared monitoring framework tracks roadmap milestones using nationally validated indicators; existing inspection and self-evaluation systems balance compliance checks with evidence on teaching and learning outcomes; continuous feedback loops (school – ministry - EU-level dialogue) inform improvement, resource curation, and long-term sustainability.

Risks and assumptions

Because education systems across EU Member States vary widely, it is recommended that guidance be adaptable rather than prescriptive, avoiding a one-size-fits-all approach. At the same time, teacher workload and timetable constraints make it essential to integrate preparedness into existing subjects instead of creating new ones. Finally, equity considerations can be embedded from the outset, ensuring that language diversity, disability inclusion, and the needs of migrant learners are fully addressed.

Decision asks and next steps

To advance the EU's resilience agenda, the next step is to formalise preparedness education as a shared priority across Member States. This begins with the development of EU-level guidelines for early childhood and primary education, ensuring alignment with the Preparedness Union objectives. Building on this foundation, it is recommended that a toolkit and a comprehensive teacher professional development package be co-created with Member States and UCPM partners to guarantee consistency and adaptability.

Repository of Preparedness Education Good Practices and Resources

The Repository of Preparedness Education Good Practices and Resources is a practical, searchable tool that supports the Roadmap for Preparedness in Early & Primary Curricula by consolidating classroom materials, teacher training resources, institutional templates, and partnership approaches from EU Member States, UCPM Participating States, European initiatives, and selected international references in the field of civil protection and disasters management. Each entry is coded to align directly with the Roadmap stages (1A, 1B, 2A, 2B, 3) and categorised by type, hazard focus, keywords, description, and source link, enabling teachers, school leaders, policymakers, civil protection agencies, and teacher education providers to quickly find and adapt examples that fit their context without starting from scratch, with a focus on teacher usability and low-burden adoption. Delivered as a filterable workbook, the repository reveals patterns and gaps across countries and Roadmap stages and provides concrete materials for guidance, workshops, and capacity-building. While non-exhaustive and not rating impact evidence, it prioritises recognised, promising practices and is designed to scale into a live EU-level platform that allows continuous contribution, curation, and community-building.



BACKGROUND AND OBJECTIVES



This chapter introduces the study’s rationale and objectives, situating preparedness education within the EU disaster risk management agenda. It highlights the importance of early childhood and primary education for building resilience and outlines the study’s scope and contribution to supporting Action 29 of the EU Preparedness Union Strategy.

Rationale

Strengthening population preparedness through education is a core priority of the EU disaster risk management agenda. This priority is reflected in key EU policy instruments, including the EU Preparedness Union Strategy and the Union Civil Protection Mechanism (UCPM). Recent crises, including COVID-19 and climate-related hazards, have exposed gaps in risk awareness and education system readiness. Early childhood and primary education are critical for building a culture of preparedness, as they shape lifelong attitudes and behaviours that extend to families and communities.

Evidence from the PreparEU project provides insight into both the demand and practical constraints of integrating preparedness education into school systems. The PreparEU pilot project, the EU’s flagship initiative supporting implementation of the Union Disaster Resilience Goals (UDRG), examined this topic by developing recommendations for a Learning Program for Schools to teach students about risks and preparedness. The program introduces age-appropriate activities and lessons covering common hazards, their impact on society, how to prepare, and appropriate responses in emergencies. The concept received the strongest support in the project’s web survey, ranking highest in intended use among Member and Participating States. Respondents viewed it as a key tool for fostering a culture of preparedness from an early age, including through positive spillover effects to families and communities. However, feasibility for implementation was assessed as low, reflecting the complexity of integrating new content into national education systems, crowded curricula, and the need for coordination between education and civil protection authorities.

This study contributes to implementation of Action 29 of the EU Preparedness Union Strategy by examining how preparedness education is integrated across school systems. Action 29 seeks to develop guidelines for embedding preparedness concepts into early childhood and primary education curricula and equipping educators with the skills and tools needed to teach preparedness concepts effectively. While several Member and Participating States have introduced preparedness initiatives, there is no comprehensive EU-wide evidence on integration across curricula, teaching materials, teacher training, and quality assurance. Closing this gap is essential to produce coherent and adaptable EU-level guidance. This

study supports Action 29 by generating evidence on the integration of preparedness within early childhood and primary education and by providing recommendations to equip educators with practical tools and training.

Scope

Undertaken under TAFF 2025 (Phase 2, Component 2), this study supports UCPM countries by generating comparative evidence on how disaster preparedness and disaster risk reduction (DRR) are embedded in education systems. It contributes to Union Disaster Resilience Goal 2 (Prepare) by strengthening the evidence base for population risk awareness and preparedness and helps inform implementation of the EU Preparedness Union Strategy led by DG ECHO in cooperation with other services, notably DG EAC.

The study examines the integration of preparedness and disaster risk reduction (DRR) into early childhood and primary education across curricula, teaching materials, teacher and school leader training, quality assurance, and institutional coordination. It uses a comparative approach, reviewing 20 case studies across EU Member States, UCPM Participating States, and global comparators. The EU Member State sample is informed by the EACEA/Eurydice mapping on preparedness in education, complemented by Participating States and global comparators to identify transferable practices and system-level enabling conditions. While many principles in this report apply across education levels, it focuses specifically on early childhood and primary education. This report focuses on these younger age groups as the priority in a longer process.

Preparedness education holds transformative potential: by equipping children with a resilience mindset from an early age, it can generate a butterfly effect that ripples across households, communities, and future generations, gradually shifting societal culture toward greater readiness and adaptive capacity. Yet this potential, however significant, must not be mistaken for sufficiency. Preparedness education is one pillar among several that together constitute a meaningful resilience framework - and it cannot, on its own, guarantee the safety of school communities or the continuity of learning when shocks strike. The physical safety of school infrastructure, the institutional preparedness of education systems, and the broader resilience of society are equally critical and mutually reinforcing dimensions. Neglecting any one of them exposes the limits of the others. This is also, fundamentally, a matter of equity: children do not attend school on equal terms. Some learners are taught in well-built, well-resourced schools embedded in responsive systems; others spend their days in structurally unsafe buildings, in communities with limited institutional support. Acknowledging this is not a reason to diminish the value of preparedness education - it is a reason to pursue all pillars of resilience with equal seriousness and purpose.

For analytical consistency and cross-country comparability in the EU context, the study adopts ISCED (2011) definitions of early childhood and primary education. Under this framework, early childhood education corresponds to ISCED level 0, covering organised learning before entry into compulsory schooling, while primary education corresponds to ISCED level 1, marking the beginning of compulsory education and the development of foundational skills. Although institutional structures, entry ages, and program duration vary across Member States, these levels provide a common basis for comparing education systems.

While this study focuses primarily on natural hazards, the approach it proposes is designed with expandability in mind and can be readily applied to human-induced hazards as well. To this end, the study introduces an all-hazards framework that establishes a common foundation for preparedness education across risk types. At the same time, it is attentive to the areas where natural and human-induced hazards meaningfully diverge - whether in terms of warning systems, response behaviours, or pedagogical considerations - and addresses these distinctions explicitly, ensuring that the framework remains both coherent and adaptable.

Evidence draws on desk reviews, structured case studies, inputs from international organisations, the Eurydice questionnaire on Preparedness in Education in Europe⁶, and an EU-wide teacher survey⁷. Findings are organised under six thematic pillars:

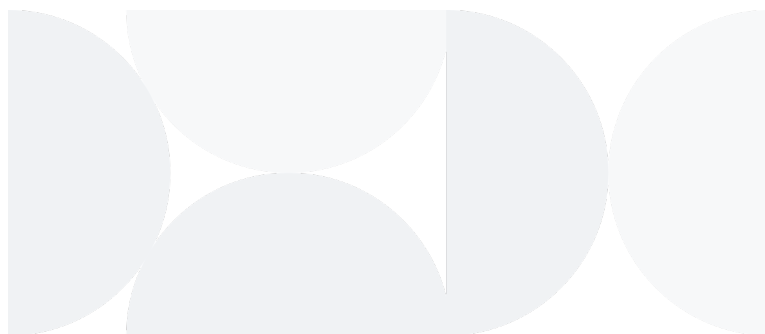
1. Curriculum integration;
2. Teaching materials and classroom tools;
3. Teacher education and professional development;
4. Quality assurance and monitoring;
5. National strategies and future plans; and
6. Stakeholder engagement and partnerships.

⁶ European Commission / Preparedness Education in Europe. EACEA / Eurydice. Eurydice Report. Luxembourg: Publications Office of the European Union. Luxembourg, 2025.

⁷ European Commission. 2026. "Survey on School Preparedness and Resilience – Results," European School Education Platform, 2026. URL: <https://school-education.ec.europa.eu/en/discover/expert-views/survey-school-preparedness-and-resilience>.

The study aims to create an EU-wide evidence base to inform practical, non-binding guidelines on preparedness education for early childhood and primary levels, build a repository of good practices, and provide actionable insights for adapting and scaling effective approaches.

For this study, disaster follows Article 4 of the UCPM and is aligned with the EU Preparedness Union Strategy's integrated all-hazards approach. It therefore adopts a multi-hazard perspective that includes natural hazards (such as floods, storms, heatwaves, earthquakes, and landslides), technological and public health emergencies, and, human-induced and conflict-related risks and threats. The focus is on hazards most likely to affect children's safety, well-being, and continuity of learning, recognising the vulnerability of young learners and the need for resilience-building measures in early childhood and primary education.





**AT THE INTERSECTION OF
EDUCATION AND RESILIENCE**



This chapter explores the points of contact of education and resilience. It maps the current frontier of a systemic approach to preparedness education. It underscores the dual action of resilience in education: safeguarding learners and learning continuity during crises while mobilising schools as agents that contribute to resilience through improved knowledge, skills, attitudes and values. Central to this vision is preparedness education as a competency-based process, and consequently the intersection of resilience with the European GreenComp, LifeComp, and DigComp. Anchored in an all-hazards and whole-of-society approach, the chapter aligns preparedness education with the OECD Learning Compass and situates it within the EU Preparedness Union Strategy Action 29. In concert with global collaboration, Action 29 helps translate policy into scalable practice, strengthening both education systems and community resilience.

Where Education Meets Resilience

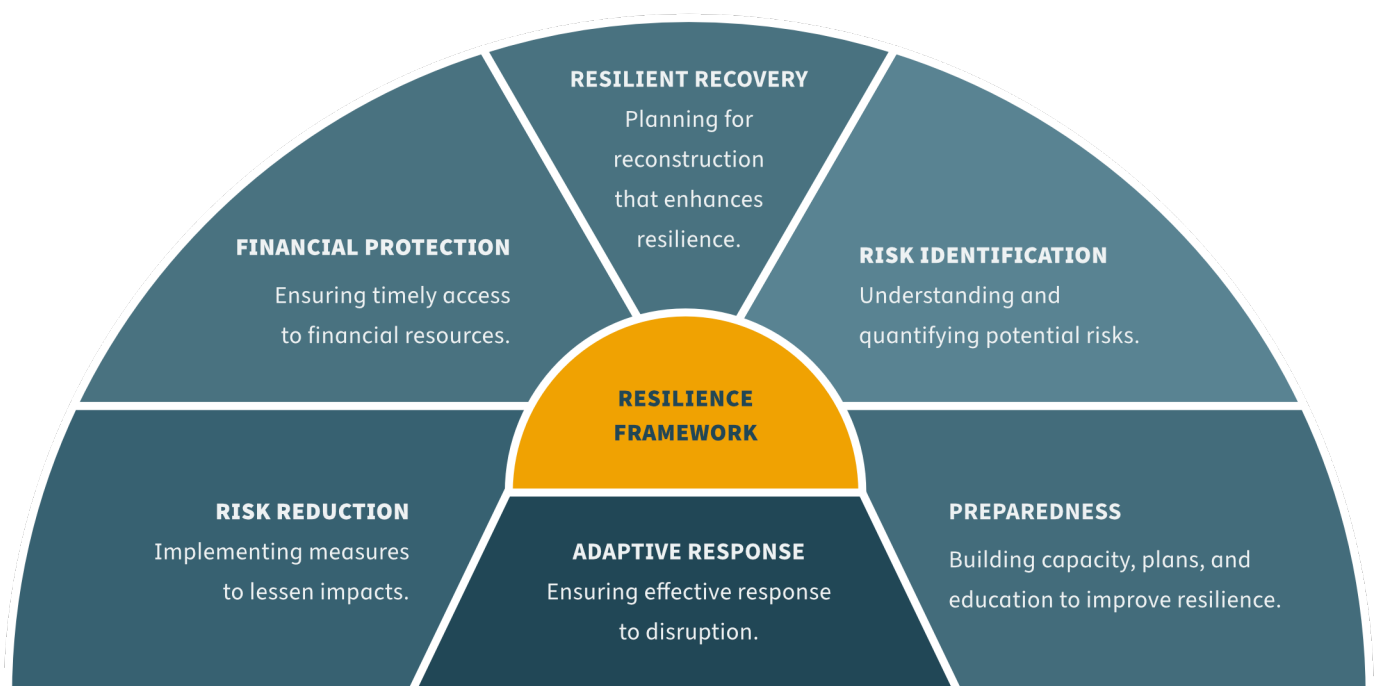
The urgency for resilience has never been greater. Climate shocks and conflicts displace millions of learners each year, while hazards such as floods, wildfires, and earthquakes damage school infrastructure, interrupt teaching time, and displace learners and staff. According to UNICEF data, nearly 4 million children in Europe were affected by climate-related school disruptions in 2024. The consequences are severe: months of lost learning, increased dropout risk, and widening inequalities for children already facing barriers to access. For education authorities, resilience is therefore a practical way to promote inclusion and uphold the right to education in the face of growing risk.

In technical terms, resilience is the ability of a system and its component parts to absorb or recover from the effects of a shock, and resume its essential basic functions. Strategies to build resilience increasingly prioritise prevention over reactive response through a multidimensional approach typically grounded in six core areas (Figure 1). Working in synchrony, the six core areas foster resilience at the system level: (1) risk identification, which systematically assesses, models, and communicates hazards, exposure, and vulnerability to reveal who and what is at risk and why; (2) risk reduction, which proactively lowers existing and future risk by addressing root causes through resilient infrastructure, land-use planning, and risk-informed regulations; (3) adaptive response, which is the ability to act and modify decisions during a crisis to manage uncertainty and reduce impact, supported by effective early warning systems, emergency management capacities, and the preparedness of institutions, communities, and markets; (4) financial protection, which secures pre-arranged, diversified financing instruments to ensure

rapid, predictable funding for relief, early recovery, and reconstruction without derailing budgets; (5) resilient recovery, which rebuilds better by restoring services and livelihoods in ways that reduce future risk, strengthen institutions, and embed resilience into reconstruction; and (6) preparedness, which is a structured process through which all segments of society acquire knowledge, skills, attitudes, and values needed to prevent, respond to, and recover from crisis.

Preparedness translates policy ambitions into practical behaviours and shared routines. When societies normalise preparedness through structured pedagogical, capacity building, or public awareness activities, children and adults develop the competencies to strengthen resilience across all other five areas of the resilience framework. These learning and capacity building processes build confidence, situational awareness, and decision-making skills that enable learners and stakeholders to act effectively. For instance, in Greece, preparedness in schools is regulated by the Ministry of Education, which issues annual guidance requiring school directors to draft or update emergency plans, train staff and students on self-protection, and conduct three preparedness exercises per year. Training is typically delivered by firefighters or, for seismic hazards, by the Earthquake Protection Organization. More recently, a Digital Portal of Civil Protection Academy was launched in May to host educational programs for children aged 11 to 15 covering a range of natural hazards — including fires, floods, earthquakes, and climate-related disasters — in both Greek and English. These programs, available freely online, are not integrated into the official curriculum but represent a meaningful step toward broadening public access to preparedness education beyond the school system.

Figure 1. Resilience Framework



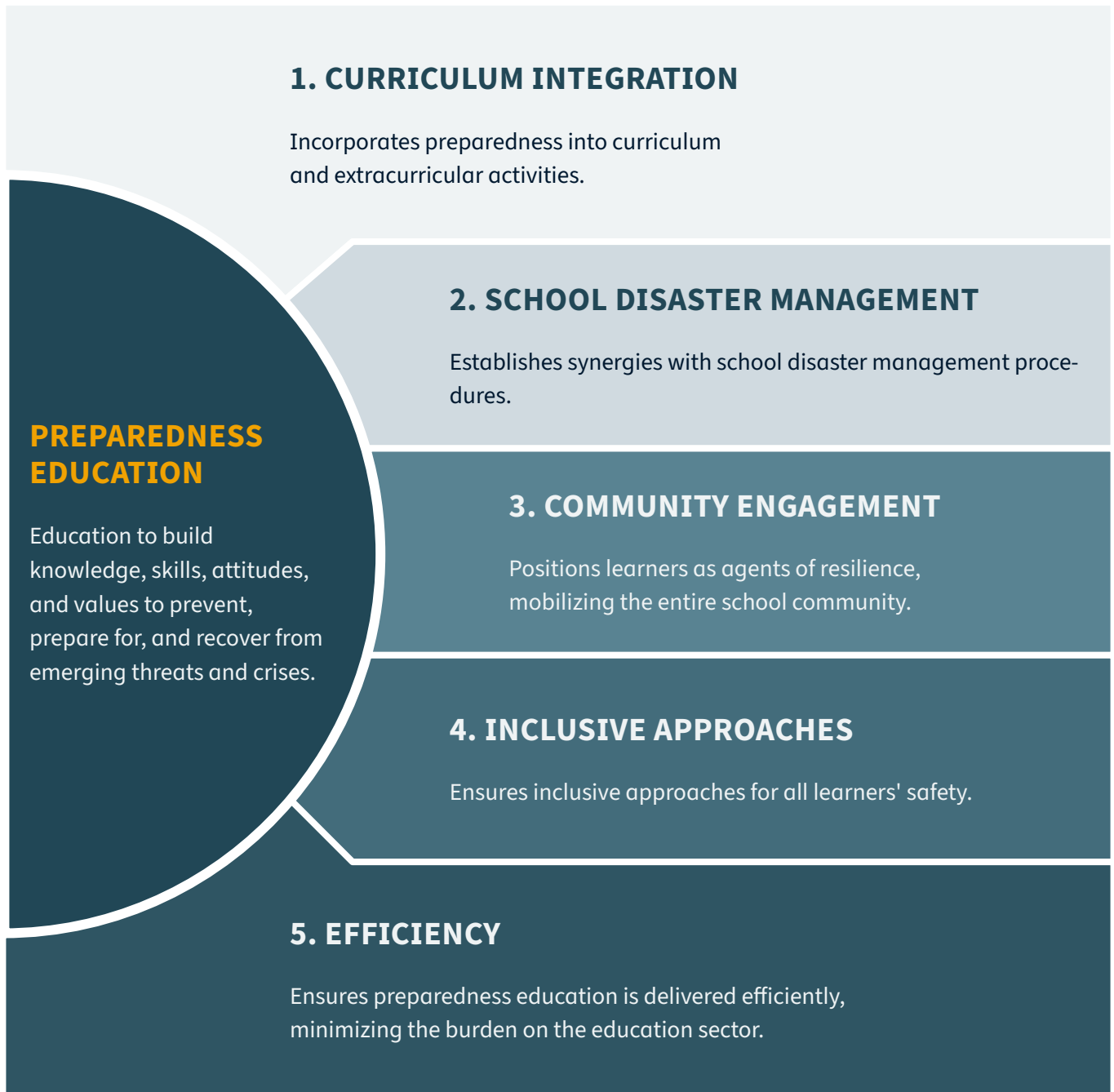
Source: World Bank

Preparedness education, in particular, builds competences within the formal structures of national education systems, equipping learners, educators, and school communities with the knowledge, skills, attitudes, and values needed to strengthen resilience across both education systems and society. Learners act as powerful multipliers - carrying key messages home, reinforcing safer practices, and fostering a culture of prevention that extends well beyond the classroom. Over time, these sustained behaviours improve readiness for major emergencies and everyday risks alike, strengthening community cohesion, risk communication, and self-sufficiency in the critical hours after an event. Schools themselves are vital community assets. In post-disaster situations, they could serve as shelters and trusted spaces for support, information, and essential services. When linked to early warning systems, emergency planning, and risk-informed decision-making, schools help reduce confusion, enable timely action, protect children, and accelerate recovery. Critically, children are not merely beneficiaries of adult protection - when equipped with preparedness competencies, they act as active agents of resilience, supporting peers, relaying information to families, and helping restore normalcy and routine within their communities.

Consequently, at the intersection of resilience and education lies a dual purpose: education is both directly exposed to crises that threaten school communities' safety and learning outcomes and a contributor to resilience, building essential competencies needed for learners to become active agents of resilience. Resilient education systems are instrumental to safeguarding education, enabling schools to maintain learning continuity during crises. It allows schools to adapt and recover swiftly, limits avoidable harm and long-term setbacks for children and families, maintains essential functions under stress, restores instructional time, and preserves the protective role schools play in communities. On the other end, preparedness education contribute decisively to a culture of prevention, adaptive response during crisis, and resilient recovery, strengthening whole-of-society resilience.

Five core attributes can be identified for preparedness education to serve as an effective and efficient contributor to resilience (Figure 2). Together, these attributes emphasise the need to link preparedness education with broader resilience measures and to engage the whole of society in inclusive and efficient ways. Preparedness education spans curriculum integration, articulation with school management, and community engagement - particularly in early childhood and primary education, where stable routines and adult support are fundamental to learning and wellbeing. Inclusive practices are essential to ensure equitable safety and access for all learners. Finally, effective integration into education systems requires approaches that minimize the burden on the sector while being adequately supported by professional development and meaningful incentives for all participants.

Figure 2. Core Attributes of Preparedness Education



Source: World Bank

Effective preparedness education implementation relies on enabling pedagogical and institutional conditions within education systems. This includes access to high-quality, age-appropriate teaching and learning materials, continuous professional development that equips teachers with pedagogical strategies for competency-based preparedness, and strong alignment between education and Disaster Risk Management (DRM) policies and institutions. These conditions ensure preparedness is not treated as an isolated compliance requirement, but integrated into curriculum and instructional practice, making preparedness feasible for educators, meaningful for learners and sustainable over time. By strengthening both instructional capacity and institutional readiness, preparedness education contributes directly to building resilient learners, schools and communities.

When preparedness is embedded in curricula and school practice, it delivers education-specific benefits:

- ✦ **Safer, more inclusive learning environments:** Risk-aware school routines, and trauma-sensitive pedagogy protect all learners, including students with disabilities.
- ✦ **Continuity and equity:** Preparedness mitigates dropout risk and helps close equity gaps for children who already face barriers.
- ✦ **Improved learning outcomes and wellbeing:** Clear roles, simple protective behaviours, and consistent practice reduce stress, build student confidence, and support engagement.

Preparedness Education as a Competency-Based Process

While preparedness education is most effective when aligned with school emergency and contingency planning and broader crisis management procedures, it serves a distinct and complementary purpose. Rather than functioning solely as a reactive protocol, it operates as a competency-based process that deepens learners' knowledge, skills, attitudes, and values, cultivating a lasting culture of resilience that extends well beyond emergency response. While emergency and contingency planning are important for institutional readiness, on their own they do not ensure that learners develop competencies needed to enhance resilience. This is reflected in the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES) Comprehensive School Safety Framework (2022-2030)⁸, specifically Pillar 3: Risk Reduction and Resilience Education. Recognising preparedness education as both institutional responsibility and learning objectives enables education systems to move beyond compliance towards long term resilience.

The EU has developed a suite of competency frameworks to guide education systems toward more holistic, future-oriented outcomes. The GreenComp⁹ establishes competences for sustainability thinking and action; LifeComp¹⁰ provides a framework for personal, social, and learning competences; and DigComp¹¹ defines the digital competences needed for active citizenship in a technology-driven world. Together, these frameworks reflect a systemic understanding of education - one that moves beyond knowledge transmission toward the cultivation of adaptable, responsible, and resilient learners.

Preparedness education is fully aligned with this systemic vision. Like these frameworks, it does not treat education as a linear pathway with predetermined destinations, but rather as a dynamic process in which learners develop

⁸ GADRRRES (Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector). *Comprehensive School Safety Framework 2022-2030: For Child Rights and Resilience in the Education Sector*. 2022. https://gadrrres.net/wp-content/uploads/2023/01/CSSF_2022-2030_EN.pdf.

⁹ GreenComp is the European sustainability competence framework. https://joint-research-centre.ec.europa.eu/greencomp-european-sustainability-competence-framework_en

¹⁰ LifeComp is the European framework for personal, social and learning to learn key competence. https://joint-research-centre.ec.europa.eu/lifecomp_en

¹¹ DigComp is the European Digital Competence Framework. https://joint-research-centre.ec.europa.eu/projects-and-activities/education-and-training/digital-transformation-education/digital-competence-framework-digcomp_en

the agency to navigate uncertainty, complexity, and risk. This orientation is well captured by the compass metaphor embedded in the EU's education architecture: rather than prescribing a fixed route, the compass empowers learners to find their own direction in meaningful and responsible ways. The ultimate destination is individual and collective well-being - reached through ongoing engagement with peers, teachers, families, communities, and the broader ecosystem, and through the capacity to reflect, anticipate, and act.

The majority of GreenComp's competences are either directly transferable or readily adaptable to a resilience context. If the GreenComp were to be adapted toward a resilience-oriented competency framework, such an adaptation would also create powerful synergies between resilience and sustainability agendas - two areas increasingly recognised as interdependent in both policy and practice. Table 1. identifies a set of key competences for a preparedness education curriculum, drawn from an initial mapping and extraction of relevant competences across the EU's GreenComp, LifeComp, and DigComp frameworks.



Table 1. Competences for Preparedness Education

PREPAREDNESS COMPETENCIES FOR ECE AND PRIMARY EDUCATION	WHO I AM Develops the learner (adapted from LifeComp)	Personal	Self-regulation Flexibility Wellbeing	RESILIENCE FRAMEWORK Prevention (Risk Identification, Risk Reduction, Financial Protection) Response (Adaptive Response) Recovery (Resilient Recovery)
		Social	Empathy Communication Collaboration	
	WHY AND FOR WHAT PURPOSE Develops the resilience-oriented citizen (adapted from GreenComp)	Envisioning Resilient Futures	Futures literacy Adaptability Exploratory thinking	
		Embracing Complexity in Resilience	Systems thinking Critical thinking Problem framing	
		Acting for Resilience	Political agency Collective action Individual initiative	
		Embodying Resilience Values	Valuing resilience Supporting fairness	
	HOW I OPERATE Develops the resilient digital actor (adapted from DigComp)	Digital Communication and Collaboration	Engaging in Citizenship Digital behaviour Digital identity	
		Digital Safety, Wellbeing, and Responsible Use	Devices Personal data and privacy Wellbeing Environment	

Aligned with the EU's frameworks and OECD Learning Compass 2030¹², preparedness education offers an opportunity to strengthen pedagogical models by equipping learners with transferable cognitive competence, behavioural capability, and socio-emotional resilience for sustainable futures. Traditional approaches to school safety often position children as passive recipients of adult protection. Drills remain essential, but they are insufficient when treated solely as routines rather than structured learning experiences. Pedagogically, it misses the opportunity to build transferable life skills. This compliance-based model is particularly insufficient for navigating genuine crises, where conditions rarely match practiced scenarios, and to build a culture of prevention. Practically, it leaves children vulnerable when adult guidance is unavailable. Developmentally, it overlooks children's capacity with age-appropriate pedagogy to develop situational awareness, help-seeking behaviours, and adaptive decision making. As recent research on educational innovation under uncertainty highlights, 'true agency is not about following instructions perfectly, but about developing the capacity to make sound judgments when instructions are incomplete or contexts change.'¹³ This approach does not shift responsibility away from adults; rather, it complements adult protection by strengthening children's capacity to act safely in emergency situations. True educational preparedness integrates three interconnected dimensions aligned with the Learning Compass framework:

-  **Cognitive competence:** age-appropriate understanding of hazards, risks, and protective actions,
-  **Behavioural capability:** practiced skills that can be deployed under stress,
-  **Socio-emotional resilience:** the capacity to regulate emotions, support peers, and advocate for collective safety. This socio-emotional dimension is critical because emergencies are relational as well as technical challenges. This approach recognises children as active constructors of knowledge and legitimate participants in their own protection.

Preparedness competencies evolve across early childhood and primary education. Rather than a linear skills acquisition model, this represents a spiral curriculum where foundational concepts are revisited with increasing sophistication. The OECD Learning Compass 2030 identifies three transformative competencies particularly relevant to disaster contexts: (i) creating new value (innovating solutions when standard procedures fail); (ii) reconciling tensions and dilemmas (balancing competing priorities such as individual safety versus collec-

¹² Organisation for Economic Co-operation and Development. OECD Learning Compass 2030: A Conceptual Framework for Future Education. Paris, 2020. <https://www.oecd.org/education/2030-project/teaching-and-learning/learning/learning-compass-2030/>.

¹³ Lasse Leponiemi, Sean Slade, and M. Mariah Voutilainen, *Leading Through Uncertainty: Education Innovation in Times of Global Funding Volatility*. HundrED, 2025.

tive responsibility); and (iii) taking responsibility (understanding the consequences of actions and contributing to community well-being). Progression in these competencies may be evidenced across the following dimensions.

- 🍌 **From concrete to abstract:** Early learners engage through sensory and physical experience; older students develop conceptual models and analytical frameworks.
- 🍌 **From individual to collective:** Young children focus on personal safety; upper primary students understand their role in community resilience.
- 🍌 **From compliance to critical thinking:** The goal is not rote memorisation of rules but the development of adaptive problem-solving capacity.

Table 2 outlines a developmental progression of preparedness competencies for learners from early childhood through upper primary (ISCED 0–1). It organises eight core areas based on the EU’s competencies frameworks, showing how knowledge, skills, and attitudes evolve with age.

Table 2. –Competency Areas Across ISCED Levels (Ages 3–12)

Area of competency	ISCED 0: Early Childhood (Ages 3–5)	ISCED 1: Early Primary (Ages 6–8)	ISCED 1: Upper Primary (Ages 9–12)
Personal (Self-regulation, flexibility, and wellbeing) adapted from LifeComp	Prevention: Learn that practising safety routines regularly helps reduce fear and builds confidence for when emergencies happen. Response: Recognise and express emotions related to fear or uncertainty; learn simple self-calming techniques such as deep breathing. Recovery: Re-engage with familiar routines and trusted adults to restore a sense of safety and normalcy.	Prevention: Practise coping strategies such as deep breathing and peer check-ins before an emergency so they are accessible under stress. Response: Recognise signs of fear in themselves and others; employ practised coping strategies; understand when and how to seek help. Recovery: Understand that it is normal to feel upset after an emergency and that support is available; re-establish personal routines with adult support.	Prevention: Develop healthy coping strategies for disaster-related stress through preparedness practice and peer discussion. Response: Regulate emotions under stress; demonstrate flexibility when standard procedures require adaptation. Recovery: Support peers through post-emergency adjustment; notice when a peer seems upset and know to involve a trusted adult.
Social (Empathy, relationships, and care for others) adapted from LifeComp	Prevention: Identify trusted adults in the school and community; understand that keeping each other safe is a shared responsibility. Response: Show care for peers during an emergency; check that classmates are accounted for and stay together as a group.	Prevention: Recognise that preparedness protects not only oneself but also vulnerable peers and community members. Response: Support classmates, including peers with different needs, during drills and emergency procedures; show empathy toward those who are frightened.	Prevention: Understand the human dimensions of disaster risk, who is most vulnerable and why; connect preparedness to values of inclusion and collective responsibility. Response: Exhibit leadership by assisting younger children and accommodating peers with disabilities in evacuation planning.

Area of competency	ISCED 0: Early Childhood (Ages 3–5)	ISCED 1: Early Primary (Ages 6–8)	ISCED 1: Upper Primary (Ages 9–12)
Social (Empathy, relationships, and care for others) adapted from LifeComp	Recovery: Re-engage with the school community; understand that supporting one another helps everyone feel safe again.	Recovery: Understand that collective effort is more effective than individual action in recovery; actively support peers in returning to normal routines.	Recovery: Contribute to community recovery efforts; understand the importance of equity in ensuring all community members are supported in the aftermath of an emergency.
Envisioning Resilient Futures (Futures literacy and adaptability) adapted from GreenComp	Prevention: Understand that situations can change and that dangerous things can be made safer with the help of adults and good preparation. Response: Trust that following practised plans will lead to safety; understand that adults have prepared for emergencies in advance. Recovery: Understand that after an emergency, things can return to normal and that the community works together to make this happen.	Prevention: Begin to imagine what a safer school or home would look like; understand that preparedness actions taken today reduce harm in the future. Response: Take ownership of age-appropriate tasks during an emergency; follow multi-step plans with growing independence and confidence. Recovery: Understand that communities recover after emergencies; begin to think about what could be done differently to be better prepared next time.	Prevention: Connect scientific understanding of local hazards to broader patterns of environmental change and future risk; explore how individual and community actions today reduce long-term vulnerability. Response: Apply knowledge across domains; demonstrate adaptive decision-making when primary protocols prove inadequate. Recovery: Reflect critically on what worked well and what could be improved in the emergency response; contribute actively to planning for future resilience.
Embracing Complexity in Resilience (Systems thinking and managing uncertainty) adapted from GreenComp	Prevention: Identify simple hazards in the immediate environment; understand basic weather patterns that signal danger. Response: Recognise signals that indicate danger, such as a loud alarm, shaking ground, or an adult's warning, and respond by moving to a safe space. Recovery: Understand that after a hazard, trusted adults will help things return to normal.	Prevention: Name and describe characteristics of local hazards (storms, earthquakes, floods, fires); understand that multiple hazards can occur at the same time or in sequence. Response: Identify the type of hazard occurring and recall the corresponding protective procedure Recovery: Understand that recovery involves helping others and returning to familiar routines, and that communities have systems in place to support this.	Prevention: Explain causes and effects of local hazards using scientific terminology; systematically analyse the environment, identifying multiple hazards and evaluating relative risks. Response: Assess whether conditions require adaptation of standard procedures in real time; make reasoned decisions under uncertainty. Recovery: Understand how interconnected systems like schools, emergency services, families, community networks, contribute to recovery, and reflect on how to strengthen them.

Area of competency	ISCED 0: Early Childhood (Ages 3–5)	ISCED 1: Early Primary (Ages 6–8)	ISCED 1: Upper Primary (Ages 9–12)
Acting for Resilience (Practical preparedness actions and procedures) adapted from GreenComp	Prevention: Find safe spaces in familiar settings; understand meeting points and the importance of staying with trusted adults. Response: Practise protective postures through play; participate in evacuation procedures as games. Recovery: Return calmly to familiar routines following an exercise or event, supported by trusted adults.	Prevention: Take ownership of age-appropriate preparedness tasks like assembling emergency kits, practising family meeting points, knowing evacuation routes. Response: Accurately participate in school drills; remember and execute multi-step procedures; adapt when minor variations occur; monitor whether classmates are accounted for. Recovery: Actively support the restoration of classroom routines following a drill or emergency event; help account for peers.	Prevention: Assess school and home environments for hazard risks; contribute meaningfully to school and household preparedness planning through concrete actions. Response: Demonstrate critical thinking during drills; make reasoned decisions about staying with injured persons versus seeking help; adapt procedures when conditions require it. Recovery: Assist in the orderly return to normal procedures; take initiative in supporting peers and restoring shared routines after a disaster.
Embodying Resilience Values (Attitudes, beliefs, and commitment to sustainability and equity) adapted from GreenComp	Prevention: Begin to understand that taking care of the environment and looking after one another helps keep communities safe. Response: Follow procedures that protect the whole group, not only oneself; understand that rules exist for everyone's benefit. Recovery: Understand that working together as a community is what makes recovery possible.	Prevention: Recognise that being prepared is an expression of care for others, including those who may need more support. Response: Understand that safety procedures apply equally to everyone and that inclusion matters in an emergency. Recovery: Understand that fairness and collective effort are at the heart of recovery; recognise the role of shared values in building resilient communities.	Prevention: Connect preparedness to broader values of environmental stewardship, social justice, and community responsibility; understand how human activity shapes disaster risk. Response: Act on values of inclusion and equity during an emergency, ensuring that vulnerable peers are not left behind. Recovery: Reflect on how equity and shared values shape the quality of community recovery; advocate for inclusive preparedness practices in school and community settings.
Communication and Collaboration (Accessing, evaluating, and sharing information) adapted from DigComp	Prevention: Know their full name and home address; understand where to find information about staying safe (trusted adults, school notices, safety signs). Response: Use practised verbal signals or gestures to call for help; follow verbal instructions from trusted adults during an emergency.	Prevention: Understand how public information about hazards is communicated through sirens, broadcasts, school notices Response: Know when and how to access help; communicate clearly and calmly with emergency responders during an event.	Prevention: Access and critically evaluate reliable sources of hazard information and early warning systems; understand how misinformation spreads during emergencies and how to identify credible sources. Response: Communicate calmly and accurately with peers and adults during an emergency; use available information to make adaptive decisions.

Area of competency	ISCED 0: Early Childhood (Ages 3–5)	ISCED 1: Early Primary (Ages 6–8)	ISCED 1: Upper Primary (Ages 9–12)
Communication and Collaboration (Accessing, evaluating, and sharing information) adapted from DigComp	Recovery: Ask questions to understand what happened; listen to trusted adults explaining next steps.	Recovery: Share information with family members about what happened; ask questions to make sense of official guidance and next steps.	Recovery: Relay accurate information to family and community members; contribute constructively to post-emergency communication.
Safety, Wellbeing and Responsible Use (Digital safety, physical wellbeing, and responsible behaviour) adapted from DigComp	Prevention: Learn basic physical safety rules for school and home environments; understand that certain actions protect health and safety. Response: Follow safety procedures calmly; avoid actions that could put oneself or others at risk during an emergency. Recovery: Re-engage with familiar, safe routines under adult supervision following an emergency.	Prevention: Understand personal and collective responsibility for safety in school environments; recognise how individual behaviour affects group safety. Response: Execute safety procedures responsibly; support peers in following correct procedures during an emergency. Recovery: Understand that responsible behaviour supports faster and safer recovery for the whole community.	Prevention: Critically evaluate digital information about hazards and emergencies; understand responsible use of social media and communication tools in crisis contexts. Response: Use digital tools responsibly during an emergency to access early warning information rather than spreading unverified content. Recovery: Contribute positively to the information environment during recovery; support peers' wellbeing through responsible communication.

The competency framework presented in Table 1 focuses on knowledge, skills, and behaviours relevant to natural hazard contexts in school and community settings. As noted in Section 2.1, preparedness education spans the full crisis cycle, from prevention and risk reduction through to response and recovery. While this framework addresses key competencies across that cycle, two dimensions fall outside the scope of the present study and should be developed with specialist input:

-  Practical survival skills, such as shelter, water access, food rationing, and fire suppression, represent an important dimension of preparedness education. Their specific content should be defined in consultation with national civil protection authorities and relevant specialist frameworks, as this falls outside the scope of the present study.
-  Recovery from emergencies also has an important psychosocial dimension. Supporting children's emotional wellbeing after a crisis includes recognising signs of distress, maintaining routines, and fostering peer support. These elements are critical components of recovery. Member States are encouraged to draw on the IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings (Action Sheet 7.1 on education and Action Sheet 5.4 on young children), which provide concrete, school-relevant guidance. However, the specific design of psychosocial support programmes falls outside the scope of the present study, and should be developed in consultation with qualified mental health and psychosocial support professionals.

EU Framework for Preparedness Education

Preparedness education is a strategic priority within the EU's resilience agenda. The European Disaster Resilience Goals (2023) identifies population preparedness as one of five priority areas for investment. This effort is anchored in the Preparedness Union Strategy 2025¹⁴ and aligned with broader objectives under the European Education Area (EEA)¹⁵, climate adaptation, and social inclusion. The Preparedness Union Strategy emphasises prevention, preparedness, and resilience-building across society, positioning education as a key lever for achieving these goals (Figure 4). The strategy adopts a multi-hazard, whole-of-government and whole-of-society approach and is structured around seven thematic areas (foresight and anticipation, resilience of vital societal functions, population preparedness, public-private cooperation, civil-military cooperation, crisis response, and resilience through external partnerships). Population preparedness is addressed as a distinct policy pillar, with flagship actions led by the Directorate-General for European Civil Protection and Humanitarian Aid (DG ECHO), in cooperation with other Directorates-General, particularly the Directorate-General for Education, Youth, Sport, and Culture (DG EAC), underscoring its cross-sectoral nature.

The EU plays an enabling role in disaster preparedness through coordination, knowledge sharing, and capacity-building. The legal foundation for EU-level preparedness is provided by the Union Civil Protection Mechanism (UCPM, Decision No 1313/2013/EU). UCPM establishes the mandate for EU-level coordination, cooperation and support in disaster prevention and preparedness, while respecting Member State competences in civil protection and education. Within this framework, the EU's role is primarily enabling, supporting knowledge exchange, comparability, and capacity-building, rather than harmonising national systems.

Over the past five years, compounding shocks have accelerated policy attention to preparedness. The COVID-19 pandemic and the increasing frequency and severity of climate-related hazards, including wildfires, floods, and heatwaves, have exposed systemic vulnerabilities and highlighted the limitations of reactive approaches.

Recent public perception data reinforces this urgency. The 2024 Eurobarometer survey on preparedness reveals significant gaps (Figure 5.): 65% of Europeans report needing more information to prepare for disasters; nearly half do not feel well informed about risks; around two-thirds do not feel prepared; and almost half do not know how to respond in an emergency. These findings highlight the scale of the challenge and strengthen the case for embedding age-appropriate preparedness education as a cornerstone of population resilience. By addressing

¹⁴ European Commission (2025). *EU preparedness union strategy*. [Link](#).

¹⁵ European Commission - European Education Area. [Link](#).

these knowledge and confidence gaps early, through trusted school routines and practical learning, education systems can play a decisive role in building a culture of preparedness across generations.

Figure 4. The EU Preparedness Union Strategy

Source: European Commission.



Figure 5. Eurobarometer 547: Personal disaster preparedness

By preparing for a disaster or emergencies, you will be able to better cope with the situation



You need more information to be able to prepare for disasters or emergencies



You know how emergency services will alert you in the event of a disaster



It is easy to find information on how to prepare for disasters or emergencies from public authorities and emergency services in (OUR COUNTRY)



You know what to do in the event of a disaster



You do not have time or financial resources to prepare for disasters or emergencies



You feel you are well prepared for disasters or emergencies that may happen in the area where you live



Emergency services or authorities (e.g. police, firefighters, civil protection, local and national authorities) encourage you to take training or prepare for disasters or emergencies



Your employer or school encourages you to take training or prepare for disasters or emergencies



● Totally agree ● Tend to agree ● Tend to disagree ● Totally disagree ● It depends on the type of disaster (SPONTANEOUS) ● Don't know

Source: Eurobarometer.

ACTION 29: EDUCATION AS AN OPERATIONAL ENTRY POINT

Action 29 of the EU Preparedness Union Strategy on including preparedness in school education curricula and training of educational staff is framed as a strategic pillar for population preparedness, specifically targeting the education sector to build long-term societal resilience. Led by DG ECHO in close partnership with DG EAC, Action 29 seeks to support the integration of preparedness into education, while fully respecting Member State prerogatives over curricula and education systems. The Action focuses on (i) development of EU-level guidance for preparedness education; (ii) production of practical resources for educators, drawing on best practices from across the EU and comparable international contexts; and (iii) use of evidence from EU-wide data collection and comparative analysis conducted by the World Bank and GFDRR under TAFF.

At its core, EU Action 29 is an integrated all-hazards approach that expands the traditional focus on natural hazards (earthquakes, floods, fires) to include human-induced and hybrid threats, or hazards arising from human intent, negligence, or technological failure. This policy shift recognises that in a highly interconnected Europe, preparedness cannot be siloed into ‘earthquake drills’ or ‘fire safety’. Instead, Action 29 focuses on ‘preparedness by design’, ensuring that risk awareness is a horizontal competency across European learning environments.¹⁶

The Commission and Member States will integrate preparedness lessons into school curricula and introduce an EU Preparedness Day to foster a culture of resilience... adopting an integrated all-hazards approach which covers the full spectrum of natural and human-induced risks and threats.^{17, 18}

DG EAC plays a key role in supporting preparedness education through policy experience and implementation-focused capacity-building initiatives. These areas offer pedagogical approaches and implementation insights directly relevant to preparedness education, including learning for sustainability and climate education, citizenship education and digital literacy, refugee inclusion, and continuity of education in crisis contexts. In addition, DG EAC is mobilising existing platforms, notably the European School Education Platform¹⁹, which is being used to curate and disseminate preparedness-related resources and support professional development. From 2025 onwards, and intensifying through 2026, a structured program of webinars, online courses, and self-paced learning modules on preparedness education is planned, complemented by analytical work such as curriculum mapping and guidance on effective school leadership in times of crisis.

Operationally, the evolving policy framework is being translated into complementary initiatives. Preparedness education advances the six education resilience principles of the EDURES platform²⁰, contributing to strengthening governance, ensuring continuity, expanding the role of education, increasing accessibility, fostering cooperation, and increasing efficiency (Figure 6). Other initiatives include (i) PreparEU risk communication training, with pilot phases completed and EU-level guidance expected in 2026; (ii) mainstreaming preparedness within EU youth programs, such as the European Solidarity Corps; (iii) development of inclusive preparedness guidance addressing the needs of persons with disabili-

¹⁶ European Commission. *Preparedness Union Strategy - Action Plans*. https://commission.europa.eu/topics/preparedness_en

¹⁷ European Commission. *Joint Communication: EU Preparedness Union Strategy*. JOIN(2025) 130. 2025. https://commission.europa.eu/document/download/526806b6-c4e1-43d1-81b7-947308efbab1_en?filename=Joint%20Communication.pdf

¹⁸ European Parliament. *EU preparedness: From concept to strategy?* EPRS Briefing. 2025. [https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/772898/EPRS_BRI\(2025\)772898_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/772898/EPRS_BRI(2025)772898_EN.pdf)

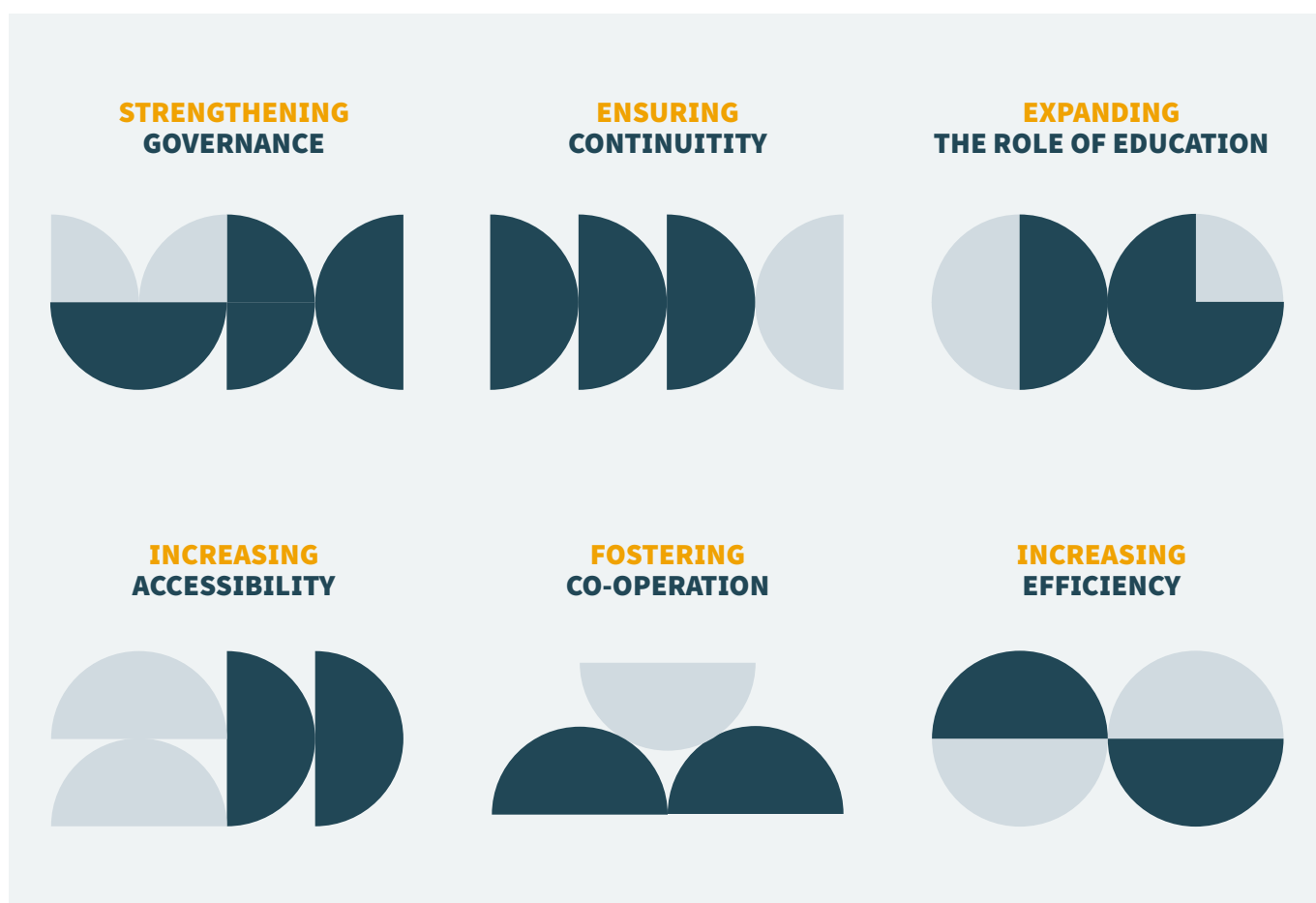
¹⁹ The European School Education Platform is the meeting point for the school education community working in early childhood, primary, secondary and initial vocational education. The platform is also home to eTwinning, the online community for schools in Europe.

²⁰ Council of Europe - EDURES Platform. [Link](#).

ties and other population groups; and (iv) citizen-facing guidance for the first 72 hours of emergencies, aimed at strengthening population self-sufficiency. Together, these actions indicate a shift toward practical tools and guidance that support Member States while allowing for national and local adaptation.

Taken together, these EU policies and initiatives position preparedness education as a strategic driver of Europe’s resilience and broader goals on education, climate, social inclusion, and sustainability. Through the enabling framework of the UCPM, the strategic direction of the Preparedness Union Strategy, particularly Action 29, and related initiatives, the EU is strengthening support to Member States to embed preparedness within education systems. In doing so, preparedness education contributes not only to disaster risk management objectives but also to wider EU goals under education, climate adaptation, sustainability, and social inclusion, reinforcing its relevance as a medium- to long-term investment in Europe’s future.

Figure 6. The 6 Education Resilience Principles of the EDURES Platform



Source: Based on <https://eduresplatform.org>

Box 1. The PreparEU Pilot Project

The PreparEU Pilot Project strongly advocates for the systematic integration of risk awareness and self-preparedness into school education as a cornerstone for fostering a long-term culture of preparedness across the European Union. The proposed "Learning Programme for Schools", which garnered the highest support among surveyed Member and Participating States, aims to equip students with practical knowledge about risks, emergency response, and self-preparedness through age-appropriate lessons and activities.

This approach leverages schools as pivotal platforms for embedding preparedness into daily life, enabling students to act as catalysts for resilience within their families and communities. However, the project identifies significant barriers to implementation, chiefly the challenge of incorporating new content into already crowded curricula and the need for complex coordination between civil protection authorities, education ministries, and curriculum developers.

To address these obstacles, the project recommends a flexible, modular strategy that combines formal curriculum integration with informal extracurricular activities, such as scenario-based exercises and preparedness-themed events. At the EU level, non-binding guidance, knowledge exchange through platforms like the Union Civil Protection Knowledge Network, and support for co-creation of adaptable educational materials are proposed to facilitate uptake. Member States are encouraged to tailor these resources to local risks and school systems, promote recurring preparedness activities, and foster collaboration between education and civil protection sectors.

The report emphasizes that successful implementation depends on sustained political commitment, adequate funding, and active stakeholder engagement, positioning preparedness education as a medium-term objective aligned with the EU's broader Preparedness Union agenda and requiring careful planning and ongoing evaluation.

A Systemic All-Hazards, Whole-of-Society, Whole-of-Government Approach to Preparedness Education

EU's all-hazards, whole-of-society, and whole-of-government approach to preparedness education aligns closely with OECD Learning Compass 2030 (Figure 6) and global disaster risk management frameworks. Together, they embed preparedness within an interconnected system to strengthen collective resilience and broader development goals. The Learning Compass emphasises developing knowledge, skills, attitudes, and values that enable learners to navigate complexity, uncertainty, and interdependence—core features of shocks and crises. Similarly, an all-hazards framework integrates preparedness for natural, technological and biological threats, geopolitical threats and hybrid crises within a single, coherent system, while whole-of-society and whole-of-government approaches recognise that resilience depends on coordinated action across institutions, sectors, and communities. Together, these perspectives reflect a systemic approach: rather than treating preparedness as a standalone goal, they position it within an interconnected educational, policy, and societal ecosystem, addressing risk from a holistic system-level perspective that strengthens collective adaptive capacity.

While knowledge and skills are foundational, values such as ethics, accountability, and institutional trust are a critical and often overlooked dimension of preparedness education. Existing European competence frameworks such as GreenComp, LifeComp, and DigComp define competence as a combination of knowledge, skills, and attitudes. The OECD Learning Compass 2030 extends this understanding by explicitly incorporating values. Preparedness education can engage with questions of ethics, accountability, power, governance, social responsibility, and institutional trust. Addressing these dimensions effectively requires learners not only to acquire knowledge and skills, but also to reflect on values that shape decision-making and collective action.

Figure 6. OECD Learning Compass 2030 diagram



Source: OECD

EXPANSION TO HUMAN-INDUCED RISKS

The transition to an ‘all-hazards’ framework is driven by the realisation that modern crises are increasingly ‘human-induced’ or hybrid in nature. Human-induced risks are defined as hazards originating from human intent, negligence, or technological failure, rather than natural processes.²¹ The reasoning for including these specific threats in ECE/primary education is rooted in the ‘72-hour self-sufficiency’ goal, the idea that the population must be able to function during the initial window of a major disruption. Human-induced hazard include:

- 🍌 **Terrorism & Hybrid Threats:** Schools are designated as ‘soft targets.’ Preparedness education focuses on situational awareness and ‘Run-Hide-Tell’ protocols, adapted for children to reduce trauma while maximising safety.
- 🍌 **Cyber Hazards (AI, Deepfakes, Misinformation, Disinformation and Malinformation):** Digital literacy is now classified as a security imperative. Primary students are being taught to identify ‘information manipulation’ (FIMI) as a form of self-defence against attempts to destabilise social cohesion.²²
- 🍌 **Nuclear and Radiological Accidents:** While the probability is low, the potential impact is transboundary. EU guidance emphasises ‘spiral curricula’ where children learn about radiation through everyday phenomena (e.g., UV rays/X-rays) before progressing to emergency protocols like ‘Go In, Stay In, Tune In.’²³

EU-LEVEL FRAMEWORKS SHAPING SCHOOL PRACTICE

The following frameworks provide policy and pedagogical architecture for implementing a whole-hazards approach.

- 🍌 **EU AI Act:** Directly affects primary education by categorising AI used in educational settings as ‘high-risk’. It prohibits manipulative AI (e.g., emotion recognition in classrooms) to protect the psychological development of children.²⁴
- 🍌 **NIS2 Directive:** While focused on critical infrastructure, its ‘whole-of-society’ mandate requires educational authorities to implement robust cybersecurity risk-management and reporting, trickling down into school ICT policies.²⁵

²¹ UCP Knowledge Network. *Human-Induced Risks: Definition and Scope*. <https://civil-protection-knowledge-network.europa.eu/eu-overview-risks/human-induced-risks>

²² ENISA. *Cybersecurity Education in Member States: Mapping Primary and Secondary Education*. 2023. <https://www.google.com/search?q=https://www.enisa.europa.eu/publications/cybersecurity-education-in-europe>

²³ European Commission. *Radiation Course for Primary and Secondary Schools (Technical Supplement)*. 2021. <https://preparecenter.org/wp-content/uploads/2021/03/Radition-Course-for-primary-and-secondary-school.pdf>

²⁴ European Parliament. *Artificial Intelligence Act (Regulation (EU) 2024/1689)*. 2024. <https://eur-lex.europa.eu/eli/reg/2024/1689/oj>

²⁵ European Union. *NIS2 Directive (Directive (EU) 2022/2555)*. 2022. <https://eur-lex.europa.eu/eli/dir/2022/2555/oj>

 **Digital Education Action Plan (2021–2027):** This is the main vehicle for Action 7, which provides guidelines for teachers on tackling disinformation. It moves primary education toward ‘competency-based’ digital safety.²⁶

Several European nations have already begun the ‘all-hazards’ transition in their primary and ECE sectors, moving beyond the 20-country study baseline to set regional standards (Table 3).

Table 3. Examples of European Country Actions on Human-Induced hazards

Digital & Cyber Preparedness	Estonia	Under the Education Estonia framework, cyber hygiene is taught from age 5. Kindergarteners learn about ‘Digital footprints’ and basic algorithmic logic, which serves as a foundation for understanding AI and misinformation later in primary school. ²⁷
	Ireland	The Webwise Primary Programme (Safer Internet Centre) has launched specific modules for 7–11-year-olds on ‘AI and Deepfakes,’ focusing on how digital content can be manipulated to create false narratives. ²⁸
	Poland	The OSE (Nationwide Education Network) manages secure internet for all schools and provides over 200 e-learning courses for primary students, focusing on “Digital Mentorship” and defence against cyber-attacks. ²⁹
Physical & Radiological Preparedness	Finland	The New Literacies program integrates media literacy into multiliteracy and transversal competences, which in turn contribute to resilience in the face of challenges such as misinformation and health or security crises (e.g., pandemics or hybrid threats). ³⁰
	Belgium & Spain	These countries utilise ‘spiral curriculum’ materials developed in coordination with nuclear safety agencies (e.g., ONDRAF/NIRAS) to teach radiation safety through gamified apps and interactive books for children as young as 6. ³¹
	Sweden	Since 2018, digital skills and ‘security when using technology’ have been mandatory in the national curriculum, ensuring primary students understand data protection as a core safety skill. ³²

Source: World Bank.

²⁶ European Commission. *Guidelines for teachers on tackling disinformation*. 2022. <https://education.ec.europa.eu/focus-topics/digital-education/action-plan/action-7>

²⁷ Education Estonia. Cybersecurity and ProgeTiger in ECE. <https://www.educationestonia.org/>

²⁸ Webwise Ireland. Primary School Resources: Deepfakes and AI. <https://www.google.com/search?q=https://www.webwise.ie/teachers/primary/>

²⁹ NASK (Poland). Nationwide Education Network (OSE) e-learning platform. <https://ose.gov.pl/>

³⁰ Finnish National Agency for Education (EDUFI). New Literacies Development. <https://www.google.com/search?q=https://www.opf.fi/en/development/new-literacies>

³¹ Uatom.org. Communicating with Children on Nuclear and Radiation Safety. 2025. <https://uatom.org/en/2025/06/19/round-the-world-how-to-communicate-with-children-and-youth-on-nuclear-and-radiation-safety.html>

³² Swedish National Agency for Education. Digital Competence in the National Curriculum. <https://www.google.com/search?q=https://www.skolverket.se/om-oss/var-verksamhet/skolverkets-prioriterade-omraden/digitalisering>

GLOBAL COOPERATION ON PREPAREDNESS EDUCATION

Several international alliances and frameworks provide complementary support for preparedness education and safer, more resilient learning environments.

UNESCO and the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES) set global policy through the Comprehensive School Safety Framework (CSSF 2022–2030), which promotes an all-hazards, all-risks approach across three pillars—safer learning facilities; school safety and educational continuity management; and risk reduction and resilience education—ensuring equitable, continuous access to quality education during crises. UNICEF operationalises preparedness and continuity of learning at school and system levels by helping countries integrate into curricula, drills, and child protection. Its risk-informed programming supports multi-risk assessment, gender-differentiated analysis, and school emergency planning, building capacities for help-seeking, socio-emotional support, and procedural skills that protect children and sustain learning through disruptions.

The World Bank Group brings financing, analytics, and multi-sector expertise to translate global standards into country operations. Through the Education Global Practice and Disaster Risk Management teams—including the Global Facility for Disaster Reduction and Recovery (GFDRR)—the World Bank helps governments embed risk analytics, regulatory strengthening, and resilient school infrastructure in policy and investments. GFDRR’s Safer School Thematic Area provides the technical backbone for safer school infrastructure at scale. Its Roadmap for Safer and Resilient Schools guides diagnostics, risk analysis, investment prioritization, and policy reform, informing substantial investments for millions of students. Complementing this, the World Bank’s RIGHT+ Framework for Physical Learning Environments offers criteria to ensure planning, construction, rehabilitation, and operations are resilient, inclusive, green, healthy, and conducive to learning. Used alongside GFDRR’s Safer School Thematic Area Roadmap and aligned with the CSSF, RIGHT+ helps embed pedagogical quality and sustainability in infrastructure programs, linking global policy and advocacy, financing, and implementation so governments can deliver system wide preparedness education and safer schools.

Box 2. GFDRR's Safer Schools Thematic Area

The World Bank's Safer Schools Thematic Area

The World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) launched the Safer Schools Thematic Area in 2014 to improve the safety and resilience of school infrastructure, especially in low- and middle-income countries. Its work helps governments assess hazard exposure, diagnose vulnerabilities, and implement risk-reduction measures through capacity building, risk assessments, and advisory services, with a strong focus on maintaining learning continuity in hazard-prone and crisis-affected contexts.

Over the past decade, these engagements have reached over 115 million students and informed US\$4.4 billion in World Bank investments across 40 countries. Despite progress, global risk remains high: around 3,200 schools are damaged or destroyed annually, causing US\$7 billion in economic losses and disrupting education for 175 million children, disproportionately affecting marginalized communities.

GFDRR's approach is built on three pillars:

- 🍌 Risk-informed planning for education infrastructure.
- 🍌 Policy and regulatory strengthening to ensure safer construction and maintenance.
- 🍌 Community engagement to build ownership and improve implementation.

The thematic area also invests in global tools such as the Roadmap for Safer and Resilient Schools (RSRS) and the Global Library of School Infrastructure (GLOSI) to support scalable strategies and investment plans. Recent work, including the RIGHT+ approach, promotes a holistic view of school infrastructure that integrates safety with inclusivity, sustainability, health, and learning outcomes. Delivery is supported through partnerships with governments, academia, UN agencies, and development partners, aligning with the Sendai Framework and contributing to GADRRRES.





CURRENT LANDSCAPE OF EU PREPAREDNESS EDUCATION

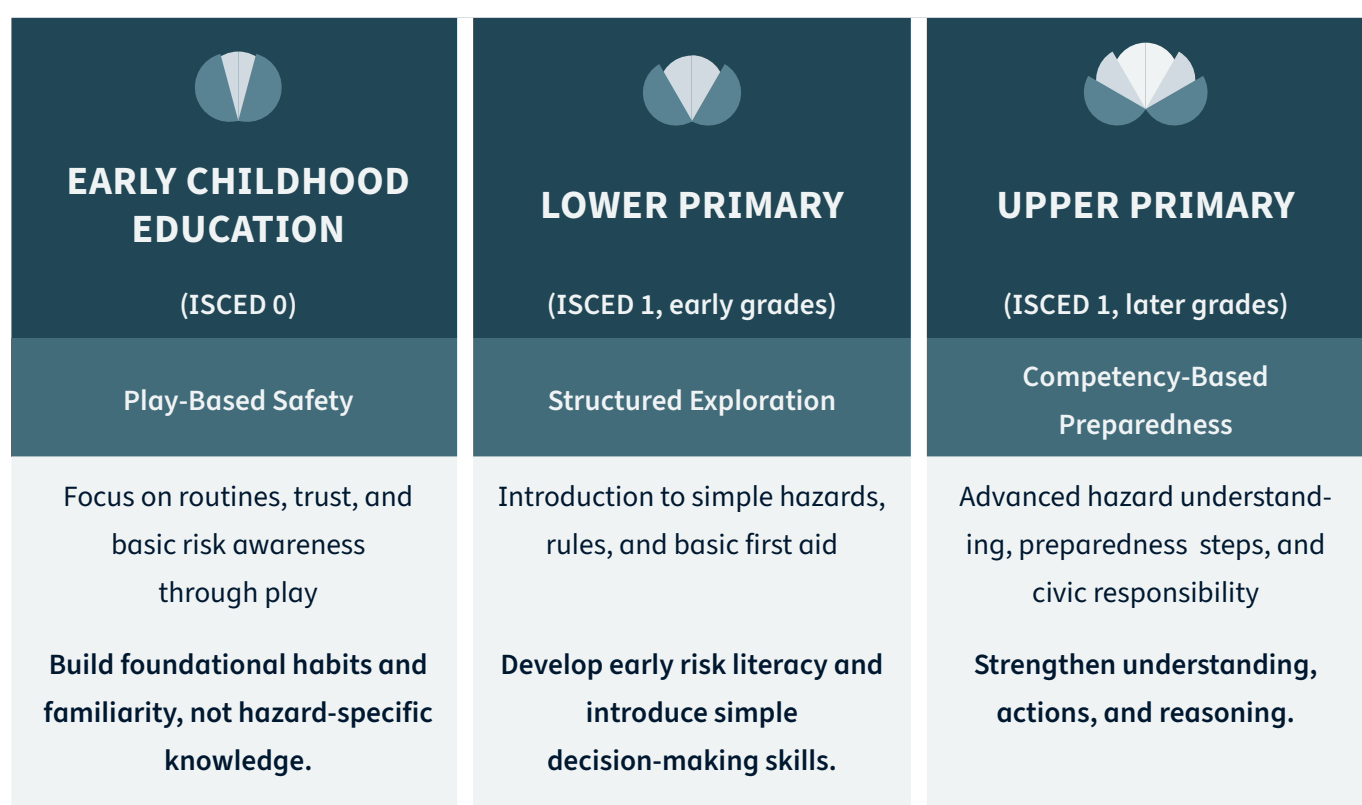


This chapter maps how disaster preparedness is currently reflected in early childhood and primary education systems and identifies the main system-level gaps affecting effective implementation. It introduces the analytical framework and six pillars used to structure country evidence, summarises baseline findings from EU-wide instruments (Eurydice and the teacher survey), and then applies the framework across EU Member States, UCPM Participating States, and global comparator systems.

The analysis assesses where and how preparedness is embedded in curricula, the availability and usability of teaching tools and teacher support, and the functioning of quality assurance and monitoring arrangements across different education system contexts.

This chapter treats early childhood and primary education as distinct pedagogical spaces, not simply sequential age groups. In early childhood education, preparedness typically appears as play-based learning, adult-guided routines, and socio-emotional development, while in primary education it more often emerges through structured instruction, cross-curricular competencies, and procedural learning activities. The chapter concludes with cross-cutting findings and implications for strengthening preparedness education in ways that are feasible, scalable, and aligned with wider EU policy objectives.

Figure 7. Learning Progression for Preparedness Education
(ECE → Primary)



Methodology

The study applies a mixed-methods, triangulated comparative approach to analyse how disaster preparedness is integrated into early childhood and primary education systems across selected countries. The methodology combines (i) a structured document and policy review, and (ii) the integration of EU-wide evidence sources (Eurydice review outputs and teacher survey evidence) and country-level qualitative inputs. Evidence is organised using a common analytical structure. This approach enables consistent cross-country comparison and synthesis while capturing variation in institutional and implementation contexts, allowing interpretation of level-specific pedagogical approaches reflected in curriculum design.

The comparative analysis is structured around country case studies in three groups: (i) selected EU Member States, (ii) UCPM Participating States, and (iii) selected global comparators. This design supports comparison within the EU, across UCPM contexts, and against a small set of international reference systems.

Evidence is gathered and triangulated across the following streams:

-  Document and policy review: A structured review of curricula and related policy instruments (for example, curricular frameworks, learning standards, teacher education standards, inspection/quality assurance criteria, and national strategies) is used to establish how preparedness is defined, where it is embedded, and what implementation supports exist, including differences between early childhood and primary education in pedagogical framing, expected learning progression, and delivery arrangements.
-  Integration of EU-wide instruments and teacher survey evidence: To strengthen EU-wide comparability, results from EU-wide mapping instruments (including Eurydice outputs) and teacher survey evidence are integrated as system-level inputs and used to inform extraction templates and the comparative coding framework.
-  Stakeholder consultations and country case studies: Written consultations on draft outputs were carried out with relevant education stakeholders, where appropriate civil protection authorities and civil society actors supporting implementation. The consultation process was used to verify accuracy, identify delivery arrangements, enabling factors, and constraints.

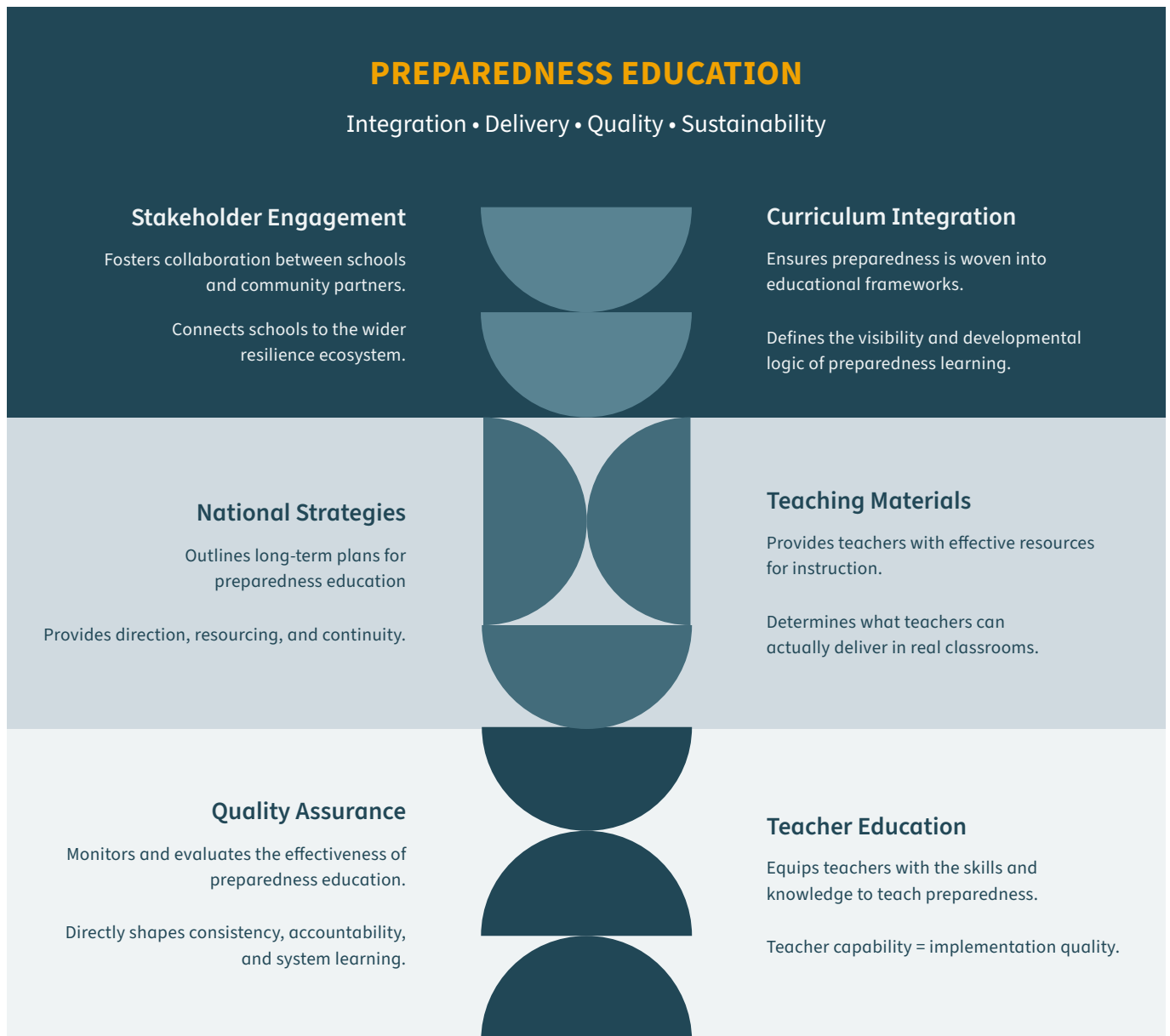
All evidence is extracted and synthesised using a six-pillar framework that provides the common structure for the twenty case studies presented in Annex B and in cross-country comparison matrices (Figure 7). The pillars are applied consistently across early childhood and primary education while allowing age-

appropriate interpretation. In practice, this means the framework is used to capture both shared system features and pedagogical differences between early childhood and primary education (ISCED 0 and ISCED 1), including how preparedness is framed, taught, practiced, and monitored at each level. The six pillars are:

- 🍌 Curriculum integration: where and how preparedness appears in curricula, and what dimensions are included.
- 🍌 Teaching materials and classroom tools: availability, status, and usability of resources adapted to age-appropriate pedagogical methods.
- 🍌 Teacher education and professional development: coverage in pre-service training and in-service professional development, and participation pathways.
- 🍌 Quality assurance and monitoring: inspection and evaluation approaches and indicators supporting implementation and learning outcomes.
- 🍌 National strategies and future plans: policy coherence and the sustainability of reforms.
- 🍌 Stakeholder engagement and partnerships: the degree of coordination between education and civil protection and wider community links.



Figure 8. Six-pillar Framework



Source: World Bank.

Collectively, these pillars operationalise the EU Preparedness Union Strategy’s Action 29 as an education-system map, making it possible to compare how preparedness is integrated and supported across early childhood and primary education systems. Pillars 1–2 capture what is taught and with what tools; Pillar 3 assesses whether educators are equipped with relevant preparedness education resources; Pillars 4–5 examine system mechanisms that support implementation quality and sustainability; and Pillar 6 reflects the whole-of-society logic by examining partnerships that connect schools with civil protection and community resilience ecosystems.

Evidence from multiple sources is consolidated into structured country case studies aligned with six analytical pillars. Drawing on documents, EU-wide instruments, and stakeholder consultations, the material is analysed using thematic coding and synthesis tables to identify patterns, enabling factors and systemic bottlenecks across contexts. This approach supports both cross-country compar-

ison and the interpretation of institutional and implementation differences shaping preparedness education integration.

The study applies structured quality assurance measures to maintain analytical rigor. Quality assurance is secured through (i) the use of common definitions when coding country evidence; (ii) repeated internal peer reviews of country templates and synthesis tables; and (iii) targeted validation with stakeholders. This approach is consistent with EU preparedness and resilience initiatives that combine structured evidence collection with multi-stakeholder validation to strengthen the usability of findings for policy guidance and implementation.

The analysis is subject to methodological limitations, which are addressed through structured mitigation measures. Limitations include differences in terminology and governance arrangements across countries, uneven availability of documentation and evaluation evidence, and the interpretive constraints associated with self-reported inputs, including survey and consultation evidence. These factors may influence comparability and the depth of system-level assessment. To address these limitations, the study applies triangulation across multiple evidence sources, makes an explicit distinction between 'policy intent' and 'implementation evidence' within the six-pillar templates, and relies on consistent coding structures to enhance analytical transparency and comparability.

What Two Surveys Reveal About EU Preparedness Education

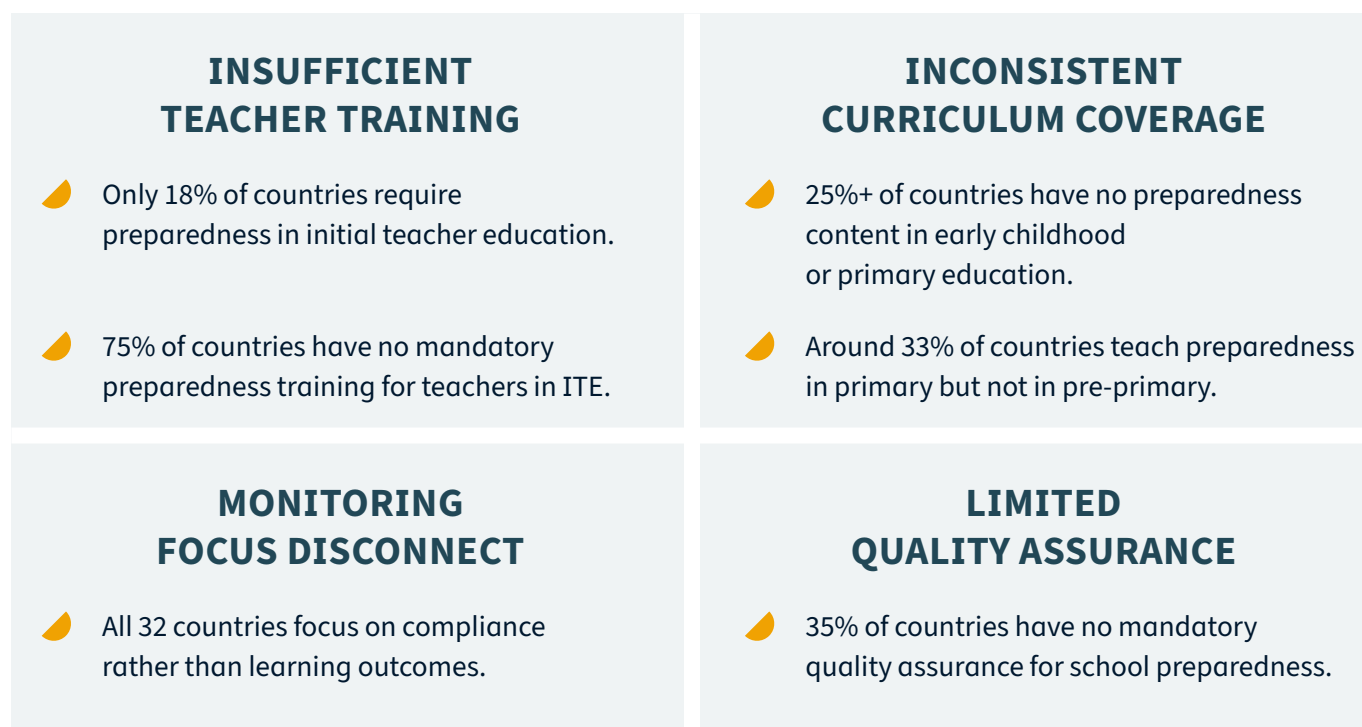
To identify key gaps and challenges in preparedness education across EU Member States, two complementary surveys were conducted.

The Eurydice preparedness questionnaire was designed to provide a system-level overview of how preparedness education is currently integrated within early childhood and primary education. It focuses on curriculum coverage, professional development practices, quality assurance, and the potential role of the EU and national-level planning across participating countries.

In parallel, the teacher survey on school preparedness and resilience captures the school-level perspective. As key stakeholders in the implementation of preparedness education, teachers are explicitly included in the evidence base informing efforts to strengthen preparedness education across EU Member States. The survey was designed to understand teachers' views on how schools can best prepare for emergencies, support students in developing risk awareness and relevant skills, and implement preparedness-related activities in practice. It examines how preparedness is addressed in everyday school settings, including the availability of guidelines, teaching resources, and intersectoral collaborations, as well as the

training and awareness-raising activities offered to school staff. In addition, the survey seeks to identify areas where further support may be needed to strengthen effective implementation.

Figure 9. Eurydice Preparedness Survey: Key Gaps Identified



Based on the Eurydice Preparedness Survey covering 32 participating countries, four key system-level gaps in the integration of preparedness within early childhood and primary education have been identified (Figure 10):

- Curriculum coverage remains uneven across education levels. More than 25 percent of countries report no formal preparedness content in early childhood or primary education. In addition, among countries that include preparedness at the primary level, approximately one third do not introduce such content at the pre-primary level, indicating a gap in early-years preparedness.
- Preparedness is weakly anchored in initial teacher education. Only 18 percent of countries explicitly require preparedness-related content in initial teacher or school leader training. This limits implementation capacity, as the inclusion of preparedness in curricula does not consistently translate into effective classroom delivery.
- Quality assurance arrangements are incomplete or absent. Nearly 35 percent of countries report no mandatory quality assurance mechanisms to verify school-level preparedness planning and implementation, reducing oversight and comparability across schools.
- Monitoring focuses on compliance rather than learning outcomes. Existing monitoring practices primarily assess procedural elements, such as the presence of emergency plans or the conduct of drills, with limited assessment of student preparedness, risk literacy, or the effectiveness of preparedness education.

Figure 10. Teacher Survey: Key Gaps Identified

INCOMPLETE PREPAREDNESS MEASURES Schools are only partially prepared to respond to crises and support wellbeing.	LIMITED PEDAGOGICAL INTEGRATION Preparedness is not embedded in teaching, relying mainly on drills and awareness activities.
INSUFFICIENT STAFF TRAINING Comprehensive staff training reaches only a minority of schools.	CAPACITY BARRIERS Funding, time, and access to training are the main barriers reported by teachers.

Findings from the teacher survey highlight a clear gap between strong commitment to school preparedness and its practical implementation at the school level:

- ✦ **Incomplete preparedness measures.** While preparedness is widely recognised as a core school responsibility, teachers report that key measures remain only partially in place. Weak psychological support, insufficient emergency resources, and inconsistent safety checks limit schools' capacity to respond to crises and support recovery and wellbeing.
- ✦ **Limited pedagogical integration.** Preparedness education for learners relies mainly on drills and awareness-raising activities rather than systematic, curriculum-embedded learning, constraining the development of sustained risk awareness and coping skills.
- ✦ **Insufficient staff training.** Comprehensive training is available in only a minority of schools. Many rely on partial or voluntary participation, weakening consistency and institutional readiness.
- ✦ **Capacity-related barriers.** Teachers identify limited funding, time, and access to training as the main constraints to preparedness, and prioritise professional development, dedicated financial resources, clearer guidance, and stronger leadership as the most effective levers for improvement.

Beyond the gaps identified through surveys, education systems face broad implementation challenges that limit the impact of preparedness education.

- ✦ **Fragmented curriculum design.** Preparedness content is often optional, inconsistently embedded across subjects, and unevenly sequenced across grades. Weak alignment between curricula and preparedness competencies contributes to gaps in risk literacy among both pupils and school staff.
- ✦ **Limited access to quality teaching resources.** Many systems lack age-appropriate, quality-assured teaching materials and assessment tools

aligned with national curricula. Digital and blended learning resources are not systematically available, and materials supporting interactive or participatory pedagogy remain scarce.

-  Low teacher capacity and weak incentives. Opportunities for pre-service training and continuous professional development are limited and rarely linked to professional standards or inspection frameworks. Many teachers also report low confidence in using digital tools and remote learning platforms for preparedness education.
-  Insufficient implementation support and coordination. Weak guidance, limited monitoring, and underdeveloped partnerships between education authorities, civil protection agencies, and local actors undermine the sustainability of school-based preparedness activities. Inclusive approaches for vulnerable groups, such as learners with disabilities and refugee pupils, remain underdeveloped.

Despite these challenges, the Eurydice survey reveals growing top-level policy dialogue on preparedness education across Europe. This trend is linked to increasing alignment of EU-level frameworks and recognition of the EU's role in providing funding, technical guidance, and opportunities for cross-border cooperation. The momentum is reflected in national planning: approximately half of European education systems intend to expand preparedness education, either through curricular revision, strengthened management requirements, professional training reforms, or whole-school approaches aimed at enhancing the preparedness competencies of teachers, school leaders, students, and staff.

The combined survey evidence points to an emerging implementation gap: preparedness policy discussions are outpacing implementation conditions required for consistent delivery in schools. Together, these findings point to the need for more coherent system design. Strengthening preparedness education will require 1) closer alignment between curricula, teacher standards, quality-assurance frameworks, and monitoring systems; 2) sustained investment in teacher professional development; 3) shared repositories of evaluated teaching resources; and 4) stronger multisector coordination. Addressing these priorities is central to advancing the objectives of the EU's Preparedness Union and ensuring that preparedness education moves beyond compliance toward meaningful preparedness competencies.

Figure 11. Key Gaps from the Eurydice Preparedness Survey

Inconsistent curricular coverage		Teacher training disconnect	
25%	with no formal preparedness content	75%	don't require any preparedness-related coursework in ITE
Weak or absent quality assurance		Monitoring stops at compliance of school-level preparedness	
35%	have no mandatory QA	NO COUNTRY	reported assessing preparedness learning outcomes

Source: World Bank.

Comparative Analysis by Group

EU MEMBER STATES

Across EU Member State case studies, preparedness education in early childhood and primary education (ISCED 0-1) is embedded through multiple institutional approaches rather than a single uniform pathway. These approaches differ in how preparedness is anchored within education systems, how learning outcomes are defined, the degree of formal obligation, and the balance between operational readiness and competency-based learning. Four ideal-type approaches emerge from the comparative analysis of case studies: (i) the curriculum-led approach, where preparedness is explicitly integrated into curriculum frameworks; (ii) the civil protection-led approach, where preparedness is institutionalised primarily through safety planning, drills, and operational coordination; (iii) the decentralised or enabling system approach, where preparedness is supported through guidance, resources, and local initiative rather than binding requirements; and (iv) the partnership-based approach, where external actors such as civil protection agencies, emergency services, and NGOs play a central role in delivering preparedness education. Most case studies combine elements of multiple approaches, but typically one approach serves as the primary institutional entry point.

Figure 12. Four Institutional Entry Points for Preparedness Education in EU Member States

	Curriculum-Led Model	Civil Protection-Led Model	Enabling Framework Model	Partnership-Based Model
Entry Point	National curriculum frameworks	Legal safety obligations	Guidance + optional uptake	External actors
What it looks like	Preparedness embedded across subjects	Mandatory emergency plans and drills	Non-binding frameworks, tools, and resources	Experiential learning, drills, outreach programs
Strengths	Universal exposure; predictable learning	Universal procedural readiness	Flexibility; supports innovation	High relevance; hands-on engagement
Risks	Quality varies with teacher preparation, time, and materials	Limited learning depth unless connected to classroom practice	Uneven implementation; weak comparability across schools/regions	Coverage depends on partnership stability; risk of fragmentation

Curriculum-led approach

In the curriculum-led approach, preparedness education is formally embedded within national curriculum frameworks, ensuring structured, developmentally appropriate progression from early childhood to primary education. This approach, illustrated by the examples of Italy, Poland and Portugal, provides strong institutional foundation for positioning preparedness education as a learning objective, rather than solely as an operational requirement. By defining learning outcomes, allocating instructional time, and embedding preparedness within formal subjects or cross-curricular competencies, these systems create predictable and scalable pathways for supporting preparedness learning and resilience development. Curriculum anchoring enables preparedness competencies to be introduced to children early on – often through safety, wellbeing, or environmental learning domains in early childhood education – and progressively strengthened through more explicit hazard-related instruction in primary grades. In Italy, mandatory Civic Education is a nationwide mechanism for civil protection learning, beginning in primary education and integrating preparedness competencies across subjects. Poland embeds preparedness even earlier, introducing safety and emergency response competencies in preschool and reinforcing them through structured instruction and learning outcomes throughout primary education. Portugal similarly integrates preparedness-related competencies within early childhood and primary curriculum frameworks, positioning preparedness within broader risk awareness and citizenship learning.

This approach is associated with several implementation advantages, including i) consistent exposure; ii) clearer developmental progression; and iii) an opportunity for reinforcing preparedness competencies over time. However, curriculum embedded preparedness education does not guarantee pedagogical depth.

Where preparedness education is implemented across curricula without sufficient instructional time, teacher and school leader training, or pedagogical guidance, implementation quality may vary. Therefore, the effectiveness of curriculum-led approach appears closely linked to the degree of alignment between curriculum framework, teacher preparation, materials, and learning outcomes

Civil protection-led approach

The civil protection-led approach anchors preparedness education primarily in legal school safety obligations, including mandatory emergency plans, drills, and coordination with emergency services. This approach establishes universal procedural readiness and helps ensure schools maintain operational preparedness through standardised protocols, which helps ensure children are exposed to emergency procedures from early childhood onwards. In France, for example, the mandatory practical school-level safety plans and drills (PPMS) framework requires all schools, early childhood and primary institutions to maintain emergency plans and conduct regular drills in coordination with civil protection authorities. Bulgaria and Romania take a similar approach: preparedness plans and drills are legally required from early childhood onward, ensuring procedural readiness. However, preparedness competencies are not consistently defined as structured learning outcomes at these levels, and assessment focuses primarily on verifying plans and drills rather than evaluating student competency development. While drills build familiarity with procedures, they do not necessarily ensure that students develop deeper understanding, adaptive decision-making skills, or transferable resilience competencies unless explicitly linked to curriculum and pedagogy. Without structured integration into teaching and learning, preparedness education may function primarily as procedural compliance rather than structured educational process.

Decentralised or enabling system approach

The decentralised or enabling system approach is characterised by strong flexibility but frequently uneven implementation. Preparedness education is supported through policy guidance, competency frameworks, and resource ecosystems, but without binding curriculum mandates or standardised instructional requirements. These systems prioritise flexibility, allowing schools and teachers to adapt preparedness education to local risk contexts and institutional capacities. In early childhood and primary education, preparedness is embedded with broader wellbeing, environmental, or safety learning domains, while hazard-specific learning outcomes may remain optional or implicit. Estonia's national civil protection competency framework outlines preparedness competencies, but

functions as guidance rather than a binding curriculum requirement. At early childhood and primary levels, integration depends on school and teacher initiative, and assessment frameworks do not systematically evaluate student preparedness competencies. Sweden follows a similar structure. Preparedness is supported through civil protection guidance and safety obligations, but preparedness-specific learning outcomes are not explicitly defined at early childhood and primary levels. Assessment focuses primarily on procedural compliance rather than student competency development.

This approach enables innovation and local ownership. Schools can tailor preparedness education to region-specific hazards, and teaching materials provide practical support for implementation. However, it relies on voluntary uptake, which creates variability in implementation. Schools with strong leadership, partnerships, and institutional capacity may develop robust preparedness education, while others may implement only minimal or procedural activities.

Partnership-based approach

Across many systems, partnerships with external actors, including civil protection agencies, emergency services, and non-governmental organisations, play a central role in delivering preparedness education. These actors provide teaching materials, classroom instruction, training programs, and experiential learning opportunities that strengthen implementation. Croatia exemplifies this approach through its collaboration with civil protection authorities, which provide child-friendly teaching materials and educational games and school-based outreach programs. Czechia provides a more structured partnership approach, where civil protection authorities and firefighters collaborate with schools to deliver structured preparedness education. Teaching materials and externally delivered instruction support competency development, but assessment frameworks remain focused primarily on compliance and institutional preparedness rather than student learning outcomes.

The partnership approach can significantly enhance preparedness education quality. External actors bring technical expertise, real-world relevance, and experiential learning opportunities that may not be available within education systems alone. They often provide ready-to-use teaching materials, structured lesson sequences, and student engagement programs that support competency development. However, reliance on partnerships introduces variability. Where partnerships are well supported, they strengthen preparedness education. Where partnerships are fragmented, optional, or dependent on local initiative, implementation may be inconsistent.

Cross-cutting findings

Across all four approaches, a consistent pattern emerges: learning outcomes related to preparedness are increasingly defined in policy and curriculum frameworks, but quality assessment remains primarily focused on procedural compliance rather than student competency development. Monitoring systems typically verify whether emergency plans exist and drills occur, but rarely assess whether children understand risks, can make safe decisions, or demonstrate adaptive preparedness behaviours. Curriculum-led approaches most clearly defines learning outcomes, while civil protection-led, enabling, and partnership-heavy approaches often strengthen implementation practice without embedding systematic competency assessment. Evidence suggests that stronger alignment between learning outcomes and assessment frameworks is associated with more consistent preparedness education implementation. Without this alignment, preparedness education risks remaining procedural rather than fulfilling its potential to build resilience through competency-based learning.

These findings are further synthesised in the challenge and enabling-factor tables above. Taken together, they show that EU systems rarely rely on a single approach; rather, they combine curriculum frameworks, civil protection obligations, resource ecosystems, and partnership arrangements in different proportions. The key implementation differences lie in how these elements are aligned through teacher support, accountability mechanisms, and learning-focused monitoring.

Together, these findings provide a reference point for interpreting the UCPM Participating States and global comparators, where similar implementation trade-offs appear under different governance and hazard contexts.

UCPM PARTICIPATING STATES

Preparedness education in early childhood and primary education across the UCPM Participating States follows several distinct institutional approaches rather than a single uniform pathway. Two approaches emerge from the comparative analysis: (i) a policy-explicit, curriculum-anchored approach, and (ii) a system-capacity and continuity-driven approach. These approaches differ in how preparedness is embedded in education policy, the extent to which it is integrated into curriculum and pedagogy, and how systematically implementation is supported through tools, teacher preparation, and accountability mechanisms. Both approaches aim to strengthen preparedness and resilience, but they differ in their primary institutional entry points and implementation dynamics. In practice, states combine elements of multiple approaches, but typically one approach serves as the primary institutional entry point.

The examples presented below are illustrative of how these two approaches are operationalised in practice.

Policy-explicit, curriculum-anchored approach

In this approach, preparedness education is explicitly embedded within education policy, curriculum requirements, and national preparedness strategies. Montenegro illustrates this approach through its inter-subject DRR program, which integrates preparedness across compulsory subjects and class-teacher time, supported by the DRR Strategy 2025–2030 (Action Plan 2025–2030). However, while the aforementioned is formally included in strategies and policy documents, it is not yet clear how consistently they are being implemented across education institutions. Preparedness learning in Montenegro is introduced progressively from early childhood through age-appropriate activities, structured teaching materials, and centralised digital platforms such as Digital Classroom (Digionica). Implementation follows a coherent curriculum-to-tools pipeline, combining methodological guidance linked to the cross-curricular DRR program with digital tools.

This approach provides a stronger institutional foundation for integrating preparedness as a learning objective rather than solely as a procedural requirement. Curriculum anchoring enables the development of learning progression and supports more consistent instructional delivery. Professional development is aligned with curriculum objectives through accredited professional development programs delivered jointly by education authorities and protection-and-rescue institutions, including training for preschool educators and disability support personnel. However, successful implementation and reaching a sufficient number of education workers across the system remains dependent on sustained teacher and school leader training coverage, and the extent to which preparedness learning outcomes are systematically embedded within routine monitoring and assessment frameworks.

System-capacity and continuity-driven approach

In this approach, preparedness education is advanced primarily through system capacity, continuity infrastructure, and school safety regulations rather than a single consolidated curriculum mandate. This pathway is evident in systems where preparedness is reinforced through safety regulations, emergency planning, and large-scale continuity mechanism. Türkiye provides an illustrative example through a distributed set of policies and safety requirements. This includes Türkiye’s competency-based Century of Türkiye Education Model (TYMM)

and strong investments in education continuity infrastructure, including national digital platforms such as EBA and large-scale emergency response mechanisms developed following the February 2023 earthquakes.

Preparedness is reinforced through safety regulations, emergency planning requirements, and awareness programs. Such a system is characterised by strong operational capacity, particularly in maintaining learning continuity, deploying emergency learning materials, and providing psychosocial support during crises.

However, preparedness education at the classroom level remains less systematically structured, especially since there is no single, consolidated preparedness education framework defining nationwide standards, progression, and accountability across the education system. Implementation is strongly shaped by scale and emergency responsiveness. Preparedness content is often delivered through dispersed materials, awareness initiatives, and safety requirements. Teacher preparedness is primarily supported through in-service training and project-based initiatives, while integration into initial teacher education and systematic pedagogical progression remains uneven.

Critical steps for each approach

The curriculum-anchored approach provides a stronger foundation for structured learning progression, while the system-capacity approach enables rapid operational response and continuity during crises. In both pathways, it is critical to strengthen alignment between preparedness policy, curriculum frameworks, teacher preparation, and assessment systems. Strengthening this alignment can help shift preparedness education from primarily procedural compliance toward competency-based learning that builds durable preparedness skills and supports both resilience and learning continuity.

Table 4. Preparedness education implementation profile

Dimension	Policy-explicit, curriculum-anchored approach	System-capacity and continuity-driven approach
Policy and curriculum integration	Preparedness explicitly embedded through inter-subject DRR curriculum and national DRR strategies, including early childhood and primary education	Preparedness reflected in broader curriculum reforms and safety regulations, without a single consolidated preparedness education framework
Institutional entry point	Curriculum mandates linked to national preparedness strategy and education policy	School safety regulations, emergency planning requirements, and continuity infrastructure
Implementation tools	Centralized digital platforms and curriculum-linked teaching materials supporting structured delivery	National digital platforms, continuity infrastructure, and emergency learning systems
Teacher support	Curriculum aligned DRR professional development	Primarily in-service training and project-based initiative
Monitoring	Monitoring focuses on implementation and compliance with limited assessment of preparedness learning outcomes	Strong administrative monitoring systems, but limited assessment of preparedness learning outcomes
Inclusion and continuity measures	Disability-adapted preparedness activities	Strong continuity and psychosocial support systems, particularly following recent disasters

Source: World Bank.

Table 5. Strengths and challenges

Type of approach	Policy-explicit, curriculum-anchored approach	System-capacity and continuity-driven approach
Key strengths	Explicit curriculum integration; alignment between curriculum and professional development; availability of structured teaching resources	Strong continuity infrastructure; high operational capacity for rapid crisis response; ability to scale implementation rapidly
Areas for further development	More systematic assessment of student learning outcomes and integration into quality assurance frameworks	Strengthening curriculum coherence; developing structured preparedness learning progression; more systematic integration into teaching and learning processes

Source: World Bank

The sections below examine how these two approaches are translated into practice across key implementation dimensions. Specifically, it considers how preparedness is embedded in education policy and curriculum frameworks, the tools and delivery mechanisms used to support the implementation, the availability of teacher development, the extent to which quality assurance capture preparedness learning, and the degree to which inclusion and continuity measures are integrated. This multidimensional perspective helps clarify not only how preparedness education is formally positioned within education systems, but also

how consistently it is operationalised in early childhood and primary education settings.

Policy frameworks: explicit DRR mandates vs. integration through wider reforms and regulations

In policy-explicit, curriculum-anchored systems, preparedness is embedded within education policy and curriculum requirements. In the illustrative case of Montenegro, preparedness education is anchored in (i) a formally introduced inter-subject DRR program that mainstreams DRR content across compulsory subjects and class-teacher time²⁶, and (ii) the DRR Strategy 2025–2030 (Action Plan 2025–2026), which extends preparedness requirements into early childhood and primary education through various age-appropriate activities, materials, and tools²⁷. This approach is reinforced by broader education reform priorities emphasising safe and resilient learning environments²⁸.

In system capacity and continuity-driven systems, preparedness education is often integrated through a distributed set of policies and safety requirements rather than just a single consolidated framework. For example, in Türkiye, preparedness education is signalled through the competency-based Century of Türkiye Education Model (TYMM) and reinforced by national and provincial awareness initiatives, while the most binding requirements appear through school safety regulations and mandated emergency planning aligned with Disaster and Emergency Management Presidency (AFAD) formats. Following the February 2023 earthquakes, the education response and recovery architecture demonstrated strong political commitment and elevated the urgency of embedding preparedness, continuity, and psychosocial support more systematically²⁹. However, the evidence points to a strategic gap: the absence of a single consolidated ‘preparedness education’ framework defining nationwide standards, progression, and accountability across the education system.

Implementation: digital platforms as backbone, but uneven pedagogical depth

Across both approaches, systems rely heavily on system-level tools, particularly national digital platforms, to support preparedness and continuity, although emphasis differs. In curriculum anchored systems (as illustrated by Montenegro),

²⁶ Tmušić, Ljuban, and Kristina Palajsa (2023). *Inter-Subject DRR Program in Montenegro*.

²⁷ Ministry of the Interior, Government of Montenegro. *Disaster Risk Reduction Strategy for the period 2025–2030 with an Action Plan for 2025–2026 (draft)*. Montenegro, 2024. <https://www.gov.me/dokumenta/a9cef7cc-015d-4433-a86c-38bba3357126>

²⁸ Eurydice (2025). *Montenegro — Teaching and Learning in Single-Structure Education*.

²⁹ Presidency of Türkiye, Strategy and Budget Office (2023). *Türkiye Earthquakes Recovery and Reconstruction Assessment*. [Link](#)

implementation often follows a coherent curriculum-to-tools pipeline, combining methodological guidance linked to the cross-curricular DRR program with centralized platforms that provide structured content for children and support materials for teachers (e.g. Digionica). This strengthens consistency of access and ensures continuity during emergencies, though uptake may still vary by school capacity and local prioritisation.

In the system capacity driven approach, implementation is strongly shaped by scale and emergency responsiveness. Long-running education technology investments and the rapid shift to remote and televised learning during COVID-19 created robust continuity mechanisms. Following the 2023 earthquakes in Türkiye, the system mobilised materials, temporary learning arrangements, and catch-up supports, demonstrating high operational capacity³⁰. However, in such systems, classroom-level preparedness learning may remain inconsistent, as many resources are often dispersed across multiple channels and are not always curated into coherent, age-appropriate, and inclusive progression, particularly for early childhood and vulnerable groups.

In both approaches, preparedness education focuses more on response than on broader resilience competencies. This highlights the fact that preparedness is primarily framed around awareness and response behaviours, such as drills and protective actions, while prevention, risk understanding, and broader resilience competencies receive less consistent attention, especially where curricula lack clearly defined learning progressions.

Workforce readiness: strong in-service platforms, weaker institutionalisation in initial preparation

Curriculum-anchored systems typically demonstrate stronger alignment between DRR curriculum objectives and professional development practices. An accredited DRR professional development program is delivered jointly by education authorities and protection-and-rescue institutions, reaching municipalities nationwide and including preschool staff and disability-centre personnel in evacuation planning and adapted drills.³¹ The remaining challenge is ensuring coverage of sufficient number of education workers and integrating preparedness in initial teacher education.

In system capacity systems, teacher preparedness is driven mainly by in-service training. In Türkiye, for example, teacher preparedness is largely built through in-service scale mechanisms (e.g., ÖBA, project-linked trainings, campaigns) and

³⁰ Presidency of Türkiye, Strategy and Budget Office (2023). *Türkiye Earthquakes Recovery and Reconstruction Assessment*. [Link](#).

³¹ Tmušić, Ljuban, and Kristina Palajsa (2023). *Inter-Subject DRR Program in Montenegro*.

specialised streams such as first aid certification. Participation in MoNE-accredited continuous professional development, including disaster-related courses, contributes to teachers' professional development records and career progression (e.g., master teacher status), but there is no national salary incentive specifically tied to preparedness training. Evidence from evaluation research suggests positive changes in teacher awareness and attitudes in school-based disaster education programming. Yet the approach is more variable across regions and less consistently institutionalised within initial teacher education, and inclusion-focused preparedness pedagogy (disability, refugee and multilingual contexts) is not yet uniformly embedded.

Accountability and evidence: compliance visibility is higher than learning outcomes visibility

Across both approaches, system monitoring tends to prioritise inputs and compliance over measured student preparedness competencies. In curriculum anchored systems such as Montenegro, school evaluation frameworks include elements of safety and administrative documentation compliance, but do not clearly specify preparedness learning outcomes as a distinct domain for monitoring. While research has assessed pupils' preparedness knowledge, attitudes and skills, routine feedback into system QA tools is not yet clearly evidenced³². System-capacity driven systems showcase stronger education management systems and preparedness is not mainstreamed into a unified national indicator set that links curriculum, teacher and school leader training, school practice, and student outcomes. This underscores the potential to use data systems more strategically, particularly to track vulnerable learners during emergencies and measure recovery and resilience.

Inclusion and psychosocial support: emerging attention, uneven integration

Inclusivity and psychosocial aspects are increasingly recognised, but integration remains uneven. Montenegro's extension of preparedness activities into preschools and adapted approaches for children with disabilities demonstrate deliberate attention to inclusive preparedness education³³. Türkiye's post-earthquake response strengthened psychosocial support and targeted teacher guidance. However, case evidence highlights gaps in systematic integration of disability-inclusive DRR pedagogy and refugee-sensitive preparedness planning into everyday teaching and preparedness resources.

³² Tmušić, Ljuban, and Kristina Palajsa (2023). *Inter-Subject DRR Program in Montenegro*.

³³ Ministry of the Interior, Government of Montenegro (2024). *Disaster Risk Reduction Strategy for the period 2025–2030 with an Action Plan for 2025–2026 (draft)*. [Link](#).

Comparative implications for UCPM context

Taken together, analysis suggests that non-EU UCPM Participating States can advance DRR education integration through two broad pathways:

- 🟡 A policy-explicit pathway: clearer mandates that connect national DRR strategy, curriculum instruments, and centralised tools; or
- 🟡 A system-capacity pathway: large-scale continuity infrastructure and rapid crisis mobilisation, with DRR integrated through broader curriculum reforms and regulatory requirements.

In both pathways, the key implementation frontier is shifting from ‘awareness and drills’ to competency-based preparedness supported by coherent learning progressions, inclusive pedagogy, and monitoring that captures not only whether schools are compliant, but whether learners are building durable preparedness knowledge, skills, and behaviours, while sustaining learning continuity through crises.

GLOBAL COMPARATORS

Japan, New Zealand, Canada, and the United States illustrate three distinct approaches to integrating preparedness education across early childhood and primary education. Japan demonstrates a system-wide model in which preparedness is embedded in school safety education and supported through detailed national guidance shaped by major disaster experience. New Zealand represents a national curriculum approach in which preparedness is not a standalone subject, but is operationalised through widely disseminated, curriculum-linked resources and mandatory school planning expectations. Canada and the United States illustrate decentralised governance models, where curriculum decisions sit at the provincial or state level. In these systems, preparedness is advanced through a combination of curriculum standards, operational requirements (plans and drills), and extensive program and resource ecosystems delivered through government and NGO partnerships.

Table 6. Emerging patterns: Global Comparators

CURRICULUM Preparedness Woven Into Existing Subjects All four countries integrate hazards and safety into existing curriculum areas (science, social studies, health, key competencies), starting from primary and often early childhood.	TEACHING MATERIALS Free, Branded Toolkits Linked To Hazards Governments and NGOs provide free, curriculum-linked toolkits with lesson plans, student workbooks and child-friendly materials tailored to local hazards.	TEACHER EDUCATION & PD System-level Support for Staff Preparedness Teacher capability is strengthened mainly through ongoing professional development, guidance and school-based training; Japan additionally embeds school safety in pre-service teacher training.
QUALITY ASSURANCE Plans, Drills & Continuous Improvement Japan assesses students' disaster skills and behaviors, not just plans and drills, using learning tasks, post-drill reflection and tools like the Disaster Mitigation Capability Test to check if children can spot danger and act safely.	NATIONAL STRATEGIES Preparedness Anchored in Wider Resilience Agendas Preparedness in education is framed within broader national or state strategies and legislation on disaster risk reduction and safety, which set expectations for plans, drills and roles.	STAKEHOLDER ENGAGEMENT Schools as Hubs in Multi-actor Partnerships Schools and early childhood centers work with emergency services, NGOs, local authorities and families to deliver preparedness, often using participatory activities and take-home materials.

Preparedness is institutionalised through different policy ‘entry points’

Systems institutionalise preparedness through different entry points, curriculum expectations, operational safety obligations, or resource-driven enablement, and many combine these. Japan stands out for explicitly positioning disaster prevention within school safety education across schooling levels through national guidance, creating a strong system expectation for cross-curricular implementation. New Zealand’s approach emphasises an enabling educational architecture – a competency-based curriculum with local flexibility, nationally disseminated curriculum-linked resources (e.g., What’s the Plan, Stan?), and required emergency planning guidance for schools and early childhood education services. In Canada and the United States, where curriculum authority is decentralised, preparedness is typically advanced through subnational guidance and programs rather than a single national curriculum mandate, making the “policy entry point” more operational and programmatic.

Early childhood preparedness is treated primarily as operational readiness

Across all four comparators, early childhood preparedness is most consistently addressed through operational and licensing frameworks, rather than through formalised learning outcomes. In New Zealand, Te Whāriki provides a holistic curriculum framework that emphasises wellbeing and relationships with families and communities, while the Ministry sets expectations for emergency preparedness and incident planning in early childhood education. In Canada, Ontario’s licensing guidance explicitly requires written emergency plans, defined staff roles, and drills in child-care settings. In the United States, early childhood preparedness education is similarly anchored in required emergency planning and drill routines, supported by state and local guidance materials. Japan also emphasises whole-school safety systems and staff readiness to protect students, including inclusive planning for children with special needs. Across these systems, early childhood preparedness is most consistently ensured through safety procedures and operational requirements, while structured learning about hazards becomes more explicit as children progress into primary education.

Tools and resource ecosystems act as the bridge between policy and classroom practice

Accessible, curriculum-linked tools are a key implementation bridge, especially in decentralised systems, but also in centralised ones. Japan’s approach relies on a comprehensive ecosystem of resources and platforms developed by national and local authorities, complemented by practical tools that support realistic training and ease teacher implementation. New Zealand’s approach is distinctive for the coherence of its national offer: a widely disseminated school resource suite linked to curriculum competencies, paired with practical templates for emergency planning and drills. Canada and the United States rely heavily on programmatic tools and NGO partnerships, e.g., structured resources and take-home materials designed to connect schools and households, while teacher uptake is often voluntary and therefore uneven across jurisdictions. Across the four systems, resources that combine lesson content, drill routines and family engagement materials emerge as a practical mechanism for translating preparedness from a topic into repeated behaviour and shared norms.

Continuous improvement is most developed where drills are treated as learning and review moments

A third comparative insight concerns how systems learn and improve. Japan's model places unusual emphasis on what students can do, not only on whether drills occur: guidance promotes observation of student behaviour, reflection after drills, scenario-based exercises, and PDCA-style improvement informed by incident and near-miss data. In contrast, Canada and the United States more commonly emphasise documented compliance, including emergency plans, drill logs, and periodic plan reviews. However, the U.S. case examples highlight a stronger culture of continuous improvement through exercises and structured after-action review promoted through national technical assistance and state safety guidance. New Zealand sits between: emergency planning is a compliance expectation supported by templates, while review and evaluation frameworks focus on safe environments and learner wellbeing without consistently tracking DRR learning outcomes as a separate domain.

Overall, the global examples suggest that operational compliance is easier to standardise than learning outcomes, but systems that explicitly treat drills as learning events, with structured reflection and feedback loops, are better positioned to improve both readiness procedures and educational value over time.

Partnerships are essential everywhere, but institutionalisation varies

All four cases underscore that preparedness education is rarely delivered by schools alone. Japan's guidance strongly emphasises structured collaboration among schools, families, communities, and specialised agencies, including participatory learning and inclusive planning for learners with disabilities. New Zealand's model reflects a whole-of-society framing in which schools align with national messaging and coordinate through national and local emergency management arrangements, while Te Whāriki reinforces family/whānau partnership as a norm for early learning practice.

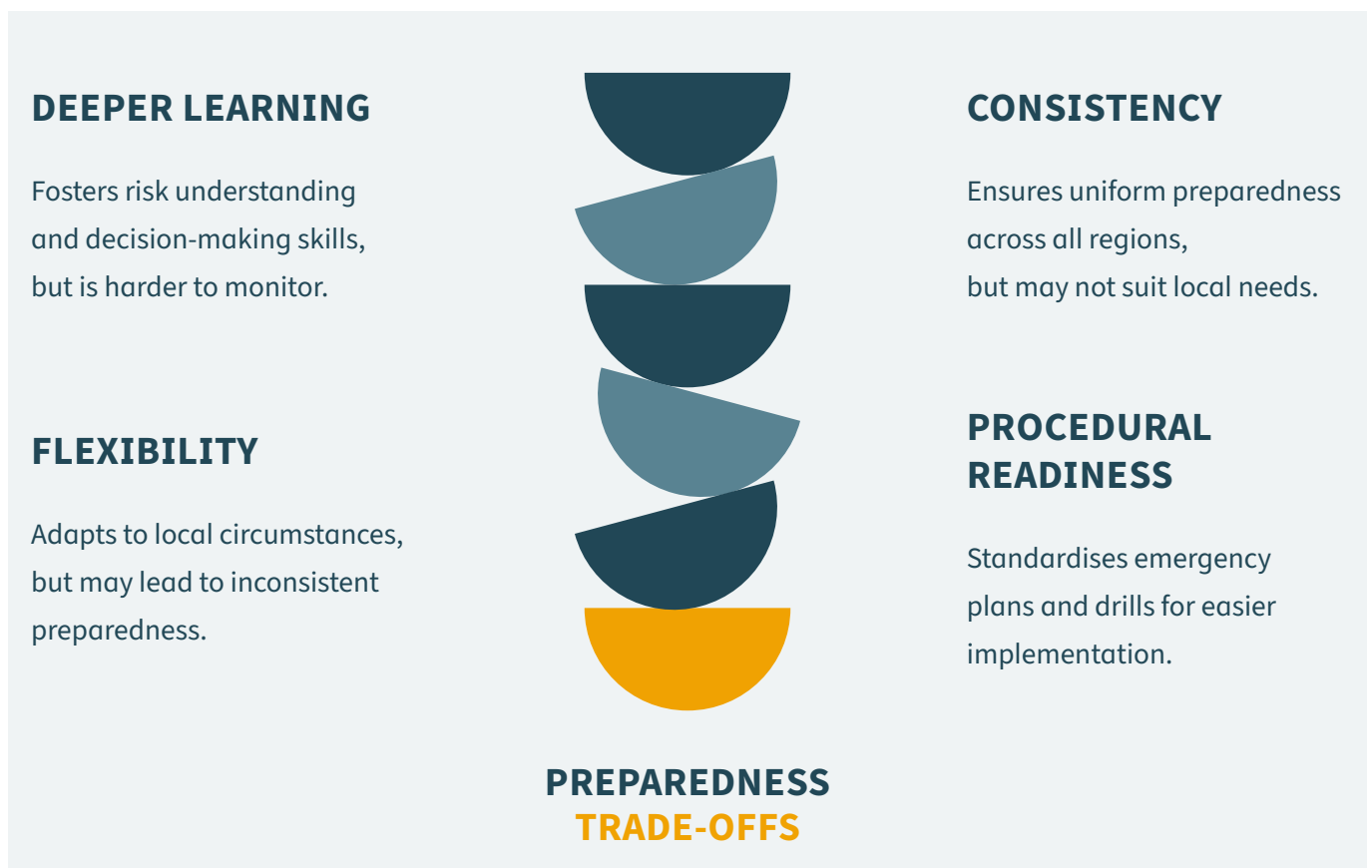
In Canada and the United States, partnerships are often program-driven, delivered through Red Cross activities, municipal preparedness outreach, and public agency toolkits, supporting family engagement but also contributing to variable reach when collaboration depends on local capacity and initiative.

What these global examples contribute to the comparative analysis

Taken together, the four cases demonstrate that preparedness education can be strengthened through different combinations of: (i) system-level curriculum expectations (strongest in Japan), (ii) mandated emergency planning obligations (strong across all cases, particularly early childhood), (iii) widely disseminated curriculum-linked resources that reduce implementation burden (strong in New Zealand and Japan, prominent in Canada and the U.S.), and (iv) continuous improvement mechanisms that treat drills and exercises as opportunities to learn and revise practice (most explicit in Japan and in U.S. after-action guidance).

These pathways reflect a familiar trade-off: explicit curriculum and strategy alignment improve coherence and visibility, while system-capacity approaches can mobilise scale and continuity quickly but may leave learning progression and accountability less clearly defined unless expectations and tools are consolidated. The next section returns to the study's analytical framework to examine these findings in greater depth, organising evidence systematically across the six pillars for comparability with EU Member States and UCPM participating countries.

Figure 13. Preparedness Trade-offs



Cross-Cutting Findings and Emerging Trends

EU frameworks define goals. This analysis identifies the system conditions that determine whether those goals translate into consistent learning outcomes. Existing EU initiatives and national strategies increasingly recognise the importance of preparedness education, but they often emphasise priorities, principles, and whole-school and cross-sector approaches more than the implementation conditions that determine classroom consistency and learning quality. This comparative analysis therefore adds an implementation-focused perspective: it identifies the system-level mechanisms (across curriculum, materials, teacher support, quality assurance, strategy, and partnerships) that shape whether preparedness education is consistently delivered, not only formally endorsed.

This section extends existing EU education and resilience framing by examining the implementation architecture that determines whether policy priorities become repeatable teaching practice and equitable learning opportunities. Rather than focusing only on policy intent or programme design, the six-pillar framework reveals the structural enablers and bottlenecks that shape implementation quality, consistency, and sustainability across diverse governance contexts. Throughout the case studies, the main differences are not only in policy ambition but in how systems balance recurring trade-offs: integration versus curriculum overload, flexibility versus accountability, broad coverage versus pedagogical depth, and local adaptation versus equity of implementation.

Preparedness education across the 20 case studies is best understood not as a discrete lesson or standalone programme, but as a system of interdependent implementation conditions. Curriculum signals set expectations; school safety obligations create routine practice; teachers translate intent into pedagogy; materials and digital platforms shape what is feasible in everyday teaching; quality assurance influences consistency; strategies shape priorities and resourcing; and partnerships add technical depth and implementation support. The six-pillar framework makes this interdependence visible: similar policy ambitions produce very different results depending on how well these elements are aligned in practice.

CROSS-CUTTING FINDINGS ACROSS THE SIX PILLARS

The cross-cutting findings below synthesise patterns that are often treated separately in existing policy frameworks (e.g., curriculum, school safety, teacher development, civil protection collaboration). Bringing them together makes visible the implementation interdependencies that most directly affect scale, equity, and learning quality.

Figure 14. Emerging trends: Europe



Pillar 1: Curriculum integration is strongest when preparedness is defined as a competency pathway, not a timetable burden.

Across case studies, preparedness education is institutionalised through several distinct approaches. Some approaches establish explicit curriculum requirements or mandate a cross-cutting learning area that provides a clear institutional basis for preparedness. Others prioritise school safety obligations, such as planning, drills, and emergency routines, which ensure a universal baseline even when classroom depth varies. A third group operates within flexible or competency-based curricula, where preparedness can be locally adapted but still requires reinforcement through reference frameworks, external resources, or accountability mechanisms to avoid uneven uptake. In decentralized education systems, governance arrangements may further shape implementation consistency, with variation across regions reflecting differences in institutional capacity, local prioritisation, and support structures. The case studies suggest that curriculum approaches anchored in explicit competency progression or supported by operational requirements (such as mandatory drills and safety planning) produce more consistent implementation than approaches relying solely on flexible or optional curriculum space. Where preparedness remains entirely discretionary, delivery is more dependent on individual schools or teacher initiative.

Each pathway carries advantages and constraints. Explicit curriculum mandates and cross-cutting requirements improve visibility and universal reach, but they can add pressure to already crowded timetables and risk shallow coverage if teach-

ers are not supported. Safety-led approaches (plans, drills, routines) create a reliable baseline of practice but may privilege procedural readiness over conceptual learning unless linked to classroom progression. Flexible or competency-based approaches allow adaptation to local hazards and school context, but they require stronger guidance, curation, or accountability to avoid uneven uptake.

A consistent learning-stage dynamic runs through these models. Across ISCED 0 and ISCED 1, preparedness most often appears as procedural readiness, care routines, simple response behaviours, and emergency planning, while primary grades are more likely to extend toward hazard understanding, protective actions, first aid basics, and civic responsibility. Systems that articulate learning progression (skills and behaviours revisited and deepened over time) create more durable practice than those that leave preparedness as an occasional project or awareness campaign.

Pillar 2: Materials and tools decide whether preparedness remains an aspiration or becomes routine teaching.

In many settings, the translation of preparedness policy into classroom practice mostly depends on the availability of structured teaching materials: classroom-ready sequences, child-friendly tools, planning templates, and resources that connect learning to drills and scenario practice. Where a national actor curates and disseminates content (or provides a coherent reference framework), delivery becomes more consistent and less dependent on individual teacher motivation. The advantage of a curated national or system-level offer is lower teacher burden and more consistent messaging; the downside is that highly centralised packages can become rigid or less responsive to local hazard context if they are not designed for adaptation.

Two recurring weaknesses stand out. First, several systems exhibit ‘resource abundance but weak coherence’: many actors produce materials, agencies, municipalities, NGOs, projects, yet teachers face curation overload and inconsistent messaging. Second, digital platforms can be powerful continuity infrastructure, but only when preparedness content is clearly curated, age-appropriate, accessible, and actively supported; otherwise, platform presence does not translate into classroom use, and usage/impact often remains untracked. Digital platforms therefore create a second trade-off: they can dramatically improve reach and continuity at scale, but without curation, accessibility standards, and active teacher support, they risk functioning as repositories rather than teaching infrastructure.

Pillar 3: Teacher capability is the hinge, yet it remains the most difficult challenge to address.

Whether preparedness becomes meaningful learning or mere compliance depends on teachers' ability to convert routines into pedagogy: discussion, reflection after drills, scenario-based thinking, and sustained practice. Three workforce models recur. Some systems embed preparedness more firmly through statutory safety duties and structured in-service training aligned to mandated themes. Others build depth through specialist networks and train-the-trainer channels, effective for expertise and less reliable for universal reach. A third pattern relies on optional or localised CPD, delivered via campaigns, partners, or project cycles, which tends to produce patchy coverage.

In practice, these approaches trade off scale, depth, and consistency. Statutory duties plus structured in-service training support broader minimum coverage, but may emphasise compliance-oriented roles unless pedagogy is built in. Specialist networks can build high-quality expertise and innovation, but they do not reliably reach all teachers. Optional or project-based CPD is often feasible and locally responsive, but it is the least predictable route for system-wide equity.

Initial teacher education is often less visibly anchored than in-service learning. Capacity-building is more commonly linked to school safety plans, drills, first aid readiness, crisis roles, and incident response. Gaps are particularly evident around inclusive preparedness pedagogy (disability, multilingual/refugee contexts) and around psychosocial and trauma-informed approaches, areas that tend to become urgent after major shocks but are harder to institutionalise without repeatable training pathways.

Pillar 4: Quality assurance tends to be operationally strong and learning-light, limiting sustainability and improvement.

Inspection and monitoring most often focus on procedural compliance: the existence of plans, documentation, and drill routines. Student competencies, what children can do, are far less frequently measured. Even robust external evaluation can remain administrative, leaving the quality of teaching and learning progression largely invisible. This reflects a common systems trade-off: procedural compliance is easier to standardise and verify across schools, while student preparedness competencies are harder to define, observe, and compare. The result is that what is easiest to monitor often receives the strongest institutional attention, even when it is not the best proxy for learning quality.

Where implementation is more developed, systems often rely on continuous

improvement mechanisms, including reflection after drills, scenario exercises, after-action reviews, and use of incident and near-miss information to revise plans and practice. This creates a practical feedback loop that supports institutional learning even when learning outcomes are not formally assessed. Several cases also reveal unrealised potential in education data systems (including EMIS). While core infrastructure exists, preparedness is not yet consistently represented through consolidated indicators linking curriculum, teacher and school leader training, school practice, vulnerable learners' trajectories, and preparedness related outcomes.

Pillar 5: Strategy matters when it translates intent into responsibilities, resources, and minimum expectations.

National strategies frequently shape preparedness education indirectly through civil protection, resilience, climate adaptation, or security agendas that strengthen obligations for plans and drills and support public messaging. Education-specific strategies that define age-progressive learning outcomes, teacher competence pathways, and learning-focused monitoring for ISCED 0–1 are less common. This creates a strategic trade-off. Broader resilience, civil protection, or climate strategies can quickly strengthen preparedness obligations and public messaging across the system, but they may leave classroom learning expectations under-specified. Education-specific strategies can better define progression, pedagogy, and teacher pathways, but they require stronger coordination with civil protection actors to retain operational relevance and implementation support.

The strongest strategic configurations do three things at once: clarify roles between education and civil protection actors; finance repeatable teacher development and curated materials (often through national platforms); and set minimum expectations for schools (including planning, exercises, and review cycles), so implementation is not left to local discretion alone. Where the strategy-to-classroom chain is fragmented, preparedness is delivered through parallel initiatives and projects, with uneven reach and limited feedback into system improvement.

Pillar 6: Partnerships are universal; institutionalisation determines equity.

Civil protection agencies, emergency services, municipalities, NGOs (including Red Cross), and community organisations appear in virtually every case study as delivery partners. They add legitimacy, technical expertise, and practical reinforcement through drills, hazard mapping, workshops, and take-home resources that link school learning to household planning.

The dividing line is predictability. Routinised partnerships, stable roles, shared calendars, co-developed materials and regular training moments reduce dependence on ‘local luck’. Project-based or locality-driven engagement often produces innovation in some places and gaps in others. Inclusion is a persistent weak spot: adaptations for children with disabilities, linguistic minorities, displaced learners, and those at heightened dropout risk do not reliably emerge unless explicitly designed into tools, standards, and coordination mechanisms.

Partnerships therefore involve a recurring trade-off between innovation and predictability. Locally driven or project-based collaboration can generate highly relevant, engaging practice, but it often depends on local leadership and partner availability. Institutional partnerships reduce that variability and support equity, though they require clearer role definition, shared planning routines, and sustained coordination capacity.

ENABLING FACTORS THAT RECUR ACROSS CONTEXTS

Building on the institutional approaches and cross-case synthesis, several enabling factors emerge consistently across education systems. These are not presented as policy requirements, but as implementation conditions in systems where preparedness education is more consistently integrated into school practices. They help distinguish what allows preparedness education to function over time, not only as a policy commitment, but as an embedded and sustained component of teaching and school routine. The most resilient approaches share common architecture. They couple learning with operations, so preparedness is practiced, not merely discussed: plans, drills, roles, communication routines, and structured review reinforce classroom learning. They reduce teacher burden through curated, curriculum-linked ‘ready paths’, lesson sequences, templates, and age-appropriate resources that make implementation doable in real school time. They treat professional learning as infrastructure through accredited CPD, leadership development, e-learning options, and training moments built into the annual safety-planning cycle. They use accountability hooks, such as external evaluation criteria or inspection attention, to sustain institutional focus. And they stabilise partnerships through formalised collaboration rather than episodic visits or short projects.

Table 6 summarises enabling factors associated with more consistent preparedness education implementation.

Table 7. EU Member States Key Enabling Factors

Enabling factors	Why it matters	Illustrative country patterns
Binding policy entry points	Formal requirements ensure preparedness is consistently implemented across schools.	Italy, Poland (curriculum mandates); France (mandatory safety plans and drills); safety obligations in Croatia, Sweden, Romania, Bulgaria
Accountability and inspection mechanisms	External evaluation helps ensure preparedness is implemented and identifies gaps.	Portugal (inspection-linked evaluation); Czechia (thematic inspections)
Teacher-facing tools and materials	Ready-to-use resources reduce teacher burden and support consistent delivery.	France, Croatia, Estonia, Sweden, Bulgaria, Czechia; harmonizing role in Germany and Spain
Institutionalised partnerships	Collaboration with civil protection and NGOs translates policy into practical learning activities.	Czechia, Croatia, Romania, Poland, Portugal, Bulgaria; important in Germany and Spain
Policy reform and development windows	Emerging reforms create opportunities to strengthen and formalise preparedness education.	Spain, Estonia, Sweden, Italy, Poland

Source: World Bank.

SYSTEMIC CHALLENGES AND TRADE-OFFS

Several tensions recur. Curriculum space is crowded, so cross-curricular integration is often the only viable route; yet this same flexibility can dilute responsibility and lead to uneven depth. Teacher confidence remains uneven, especially where preparedness requires interactive pedagogy, sensitive psychosocial content, or inclusive adaptations. Resource ecosystems can be plentiful but incoherent, creating curation overload and inconsistent accessibility standards. Monitoring often privileges compliance over learning, which keeps implementation visible but pedagogical quality opaque. Governance shapes equity: decentralisation and locality-driven partnerships can produce excellence in some jurisdictions while leaving others behind.

None of these trade-offs implies a single preferred model. The comparative evidence instead suggests that different approaches solve different problems: flexibility improves feasibility and local relevance; accountability improves continuity and institutional attention; operational obligations improve baseline readiness; and explicit learning pathways improve pedagogical depth and progression. The implementation challenge is not choosing one approach but combining them in ways that reduce predictable weaknesses.

These patterns point to a central trade-off: flexibility supports feasibility and local relevance, while minimum standards support equity and continuity. Systems that balance both tend to define baseline competencies and school expectations, while keeping delivery modular enough to fit different curricula, hazard profiles, and community contexts without overloading timetables or narrowing teacher discretion excessively.

Table 7 summarises the common implementation challenges identified across the EU Member State approaches.

Table 8. EU Member States Common Challenges

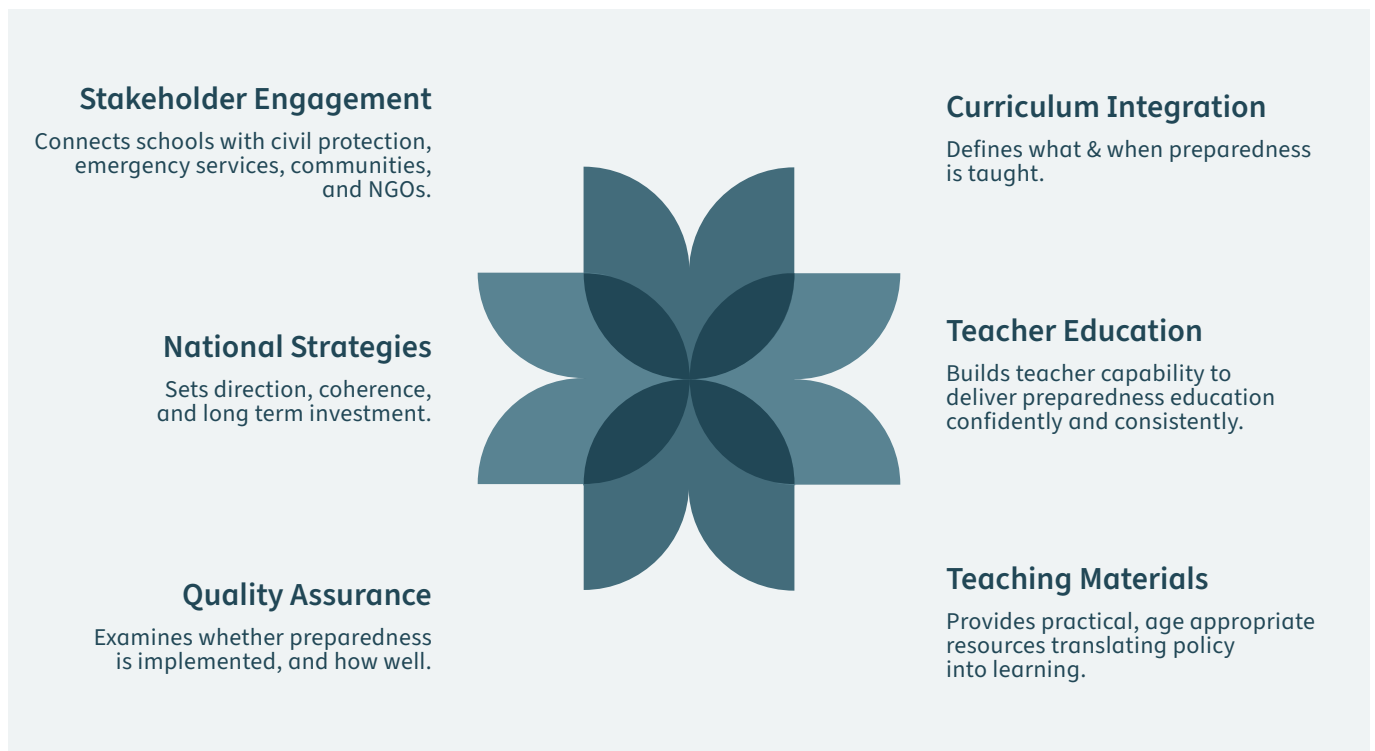
Common challenges	What this means in practice	Illustrative country patterns
Compliance-focused monitoring	Preparedness is monitored through plans and drills rather than student learning outcomes or competencies.	France, Croatia, Sweden, Bulgaria, Czechia
Implicit early years learning expectations	Early childhood and primary preparedness is framed through general safety and wellbeing goals rather than explicit hazard-related competencies.	Sweden, Croatia, Bulgaria, Estonia
Uneven teacher training and support	Teacher preparedness training is often optional, selective, or externally delivered, limiting scalability and consistency.	France, Latvia, Romania, Estonia, Bulgaria, Germany, Spain
Implementation variability	Delivery depends heavily on subnational authorities and school leadership, creating uneven implementation.	Germany, Spain, Portugal, Sweden, Romania
Fragmented resource ecosystems	Teaching materials exist but are often optional, project-based, or dispersed across providers, limiting consistent uptake.	France, Croatia, Estonia, Sweden, Bulgaria, Czechia

Source: World Bank.

INTERLINKAGES ACROSS PILLARS

The pillars operate in reinforcing loops. Curriculum change without teacher development and usable materials often yields awareness-raising rather than skill-building. Operational obligations guarantee routine practice, but their educational value depends on teachers' ability to turn drills into reflection, scenario learning, and progressive competence. Materials can function as embedded training, shaping pedagogy simply by making good practice easy to deliver. Quality assurance can institutionalise routines but becomes transformative only when evidence feeds back into material curation, CPD design, and curriculum guidance. Strategy shapes partnership effectiveness: clear roles and shared tools make collaboration scalable; fragmented responsibility keeps partnerships uneven and project driven.

Figure 15. Implementation Architecture for Preparedness Education



CONTEXTUAL DIFFERENCES THAT SHAPE WHAT ‘SCALES’

Scaling is context sensitive. Centralised systems can standardise expectations quickly but may still enable local relevance and ownership. Decentralised systems often need stronger curation, shared reference frameworks, and incentives to avoid territorial inequities. Centralised systems can standardise faster but may struggle to maintain local ownership if guidance is too rigid; decentralised systems can tailor more effectively to local contexts but need stronger shared tools, reference frameworks, and incentives if equity across territories is a policy goal. Hazard salience and recent shocks can accelerate psychosocial support, continuity planning, and political attention, yet urgency does not automatically produce coherent learning progressions without system infrastructure. Digital maturity influences whether platforms function as continuity mechanisms or simply as repositories. Finally, the maturity of civil protection–education collaboration determines whether preparedness is routine and embedded or episodic and campaign-driven.

EMERGING TRENDS

Several shifts are becoming clearer. Preparedness is moving beyond hazard awareness toward resilience competencies, including problem-solving, protective behaviours, and civic preparedness framed through self- and mutual aid across natural, technological, public health, and human-induced risk contexts. Whole-school and whole-community models are strengthening, linking classroom learning to drills, family engagement, and community planning. Psychosocial and trauma-informed dimensions are gaining visibility, particularly where disruptions are prolonged or repeated. Digital ecosystems are increasingly used for both preparedness learning and continuity during shocks, alongside a growing recognition

that curation, accessibility, and equity must be designed in. Finally, there is movement from pilots toward institutionalisation: standards, accredited CPD, routinised partnerships, and improvement cycles that sustain practice beyond project funding.

Compared with existing EU-level framing, the additional insight here is not only that these trends exist, but which system conditions appear to support them in practice (for example, curated materials, accredited CPD, routinised partnerships, and feedback loops that connect drills, review, and teaching).

IMPLICATIONS FOR SCALING GOOD PRACTICES GLOBALLY

These implications are intentionally framed at the level of implementation design. They do not restate existing preparedness or resilience commitments; instead, they translate cross-case evidence into practical system considerations for making those commitments deliverable at school level.

Three implications follow from the evidence. First, defining minimum preparedness competencies and school expectations, especially for ISCED 0–1, strengthens equity, while modular delivery preserves curriculum fit and local hazard relevance. Second, teacher support can be treated as core infrastructure: repeatable CPD pathways, guidance on turning drills into learning, leadership development, and explicit inclusion-oriented pedagogy are decisive for quality and reach. Third, systems need an accountability-and-learning loop, not only compliance: it is recommended that operational indicators be paired with pragmatic signals of learner competence and fed back into materials curation, professional learning, and continuous improvement over time.

Box 3. Chapter 3 Key Takeaways

-  **Preparedness is shifting from hazard awareness to resilience competencies** (problem-solving, protective behaviours, civic responsibility) across **all-hazards contexts**, including natural, technological, public health, and human-induced risks/threats.
-  **Whole-school and whole-community models are strengthening**, linking classroom learning to drills and family engagement and local preparedness systems.
-  **Psychosocial and trauma-informed approaches are gaining visibility**, especially in contexts of repeated disruption and crisis.
-  **Digital ecosystems are increasingly used** for preparedness learning and continuity during shocks, with growing attention to curation, accessibility, and equity.
-  **Movement from pilots toward institutionalization:** standards, accredited CPD, routinized partnerships, and continuous improvement cycles.



INTRODUCTION TO THE REPOSITORY



The Repository of Preparedness Education Good Practices and Resources is a unified tool designed to help European countries advance the Roadmap for Preparedness in Early & Primary Curricula. It brings together good practices, practical tools and case-based examples from EU Member States, UCPM Participating States, European initiatives (such as Erasmus+ and eTwinning projects) and selected international references used for learning and inspiration. The coding of each entry mirrors the main dimensions of the project, curriculum integration and classroom practice, teacher education and professional development, quality assurance and institutional tools, and stakeholder engagement and partnership approaches, so the repository can be used directly alongside the Roadmap and the rest of the report.

Each row in the repository corresponds to one practice or resource and is coded in a simple, common format: a stable ID, country, Roadmap step in the Roadmap for Preparedness in Early & Primary Curricula (1A, 1B, 2A, 2B, 3), type of entry (for example classroom resource, teacher professional development, guidance/template, strategy/framework, community engagement model, assessment tool), main hazard focus, a small set of controlled keywords, a short description and a link to the original source. The initial population of the repository was informed by the detailed country case studies and then expanded with additional European country examples and EU-level initiatives, so that coverage goes beyond the case-study countries while remaining grounded in the same analytical framework. The repository is not exhaustive and does not rate the strength of evidence for impact; instead, it highlights practices that are in use, endorsed or recognised and that show promise, leaving space for countries to assess fit and effectiveness in their own context.

The repository is intended for teachers and school leaders, policymakers and curriculum developers, disaster and civil protection agencies, teacher education providers and other partners working on preparedness in education. A core design principle is to reduce implementation burden for teachers, rather than adding new tasks or complex standalone frameworks. Resources are chosen and described with a view to practical classroom use, alignment with existing curricula and routines, and support for whole-school practice, so that teachers can pick up, adapt and use examples without starting from scratch, while policymakers and other stakeholders can see how classroom practice links to training, governance and partnerships.

Users will find a wide range of content, including classroom-facing materials (including age-appropriate materials for early childhood and primary education, such as lesson plans, activities, story-based resources, games, hazard maps and digital tools), teacher professional development and training materials (such as workshop packages, e-learning modules and safety and crisis management courses), and institutional and partnership tools (such as school emergency plans, policy templates, licensing requirements, community engagement models and monitoring tools). Together, these entries illustrate how different European systems integrate preparedness and resilience into curriculum and pedagogy, teacher learning, school governance and collaboration with families, local authorities and civil protection actors.

The repository is provided as a searchable workbook. Users can quickly filter and combine entries by country, Roadmap step, type of entry, hazard focus and keywords (covering pedagogy, format, target group, content and implementation approach) to identify relevant examples and compare approaches across countries and stages of the Roadmap. This supports the comparative synthesis in the report, by making patterns, gaps and clusters of activity visible, and provides concrete material for workshops, guidance and capacity-building, where examples are needed to illustrate each stage of the Roadmap and each dimension of the overall framework.

Although the repository is currently delivered as a structured spreadsheet, it has clear scaling potential. The same coding logic could underpin a live, online platform where European countries and partners can browse, search and contribute resources in real time; where materials are updated as new initiatives emerge; and where communities of practice can form around specific Roadmap stages, hazards or themes. In the medium term, such a platform could be hosted and curated by an EU-level actor or designated knowledge partner, with clear processes for reviewing and adding entries. This would also require simple quality-control criteria (for example, relevance, usability, source credibility, and alignment with the repository coding structure) to preserve comparability as the repository grows. Over time, this would turn the initial repository into a collaborative European hub for preparedness education, a shared, living resource for teachers, policymakers and stakeholders across the region.



CONCLUSIONS



This report demonstrates that preparedness education for early childhood and primary schooling is most effective when it is treated as a system-level function rather than a standalone curricular addition. Across the analysis of EU Member States, UCPM participating countries, and global comparators, the evidence shows that durable impact depends on alignment between policy frameworks, curriculum design, teacher professional development, institutional coordination, and quality assurance mechanisms. The Roadmap for Preparedness in Early and Primary Curricula presented in this report responds directly to these findings by providing a structured yet flexible pathway for embedding preparedness into education systems in ways that are scalable, accountable, and sustainable over time.

Opportunities to strengthen preparedness education increasingly lie at the system level rather than within individual programs. Countries that demonstrate sustained progress tend to invest in enabling factors such as clear policy mandates, stable financing, inter-ministerial coordination, professional standards for teachers, and institutionalised partnerships with disaster risk management authorities. Strengthening these foundations allows preparedness education to scale, maintain quality, and persist beyond political cycles or project-based funding, reinforcing resilience as a core function of the education system.

Close alignment between preparedness education and operational disaster risk management practice is emerging as a critical success factor. Effective systems link what children learn in classrooms with how risks are managed in communities, through shared terminology, coordinated drills, consistent messaging, and collaboration between schools and civil protection actors. This alignment enhances credibility, supports real-world application, and helps translate educational outcomes into safer behaviours and shared preparedness routines beyond the school environment.

The Roadmap for Preparedness in Early and Primary Curricula synthesises current practice, identified gaps, and emerging trends into a coherent framework that supports both immediate implementation and long-term system strengthening. By integrating institutional capacity building, cross-sector governance, resource development, teacher support, and monitoring, the Roadmap bridges the divide between education policy and disaster risk management practice. It offers Member States a practical framework to move from fragmented initiatives toward embedded, resilient education systems that consistently prepare young learners for evolving risks.

Successful implementation of preparedness education requires approaches feasible for educators and aligned with education systems capacity. Preparedness education can empower learners without increasing anxiety or psychological distress, requiring age-appropriate and trauma-sensitive pedagogical approaches. System-level constraints, including teacher shortages, increasing classroom diversity and pressures on foundational skills, mean that preparedness initiatives can remain aligned with existing education priorities. Practical, low-burden resources and accessible professional development are essential to ensure that teachers are supported rather than overburdened.

Emerging Trends and Future Directions

Preparedness education is evolving as risk profiles, learning sciences, and governance expectations rapidly change. There is a clear trajectory toward expanding disaster risk reduction, integration beyond early grades into additional levels of compulsory education, strengthening vertical coherence and reinforcing learning progression over time. There is an opportunity to more explicitly incorporate climate change adaptation, reflecting the growing recognition that preparedness **can** address both sudden-onset hazards and slow-onset, climate-driven stresses that increasingly shape children lived environments.

Emerging risks are reshaping the scope of preparedness education and reinforcing the need for adaptive frameworks. In addition to intensifying climate hazards, education systems are beginning to confront digital and cyber risks, including misinformation, cyber disruption, and the misuse of artificial intelligence, alongside ongoing geopolitical instability that affects school continuity and community cohesion. These dynamics underscore the importance of preparedness education that addresses physical, digital, and psychosocial safety in an integrated manner, while remaining developmentally appropriate for young learners.

The World Bank's RIGHT+ offers a practical foundation for adapting preparedness education and school systems to emerging risks and evolving expectations. The RIGHT+ framework can be seen as a forward-looking tool to guide adaptation as the EU faces intensifying climate hazards, growing digital and cyber risks, and continued geopolitical uncertainty. Its integrated structure supports expansion of preparedness beyond immediate physical safety to include health, psychosocial well-being, inclusion, and learning continuity, while remaining grounded in system-level policy and institutional capacity. The emphasis on the “+” is particularly relevant for future work, as it reinforces the need for ongoing monitoring, feedback, and iterative refinement. Applied consistently, RIGHT+ can help Member States align disaster resilience education with broader education reform agendas, strengthen links between disaster risk management and education practice, and ensure that preparedness remains adaptive, rights-aware, and responsive to the changes facing children, schools, and communities across Europe.

The Roadmap is intentionally designed as a living framework that must adapt as the European Union evolves. As hazards intensify, technologies advance, and societies change, preparedness education will require continuous refinement, informed by evidence, practice, and innovation in how children learn best. By combining adaptability with shared standards and institutional coherence, the Roadmap positions Member States to strengthen preparedness education not only for today's risks, but for an uncertain and complex future.



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ANNEX A: ROADMAP FOR PREPAREDNESS IN EARLY & PRIMARY EDUCATION



Aims and Background

Protecting children and minimising disruptions is urgent as European schools face more frequent and complex risks that directly affect children, communities, and education continuity. Building more resilient education systems not only protects children, but also turns preparedness from policy intent into practice. Education systems are uniquely positioned to translate preparedness from policy aspiration into everyday knowledge, skills, and behaviours that protect lives and strengthen social resilience. Yet across the EU, preparedness education remains uneven, fragmented across subjects, dependent on individual initiative, and uncertainly anchored in institutional systems. The Roadmap for Preparedness in Early and Primary Curricula (the Roadmap) presented in this report responds to this gap by offering a structured, scalable approach to integrating preparedness into early childhood and primary education in ways that are practical, evidence-based, and institutionally sustainable.

The Roadmap provides a clear and sequenced pathway for moving from policy intent to classroom practice, while strengthening the institutions that sustain implementation over time. Illustrated in Figure9, the Roadmap visualizes preparedness integration as a multi-stage journey, with distinct phases along a common path and institutional capacity building running alongside as a continuous enabling function. Rather than treating preparedness as a one-time curriculum reform, the Roadmap emphasises alignment across policy, curriculum, teacher support, and quality assurance, ensuring that each stage builds on the previous one and can be scaled within existing education systems.

The Roadmap is intentionally designed as an action-oriented framework that moves from defining standards, through understanding current practice, to implementing practical and realistic actions. As shown in Figure10, the first step for the design of the Roadmap focused on defining standards by clarifying what learners should know and be able to do during emergencies, the essential skills teachers need to teach preparedness confidently, and the policy reforms required to embed preparedness into curricula at scale. The second step deepens understanding by analysing EU preparedness frameworks and survey findings, examining case studies across EU Member States and UCPM participating countries, and drawing lessons from selected international reference approaches. The third step translates evidence into action by prioritising high-impact measures and teacher guidance, sequencing short-, medium-, and long-term actions, and linking implementation to measurable indicators that support continuous improvement.

The Roadmap converts existing knowledge and notable practices into a practical guide tailored to EU education systems. As summarised in Figure9, it supports EU Member States in strengthening preparedness teaching from early childhood through upper primary education by translating policy commitments into concrete steps across curriculum design, teacher preparation, classroom practice, and system-level quality assurance. The Roadmap aligns education objectives with disaster risk management and child protection priorities, reinforcing preparedness as a foundational component of education and long-term resilience rather than a standalone intervention.

Together, the Roadmap establishes a coherent foundation for embedding preparedness into education systems at scale. By linking standards, evidence, and action, and by placing institutional capacity at the centre of reform, it enables Member States to move beyond fragmented initiatives toward resilient education systems that equip children with the knowledge, skills, and behaviours needed to navigate an increasingly uncertain risk environment. The chapters that follow provide detailed guidance, tools, and country examples to support implementation across each stage of the Roadmap.

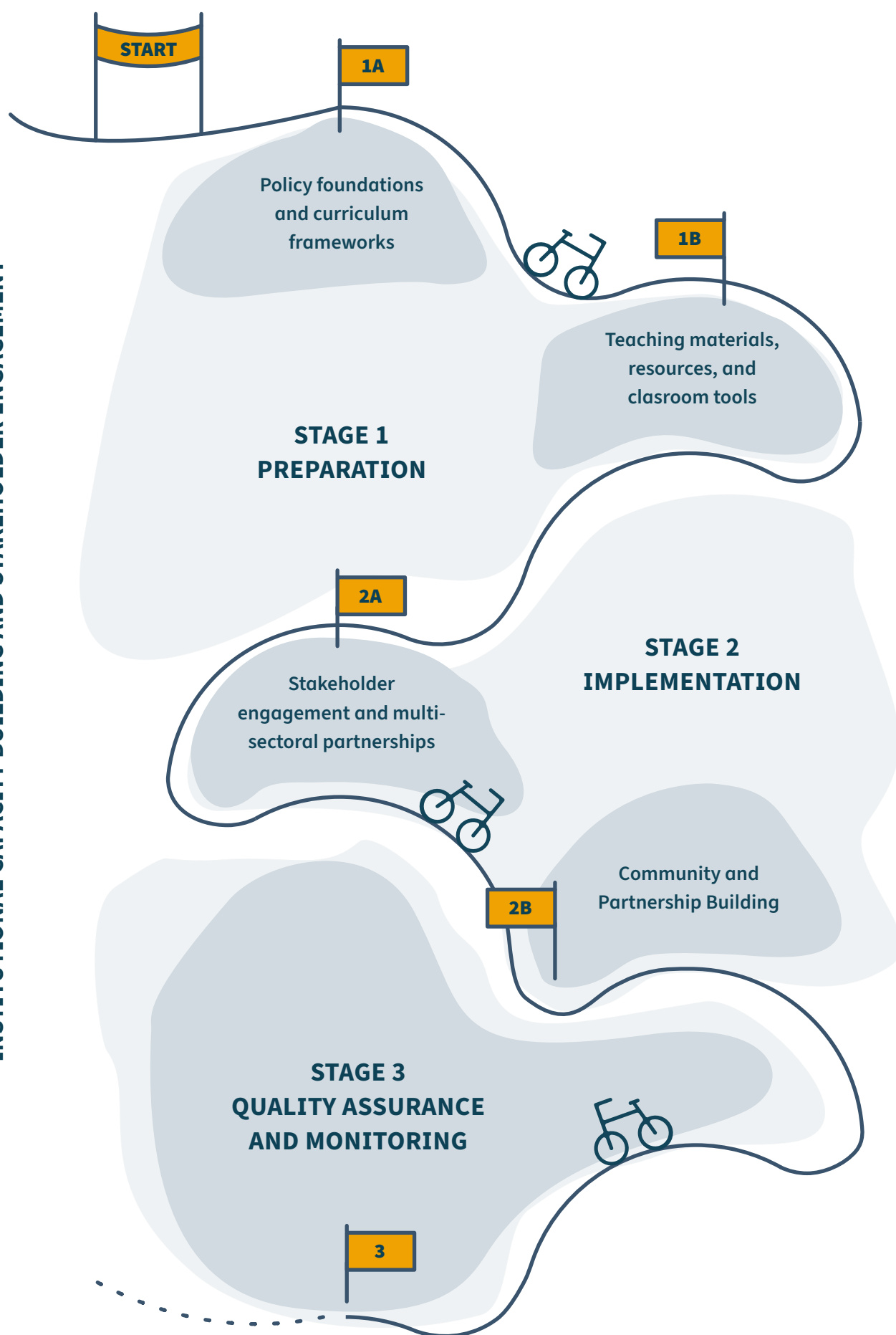
Figure 17. The strategy towards developing the action-oriented roadmap

Define the standards	Understand the EU's preparedness vis-a-vis international references	Develop practical and realistic actions to ensure long-term success
What should learners know? Clear actions during drills and emergencies. Essential teacher skills: Ability to teach preparedness confidently and integrate it into lessons. Policy needs: Reforms to embed preparedness in curricula at scale.	Analyze EU framework and survey results: PrepareEU, Eurydice, and Teacher Surveys. Research EU cases: 16 case studies with local expertise. Review global models: 4 international comparators	Plan for scale: Sequence short-, medium-, and long-term actions for curriculum integration. Embed monitoring: Link actions to measurable indicators for continuous improvement.

Figure 18. Key goals for the Roadmap

 ACTIONABLE From notable practices to actionable steps: policy, curriculum, teacher support, and QA.	 TAILORED Tailored for EU countries to integrate into existing education systems.	 ALIGNED Aligns education with disaster risk management and child protection for long-term resilience.
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INSTITUTIONAL CAPACITY BUILDING AND STAKEHOLDER ENGAGEMENT



Grounding the Roadmap in Competencies of Preparedness Education

The Competencies of Preparedness Education, presented in Chapter 2, provides this foundational reference for what preparedness education should achieve for learners. There are eight areas and associated competencies that apply for the three phases of the crisis cycle: Prevention, Response, and Recovery. Each stage of the Roadmap is designed to progressively develop the competencies, supporting learners from foundational awareness in early childhood to expertise and collective action in upper primary level. Stage 1 in the roadmap includes curriculum development that should directly ensure learning objectives are oriented to help students achieve the competencies. And Stage 3 in the roadmap should measure the learning outcomes related to resilience competencies. Looking ahead, the EU may wish to consider developing a parallel resilience competency framework for professional groups, including teachers, school leaders, civil protection professionals, and others.

Integrating Institutional Capacity Building

Institutional Capacity Development (ICB) is a cross-cutting requirement at every stage of the Roadmap and a decisive factor for achieving durable impact. Early stages call for institutions that can support policy coordination, joint planning, and evidence-based decision-making across education and disaster risk management authorities. As implementation progresses, ministries, curriculum agencies, teacher and school leader training institutions, and local education authorities require strengthened technical, managerial, and delivery capacities to translate policy commitments into consistent and high-quality classroom practice.

Sustained preparedness education depends on deliberate investment in institutional systems, not only in individual skills. This includes clarifying mandates, strengthening inter-ministerial coordination, upgrading systems for teacher training and professional support, and building robust data and monitoring capabilities. As programs scale, institutions need the capacity to manage quality assurance, financing, and continuous improvement. By aligning capacity building with each stage of the Roadmap, Member States can ensure that preparedness education is embedded within resilient and adaptive education systems rather than reliant on short-term projects or individual champions.

Integrating Stakeholder Engagement

Stakeholder engagement is a cross-cutting requirement at every stage of the Roadmap and a decisive factor for achieving lasting ownership and relevance of preparedness education. Effective engagement recognises that preparedness education goes beyond the classroom to include families, non-formal educators, community actors, and learners themselves. The stakeholders all play an essential role in reinforcing preparedness knowledge, skills, and behaviours across formal and informal settings.

Sustained stakeholder engagement depends on deliberate and structured inclusion throughout the Roadmap, from the co-design of curricula and learning materials, through to implementation, monitoring, and continuous improvement. This means creating formal opportunities for practitioners, civil society organisations, parent associations, and community partners to contribute their expertise at each stage. It is important to recognise that social partners, including teacher trade unions and employer organisations, are distinct from civil society actors and should be engaged through their own dedicated mechanisms, given their specific role in shaping employment conditions, professional standards, and collective agreements within the education system. Learners, including learners with disabilities, can be recognised as active participants in this process, not only as recipients of preparedness education. By embedding stakeholder engagement as a continuous principle rather than a one-time consultation, Member States can ensure that preparedness education reflects the diverse needs and experiences of the communities it serves, and that it benefits from the broad ownership needed to sustain implementation over time.

Scope and Adaptability of the Roadmap

The Roadmap is designed as a flexible strategic framework that EU Member States can adapt to diverse national, subnational, and hazard-specific contexts. It is not intended as a prescriptive blueprint, but as a common structure and set of principles that countries may apply in full or selectively depending on their level of readiness, institutional arrangements, and policy priorities. This flexibility allows Member States to engage with the Roadmap at different entry points while maintaining a coherent approach to preparedness education.

The framework is deliberately adaptable within countries to reflect varied geographies, risk profiles, and implementation capacities. Member States can tailor approaches across urban and rural settings and address differing hazard contexts, including floods, heatwaves, earthquakes, cyber-attacks, or wildfires, sequencing actions in line with institutional capacity and system maturity. By enabling adaptation across hazards, geographies, and stages of development, the Roadmap supports practical and context-sensitive integration of disaster resilience into education systems while remaining aligned with shared EU objectives and international good practice.

Strategic Sequencing and Potential Bottlenecks

This Roadmap outlines a comprehensive ecosystem for preparedness education, but implementation can be sequenced strategically. It is recommended that Member States prioritise resolving foundational bottlenecks to maximise the impact of subsequent investments.

Institutional Capacity Building (ICB) can be treated across all tiers as an ongoing priority, not a one-off activity. ICB entails building internal systems, governance, and expertise within the Ministries of Education and partner agencies. In Stage 1, ICB emphasises administrative capacity to draft policy, set standards, and manage disaster risk reduction budgets. In Stage 2, it shifts to operational capacity, the ability to independently manage professional development networks, deliver integrated lesson plans at scale, and maintain multisector partnerships without external technical assistance.

There are three critical bottlenecks:

- 1. Mandate gap and legal foundation (Stage 1a):** Preparedness education often stalls because it lacks a formal legal basis. It is recommended that preparedness be explicitly incorporated into education policies, regulations, and budgets. Without a legal mandate and appropriation, preparedness remains an optional activity rather than a core state function.

When a national mandate is not possible, consider piloting the legal framework at the provincial/state level. Another alternative is to focus on the budget to accelerate policy formalisation.

- 2. Institutional silos and coordination (Stage 1a):** Effective preparedness requires both hazard expertise and pedagogical delivery. Formal interministerial mechanisms (e.g., Memoranda of Understanding, joint directives, and shared workplans) are useful to provide the institutional scaffolding needed to sustain work beyond pilots.

When there are challenges creating coordination groups that break silos, consider embedding a preparedness education coordinator within existing platforms, or create informal technical groups that lower the stakes but create incremental steps towards collaboration.

- 3. Pedagogical burden and curriculum integration (Stage 1b):** To avoid implementation challenges given limited teacher capacity, prioritise integration over addition: audit existing subjects to embed preparedness content and competencies rather than creating standalone, competing subjects.

Where teacher capacity is limited, it is possible to develop short and flexible learning modules that teachers can implement during theme-based observances on issues related to safety, resilience, and sustainability (e.g., International Day for Disaster Risk Reduction), without increasing instructional burden. Another strategy is to consider embedding preparedness education into project-based learning or extra-curricular activities first to engage students

and create topic familiarity without formality. An additional strategy to alleviate this pressure is to reinforce the education system with professionals beyond the classroom teacher. For example, Occupational Safety and Health (OSH) experts, already operate within school environments and hold relevant expertise in risk assessment and safety procedures. Another example is including school psychologists who can support the socio-emotional dimensions of preparedness education and provide guidance on trauma-sensitive approaches. Encouraging or formalizing their involvement in preparedness education delivery alongside teachers could reduce the burden on educators while also strengthening the quality of teaching content.

While following the Roadmap as described is encouraged, Table 9 highlights the most critical items to address first.

Table 9 - Prioritisation of Roadmap Implementation

Priority Tier	Focus Area	Objective	Roadmap Component
Tier 1: Foundational	Mandates and Basic Safety Preparedness	Establish the policy and budget framework to ensure basic preparedness for all schools.	 Legal Policy Mandate  Joint directives and inter-ministerial agreements  Dedicated days and extracurricular activities committed to preparedness
Tier 2: Sustaining	Capacity and Quality	Transition from pilots to programs- ensure teachers are capacitated and funding is predictable.	 Teacher Training  Standard integrated lesson plans  Domestic Budget Lines
Tier 3: Advancing	Innovation and Agency	Achieve Preparedness Culture: Foster student agency and utilise cutting-edge pedagogical tools.	 Playful Activism  Micro-credentials  Student-led project initiatives  Innovative assessment mechanisms

STAGE 1: Curriculum Preparation

OVERVIEW OF STAGE 1

Stage 1 establishes the policy, curricular, and resource foundations required to systematically integrate preparedness into early childhood and primary education systems. It focuses on creating an enabling environment in which preparedness is embedded within education policy and curricula and reinforced through high-quality, accessible teaching materials. This stage emphasises alignment, institutional readiness, and coherence across levels of the education system, recognising that Member States may enter the Roadmap at different points. This work is underpinned by a commitment to build the internal capacity of educational bodies to manage this mandate. Curriculum preparation can also consider linkages with adult and intergenerational learning where appropriate, as preparedness knowledge is most durable when it connects learning across generations. Engaging families and community members in the design process helps ensure that school-based content can be meaningfully reinforced at home.

This stage comprises two components:

STAGE 1A: POLICY FOUNDATIONS AND CURRICULUM FRAMEWORKS

Policy Foundations and Curriculum Frameworks, which establishes the policy and governance architecture required to integrate preparedness across early childhood and primary curricula, ensuring equity, sustainability, and systemic coherence.

STAGE 1B: TEACHING MATERIALS, RESOURCES, AND CLASSROOM TOOLS

Teaching Materials, Resources, and Classroom Tools, which ensures the widespread availability of high-quality teaching materials and classroom tools through open, multilingual, and accessible distribution channels.

STAGE 1A: POLICY FOUNDATIONS AND CURRICULUM FRAMEWORKS

Stage 1A (see Figure12) focuses on anchoring preparedness within national education systems through clear policy mandates, governance arrangements, and curriculum frameworks. The objective is to ensure that preparedness is not treated as an add-on, but as a core and equitable component of learning outcomes from early childhood onward.

CURRICULUM PREPARATION

Policy Foundations and Curriculum Frameworks

Establish the policy and governance basis to integrate preparedness across early childhood and primary curricula, ensuring equity and sustainability.

SET THE FOUNDATION

Ensure education sector plans and budgets integrate requirements for preparedness.

COORDINATE PLANNING

Create a joint directive between education and disaster agencies.

EMBED IN CURRICULUM

Formalize integration of preparedness basic competencies for each grade.

1.A.1. Set the Foundation: Integrate Preparedness into Education Sector Planning and Budgets

Establishing preparedness within national education policy, planning, and financing frameworks creates the foundation for sustained and system-wide implementation. Effective integration is typically anchored in national education policies, legal frameworks, or binding sector strategies that explicitly recognise preparedness as part of the education mandate. This formal recognition signals political commitment, clarifies institutional responsibility, and provides a basis for accountability across levels of government. In practice, preparedness may be referenced in education laws, national education strategies, or medium-term sector plans, aligned with broader national resilience, climate adaptation, or civil protection strategies.



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Education sector planning and budgeting translate policy commitments into operational reality and sustained delivery. When preparedness actions are embedded in sector plans, they can be linked to specific programs, activities, and performance indicators, enabling systematic implementation and monitoring. Clearly identifiable budget allocations for preparedness-related activities such as curriculum development, teacher training, drills and learning materials support predictability of financing and reduce reliance on short-term or external funding. In decentralised systems, this clarity also enables subnational authorities to plan, co-finance, and implement preparedness activities in line with national priorities.

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Indicative outcomes associated with this action area typically include:

- Preparedness is explicitly referenced in national education policies, laws, or binding strategies.
- Preparedness actions are incorporated into education sector plans with defined programs and indicators.
- Budget allocations for preparedness-related activities are identifiable, supporting continuity and internal administrative capacity.

1A.2. Coordinate Planning: Establish Joint Governance and Directives Across Sectors

Effective preparedness education depends on structured and sustained coordination between education authorities and disaster risk management institutions. Cross-sector collaboration is most effective when supported by formal governance arrangements that define shared objectives, roles, and decision-making processes. Joint directives, memoranda of understanding, or inter-ministerial committees are commonly used instruments to align education policies and system delivery capacity with policies and technical expertise in disaster risk management and civil protection.

Formal coordination mechanisms help institutionalise collaboration beyond individual projects or emergency events. By clarifying responsibilities for curriculum input, teacher training, drills, data sharing, and public communication, these arrangements reduce fragmentation and improve consistency of implementation. They also serve as critical components of institutional capacity building, enabling routine collaboration, joint planning, and coordinated monitoring across sectors at national and subnational levels.

The European Union may wish to consider developing a dedicated resilience competency framework for professional groups, including teachers, school leaders, civil protection professionals, and other rele-

vant actors. Drawing on the ResilientComp model developed for learners in Chapter 2, a framework would provide a shared reference for professional development, inter-sectoral training, and certification across Member States, strengthening the systemic foundations of preparedness education.

Indicative outcomes associated with this action area typically include:

-  A joint governance mechanism is established between education and disaster risk management authorities.
-  Roles, responsibilities, and coordination processes are formalised and routinely applied.
-  Cross-sector collaboration supports consistent implementation and system-level accountability.

1A.3. Embed in Curriculum: Formalise Preparedness Competencies Across Grade Levels

Embedding preparedness within formal curriculum frameworks ensures continuity, progression, and durability of learning outcomes. Preparedness is most effective when integrated into official learning outcomes for early childhood and primary education, with a clear progression across grade levels. This approach allows children to build foundational awareness at an early age and to deepen knowledge, skills, and behaviours over time, rather than relying on one-off activities or external programs.

Curriculum integration is most durable when aligned with broader education reform processes and long-term resilience objectives. Linking preparedness competencies to national learning standards, assessment frameworks, and curriculum review cycles reduces the risk that content is deprioritised over time and supports systematic monitoring of implementation and learning outcomes. This alignment also reinforces preparedness as a core element of education quality and relevance.

The World Bank’s RIGHT+ approach provides a system-level policy framework that helps governments anchor preparedness and learning quality within education sector strategies and investment planning. RIGHT+ offers a clear, evidence-based structure for integrating preparedness into national education policies, standards, and planning instruments. RIGHT+ stands for Resilient, Inclusive, Green, Healthy, and Teaching-and-learning-conducive, with the “+” emphasising monitoring, evaluation, and continuous improvement. By explicitly articulating these dimensions, the framework helps formalise preparedness as part of the education mandate, linking school safety, risk-informed planning, inclusion, environmental sustainability, health, and learning quality within a single policy lens. RIGHT+ supports clarity of roles and accountability at the system level while allow-



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ing flexibility in implementation across regions and school contexts. It enables governments to align education sector plans, infrastructure standards, and budgetary priorities with preparedness objectives in a way that is coherent, scalable, and equitable across early childhood and primary education systems³⁴.

**STAGE 2
IMPLEMENTATION**

International evidence shows that effective preparedness education relies on structured learning progression rather than standardised content. The UNESCO and UNICEF report *Towards a Learning Culture of Safety and Resilience* emphasises that countries do not need identical lesson plans or materials to achieve meaningful integration. Instead, what matters is a shared structure that defines how preparedness competencies develop over time. Mapping exercises presented in the report illustrate how learning objectives can progress from basic awareness and simple protective actions in early childhood, to a more complex understanding of risks, responsibilities, and collective action in primary education. This approach allows preparedness to be aligned with national curricula, institutional arrangements, and hazard contexts, while maintaining coherence across grade levels and education systems³⁵.

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International frameworks highlight the importance of both vertical and horizontal integration of preparedness within education systems. Vertical integration refers to the deliberate sequencing of learning objectives across age groups, ensuring that preparedness knowledge and skills are reinforced and expanded as children progress through early childhood and primary education (see Figure 13). Horizontal integration, by contrast, involves embedding preparedness concepts across multiple subjects such as science, social studies, language, and life skills, rather than confining them to a standalone course. UNESCO and UNICEF's analysis shows that systems combining both approaches are better positioned to sustain learning, support teachers, and avoid curriculum overload. For policymakers, these findings underscore that preparedness integration is primarily a curriculum design and system alignment challenge, not a content-volume challenge³⁶.

³⁴ World Bank. *RIGHT+ Framework for Physical Learning Environments: Maximizing Investment Impact in Education Spaces and Facilities*. Washington, DC: World Bank, 2025. <https://www.worldbank.org/en/topic/education/publication/right-framework-physical-learning-environments>.

³⁵ UNESCO and UNICEF. *Towards a Learning Culture of Safety and Resilience: Technical Guidance for Integrating Disaster Risk Reduction in Education Systems*. Paris and New York, 2022.

³⁶ UNESCO and UNICEF. *Towards a Learning Culture of Safety and Resilience: Technical Guidance for Integrating Disaster Risk Reduction in Education Systems*. Paris and New York, 2022.

Figure 20. Integrating DRR into curriculum by age group

An Example of Vertical Integration of the Concept of Vulnerability	
AGES 4-7	- Safe and dangerous spots at school and community - Danger from storm winds, flood waters and ground shake - Basic safety habits to avoid dangers
AGES 7-11	- School/community mapping on safe and dangerous spots - Past natural disaster impacts in local communities - Threats to local food sources
AGES 11-14	- Past natural disasters nationally/regionally - Concept of vulnerability - Environmental degradation and pollution as vulnerability driver
AGES 14-18	- Dynamics between economic, social, environmental and physical vulnerabilities - Interrelationships between hazards, vulnerabilities and capacity - Gender and disaster - Poverty and disaster

Source: UNESCO, UNICEF, *Towards A Learning Culture of Safety and Resilience*

Preparedness education is most effective when woven throughout the school day rather than isolated in occasional safety lessons. Thoughtful integration makes preparedness relevant, reinforces learning through multiple contexts, and avoids the perception that safety is disconnected from academic learning. This integration approach ensures preparedness becomes part of students' conceptual framework rather than a disconnected set of rules to memorise.

To move beyond memorisation, it is recommended that curriculum frameworks adopt the interconnected curriculum model detailed in Chapter 2.1. This approach shifts the focus from passive compliance to active agency, emphasising three dimensions of student capability:

- 🍌 **Cognitive Competence:** Understanding the why behind safety protocols.
- 🍌 **Behavioural Capability:** Practiced skills that remain accessible under stress.
- 🍌 **Socio-emotional Resilience:** The ability to regulate emotions and support peers.

These competencies typically include an understanding of local hazards, safe behaviours during emergencies, problem-solving and decision-making skills, and an appreciation of collective and proactive community-based risk reduction. International guidance, including frameworks developed by UNESCO and UNICEF, provides practical examples of how preparedness competencies can be structured by age group while remaining adaptable to national curricula and local risk contexts. See Chapter 2.1 for more information.

Curriculum development processes can also create meaningful opportunities for learner participation. Children, including learners with disabilities, bring valuable perspectives on how preparedness content is experienced and understood, and their active involvement in curriculum consultation strengthens both the relevance and inclusivity of what is designed.

Integration Examples:

- 🍌 **Science:** Study weather systems while discussing storm preparedness; explore geology while learning earthquake science; investigate fire chemistry alongside fire safety.
- 🍌 **Mathematics:** Calculate evacuation times; analyse statistics on different hazard types; map evacuation routes and measure distances to safe zones; graph emergency supply consumption rates.
- 🍌 **Language Arts:** Write procedural texts explaining safety protocols; create public service announcements about the benefits of preparedness; interview family members about their emergency experiences; analyse news reports about disaster events.
- 🍌 **Social Studies:** Study community resilience and recovery after historical disasters; map local hazard zones and vulnerable populations; research Indigenous and traditional knowledge about sustainability and awareness.
- 🍌 **Arts:** Design evacuation route signage; create visual safety reminders; develop songs or mnemonics for remembering procedures; role-play as emergency responders and other stakeholders in the DRM system.

Indicative outcomes associated with this action area typically include:

- 🟡 Preparedness competencies are embedded in the formal curriculum for each grade in early childhood and primary education.
- 🟡 Curriculum implementation is ongoing and aligned with long-term national or subnational resilience plans.
- 🟡 Monitoring frameworks enable tracking of curriculum coverage and learning outcomes over time.
- 🟡 Learners, including learners with disabilities, are meaningfully consulted during curriculum design and review processes.

Note: All-Hazards Approach for Planning

As noted in Chapter 2.4, EU Action 29 is an integrated all-hazards approach that expands the traditional focus on natural hazards (earthquakes, floods) to include human-induced and hybrid threats, or hazards arising from human intent, negligence, or technological failure. At the policy design stage, it is recommended that governments include the following actions:

- 🟡 **Broaden the risk inventory** beyond natural hazards to include man-made and digital threats.
- 🟡 **Apply a unified "logic of safety"**: The same preparedness principles (prevention, detection, response, recovery) apply whether the hazard is a hurricane or a cyber-attack.
- 🟡 **Embed flexibility**: It is recommended that policies enable schools to adapt protocols to local risk profiles (e.g., urban terrorism risk vs. proximity to nuclear facilities).

Key Human-Induced Risks for Education Sectors

When drafting national strategies or disaster preparedness frameworks, it is recommended that policymakers explicitly address the policy considerations indicated in Chapter 2.4 for terrorism and hybrid threats, cyber hazards, and nuclear and radiological accidents.

Action Points for All-Hazards Planning in Stage 1A

- ✓ **Legal mandate**: Explicitly reference 'human-induced hazards' in national DRR laws and education codes.
- ✓ **Institutional ownership**: Assign clear roles (e.g., Ministry of Education leads curriculum; national cybersecurity agency advises on digital threats)
- ✓ **Resource allocation**: Budget for teacher training on emergency lock-downs, online-safety, etc., secure IT infrastructure (firewalls, age-appropriate content filters, security audits)

✓ **Stakeholder consultation:** Engage emergency services, cybersecurity experts, child psychologists, parent associations, families (parents and carers), and non-formal educators during policy drafting because they have a central role in reinforcing preparedness learning beyond the formal school environment.

Country Case Studies: Policy and Curriculum

Spotlight on Italy: Case study and review

Italy demonstrates how preparedness can be institutionalised through a clear national mandate within compulsory education. Basic civil protection education has been formally introduced into the national education program through law n. 92/2019, establishing preparedness as a recognised responsibility of the education system rather than an optional or extracurricular activity. This policy-level inclusion provides clarity for schools, teachers, and local authorities by signalling that preparedness knowledge and behaviours are part of expected learning outcomes for children. At the same time, the national framework allows flexibility in implementation, enabling regions and schools to adapt teaching approaches to local hazard profiles and institutional capacities. For education leaders, this approach illustrates how embedding preparedness in national policy and curriculum frameworks can create consistency and accountability while avoiding overly prescriptive instructional models³⁷.

Italy's experience during the first year of implementing Law 92/2019 provides valuable lessons for education systems establishing similar mandates. A recent implementation review highlights areas where the reform's ambitious vision met practical realities, offering insights that can strengthen both Italy's ongoing implementation and inform other countries' policy design. While the law established a mandatory 33-hour annual requirement, the Ministry's broad guidelines left each school to independently develop its approach, resulting in significant variability between institutions and even classes. Key learning opportunities identified include:

-  **Coordinating shared teaching responsibility:** The prevalent "trans-curricular" model where 2-5 teachers (rather than having one dedicated teacher) shared civic education across subjects created both opportunities for integration and challenges in coordination; clearer guidance on collaborative teaching structures could enhance coherence.
-  **Developing common assessment standards:** Without Ministry-provided evaluation rubrics or standardised grading criteria for assessing students' civic education competencies, including their knowledge of Constitution, Sustainable Development, and Digital Citizenship, schools struggled to grade consistently, such that some students received multiple assessments from different subjects while others received only one or two; establishing shared frameworks while preserving flexibility remains an ongoing need.

³⁷ Italian Department of Civil Protection. *Civil Protection and School Education Framework*. Rome, 2019.

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🔸 **Strengthening practical teacher support:** The 10-hour coordinator training focused heavily on theoretical content teachers already knew rather than hands-on pedagogical methods; the required 30-hour in-school training was largely not organised, revealing the importance of sustained, practice-oriented professional development.

**STAGE 2
IMPLEMENTATION**

🔸 **Allocating adequate resources:** The ‘zero-cost’ approach (a policy requiring schools to implement the reform without new funding), with only €4 million annually for approximately one million teachers, meant taking hours from existing subjects without additional staff or materials; this highlighted the resource requirements necessary for sustainable implementation.

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🔸 **Building on existing expertise:** The reform proceeded somewhat separately from Italy's established Global Citizenship Education frameworks (existing programs teaching students about global issues, human rights, and civic responsibility) and resources, representing a missed opportunity for leveraging proven approaches and accelerating adoption.

These first-year experiences demonstrate that translating national policy into effective classroom practice requires ongoing refinement, adequate support structures, and learning from implementation challenges to continuously improve preparedness education outcomes.³⁸

³⁸ Dondi, Claudio, Edoardo Gimigliano, Irene Baraldi, and Chiara Banaudi. "T1.2_Law-92_2019-ITALY-IIHL." CITIZED Project. Italy, 2023. https://www.citized.eu/wp-content/uploads/2023/02/T1.2_Law-92_2019-ITALY-IIHL.pdf.

STAGE 1B: TEACHING MATERIALS, RESOURCES, AND CLASSROOM TOOLS

Stage 1B (see Figure14) focuses on ensuring that teachers and schools are equipped with practical tools to deliver preparedness learning in line with policy and curriculum frameworks. The availability, quality, and accessibility of teaching materials are critical determinants of effective classroom implementation.

Figure 21. Overview of action items for Stage 1B

Source: World Bank.

CURRICULUM PREPARATION Teaching Materials, Resources, and Classroom Tools Ensure wide availability of teaching materials and classroom tools through open, multilingual, and accessible distribution channels.
SET THE QUALITY STANDARDS Create an EU development cycle for practical, engaging materials like guides, games, and drills.
VALIDATE ACROSS COUNTRIES Use checkpoints to ensure consistency in curriculum integration.
SHARE OPENLY Launch and maintain an EU repository for easy adoption and adaptation.
ENSURE ACCESS Translate into all EU languages and meet accessibility requirements with clear timelines.
DIVERSIFY PEDAGOGICAL APPROACHES FOR TRANSFORMATIVE LEARNING Implement a variety of creative approaches to increase adaptive thinking, collaborative problem-solving, and genuine student agency.

Set Quality Standards: Establish an EU Development Cycle for Preparedness Materials

Clear quality standards and a structured development cycle are essential to ensure preparedness materials translate curriculum expectations into safe, effective classroom practice. In early childhood and primary education, preparedness is most effective when materials are developed as a coherent suite rather than as isolated products. Common material types include curriculum-aligned textbooks and readers, teacher guides and lesson plans, age-appropriate games and simulations, digital and mobile learning assets, community mapping activities, and clearly defined school-based drills and evacuation protocols. Together, these tools support consistent messaging, progressive learning, and practical application across grade levels.

Quality assurance focuses on pedagogical effectiveness, inclusivity, and technical accuracy rather than information delivery alone. Effective materials articulate clear learning objectives, reflect age-appropriate progression, and promote active and experiential learning suited to young children. Inclusivity is addressed through design that supports learners with disabilities, linguistic diversity, and varied learning contexts. Technical validation by civil protection authorities or scientific bodies helps ensure accuracy and consistency with risk management guidance, while safeguarding addresses psychosocial sensitivity and the safe conduct of experiential activities such as simulations and drills.

Indicative outcomes associated with this action area typically include:

- Preparedness resources are formally developed through recognised institutional processes.
- Materials align with curriculum standards and learning outcomes for early childhood and primary education.
- Quality standards provide a common reference for safety, inclusiveness, and pedagogical soundness.

Validate Across Countries: Use Checkpoints to Ensure Consistency and Coherence

Cross-country knowledge sharing mechanisms support consistency in preparedness education while allowing adaptation to national and local contexts. Checkpoints embedded within the development cycle help ensure that materials align with agreed curriculum integration principles, reflect shared learning objectives, and maintain comparable quality across Member States. These mechanisms may include peer review processes, peer review technical panels, or alignment checks against EU-level frameworks and international best practice.

Peer review processes strengthen institutional confidence and facilitate scalability. By ensuring that materials meet agreed standards for pedagogy, technical accuracy, and safeguarding, checkpoints reduce duplication of effort and support mutual learning across countries. At the same time, they preserve flexibility by allowing Member States to adapt content to local hazard profiles, cultural contexts, and curricular structures without compromising overall coherence.

Indicative outcomes associated with this action area typically include:

- Preparedness materials demonstrate consistency in curriculum integration across countries.
- Peer review mechanisms support quality assurance while enabling contextual adaptation.
- Cross-country learning reduces fragmentation and duplication of resource development.

Share Openly: Establish and Maintain an EU Repository for Preparedness Resources

Open and institutionalised sharing mechanisms are critical for uptake, adaptation, and long-term sustainability of preparedness materials. Open-access platforms reduce administrative barriers for schools and teachers and allow materials to be adapted to local contexts. At the EU level, a centralised or federated repository can serve as a common access point for validated resources, enabling Member States to share, curate, and adapt materials aligned with national curricula.

Formal endorsement and integration with existing systems support routine classroom use. When resources are endorsed or recommended by education authorities, teacher confidence increases and integration into daily instruction becomes more likely. Interoperability with national learning management systems and alignment with curriculum guidance further support sustained use and reduce the burden on educators.

Indicative outcomes associated with this action area typically include:

- Government-endorsed preparedness resources are accessible through sustainable digital platforms.
- Teachers can easily adopt and adapt materials aligned with mandated learning outcomes.
- Resource sharing supports scalability and continuous improvement across Member States.

Ensure Access: Translate and Adapt Materials to Meet Linguistic and Accessibility Needs

Equitable access requires preparedness materials to be available in multiple languages and accessible formats that reflect the diversity of EU school populations. In addition to national languages, materials increasingly benefit from translation into widely spoken migrant and minority languages, reflecting the high proportion of children from migrant, refugee, and displaced backgrounds in many education systems. This approach helps ensure preparedness messages reach families and communities beyond the classroom.

Accessibility standards further strengthen inclusion and reach. Materials designed for learners with disabilities, low-bandwidth environments, and offline use are particularly important in underserved or rural areas. Clear timelines and dedicated resources for translation, adaptation, and periodic updates help maintain relevance as risk profiles, demographics, and curricula evolve.

Indicative outcomes associated with this action area typically include:

- Preparedness materials are available in multiple languages, including migrant and minority languages.
- Resources meet accessibility standards for learners with disabilities and diverse access needs.
- Materials reflect local hazard profiles and encourage family and community engagement.

Diversify Pedagogical Approaches for Transformative Learning

While emergency drills serve an important function in establishing procedural memory, they represent only one component of comprehensive preparedness education. Transformative preparedness learning requires pedagogical approaches that develop adaptive thinking, collaborative problem-solving, and genuine student agency. The following methods move beyond compliance-oriented drill culture toward capability-building education.

Scenario-Based Learning: Preparing for the Unpredictable

Real emergencies rarely unfold exactly as practiced. Effective preparedness education uses scenario-based learning to develop adaptive decision-making under uncertainty. Rather than drilling a single correct response, teachers present students with ambiguous situations requiring judgment:

Example in classroom implementation:

- Simple variations for younger students: "Our usual exit is blocked by fallen furniture. What should we do?" Students discuss options, evaluate risks, and explain their reasoning.
- Layered complexity for older students: "There's been an earthquake. The main stairwell is clear, but you hear someone calling for help from a classroom. Your teacher is unconscious. What factors do you consider? What do you do?"
- "Choose Your Path" activities: Students work in small groups through branching scenarios where each decision leads to new circumstances. The focus is on reasoning quality, not finding the single "right" answer.

This approach builds transferable thinking skills in which students learn to assess situations, identify relevant information, evaluate options, and make defensible decisions under pressure.

Games and Interactive Simulations

Building on the scenario approach, games and interactive simulations are more complex, structured activities that invite students to play through fictional crisis narratives.

A game is a structured type of play. Usually a game will feature rules, goals, interactive mechanisms, feedback in response to player decisions, and a varying degree of entertainment or fun. There are many different formats of games and simulations, including board games, video games, online games and card games. They can be played solo or with other players, either competitively or cooperatively.

In preparedness education, games and simulations build on the scenario approach to help students illuminate problems, craft solutions or train useful skills. Games often invite students to take on different roles, to examine emergency situations from different perspectives, and to consider barriers that might emerge in acting.

In a game or simulation, students will be introduced to a fictional crisis scenario, and given an objective and a set of rules governing how they participate. Through the activity, the students will then experiment, explore and learn to navigate the crisis. Games can also assist in formulating responses to specific problems and crises. An appropriate game can illustrate how crisis situations unfold in near-real time. From this standpoint, games can be seen as 'flight simulators' for crises, offering students the opportunity to make mistakes and experiment safely with disaster preparedness in a safe space.

Games can teach lessons such as:

- 🟡 Actions can have unpredictable side-effects;
- 🟡 How to search for counter-evidence;
- 🟡 How to tolerate high levels of uncertainty;
- 🟡 The importance of acknowledging mistakes and frequently reassessing assumptions;
- 🟡 How to communicate with people under pressure;
- 🟡 How to manage limited resources and unexpected feedbacks.

Disaster Risk Management Games

Within the broader category of games and scenarios, games focusing on disaster preparedness can illustrate specific principles that are unique to the world of disaster risk management. These include:

- 🟡 **The trade-off between certainty and ability to act:** As a disaster event approaches, uncertainty reduces, but so do your options to take useful action;
- 🟡 **The existence of extreme outlier events:** Science enables us to forecast extreme events that may never have been experienced by a local population;
- 🟡 **The challenges of coordinating different groups:** Balancing the differing priorities and abilities of family members, neighbours and local authorities may involve making difficult decisions;
- 🟡 **Peoples' behaviour in a disaster situation:** What are the factors that affect whether people will evacuate or choose to remain in place in a disaster situation?

These principles do not need to be explicitly described to be embedded in the game experience or absorbed by student players.

Example in classroom implementation:

- 🟡 For younger students, a game about mapping a character's escape route from the school is a stepping stone to thinking through a potential evacuation.
- 🟡 For middle primary students, games may involve multi-stage narratives that move from early warnings to evacuations to recovery, helping students connect the principles of each phase of disaster preparedness to the larger whole.
- 🟡 For older students, roleplaying games enable them to take on different characters and view the disaster preparedness system from multiple perspectives, becoming aware of the different roles within the space and who is responsible for what.

Experiential Learning Through Structured Reflection

A game can be a vital and powerful prompt for action and reflection, but reflection rarely happens during the game itself. The physical execution of a drill matters less than what students learn from analysing it.

The real learning typically takes place in the post-game debrief, where players reflect on their actions and connect their experiences with the real world. Post-drill reflection transforms procedural practice into adaptive expertise through structured debriefs that examine what happened, why it happened, and how to improve.

In the debrief setting, teachers or facilitators can talk about how the game corresponds to or differs from conditions in the real world. It's in this reflective space that students form connections and unlock solutions.

Example in classroom application: Following an evacuation drill, teachers facilitate brief, age-appropriate debriefs

-  Early Childhood (Ages 3-5): "What did we do well? How did you feel? What can we do next time to help everyone feel safe?"
-  Early Primary (Ages 6-8): "What went smoothly? What was challenging? If we had to evacuate when it was raining, what would we need to do differently?"
-  Upper Primary (Ages 9-12): "Evaluate our evacuation using three criteria: speed, safety, and inclusiveness. What trade-offs did we face? How could we improve our plan for someone using crutches?"

This reflection phase creates a high-impact opportunity for metacognition, collective problem-solving, and continuous improvement. Rather than treating each drill as an isolated compliance event, this approach builds institutional memory and adaptive capacity over time.

Documentation strategies:

-  Younger students draw "before and after" pictures showing what they learned.
-  Middle primary students keep reflection journals with "What worked / What we'll improve" entries.
-  Older students create video debriefs or written analyses identifying specific improvements.

Building Collective Capacity Through Collaborative Problem Solving

Preparedness is social and an effective response requires coordination, communication, and mutual support. Collaborative learning structures develop these capacities while distributing leadership and building inclusive practices.

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Rather than positioning the teacher as the sole authority during emergencies, these activities rotate students through leadership responsibilities:

-  **Safety Observers:** Monitor evacuation quality using simple rubrics (Was it calm? Did anyone get left behind? Were accessibility needs met?)
-  **Buddy Checkers:** Ensure all students in their assigned group are accounted for.
-  **Route Monitors:** Verify that evacuation paths are clear and identify obstacles.
-  **Communication Leads:** Practice reporting status to teachers or emergency personnel.

This peer-led approach exemplifies resource-efficient innovation so that students develop leadership, metacognitive skills, and collective responsibility.

Example of a team challenge in a classroom: present groups with constraint-based problems requiring creativity and cooperation

-  Resource scarcity scenarios: "You're sheltering in place during a storm. Water service is interrupted. What household items could you use to collect, store, and purify water?"
-  Communication breakdowns: "The school's PA system isn't working during an emergency. How would you ensure every classroom receives important information?"
-  Accessibility challenges: "Design an evacuation plan that works for a classmate who uses a wheelchair, a student with a visual impairment, and a child who becomes non-verbal when stressed."

These exercises build resourcefulness, inclusive thinking, and the capacity to innovate under constraint.

Country Case Studies: Innovative Teaching Materials

Country experience demonstrates how well-designed materials, supported by appropriate institutional arrangements, can enable innovation while maintaining quality, safety, and curriculum alignment. Table 10 provides an overview of the examples described in this section.

In the United Kingdom, initiatives such as Mod Games illustrate how preparedness and systems thinking can be introduced through what is described as playful activism. Playful activism uses games and participatory experiences to help learners explore complex real-world systems, including risk, uncertainty, collective decision-making, and community action. Rather than positioning games as standalone digital products, Mod Games emphasises teacher-led facilitation, where educators guide reflection, discussion, and connection to learning objectives. Activities are designed to be flexible and adaptable, allowing teachers to integrate them into existing subjects such as citizenship, geography, science, or social studies. The emphasis on play supports engagement and experimentation, while structured facilitation ensures learning remains purposeful and age-appropriate. This model is particularly relevant for preparedness education, where understanding interdependence, behaviour, and collective responsibility is as important as technical knowledge³⁹.

In Canada, Ember the FireSmart Fox demonstrates how animated storytelling can be used to communicate preparedness concepts to young children in an accessible and emotionally safe way. Developed through collaboration between fire management agencies and education partners, the series introduces wildfire risk reduction through a relatable character and simple narratives. Technical accuracy is ensured through involvement of subject-matter experts, while educational partners shape the content to align with early childhood and primary learning principles. The use of short animations (see Figure15) allows the material to be easily integrated into classroom instruction, shared with families, and accessed through public platforms. This dual distribution model extends impact beyond schools and supports consistent messaging between classrooms and households⁴⁰.

Canada’s Emergency Preparedness Squad provides an example of a more comprehensive, game-based program designed for primary education. The program uses interactive challenges and scenarios to teach preparedness concepts while explicitly aligning activities with curriculum expectations across science, language, arts, and social studies. Teachers are provided with structured guidance on how to use the materials, link them to mandated learning outcomes, and adapt activities to local hazards. The national rollout of the program, supported by clear instructional resources, helps ensure consistency across jurisdictions while allowing flexibility in delivery. This approach demonstrates how preparedness education can be integrated into

³⁹ Mod Games CIC. <https://www.modgames.co.uk/about>
⁴⁰ FireSmartBC. *Ember the FireSmart Fox*. <https://firesmartbc.ca/ember/>.



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everyday teaching practice without adding parallel curricula or increasing teacher burden⁴¹.

**STAGE 2
IMPLEMENTATION**

In Singapore, the Singapore Science Centre’s Get The Kids And Run offers a different approach to engaging students in innovative disaster risk education. Get The Kids And Run is a series of games for secondary students illustrating key aspects of disaster risk in the lead up to a shock. Designed as hands-on tactile activities with no digital components, the games explore the period from the first warnings to the moment of impact, focusing on typhoon and volcano risk in particular.

**STAGE 3
QA & MONITORING**

Each game within the Get The Kids And Run program looks at a different aspect of disaster risk management, illustrating the challenges faced by families, local authorities and first responders in a crisis. Evacuation Bingo is a card game that looks at the barriers that prevent families from leaving when an evacuation announcement is made. Players work together as a whole community to help each family overcome those individual barriers. Press Conference Every Minute is a fast-paced movement game that invites students to consider the balance between taking action in response to a crisis and keeping people informed of your choices.

Get The Kids And Run is embedded as part of the Geography program for secondary students visiting the Singapore Science Centre. Trained Science Centre facilitators deliver the games to students as part of their school excursions, enabling the games to reach large numbers of students without requiring a large number of teachers to be specially trained. This approach represents an alternative way to embed games within the education system.

Together, these examples highlight different but complementary approaches to preparedness education. They show how playful, narrative, and game-based materials can be effective when they are teacher-led, technically sound, curriculum-aligned, and supported by clear guidance and distribution systems. For EU Member States, they offer practical reference points for balancing innovation with institutional rigor and equity at scale.

⁴¹ Planet Protector Academy. *Emergency Preparedness Squad, BC EPS*. British Columbia. https://planetprotectoracademy.com/in/bc-eps/?utm_source=preparedbc&utm_medium=referral&utm_campaign=leadgen-teacher-funded

Table 10. Sample of relevant country case studies

Country	Initiative	Approach	Implementation Principle
United Kingdom	Mod Games (Playful Activism)	Uses games and participatory experiences to help learners explore complex real-world systems (risk, decision-making, collective action).	Emphasises teacher-led facilitation to guide reflection and connection to core learning objectives across subjects.
Canada	Ember the FireSmart Fox	Animated storytelling introducing wildfire risk reduction through a relatable character and simple narratives.	Ensures technical accuracy via fire management agencies while aligning content with early childhood/primary principles via education partners.
Canada	Emergency Preparedness Squad	Game-based program to teach preparedness content through activities and across subjects	Demonstrates play-based strategies for educating students horizontally across curriculum.
Singapore	Get The Kids And Run	Game-based program that illustrates the different roles played by people within the disaster risk system.	Embedded in a science centre context to enable it to reach a large number of participants from different schools

Figure 22. Preparedness video with Ember the FireSmart Fox in Canada



Source: World Bank.



STAGE 1
PREPARATION

STAGE 2: CURRICULUM IMPLEMENTATION

OVERVIEW OF STAGE 2

Effective preparedness education requires implementing curriculum through systematic educator capacity building and multi-sectoral institutional collaboration. Stage 2 ensures teachers have the necessary knowledge and pedagogical skills, supported by institutional structures and partnerships that connect schools to broader community resilience systems. Quality depends on continuous professional development and sustained coordination among education authorities, civil protection agencies, local governments, and civil society. Central to this stage is the ongoing development of institutional capacity and the ability of the system to manage, sustain, and quality-assure delivery independently.

Stage 2 also recognises the role of families and the wider community as active partners in implementation. Intergenerational approaches, where students share preparedness learning with family members and community actors, are addressed in Stage 2B.

The stage comprises two components:

STAGE 2A: PROFESSIONAL DEVELOPMENT AND TEACHER TRAINING

Focuses on Professional Development systems to build teacher competence in disaster science, trauma-informed pedagogy, participatory methods, and community engagement, supported by institutional incentives and recognition.

STAGE 2B: COMMUNITY AND PARTNERSHIP BUILDING

Addresses Stakeholder Engagement and Multi-Sectoral Partnerships, mapping the disaster risk management ecosystem, formalising collaboration protocols, and embedding innovative pedagogies that foster student agency.

STAGE 2A: PROFESSIONAL DEVELOPMENT AND TEACHER TRAINING

Stage 2A (see Figure16) ensures that educators possess the knowledge, skills, and confidence to deliver preparedness education effectively. Teacher capacity is central to preparedness integration, and professional development is designed to combine theory, practical exercises, and ongoing coaching to build sustained capability.

Figure 23. Overview of action items for Stage 2A

CURRICULUM PREPARATION Professional Development and Teacher Training This stage ensures educators can confidently deliver preparedness education content through accredited training and integrated professional pathways for consistent, high-quality instruction across MS.
LAUNCH MICRO-CREDENTIALS Train teachers and staff on preparedness through theory, drills, and hands-on exercises.
VALIDATE ACROSS COUNTRIES Use checkpoints to ensure consistency in curriculum integration.
EMBED IN PD PATHWAYS Integrate preparedness training into professional development for continuous learning and skill retention.
PROVIDE CLASSROOM SUPPORT Offer guides and sample lessons to help teachers confidently teach preparedness.

Source: World Bank.

Launch Micro-Credentials: Build Practical Preparedness Competencies Through Accredited Training

Accredited micro-credentials provide a practical and scalable mechanism for equipping teachers and school staff with core preparedness competencies. Effective professional development programs address four inter-related domains: disaster science literacy, facilitation of child-centred participatory learning, trauma-informed pedagogy, and community engagement skills. Training emphasises applied knowledge, enabling educators to understand local hazard profiles and early warning systems, lead simulations and drills, recognise and respond to signs of distress, and engage families and local authorities in preparedness planning.

Training programs can be most effective when they model active, age-appropriate practice and combine theory with hands-on application. Workshops and modules commonly include planning and execution of evacuation drills, integration of preparedness concepts into core subjects such as science and social studies, and structured reflection on classroom implementation. Micro-credentials, issued as digital badges or certificates tied to specific competency modules, provide tangible recognition of mastery and establish transparent pathways for professional growth while supporting consistent quality across systems. To be effective and equitable, however, micro-credential schemes benefit from being formally recognised within national career progression frameworks, including toward recertification, professional certification, and career advancement.

Indicative outcomes associated with this action area typically include:

- Teachers and school personnel have access to formally recognised, skills-based preparedness training.
- Training includes practical components such as drills, simulations, and scenario-based exercises.
- Micro-credentials or equivalent certifications recognise demonstrated preparedness competencies.
- Micro-credentials and training programmes are formally recognised within national career progression frameworks, including for recertification, professional certification, and career advancement.

Embed Preparedness in Professional Development Pathways for Sustained Skill Retention

Embedding preparedness training within established professional development pathways supports continuous learning and long-term skill retention. Blended delivery models balance reach, depth, and sustainability by combining in-person workshops, online modules, and train-the-



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trainer programs. Initial workshops provide immersive experiences and peer learning, online modules extend access to remote educators and enable refresher learning, and train-the-trainer models expand system capacity by preparing certified master trainers to deliver standardised content within districts or regions.

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Structured learning progressions and institutional incentives reinforce sustained engagement and implementation. Tiered learning pathways allow teachers to progress from foundational to advanced competencies, while alignment with continuing professional development credit systems ensures preparedness training contributes to recertification requirements. Integrating preparedness competencies into national teacher professional standards and career progression frameworks establishes preparedness as a core professional expectation and creates formal pathways for specialisation and leadership.

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Educators require professional development not only in emergency procedures, but also in facilitative pedagogies that develop critical thinking and emotional intelligence. Research on educational leadership during periods of uncertainty emphasises that effective educators balance clear structure with flexibility, maintain relational trust even under stress, and model the socio-emotional competencies they aim to develop in learners⁴².

Indicative outcomes associated with this action area typically include:

- Preparedness competencies are embedded in initial teacher education programs.
- Disaster risk reduction modules are integrated into regular CPD systems and recognised for recertification.
- Teacher professional standards and career progression frameworks explicitly incorporate preparedness competencies.

Provide Classroom Support: Enable Confident and Consistent Instruction

Practical classroom support materials are essential for translating teacher training into consistent and effective instruction. Professional development programs are most impactful when accompanied by ready-to-use resources such as lesson plans, student worksheets, drill guides, and parent communication templates. These materials reduce preparation time, lower entry barriers for teachers new to preparedness content, and promote fidelity to evidence-based pedagogical approaches.

Clear guidance and accountability mechanisms strengthen implementation and equity. Teachers benefit from explicit pedagogical guidance on

⁴² Lasse Leponiemi, Sean Slade, and M. Mariah Voutilainen, *Leading Through Uncertainty: Education Innovation in Times of Global Funding Volatility*, HundrED. 2025.

assessing student preparedness competencies and adapting instruction for different age groups and learning needs. Equitable incentive structures that link recognition to classroom practice, such as submission of lesson plans, drill documentation, or student work samples, support accountability while providing additional support to under-resourced schools. Alignment with school leadership development further ensures enabling conditions, including timetabling, resource allocation, and coordination with local civil protection partners.

- Indicative outcomes associated with this action area typically include:
- Teachers receive practical, ready-to-use materials as part of professional development.
 - Guidance supports age-appropriate, active learning and assessment of preparedness competencies.
 - Monitoring data shows increased participation in training and higher rates of classroom implementation.

Country Case Studies: Teacher Training Excellence

The following country examples illustrate how teacher training systems can institutionalise preparedness competencies through existing professional structures (see Table 6). Rather than relying on short-term projects, these approaches embed preparedness into licensing, professional development, and career progression pathways, ensuring long-term sustainability and consistent delivery.

Japan integrates preparedness into teacher professionalism by making school safety training a mandatory component of teacher licensing. Under the Education Personnel Licensing Act, all teachers are required to complete training on responding to school safety risks, including preparedness. This approach ensures that every newly certified teacher enters the profession with baseline competencies, regardless of location or subject specialisation. By embedding preparedness into permanent institutional structures, Japan avoids dependence on external funding or voluntary participation. For EU Member States, this model highlights the value of integrating preparedness competencies into formal teacher qualification requirements and leveraging existing teacher education infrastructure for nationwide delivery⁴³.

Canada demonstrates how preparedness can be introduced through existing professional development streams without overburdening teachers. Preparedness guidance has been integrated into professional development programs for environmental and sustainability education instructors, building on educators’ existing knowledge and interests. This approach reduces resistance

⁴³ Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan. *Education Personnel Licensing Act*. Tokyo.



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by framing preparedness as a natural extension of topics teachers already teach, such as climate, geography, and citizenship. For policymakers, the key lesson is that preparedness does not need to be introduced as an entirely new domain, but can be embedded within related subject areas to encourage uptake and relevance⁴⁴.

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New Zealand uses modular teacher training and micro-credentials to support incremental and motivating engagement with preparedness education. Teachers can complete online and in-person modules at their own pace, earning micro-credentials that are formally recognised for career progression. This system supports continuous learning, allows teachers to specialise over time, and provides visible recognition for effort and expertise. For the EU context, this model demonstrates how preparedness training can be aligned with national qualification frameworks and designed for portability, enabling recognition across regions or Member States.⁴⁵

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⁴⁴ British Columbia Ministry of Education. *BC Climate Change Curriculum K–3*. Government of British Columbia, Victoria, British Columbia, 2020. https://www2.gov.bc.ca/assets/gov/environment/climate-change/climate-literacy/bc_climate_change_curriculum_k-3.pdf

⁴⁵ New Zealand Qualifications Authority. *Micro-credential Listing, Approval, and Accreditation*. Wellington, NZQA. <https://www2.nzqa.govt.nz/tertiary/approval-accreditation-and-registration/micro-credentials/>

Table 11. Sample of relevant country case studies

Country	Initiative	Approach	Implementation Principle
Japan	Mandatory training on "Responding to School Safety" for all teachers via the Education Personnel Licensing Act.	Embeds DRR in permanent institutional structures rather than relying on temporary projects, ensuring baseline training for all.	Incorporate DRR competencies into teacher licensing requirements; leverage existing teacher education infrastructure for delivery.
Canada	Integration of preparedness guidance into existing professional development for environmental education instructors.	Builds on existing teacher knowledge and interests, avoiding overwhelming educators with entirely new content areas and creating natural curriculum connections.	Embed DRR into professional development for related subjects such as geography, science, citizenship education, or sustainability curricula.
New Zealand	Modular online and in-person DRR teacher training with micro-credentials recognised for career progression.	Allows flexible, self-paced learning and provides clear recognition for incremental achievement, motivating continued engagement toward specialised expertise.	Align recognition mechanisms with national qualification frameworks and ensure portability across Member States.



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STAGE 2B: COMMUNITY AND PARTNERSHIP BUILDING

Stage 2B (see Figure 17) focuses on extending preparedness education beyond the classroom by mobilising families, authorities, and community actors as active partners in learning and practice. While stakeholder engagement is a cross-cutting principle throughout the Roadmap, Stage 2B represents the dedicated phase in which informal engagement is formalised into structured, accountable partnerships. This moves efforts from ongoing collaboration to concrete agreements, defined roles, and shared delivery arrangements. For governments, this stage is critical to ensure that investments in curriculum and teacher training translate into durable changes in behaviour, shared routines, and community-level resilience. By formalising partnerships and coordinating roles across sectors, education systems can minimize education disruptions, anchor preparedness learning in everyday life and reduce reliance on short-term or project-based interventions.

Figure 24. Overview of action items for Stage 2B

Source: World Bank.

CURRICULUM PREPARATION

Community and Partnership Building

This stage intends to mobilize schools, families, authorities, and civil society to co-deliver preparedness education and embed learning outcomes in community routines to strengthen community resilience.

CREATE PARTNERSHIPS

Promote partnerships between disaster/civil protection agencies and education agencies for joint implementation of preparedness education. Issue an EU framework with templates and role guides to link schools, families, and civil society in preparedness efforts.

WHOLE OF SOCIETY PARTICIPATION

Communication campaigns to promote active participation of families in preparedness activities.

ENGAGE LEARNERS

Conduct drills and training involving the whole school community.

Create Partnerships: Establish Formal Collaboration Between Education and Civil Protection Systems

Formal partnerships between education authorities and disaster or civil protection agencies are essential for coherent and credible preparedness education. Effective preparedness education requires systematic coordination among ministries of education, civil protection agencies, local authorities, school leadership, and civil society organisations. Social partners, including teacher trade unions and employer organisations, are distinct from civil society actors and can be engaged through dedicated mechanisms that reflect their specific role in shaping employment conditions, professional standards, and collective agreements within the education system. Ecosystem mapping helps clarify roles, identify complementary expertise, and reduce fragmentation across institutions involved in preparedness planning and delivery.

Structured collaboration frameworks provide accountability and continuity across levels of government. Memoranda of Understanding, joint work plans, and standing coordination mechanisms such as technical working groups support routine collaboration, joint risk assessment, and harmonised public messaging. At the EU level, a common partnership framework with templates and role definitions can guide Member States in linking schools, families, and community organizations while allowing adaptation to national governance arrangements.

Indicative outcomes associated with this action area typically include:

-  Formalised partnerships between education authorities and civil protection agencies at national and subnational levels.
-  Standing coordination mechanisms that meet regularly and maintain institutional memory.
-  Clear role definitions and resource-sharing arrangements across partner institutions.

Whole-of-Society Participation: Engage Families and Communities in Preparedness

Preparedness education is most effective when families and community actors actively participate in learning and practice. Communication and outreach strategies play a central role in reinforcing school-based learning by encouraging family engagement in drills, discussions of local risks, and household-level preparedness actions. Collaboration with parent-teacher associations, community organisations, and local authorities helps extend preparedness messages beyond the school environment and strengthens trust in official guidance.

Community-school partnerships anchor preparedness learning in real-

world contexts and shared responsibility. Schools benefit from partnerships with local services such as fire departments, emergency responders, and meteorological offices, which can support drills, hazard mapping activities, and interpretation of early warning information. Volunteer engagement models further expand school capacity and foster community ownership, particularly in contexts with limited school resources.

Preparedness learning multiplies in effectiveness when it creates authentic connections between school and home.

Examples of homework to be conducted with the family include:

- Early childhood: "Draw a map of your home showing two ways out of each room. Practice your escape route with your family."
- Early primary: "Work with your family to create an emergency kit. Bring a photo of your kit and explain what you included and why."
- Upper primary: "Interview an adult family member about an emergency they experienced. What did they do? What did they learn? How has it changed how your family prepares?"

Family Preparedness Nights provide another engagement mechanism, where schools host interactive sessions where students teach families what they've learned. Students lead their families through "What if?" scenarios. Families work together to complete household preparedness planning worksheets. Students demonstrate protective actions and safety procedures they've practiced. These approaches reflect an intergenerational model of learning, where knowledge flows between children and adults, strengthening preparedness across the household and wider community.

Indicative outcomes associated with this action area typically include:

- Increased family participation in school-based preparedness activities.
- Strengthened collaboration with community organisations providing expertise and local networks.
- Greater alignment between school preparedness practices and community emergency procedures.

Engage Learners: Involve the Whole School Community in Practical Preparedness Routines

Whole-school participation in drills and exercises translates preparedness education into shared routines and lived experience. Regular, well-coordinated drills involving students, teachers, school leadership, families, and relevant community partners reinforce learning outcomes and normalises

protective behaviours. Clear standard operating procedures help ensure that exercises are safe, age-appropriate, and aligned with national guidance.

Institutionalisation and sustainability depend on embedding preparedness activities into routine planning and budgeting. Sustained engagement requires integrating preparedness activities into sector plans, allocating domestic resources, and establishing procedures that persist beyond individual projects or donor funding cycles. Transition planning and documentation ensure continuity as personnel change and help scale effective partnership models across regions.

Indicative outcomes associated with this action area typically include:

- Regular drills involving students, staff, families, and community partners.
- Shared preparedness routines embedded in school calendars and operating procedures.
- Evidence of sustained partnership activities supported by domestic funding and sector plans.

Country Case Studies: Partnership Excellence

These case studies illustrate how preparedness education is strengthened when schools are embedded within broader community and governance structures (see Table11). Each example demonstrates scalable, inclusive, and institutionalised approaches to engaging families, authorities, and civil society.

The Great California ShakeOut shows how large-scale, recurring drills can normalise preparedness through routine participation. This annual, synchronised earthquake drill engages millions of participants across schools, businesses, and government agencies, reinforcing shared protective actions through repetition. Its success is driven by strong coordination among education authorities, civil protection agencies, and media partners. For the EU, this model demonstrates how cross-border or regional drills, aligned with specific hazard profiles such as floods or heatwaves, could be implemented through existing civil protection mechanisms to build shared preparedness routines⁴⁶.

Canada’s engagement of Indigenous youth highlights the value of culturally relevant, play-based disaster awareness activities developed in partnership with communities. Through the Canadian Red Cross Inclusive Resilience project, a LEGO® SERIOUS PLAY®-based activity was adapted to foster climate and disaster risk awareness among Indigenous youth in

⁴⁶ ShakeOut.org, *Great California ShakeOut*. <https://www.shakeout.org/california/>.

Manitoba and Newfoundland, integrating cultural perspectives and traditional ecological knowledge with participatory learning. The child-centered activity engages small groups of participants in building and reflecting on models that represent community risks, emergency planning, and preparedness actions, using rapid character builds, risk mapping, and emergency kit planning to stimulate dialogue and critical thinking. Feedback from community partners, parents, and children has shown strong engagement and receptivity, indicating that play-based modalities can support both culturally safe learning and practical preparedness awareness ⁴⁷.

Table 12. Sample of relevant country case studies for Stage 2B

Country	Initiative	Approach	Implementation Principle
United States	Great California ShakeOut: Annual, large-scale, synchronised drill engaging millions of participants across all sectors (schools, business, government).	Scalability, annual repetition (building routine awareness), and a robust multi-stakeholder model for coordinated messaging and support.	Coordinated cross-border drills addressing region-specific hazards (e.g., floods in river basins), leveraging existing EU civil protection frameworks.
Canada	Engagement of Indigenous youth through play-based DRR education, co-designed with Indigenous communities.	Positions Indigenous knowledge as valuable expertise, integrating traditional knowledge with scientific understanding of climate impacts and adaptation.	Ensure preparedness education honors diverse knowledge systems, involves community leaders as partners, and creates culturally safe learning environments.

⁴⁷ Canadian Red Cross, *Raising Awareness Through Play Among Indigenous Youth and Children, Inclusive Resilience – Resilience in Action*. <https://www.redcross.ca/inclusive-resilience/resilience-in-action/raising-awareness-through-play-among-indigenous-youth-and-children>

STAGE 3: QUALITY ASSURANCE AND MONITORING

OVERVIEW OF STAGE 3

Effective preparedness education requires robust quality assurance and monitoring mechanisms to ensure consistent implementation across Europe and to drive continuous improvement beyond procedural compliance.

This stage comprises three interconnected areas of action:

STAGE 3: QUALITY ASSURANCE AND MONITORING

Assesses student learning outcomes through formative, low-stakes methods embedded in regular classroom activities; tracks Roadmap implementation through a national checklist and an EU-level aggregated scorecard; and uses monitoring findings to drive continuous improvement by closing the feedback loop from evidence to action across school, national, and EU levels.

Stage 3 (see Figure 18) ensures that preparedness competencies are genuinely taught, assessed, and tracked as part of structured learning, supported by monitoring systems that connect school-level practice to national and EU-level policy oversight. Quality depends on developmentally appropriate assessment, light-touch but meaningful indicators, and the systematic use of evidence to strengthen teaching and institutional readiness. Central to this stage is the ability of education systems to monitor outcomes, identify gaps, and translate findings into sustained improvements in preparedness education.

Figure 25. Overview of action items for Stage 3

CURRICULUM PREPARATION Building a Culture of Preparedness Across Europe Ensure consistent, high-quality preparedness education across MS through standardized measurement, regular reviews, and participatory feedback loops that drive continuous improvement in schools and systems.
ASSESSMENT APPROACHES FOR LEARNING OUTCOMES Adopt creative teacher assessment approaches and indicators for learning outcomes.
TRACK PROGRESS Empower Member States to autonomously track implementation progress at the country level using a structured checklist, while the EU monitors collective progress through an annual scorecard.
DRIVE IMPROVEMENT Use participatory monitoring to refine policies, resources, and training continuously.

Source: World Bank.

ASSESSMENT APPROACHES FOR LEARNING OUTCOMES

To avoid creating additional testing burdens while still ensuring accountability, preparedness competencies can be assessed through naturalistic, low-stakes methods that align with best practices in formative assessment. Assessment can be embedded within regular learning activities rather than constituting separate high-stakes events, focus on competencies demonstrated rather than solely on knowledge recalled, employ developmentally appropriate methods matching cognitive and emotional maturity, and remain inclusive by accommodating diverse learning styles and abilities. Assessment approaches can support the meaningful participation of learners with disabilities by ensuring that preparedness competencies are assessed through accessible and appropriate methods and that all learners are actively engaged in preparedness learning activities and reflection processes.

Feedback can emphasise growth and empowerment rather than deficit

identification. Effective feedback highlights specific actions the student took well, frames areas for development as opportunities, and connects learning to real-world impact. This approach builds their sense of responsibility and agency central to the OECD framework⁴⁸.

Preparedness education can position learners not just as recipients of knowledge, but also as active contributors to safer learning environments. Age-appropriate opportunities can be provided for learners to participate in preparedness activities, learning materials, school drills, and feedback processes. Student reflections, self-assessments, classroom discussions, and participation in school safety initiatives can provide valuable insights into how preparedness education is experienced and can be improved. Such approaches strengthen learner agency, ownership, and engagement while generating additional evidence for continuous improvement.

Recommended Assessment Approaches:

Assessment can support learning and competency development rather than focus solely on measuring performance. Formative and learner-centred approaches, such as peer assessment, self-reflection, portfolios, simulations, and project-based activities, provide opportunities for learners to demonstrate preparedness competencies in authentic contexts while supporting confidence, engagement, and wellbeing. These approaches help capture how learners apply knowledge, skills, attitudes, and behaviours in practice, rather than relying primarily on factual recall.⁴⁹

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Observational Rubrics: Teachers use simple checklists during drills and activities to note evidence of competency: Does the child identify hazards in their environment? Can they execute protective actions without adult prompting? Do they assist or check on peers? Do they demonstrate emotional regulation strategies? These observations become part of ongoing documentation rather than formal test events.
- 
Gamified Simulations: Age-appropriate digital, analogue, or interactive games present decision points in fictional crisis scenarios. Students make choices, and facilitators observe reasoning processes rather than scoring right/wrong answers. Examples include FEMA's 'Disaster Master' series, Red Cross 'Pillowcase Project' activities, or teacher-created 'Choose Your Own Adventure' stories.
- 
Leadership Roles: Upper primary students can serve as 'Safety Observers' during drills or interactive games, using simple rubrics to assess not just speed but quality of evacuation: Was the process calm and orderly? Did anyone get left behind? Were accessibility needs accommodated? This approach aligns with research showing that distributed leadership and shared responsibility enhance both individual competence and collective efficacy.

⁴⁸ OECD, *Learning Compass 2030*.
⁴⁹ Lifelong Learning Platform, *Rethinking Assessments: Prioritizing Learners' Wellbeing* (Brussels: Lifelong Learning Platform, 2021), https://www.lllplatform.eu/_files/ugd/043d91_46f088a678104d5581b0382f04b543ca.pdf

- Peer Assessment:** This approach exemplifies resource-efficient innovation in preparedness education. By assigning rotating roles such as ‘Safety Observer,’ ‘Buddy Checker,’ or ‘Route Monitor,’ schools generate authentic assessment data while simultaneously developing student leadership, metacognitive skills, and collective responsibility. Students learn to see themselves as active contributors to community safety. This shift requires no additional funding but yields significant gains in both competency development and institutional resilience.
- Visual and Narrative Documentation:** Younger children create ‘Safety Maps’ of their home or school, marking exits, hazards, and safe meeting points. Teachers assess spatial awareness, hazard recognition, and planning capacity through these artifacts. Similarly, students can dictate or write stories about ‘A Day I Stayed Safe’ that reveal their conceptual understanding.
- Portfolio Development:** Students maintain ongoing documentation of their preparedness learning: emergency kit inventories they've created, household plans they've developed with families, reflections on drill experiences, and artifacts from simulation exercises. This provides longitudinal evidence of competency development.

These assessment approaches support the development and monitoring of preparedness competencies through authentic, learner-centred methods that emphasise reflection, participation, and continuous learning. While many examples in preparedness education have emerged from natural hazard contexts, the same competency-based approaches can be applied to a broader range of hazards and crises, including technological, health, environmental, and human-caused emergencies. This allows focus to remain on the development of transferable competencies, such as risk awareness, decision-making, communication, collaboration, and problem-solving, that can be adapted across different emergency contexts.

Indicators for Learning Outcomes:

The learning outcome indicators are intended to monitor the extent to which learners achieve the preparedness competencies described in the competency framework presented in Chapter 2. These competencies span five core domains: hazard recognition and risk understanding; protective actions & procedural skills; socio-emotional regulation and peer support; communication and help-seeking; and planning and problem-solving. Monitoring learner competencies across these domains helps ensure that preparedness education is assessed not only through implementation measures, but also through evidence of learning and progression over time.

The light-touch indicators operationalise age-appropriate objectives across competency domains into measures feasible for routine school monitoring. They follow a developmental progression: foundational awareness and behavioural readiness (early childhood), procedural understanding and emerging reasoning (early primary), and adaptive expertise, leadership,

and systems thinking (upper primary).

Aligned with learning objectives and pedagogy, the indicators gauge protective actions and adherence to procedures, understanding of risks, socio-emotional readiness, appropriate communication and help-seeking, and participation in preparedness planning. Pedagogical alignment emphasises play-based and trust-building (early childhood), explanation-oriented and household-linked (early primary), and inquiry-based, integrated, and leadership-oriented learning (upper primary).

This section provides practical, low-burden indicators for monitoring preparedness competencies within everyday instruction and routine drills, organised by core competencies to ensure developmental alignment, inclusivity, and instructional utility. Table 13 provides illustrative examples of light-touch indicators for each competence domain.

Table 13. Suggested indicators for learning outcomes per age group

Competency Domain	ISCED 0: Early Childhood (Ages 3–5)	ISCED 1: Early Primary (Ages 6–8)	ISCED 1: Upper Primary (Ages 9–12)
Hazard Recognition & Risk Understanding	Children can identify simple hazards in their immediate environment and recognise basic danger signals, and understand that trusted adults help restore safety after emergencies. Example: point to a hot surface or sharp object in the classroom, recognising a warning signal, and understand that teachers help everyone feel safe after a drill.	Students can name local hazards and describe one main characteristic of each, and recognise that hazards may or may not occur, and understand that communities recovery after emergencies Example: name floods and fires in the area and explains that floods follow heavy rain and describe how schools reopen after disasters.	Students can explain causes and effects of local hazards using basic scientific terms and compare relative risks and reflect on lessons learned following emergencies Example: explain that flooding is linked to weather systems and compare flood and fire risk for the local community and discuss how preparedness measures can improve emergency response
Protective Actions & Procedural Skills	Children can practice simple protective actions and locate safe spaces through play, and return to familiar routines with adult support Example: perform “drop, cover, hold” during a drill, move to a safe corner with the group, and calmly return to classroom activities after a drill	Students can follow multi-step school procedures, adapt to small changes, and support the restoration of classroom routines after disruptions Example: complete an evacuation using an alternative exit, guide a classmate to the meeting point, and help resume classroom activities after a drill	Students can adapt standard procedures based on changing conditions and make reasoned decisions during emergencies. Example: choose a different route when a corridor is blocked by smoke in a simulation and explain why.
Socio-Emotional Regulation & Peer Support	Children can recognise and express fear or uncertainty and use simple calming strategies. Example: say “I’m scared” and practise deep breathing during a drill story.	Students can recognise fear in themselves and others and use coping and help-seeking strategies. Example: notice a distressed classmate and ask a teacher for help while encouraging the peer to stay calm.	Students can manage disaster-related stress and support others, including peers with additional needs. Example: help younger pupils during drills and adjust plans to include a peer with a disability.

Competency Domain	ISCED 0: Early Childhood (Ages 3–5)	ISCED 1: Early Primary (Ages 6–8)	ISCED 1: Upper Primary (Ages 9–12)
Communication & Help-Seeking	Children can identify themselves ,know whom to approach for help, and communicate their feelings after emergencies. Example: state their full name and point to a teacher or police officer as a safe adult, and explain how their feel after a drill	Students understand the roles of emergency responders ,know when and how to seek help, communicate clearly during emergencies, and discuss experiences with family members afterwards. Example: explain what firefighters and medical responders do and when to contact them, and communicate important information during an evacuation exercise.	Students can balance individual safety and collective responsibility when deciding to seek help or assist others. Example: explain whether to stay with a classmate or leave to seek help, based on safety considerations and share accurate information with family after an event.
Planning & Problem-Solving	Children understand basic safety vocabulary and the idea of a meeting point. Example: use words such as “safe place” and correctly point to the class meeting point.	Students participate in simple household preparedness planning and take age-appropriate responsibility. Example: help define a family meeting point and prepare a simple emergency kit checklist.	Students contribute to school and household preparedness planning and link scientific understanding to action. Example: propose improvements to a school evacuation plan and explain how weather or fire behaviour informs preparedness.
Pedagogical Approach	Learning activities are primarily play-based and experiential, using storytelling, role-play and sensory activities, and evacuation procedures are framed as games. Example: children act out a short story about a storm and practice moving to a “safe place” as part of a game or role-play activity.	Learning activities explain the rationale behind procedures and include guided household planning and simple probability concepts. Example: the teacher explains why a specific evacuation route is safer and asks pupils to help create a simple family meeting-point plan and discuss why hazards may or may not happen.	Learning activities use scientific inquiry, critical analysis and leadership-oriented tasks, and integrate preparedness across subjects. Example: pupils analyse a local hazard scenario using scientific terms, discuss different response options, and take leadership roles in a group preparedness exercise.
Primary Learning Focus	Teaching focuses on building trust in safety routines and developing basic safety awareness and vocabulary. Example: children practice the same safety routine repeatedly and use words such as “safe place”, “danger” and “meeting point”.	Teaching focuses on understanding the purpose of procedures, moving from simple compliance to comprehension, and beginning engagement with household preparedness. Example: pupils explain why they must follow evacuation rules and describe how their family would meet after an emergency.	Teaching focuses on adaptive expertise, leadership and collective responsibility, and connecting scientific understanding to practical action and community resilience. Example: pupils propose improvements to a school preparedness plan and explain how scientific knowledge about hazards supports better community preparedness.

TRACK PROGRESS

This step focuses on two interconnected goals: (1) tracking progress in implementing the Roadmap, and (2) measuring preparedness at the EU-level through an EU-level scorecard. Roadmap implementation can be monitored through a milestone-based checklist that track progress against clearly defined outcomes. While the checklist is adaptable by each Member State to reflect national contexts and priorities, a common EU-level framework can ensure consistency and quality standards. Measuring preparedness would be conducted at the national level through country-specific assessments. Where core indicators are aligned across Member States, results could be aggregated to produce an EU-level overview, positioning the EU at the forefront of systematic preparedness monitoring. The objective is not to compare countries, but to assess EU-wide preparedness using aggregated indicators that reflect collective progress and shared capacity.

Tracking Progress in Implementing the Roadmap

A comprehensive checklist can be provided as a guiding tool for Member States to track their status in preparedness education. The checklist can cover multiple core dimensions that are central to effective preparedness education, supporting structured self-assessment and monitoring across different national contexts.

The results in the checklist are used to assess progress across three dimensions:

- 1. System-level integration** of preparedness education. System-level indicators show how widely preparedness education is embedded in curricula and policy frameworks.
- 2. School-level implementation** of preparedness and safety measures. School-level indicators illustrate how preparedness and safety measures are implemented in practice, while learning-related indicators signal whether systems enable meaningful teaching, learning, and assessment rather than focusing solely on procedural compliance.
- 3. Enabling conditions** for preparedness learning, including teacher capacity building and assessment of student competencies.

A complete and detailed checklist is included in Annex E. In addition to the checklist, which captures whether key elements are in place, it is recommended that Member States consider developing their own country-level monitoring tools as light-touch instruments to support the implementation of preparedness education, with a specific focus on the priority gaps identified through the Eurydice preparedness survey and the teacher survey. Such tools can help Member States systematically measure their implementation status with respect to preparedness education with full autonomy. To support this effort, this report presents examples of qualitative and quantitative indicators that member countries may draw upon when



**STAGE 1
PREPARATION**

developing their own monitoring tools, which can possibly be sourced from existing national data sources, including EMIS, inspection and school self-evaluation summaries, professional development registries and, where available, national teacher surveys.

Table 14 presents a sample of illustrative indicators aligned with the three core monitoring dimensions and connected to corresponding Roadmap steps.

**STAGE 2
IMPLEMENTATION**

These indicators are designed to focus on strategic actions to institutionalize preparedness education, along with the areas where it connects with school emergency management. For example, school compliance indicators capture the presence and functioning of essential preparedness arrangements, such as drills, emergency or contingency plans, facility safety checks, and post-emergency wellbeing protocols. Learning outcome indicators focus on whether preparedness is delivered and assessed as part of planned teaching and learning processes, rather than on student performance or standardised testing, recognising that learning objectives, assessment approaches, and measurement practices vary across countries and education systems. Teacher preparedness indicators reflect access to training, professional confidence, and the availability of official guidance for teachers.

By using their own country-level monitoring framework, Member States can systematically track the implementation of preparedness education at the national level over time. Each Member State retains full autonomy over its data. To support consistent application within each national context, it is recommended that the EU develop technical guidance for each indicator, specifying the criteria for a positive response, the numerator and denominator for percentage indicators, and what does and does not qualify. This will help ensure that data collected at national level are internally consistent over time and meaningful for tracking progress.

Table 14. Sample of recommended indicators for tracking Roadmap implementation

Monitoring Dimension	Indicator Area	Relevant Indicators	Disaggregation (where feasible)	Primary Data Source	Roadmap Step
System-level integration	Policy integration	Whether preparedness education is formally embedded in national curricula (Yes/No)	ISCED level (0 and 1)	National guidance documents; Curriculum frameworks	1A, 2B, 3
	Curriculum design	Whether expected preparedness learning outcomes are specified at system level (Yes/No)	ISCED level (0 and 1)	National guidance documents; Curriculum frameworks	1A, 1B, 3
	Curriculum assessment	Whether systems provide guidance on assessing preparedness learning (Yes/No)	ISCED level (0 and 1)	National guidance documents; Curriculum frameworks	1A, 1B, 3
	System monitoring capacity	Whether preparedness is captured in national education reporting (e.g. EMIS) (Yes/No)	ISCED level (0 and 1)	Ministry reporting; National guidance documents	1A, 3
School-level implementation	School compliance	% of schools with an up-to-date emergency or contingency plan	School type (public/private);	EMIS; inspection summaries	1A, 2B, 3
		% of schools with documented facility safety checks during school year	ISCED level (0 and 1)		
		% schools conducting at least one preparedness drill per year			
Enabling conditions	Teacher preparedness	% of teachers who participated in preparedness-related training in the past 12 months	ISCED level (0 and 1)	EMIS; teacher PD registries	1A, 2B, 3
		% of schools reporting access to official preparedness guidance for teachers			
		% of initial teacher education programs that include preparedness-related content			
		% teachers trained on inclusive preparedness approaches			
		% of teachers reporting confidence in delivering preparedness education (note: This indicator is reported where national teacher surveys or administrative data already exist.)			
	Learning outcomes categorised by competency domains and delivery	Hazard Recognition & Risk Understanding: % of learners who can correctly identify key local hazards and associated risks, at an age-appropriate level.	ISCED level (0 and 1)	EMIS; aggregated inspection or self-evaluation summaries; surveys	1A, 2A, 3

Monitoring Dimension	Indicator Area	Relevant Indicators	Disaggregation (where feasible)	Primary Data Source	Roadmap Step
Enabling conditions	Learning outcomes categorised by competency domains and delivery	Hazard Recognition & Risk Understanding: % of learners who can correctly identify key local hazards and associated risks, at an age-appropriate level.	ISCED level (0 and 1)	EMIS; aggregated inspection or self-evaluation summaries; surveys	1A, 2A, 3
		Hazard Recognition & Risk Understanding: % of learners who can explain basic cause-effect relationships of common hazards (e.g., what causes floods and why they are dangerous).			
		Hazard Recognition & Risk Understanding: % of learners who can describe how individuals, schools, and communities recover following emergencies and identify lessons that can improve future preparedness, based on teacher or school self-assessment reports.			
		Protective Actions & Procedural Skills: % of learners who demonstrate understanding of appropriate preparedness actions for different types of hazards (e.g., earthquake, flood, fire), based on classroom or assessment tasks.			
		Protective Actions & Procedural Skills: % of learners who demonstrate understanding of evacuation procedures, emergency contacts, and safe assembly points, based on teacher or school self-assessment reports.			
		Protective Actions & Procedural Skills: % of learners who can correctly apply preparedness knowledge in a simulated or interactive emergency scenario (e.g., evacuation drill, role-play exercise), as assessed by a teacher or evaluator against a predefined rubric.			
		Socio-Emotional Regulation & Peer Support : % of learners who can demonstrate peer-support skills in emergency situations, as assessed by a teacher or evaluator against a predefined rubric.			
		Socio-emotional Regulation & Peer support: % of learners who report feeling confident in their ability to respond to emergency situations, based on student surveys.			

Monitoring Dimension	Indicator Area	Relevant Indicators	Disaggregation (where feasible)	Primary Data Source	Roadmap Step
Enabling conditions		Communication & Help-Seeking: % of learners who can communicate essential information clearly and appropriately when seeking assistance during an emergency, based on student surveys.	ISCED level (0 and 1)	EMIS; aggregated inspection or self-evaluation summaries; surveys	1A, 2A, 3
		Communication & Help-Seeking: % of learners who can identify trusted adults, emergency responders, warning systems, and reliable sources of hazard information appropriate to their age and context, based on student surveys.			
		Planning & Problem-Solving: % of learners expressing a sense of responsibility for their own safety and that of others in emergency contexts, based on student surveys.			
	Learning outcomes categorised by competency domains and delivery	Planning & Problem-Solving: % of learners who report discussing preparedness actions with family members or engaging in preparedness activities beyond school, based on student surveys			
		Delivery: % of learners receiving preparedness learning activities linked to the curriculum			
		Delivery: % of learners whose preparedness learning outcomes are assessed using age-appropriate and school-based approaches (e.g. formative or summative classroom assessments, observation, project-based or other school-based methods)			
		Delivery: % of learners for whom preparedness learning objectives are included in school or teaching plans			
		Delivery: % schools implementing adapted preparedness learning activities for vulnerable learners			

Measuring Preparedness at EU-Level

At the EU level, aggregated indicators are used to track collective progress and trends as part of a broader effort to measure resilience. This monitoring framework aggregates nationally validated information to provide a system-wide view, rather than evaluating individual countries, schools, or learners. This allows the EU to monitor whether preparedness education is moving from policy commitment to consistent practice over time.



STAGE 1 PREPARATION

EU-level indicators are used to track the direction of travel and to distinguish areas of progress from areas where implementation remains limited or stalled. EU-level analysis focuses on identifying patterns, gaps, and areas of uneven development, such as differences between education levels or persistent weaknesses in early childhood and primary education. If designed in line with Eurostat and Eurydice monitoring approaches, these indicators could support trend analysis, coherence, and policy learning at EU level, while fully respecting national autonomy in curriculum design, implementation choices and quality assurance arrangements.

STAGE 2 IMPLEMENTATION

The proposed monitoring framework is intended to support policy dialogue and mutual learning, not ranking or benchmarking. Indicator findings inform EU-level discussions, peer exchange between Member States, and the identification of promising practices that can be adapted across contexts. They also provide an evidence base for shaping EU guidance, capacity-building initiatives, and funding priorities related to preparedness education.

STAGE 3 QA & MONITORING

Embedding preparedness indicators into regular EU monitoring cycles helps maintain long-term visibility and continuity, ensuring preparedness education remains part of ongoing policy attention rather than a one-off initiative. By relying on existing national data systems such as Education Management Information Systems (EMIS), curriculum documentation and inspection summaries, the indicators keep reporting demands proportionate and sustainable. Eurydice⁵⁰ may provide a well-established and trusted platform for supporting EU-level monitoring of preparedness education. As the EU's network for comparative information on education systems and policies, Eurydice already collects, validates, and disseminates nationally reported data on curriculum design, governance, teacher education, and quality assurance across Member States. This makes Eurydice well suited to host and communicate system-level and policy-related preparedness indicators, such as the inclusion of preparedness in national curricula, the definition of preparedness learning outcomes, and the availability of guidance for schools and teachers.

Data for EU-level monitoring could be compiled at national level by designated competent authorities (e.g. ministries of education, inspectorates, or national statistical offices). Each member state may collect data using EMIS or other complementary sources. All data are aggregated nationally, validated by Member States, and submitted through existing EU reporting channels.

- Education Management Information Systems (EMIS) are the primary source for administrative and school-level indicators, such as the presence of safety plans, drill frequency, and participation in training.
- Curriculum and policy indicators are derived from national curriculum frameworks and official guidance, typically reported through Eurydice.

⁵⁰ Eurydice. <https://eurydice.eacea.ec.europa.eu/>

- Inspection or supervisory systems provide aggregated summaries where relevant (e.g. proportions of schools meeting specific conditions).

Table 15 presents examples of aggregated indicators, aligned with EU-level strategies and priorities on preparedness.

Table 15. Examples of EU-level Indicators

Indicator Domain	Indicators (EU-level, aggregated)	What the indicator measures	Measurement Unit	Potential channels for collecting the indicators
Preparedness learning indicators	% of learners receiving preparedness education (disaggregated by education level)	The proportion of enrolled learners at early childhood (and primary levels) who are exposed to structured preparedness education content as part of their formal education in a given academic year	Percentage (%) of total enrolled learners, disaggregated by ISCED level (0 and 1)	National EMIS; school-level surveys and questionnaires (e.g., DG ECHO/DG EAC joint teacher and school surveys); Eurostat education statistics
	% of member states with preparedness education explicitly integrated into the national curricula (disaggregated by education level)	The share of EU member states that have formally embedded preparedness content into their official national curriculum frameworks at early childhood and primary education levels (capturing de jure policy existence rather than actual delivery)	Percentage (%) of EU member states (out of xx) disaggregated by ISCED level (0 and 1)	European Commission curriculum mapping exercises (DG EAC/DG ECHO); national ministry of education policy and curriculum reviews; Eurydice network comparative reports; OECD Education at a Glance
Civil protection and disaster risk management indicators	% of schools with emergency or contingency plans (disaggregated by education level)	The proportion of schools at early childhood and primary levels that have formally documented, approved, and regularly updated emergency or contingency plan in place, covering procedures for evacuation, shelter-in-place, communication protocols, and crisis response roles	Percentage (%) of total registered schools, disaggregated by ISCED level (0 and 1)	National EMIS; national civil protection authority records and registries; school inspection and supervisory summaries (school self-evaluation reports; DG ECHO/DG EAC joint school surveys)
	% of schools connected to early warning systems (disaggregated by education level)	The proportion of schools at early childhood and primary levels that are formally integrated into, or receive structured alerts from, national or local multi-hazard early warning systems	Percentage (%) of total registered schools, disaggregated by ISCED level (0 and 1)	National civil protection authority records and registries; EU Emergency Response Coordination Centre; national EMIS; DG ECHO civil protection monitoring data; national disaster risk management authority registries

DRIVE IMPROVEMENT: USE MONITORING AND EVALUATION TO STRENGTHEN PREPAREDNESS EDUCATION

Findings from the proposed EU-level preparedness monitoring framework provide a high-level evidence base to identify shared challenges, gaps, and priorities across Member States. At the EU level, the purpose of monitoring preparedness education is not only to track progress, but to support improvement by highlighting areas where preparedness education remains limited or absent, and where greater attention to learning resources, teacher capacity, or system readiness may be needed. Improvement actions take place primarily at national, regional, and school levels, within existing education governance structures.

Use existing quality assurance systems as the backbone. Educational inspection and quality assurance mechanisms already provide a strong foundation for driving improvement across EU education systems. Across Member States, quality assurance typically combines external evaluation conducted by inspectorates or supervisory authorities with internal school self-evaluation, engaging school staff and, in many cases, students, parents, and community⁵¹. These systems routinely assess pedagogy, student outcomes, leadership, and regulatory compliance, making them a natural vehicle for integrating preparedness education into routine school review and improvement processes. Rather than creating new monitoring structures, it is recommended that preparedness be embedded as a thematic focus within existing frameworks, alongside other cross-cutting priorities such as citizenship, sustainability, or health education. This allows preparedness education to benefit from established inspection methodologies, professional dialogue, and follow-up mechanisms that are already familiar to schools and authorities.

Balance compliance checks with educational quality evaluation. To drive improvement, quality assurance processes need to address both procedural readiness and educational effectiveness. Compliance-level monitoring remains essential to ensure schools have functional disaster management plans and systems and conduct drills. These elements can be monitored annually and after hazard events, with reporting aligned to national or sub-national education information systems, including EMIS⁵². However, improvement depends on complementing compliance checks with educational quality evaluation. Within regular inspection cycles, evaluators can examine how preparedness is taught and learned in practice. This may include a mixed use of evaluation methods such as using classroom observation of preparedness lessons or integrated units, student surveys, interviews with teachers and students, teacher self-appraisal and portfolios, review of preparedness-related curriculum maps, scrutiny of assessment records, and observation of drills when used as learning activities rather

⁵¹ European Commission/EACEA/Eurydice. *Assuring Quality in Education: Policies and Approaches to School Evaluation in Europe*. Luxembourg, 2015.

⁵² Global Alliance for Disaster Risk Reduction and Resilience. *Comprehensive School Safety Framework 2022-2030 for Child Rights and Resilience in the Education Sector*, 2022.



STAGE 1
PREPARATION

than purely procedural exercises. These practices are consistent with how EU education systems already evaluate other cross-cutting curricular themes and can be integrated into existing inspection, self-evaluation, or quality assurance processes⁵³⁵⁴.

STAGE 2
IMPLEMENTATION

Strengthen learning outcome focus and assessment practices. A central gap identified across EU and international reviews is the limited attention given to student learning outcomes in preparedness education⁵⁵⁵⁶. Monitoring systems can explicitly examine whether schools assess preparedness-related competencies, and how those assessments are carried out. Monitoring can assess not only whether preparedness education is delivered, but also whether learners are demonstrating age-appropriate competencies across the core preparedness domains. To support this, it is recommended that learning outcome indicators cover knowledge, skills, attitudes, and behaviours, recognising that different outcome types require different assessment tools⁵⁷. For example, knowledge can be assessed through short written or oral tasks, while skills and applied competencies require observation, demonstration, or performance in simulated or real-life contexts. Attitudinal and behavioural dimensions, such as risk awareness or confidence, may be captured through reflection, discussion, or project-based activities. Monitoring the presence and balance of these assessment approaches helps systems identify where preparedness education remains knowledge-heavy and where more applied learning is emerging. At early childhood (ISCED 0) and primary (ISCED 1) levels, differentiated pedagogies and assessment modalities are essential for quality assurance and monitoring.

STAGE 3
QA & MONITORING

At the early childhood level, it is recommended that preparedness education prioritise hazard recognition and the development of socio-emotional skills through play-based learning activities and hands-on experiences, rather than direct, academically oriented instruction. Play-based and experiential approaches are central to how young children acquire essential knowledge and skills. It is possible to support educators in using observation tools and simple self-assessment instruments to capture children's preparedness learning through play and peer interaction. Storytelling activities and creative, hands-on events (such as toy-making or drawing activities linked to preparedness themes) can also serve as meaningful contexts for observing children's learning and engagement⁵⁸.

At the primary education level, particularly in the upper grades, preparedness education can be expanded to include explanation, knowledge acquisition, decision-making and basic reasoning. At this stage, a mixed use of

⁵³ OECD. *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, 2013.

⁵⁴ European Commission/EACEA/Eurydice. *Assuring Quality in Education: Policies and Approaches to School Evaluation in Europe*. Luxembourg, 2015.

⁵⁵ Masocha, W., Takaidza, N., Manyani, A., & Mutseekwa, C. *Disaster risk reduction integration into school curriculum: A global analysis*. European Journal of Sustainable Development Research, 9(1), em0276, 2025. <https://doi.org/10.29333/ejosdr/15820>

⁵⁶ UNESCO and UNICEF. *Disaster Risk Reduction in School Curricula: Case Studies from Thirty Countries*, 2012.

⁵⁷ UNESCO and UNICEF. *Towards a Learning Culture of Safety and Resilience: Technical Guidance for Integrating Disaster Risk Reduction in the School Curriculum*. Paris and New York, 2014.

⁵⁸ UNICEF and LEGO Foundation. *Learning through Play: Strengthening Learning through Play in Early Childhood Education Programs*, New York: UNICEF, 2018. <https://www.unicef.org/sites/default/files/2018-12/UNICEF-Lego-Foundation-Learning-through-Play.pdf>

assessment modalities is important to support intended learning outcomes. For example, Malawi's new primary curriculum adopts an outcomes-based and learner-centred approach, and its primary syllabuses systematically recommend diverse assessment modes through scope-and-sequence charts. Examples of continuous assessment include drawings, miming, teacher observations, oral questioning, self-assessment, singing, storytelling, and short written reports and texts⁵⁹.

Use ongoing and participatory monitoring to support change. Beyond formal inspection cycles, improvement can be strengthened through ongoing formative monitoring and support at the 'middle-tier' level (e.g., districts, clusters, or local education authorities)⁶⁰. International quality assurance guidance highlights the role of interim reviews, peer-learning exchanges, and targeted follow-ups to help translate evaluation findings into more consistent practice across schools.⁶¹ At the school level, continuous formative practices such as projects, simulations, or dedicated preparedness learning periods reinforce learning and provide informal feedback on student understanding^{62, 63}. Importantly, driving improvement requires feedback loops. Monitoring findings can be systematically fed back to schools, local authorities, and national policymakers, creating opportunities to adjust curriculum guidance, teaching resources, and professional development. Engaging teachers, students, and the wider school community in feedback processes, through interviews, surveys, or structured reflection, helps surface insights that are not visible through administrative data alone, especially for cross-cutting areas such as preparedness education. Learners' voices⁶⁴ can be systematically incorporated where developmentally appropriate, as they can provide valuable information on learners' confidence, perceived preparedness, understanding of risks, and experiences during preparedness activities. These perspectives complement administrative and teacher-reported data and help ensure that preparedness education remains responsive to learners' needs.

Strengthen intergenerational and lifelong learning approaches⁶⁵. Although this Roadmap focuses primarily on early childhood and primary education, preparedness education is most effective when supported by learning opportunities that extend beyond schools. Monitoring frameworks can therefore encourage schools to engage families, caregivers, community members, and non-formal educators in preparedness activities. Examples include household preparedness planning exercises, family preparedness events, community simulations, and joint learning activities involving learners and adults. Such intergenerational approaches help align preparedness knowledge and behaviours across age groups,

⁵⁹ UNESCO and UNICEF. *Towards a Learning Culture of Safety and Resilience: Technical Guidance for Integrating Disaster Risk Reduction in the School Curriculum*. Paris and New York, 2014.

⁶⁰ B. Tournier; K. Godwin; E. Cameron; C. Lugaz. *Leveraging the potential of the middle tier to improve education outcomes: The role of a capacity assessment framework*. Paris: IIEP-UNESCO, 2025.

⁶¹ European Commission/EACEA/Eurydice. *Assuring Quality in Education: Policies and Approaches to School Evaluation in Europe*. Luxembourg, 2015.

⁶² UNESCO and UNICEF. *Towards a Learning Culture of Safety and Resilience: Technical Guidance for Integrating Disaster Risk Reduction in the School Curriculum*. Paris and New York, 2014.

⁶³ Kitagawa, K. *Disaster risk reduction activities as learning*. *Natural Hazards (Dordrecht)*, 105(3), 3099–3118, 2021. <https://doi.org/10.1007/s11069-020-04443-5>

⁶⁴ OECD. 2023. *Education Policy Outlook 2023: Empowering All Learners to Go Green*. Paris: OECD Publishing. <https://doi.org/10.1787/f5063653-en>

⁶⁵ UNESCO Institute for Lifelong Learning, *Embracing a Culture of Lifelong Learning: Contribution to the Futures of Education Initiative* (Hamburg: UNESCO Institute for Lifelong Learning, 2020).



STAGE 1 PREPARATION

strengthen communication during emergencies, and reinforce preparedness as a lifelong learning process. Monitoring may also consider the extent to which preparedness resources, awareness activities, and training opportunities are made available to parents, caregivers, and other adults who play an important role in supporting children's safety and wellbeing.

STAGE 2 IMPLEMENTATION

Close the loop: from evidence to action. When used effectively, monitoring and evaluation become a continuous improvement cycle. Evidence from inspections, self-evaluations, and participatory feedback informs updates to policies, teaching guidance, and training programs. In turn, revised resources and clearer expectations support schools to strengthen practice, which is then reviewed in the next quality assurance cycle. At the EU level, aggregated insights from these processes can inform guidance, capacity-building initiatives, and peer learning, ensuring that preparedness education evolves in response to evidence rather than remaining static or compliance-driven.

STAGE 3 QA & MONITORING

COUNTRY CASE STUDIES: EVALUATION PRACTICES

The following case studies illustrate how quality assurance and monitoring related to preparedness and safety are currently conducted at country-level across selected European education systems.

Estonia illustrates a quality assurance system that is well developed for general education oversight but does not explicitly include preparedness as a monitoring domain. State supervision, led by the Ministry of Education and Research, reviews compliance with legal requirements and the teaching and upbringing environment through document analysis, statistical data, and discussions with school staff and students. Schools conduct internal evaluations⁶⁶ during each development plan period using national performance indicators published in the Estonian Education Information System, which focus on attendance, use of digital tools, and student and teacher satisfaction, but do not include preparedness or safety education. In early childhood education and care (ECEC), childcare centres and preschools are required to conduct periodic safety and health risk analyses and annual crisis assessments⁶⁷, with emergency plans subject to compliance checks by local authorities and the Rescue Board.

Portugal shows how preparedness and safety can be embedded within established inspection frameworks, primarily through a leadership and management lens. Preparedness is integrated into the national external school evaluation system led by the General Inspectorate of Education and Science (IGEC), where inspection teams review prevention and emergency plans, self-protection measures, staff training, and procedures related to

⁶⁶ Estonia. *Government Regulation on the requirements for the learning and growth environment in childcare institutions and preschools*, § 14. Risk assessment, 2025. <https://www.riigiteataja.ee/akt/128062025006>

⁶⁷ Estonia. *Basic Schools and Upper Secondary Schools Act*, § 45. Resolution of emergencies at school, 2010. <https://www.riigiteataja.ee/en/eli/504092024001/consolide>

risks and accidents under the Reference Framework for External School Evaluation⁶⁸. Inspection findings feed into school improvement plans. However, preparedness is not assessed as a distinct learning outcome, and there is limited national-level evidence on students’ preparedness-related knowledge, skills, or behaviours.

Türkiye demonstrates how preparedness education can be supported through a combination of national education data systems and targeted program initiatives. Preparedness and emergency-related monitoring are embedded within the national EMIS, providing a system-level foundation for tracking education processes. At the same time, the ÇARE (Environment, Disaster, Risk Reduction, and Education) Project⁶⁹, developed in partnership with UNICEF, places a strong emphasis on student competencies and hands-on learning for Grade 3–4 students, focusing on environmental awareness, disaster resilience, and sustainable living. Scheduled for nationwide implementation from September 2025, the project shows how practical preparedness skills can be integrated into learning while contributing to broader community resilience. Together, these approaches show how preparedness monitoring and learning can be embedded within existing education system structures, combining system-level data with program-based innovation rather than creating parallel monitoring frameworks.

Table 16. Sample of relevant country case studies for Stage 3

Country	Initiative	Approach	Implementation principles
Estonia	State supervision, internal evaluation, and ECEC safety monitoring	Education QA combines state supervision and mandatory school self-evaluation using national indicators (HaridusSilm), with no dedicated preparedness domain. In ECEC, centers conduct periodic safety risk analyses and annual crisis assessments, with compliance checks by local authorities and the Rescue Board.	• Use regular self-evaluation and public indicators to support system transparency. • Require periodic risk and crisis assessments to ensure baseline safety. • Rely on external compliance checks for emergency planning.

⁶⁸ Inspectorate-General of Education and Science. *External Evaluation of Schools – Reference Framework 2023*. https://www.igec.mec.pt/upload/AEE3/AEE_QR_2023.pdf

⁶⁹ Türkiye. The Environment, Disaster, Risk Reduction, and Education (ÇARE) Project, carried out in collaboration with the General Directorate of Support Services and UNICEF, 2025. <https://www.nsa.smsm.lt/projektai/vykdomi-projektai/np-ms/>

Country	Initiative	Approach	Implementation principles
Portugal	External school evaluation by IGEC	Preparedness and safety are assessed through national external school inspections, focusing on leadership and management practices, including prevention and emergency plans, self-protection measures, and procedures for risks and accidents. Findings inform school improvement planning but do not systematically assess student preparedness learning outcomes.	• Embed preparedness monitoring within existing inspection and QA frameworks. • Use leadership and management criteria to ensure institutional readiness. • Link inspection findings to school improvement plans. • Identify gaps where pedagogical and learning-outcome indicators can be further developed.
Türkiye	EMIS-based monitoring for preparedness and emergencies	Preparedness and emergency education monitoring is embedded within the national EMIS, complemented by project-based initiatives. The ÇARE (Environment, Disaster, Risk Reduction, and Education) Project, developed in partnership with UNICEF, focuses on student competencies through hands-on learning for Grade 3–4 students, addressing environmental awareness, disaster resilience, and sustainable living. The project aims to integrate practical preparedness skills and promote community resilience nationwide from September 2025 onward.	• Combine system-level monitoring with project-based pilots to strengthen preparedness education. • Emphasise student competencies through practical and applied learning. • Use project implementation to inform future scaling and indicator development. • Align preparedness education with broader resilience and sustainability objectives.



ANNEX E: DETAILED CHECKLIST FOR TRACKING PROGRESS IN IMPLEMENTING THE ROADMAP



Purpose of the checklist

This checklist provides a sample of relevant indicators to support self-assessment and progress tracking by EU Member States in relation to preparedness education in early childhood and primary education. Checklist items reflect system-level integration of preparedness education, school-level implementation, and enabling conditions for preparedness learning. This checklist is adaptable to each Member State's national context, allowing flexibility in implementation while ensuring coherence at the EU level.

Preparedness Education Tracking Dimension 1	System-Level Integration of Preparedness Education
Guiding question	Is preparedness education formally recognised, integrated, and sustained within the education system?
Policy and curriculum integration	☐ Preparedness education is explicitly recognised as an education policy objective at national level ☐ Preparedness education is integrated into national curriculum frameworks for: ☐ Early childhood education ☐ Primary education ☐ Preparedness learning outcomes are explicitly defined at system level ☐ Learning outcomes are developmentally appropriate and differentiated by education level ☐ Preparedness learning outcomes are linked to existing curriculum domains or transversal competences ☐ System-level guidance exists on how preparedness learning outcomes can be assessed or recognised ☐ Preparedness education is framed as learning, not only as safety compliance
Governance, coordination, and sustainability	☐ Clear institutional responsibility exists within the education system for preparedness education ☐ Formal coordination mechanisms exist between education authorities and: ☐ Civil protection / emergency management ☐ Health authorities ☐ Climate or environmental bodies ☐ Partnerships with external stakeholders (e.g. Red Cross, NGOs, local authorities) are institutionally supported ☐ Preparedness education is embedded in long-term system arrangements rather than project-based initiatives

**Preparedness
Education
Tracking
Dimension 1**

System-Level Integration of Preparedness Education

Guiding question

Is preparedness education formally recognised, integrated, and sustained within the education system?

Monitoring capacity

- ☐ Preparedness-related indicators are included in national education monitoring or reporting systems (e.g. EMIS)
- ☐ System-level data are periodically reviewed to inform policy development

**Preparedness
Education
Tracking
Dimension 2**

School-Level Implementation of Preparedness and Safety Measures

Guiding question

Are preparedness expectations translated into routine school-level practices?

School readiness

- ☐ Schools are required or expected to maintain an up-to-date safety or disaster management plan
- ☐ School emergency or contingency plans cover relevant hazards and risks
- ☐ Responsibilities for preparedness at school level are clearly assigned

Preparedness practices

- ☐ Schools conduct preparedness drills or exercises
- ☐ Preparedness drills are conducted with defined frequency
- ☐ Preparedness practices are adapted to education level (early childhood vs primary)

Integration into school processes

- ☐ Preparedness is embedded into routine school processes (e.g. school plans, safety routines)
- ☐ Preparedness is reflected in school inspection, evaluation, or self-evaluation processes

School-level monitoring

- ☐ Authorities monitor whether school-level preparedness expectations are met
- ☐ Schools have access to guidance or external support related to preparedness implementation

Guiding question

Do education systems enable meaningful preparedness learning through teacher capacity, pedagogical support, and defined student competencies?

Teacher capacity

- ☐ Preparedness-related competencies are reflected in teacher professional standards or expectations
- ☐ Initial teacher education includes content related to preparedness education
- ☐ Continuing professional development opportunities related to preparedness education are available
- ☐ Teachers have access to official guidance, teaching materials, or pedagogical resources
- ☐ Guidance supports inclusive, child-centered, and culturally sensitive approaches

Pedagogical orientation

- ☐ Preparedness learning emphasises practical, applied learning
- ☐ Learning approaches promote student agency, confidence, and emotional readiness
- ☐ Preparedness learning is framed beyond procedural compliance

**Student learning
outcomes and
assessment**

- ☐ Preparedness-related student competencies are formally recognised
- ☐ Preparedness learning outcomes are age-appropriate and developmentally sequenced
- ☐ Schools assess or otherwise recognise preparedness-related learning outcomes
- ☐ Assessment approaches focus on competencies and understanding rather than drills alone