European Forum for Disaster Risk Reduction

ROADMAP 2021-2030
For a disaster-resilient European and Central Asian region by 2030

The Sendai Framework for Disaster Risk Reduction 2015–2030 provides an opportunity for countries to adopt a concise, focused, forward-looking, inclusive and action-oriented national framework for disaster risk reduction implementation at country level, including modalities of cooperation based on commitments. The Sendai Framework recognizes the role of regional platforms for disaster risk reduction in guiding and supporting national and local actions, including through regional DRR frameworks and strategies. The European Forum for Disaster Risk Reduction (EFDRR) is a regional platform for Europe and Central Asia comprising 55 countries. These countries have different risk profiles and vary in their approaches to disaster and climate-driven risk reduction implementation, be it policies, strategies, laws, investments, levels of preparedness, collaborative arrangements or partnership modalities.

The EFDRR Roadmap 2021-2030 identifies four shared priority areas for achieving the priorities of the Sendai Framework for Disaster Risk Reduction 2015-2030. The four shared priorities include 16 common action areas for development and investment, along with five enabling approaches. The Roadmap builds on consultation with European and Central Asian countries, the review of progress in implementing the Roadmap 2015-2020, and lessons learned from the Covid-19 pandemic response and recovery. The Roadmap is also informed by the Global Platform 2019 and the guiding principles for the Global Platform 2022. The EFDRR Roadmap 2021-2030 supports the implementation of the Sendai Framework by:

- **Supporting regional, national and local disaster risk reduction strategies and actions by identifying shared gaps and challenges to and opportunities for enhancing disaster resilience in the region.**

- **Highlighting effective arrangements for national and local sharing of good practices, pathways and opportunities for more risk-informed, gender-responsive, age-sensitive and inclusive policies, strategies, programmes and approaches.**

- **Promoting and supporting systems for regional collaboration and shared learning.**

Area 1 | Understanding and communicating existing, emerging and future systemic risks

A changing climate, shifting demographics, new technologies and the transition towards digital and green economies requires a paradigm shift in the region's understanding and communication of existing, emerging and future systemic risks. To enable this, National Focal Points and the EFDRR Secretariat identified four action areas for development and investment:

1. **Invest in and apply inclusive and accessible approaches and tools, and disaggregated data to identify and understand existing, emerging and future disaster risks, particularly those based on future cliamte-related scenario.**

2. **Advance the monitoring of disaster risks, experiences and lessons learned, including understanding and communicating the disproportionate impacts on people with disabilities, different genders and age or marginalized population groups.**

3. **Improve coherence with and leverage global agendas to address future climate change, disaster risks and related socioeconomic challenges at all levels.**

4. **Build new inclusive and accessible systems to address systemic risks.**

Gaps, challenges and current status

Future climate and disaster risks are no longer predictable from just historical risks and assumptions. Countries are committed to but struggle with the approaches to understand and build resilience set out by the Sendai Framework, the Paris Agreement and the Sustainable Development Goals (SDGs). Identifying, understanding and assessing – as well as communicating in a manner that is accessible to a wide range of audiences – emerging and future disaster and climate-driven risks is challenging. Building resilient systems requires integrating a wide range of realities, vulnerabilities and capacities: future climate-driven scenarios, changes in environmental conditions and levels of biodiversity, demographic shifts, gender, age and disability issues, human rights concerns, the intersectional nature of risk, socioeconomic variables, and rapid digitalization and technological advances. The region's disaster risks are becoming increasingly complex and interconnected; a variety of multi-hazard, rapid and slow- onset hazardous events is increasing the risk of cascading and cumulative disasters, threatening development gains and critical systems. The understanding among stakeholders of existing, emerging and future systemic risks remains fragmented, as does the robust use of statistical data or scientific expertise – including the expertise to address the displacement, disability, gender and social inclusion dimensions of risk. Moreover, systems supporting policies and strategies often function in isolation.

The increasing need for global, regional, national and local collaborations and partnerships requires shared frameworks and approaches to advance risk monitoring and facilitate comparable learning. Common frameworks – such as the Sendai Framework Monitor, Making Cities Resilient 2030 initiative, the INFORM Risk Index or other shared resilience goals and strategies – can help shape a common understanding and facilitate the sharing of experience. These types of frameworks support the use of disaggregated data and scientific evidence from diverse disciplines, as well as engagement with a wide range of communities and stakeholders across society. They provide systems for improving evidence-driven understanding and the inclusive communication of existing, emerging and future systemic disaster and climate risks.

Transformative opportunities and way forward

Scenario simulations, evidence-based scientific data and new technologies, including earth observations, provide transformative tools for decision makers, scientists and stakeholders to better understand, communicate and monitor disaster and climate risks, enabling them to plan coherent resilient systems. A range of global, regional and national organizations[1] are investing in scientific and technological research, generating, interpreting and communicating common research frameworks, scientific advice and coherent actionable data. The collection and use of sex-, age- and disability-disaggregated data can transform decision-making processes and practices by highlighting the ways in which socioeconomic characteristics intersect and shape people's unique vulnerability to risk and their capacity to respond. However, the application of this type of transformative data and evidence remains fragmented, with regional, national and local processes often overlapping. This makes it difficult to develop a common understanding of risk among multiple stakeholders, including high-risk groups.

Information and communication technology, big data and artificial intelligence – including probabilistic modelling, horizon scanning, forecasting, interactive simulations, and participatory, scenario and data-driven analyses – are transforming our understanding and communication of risk. Shared spatial, system-wide, ecosystem and dynamic socioeconomic frameworks can help transform stakeholder's understanding and monitoring of existing, emerging and future systemic risks.

Regional organizations play a key role in developing strategies, directives, agreements, collaborations and contextualized approaches and tools that can help frame a comparable and coherent understanding of disaster and climate-related risks to support economic, social and ecosystem resilience-building opportunities and the sharing of knowledge, experiences and lessons.

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1. Examples of leading initiatives include E-STAG, Horizon, Copernicus, JRC, UN-GGIM and GEOSTAT.

Area 2 | Inclusive and collaborative systems for governance and decision-making

Achieving a disaster-resilient European and Central Asian region by 2030 requires a broad understanding across society, as well as further resources and investment, facilitated by robust and inclusive governance and decision-making processes. To achieve this, National Focal Points and the EFDRR Secretariat identified four action areas for development and investment:

1. **Institutionalize a multi-stakeholder, inclusive approach for governance at all levels.**
2. **Systematize scientific and evidence-based decision-making processes for action at all levels.**
3. **Strengthen collaborative and transboundary systems for capacity-building and multi-stakeholder action at all levels.**
4. **Support effective and inclusive protection and safety nets.**

Gaps, challenges and current status

Climate change and Covid-19 pandemic have highlighted the opportunities and challenges for governance and decision-making systems in addressing existing, emerging and future disaster and climate risks. In recognition of this, EFDRR countries remain committed to 'all-of-society', regional, transboundary and collaborative systems of governance and decision-making – guided, for example, by the **UN Convention on the Rights of Persons with Disabilities or the Convention on the Transboundary Effects of Industrial Accidents**. Many national disaster management agencies and platforms struggle to initiate and sustain robust engagement with non-civil protection and non-traditional stakeholders, and to secure the participation of relevant ministries, high-risk, marginalized or displaced communities, or representative groups (including age-related and women's groups, and organizations for people with disabilities) in the co-design of strategies. A fragmented understanding of terminology, concepts, approaches, databases, assessments and standards, impedes collaboration with public, private, academic and civil society organizations and, ultimately, undermines the effective utilization of resources and the benefits of all-of-society approaches. Emerging regional collaborative and advisory initiatives are helping to connect and integrate social protection, economic and scientific knowledge and expertise with governance and decision-making structures. During the Roadmap 2015-2020 period, many regional intergovernmental organizations encouraged collaboration through shared contextualized frameworks, goals, policies, strategies, directives, agreements, peer reviews, stress tests, and scientific and evidence-based initiatives. Platforms or structures for multi-stakeholder interaction, learning, after-action-reviews and decision-making can help facilitate cross-sectoral, multi-stakeholder collaboration.

Transformative opportunities and way forward

Common global, regional, national and local frameworks, agreements and consultations encourage inclusive systems for governance and the collaborative design of strategies and capacity-building. Some regional and national (inter-) governmental bodies have the convening power or legislative authority to engage relevant government ministries and stakeholders, creating the space for participation, shared leadership, and the analysis and co-design of policies, strategies and actions.

EFDRR countries are increasingly systematic in consulting or engaging key stakeholders from a range of scientific and socioeconomic fields in decision-making processes and the development of national policies. Leveraging the essential knowledge, skills, resources and experiences of women, marginalized communities, displaced people and other high-risk groups by securing their participation and leadership supports more inclusive DRR. Effective partnerships and decision-making pathways are built on shared frameworks, terminology, concepts, approaches, databases, assessments and standards, notably those of the SDGs and the Paris Agreement.

Systematic reporting for the Sendai Framework Monitoring process and (sub-)regional organizations (i.e., the **European Union,** the **Council of the Baltic Sea States**, the **Centre for Emergency Situations and Disaster Risk Reduction, the Disaster Prevention and Preparedness Initiative for SE Europe**) highlight areas of progress and opportunities for collaboration within different regional, national and local contexts, promoting collaborative reviews and common priorities for capacity-building. Initiatives such as the **Making Cities Resilient 2030 Initiative** or the **U-SCORE** project contribute to improvements related to urban risks and the implementation of resilience scorecards and strategic planning mechanisms.

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Area 3 | Supporting investments in resilience

Resilience is a public good; it is the joint responsibility of governments, the private sector and civil society to ensure that everyone benefits from investments in resilience and that no one is left behind. Increasing the quality of investments, budgetary resources and regulatory powers, especially for critical infrastructure systems, is paramount for mitigating the impacts of future climate change and enhancing disaster resilience in the region. To systematically increase investments in society-wide and regional resilience, the National Focal Points and EFDRR Secretariat identified four action areas for supporting resilient investments:

1. **Invest in protecting critical infrastructure and systems from climate change and future cascading and cumulative disaster risks.**

2. **Leverage transparent and sustainable investments for gender-responsive, age-sensitive and inclusive disaster risk reduction at all levels.**

3. **Strengthen national and local budgets and regulatory powers for inclusive DRR to address future climate-driven and disaster risks.**

4. **Establish standards and tools for sustainable financing and investments at all levels.**

Gaps, challenges and current status

Europe and Central Asia's increasingly ageing critical infrastructure systems were often designed to take account of historical risks. However, the changes in climate, demographics, ecosystems and digital support systems are altering risk profiles and creating new risks (such as cyber risks). In addition, the increasing globalization and regionalization of economies has amplified dependences with regards to food security, technology, transport, energy and communication systems. The Covid-19 pandemic showed that political and administrative boundaries can challenge or complement the resilience of public health systems.

Finance and economic ministries are increasingly engaging insurance, financing and banking markets to leverage green, sustainable and resilience investments that take into consideration future disaster and climate risk. Standards and reporting obligations for economic and financial systems and incentives increasingly account for environmental, social and governance resilience. There is a growing recognition among stakeholders, including investors, owners, operators and regulators of critical infrastructure systems, that investing in resilient (and green) systems will pay dividends in the long run.

Regional, national and local government investments and budgeting systems often fail to recognize resilience as a public good, and struggle to transparently account for and

systematically report on DRR and prevention investments. In addition, socioeconomic systems find it difficult to weigh up the benefits against the costs, and price risk into investment decisions. Although challenging, shared contextualized and transboundary understanding, data, standards and new technologies helps enhance opportunities for collaboration and investment between local, national, regional and global governance structures and non-government socioeconomic actors and resources.

Transformative opportunities and way forward

Emerging socioeconomic models, sustainable financing and investment strategies, and policy directives increasingly support transboundary and system-wide approaches to critical infrastructure resilience and investments. There is a growing recognition among policy and decision makers of the value of investing in inclusive, green and digital systems supported by new strategies and investment mechanisms, including climate adaptation strategies and recovery planning. Regional and national organizations can promote investments in resilience with new financing and inclusive partnerships, standards and tools, common classification systems (or 'taxonomies') for sustainable economic and climate-related activities, disclosure and reporting laws, budget transparency mechanisms, and investment decisions that align with the life cycles of critical infrastructure and commitments to inclusion. Policies, plans and programmes need fit-for-purpose budgetary resources and regulatory powers to prepare actively for climate-related risk scenarios.

Financing, (re)insurance, banking, investment and business decisions increasingly consider disaster, future climate and cyber risks, as well as recognize the growth and profitability of environmental, social and governance investments. Water, transport, communication, health and energy systems, policies, agreements, standards and directives increasingly support green and resilient investments for a more disaster-resilient future, including for future climate scenarios. With varying levels of coverage, regional organizations are supporting system-wide contextualized approaches for establishing resilience standards, recognizing that, as a public good, resilience needs to be inclusive and accessible to all.

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Area 4 | Preparedness for response and resilient recovery

The Covid-19 pandemic demonstrated the social and economic benefits of preparing for response and resilient recovery (and investing in resilient systems during recovery), including for existing and emerging high-impact and low-frequency future risks. Green, socioeconomic and other response and recovery investments offer opportunities to build resilience and reduce risk. Recognizing that risks are increasingly complex and require early-warning and preparedness systems, National Focal Points and the EFDRR Secretariat identified four action areas for development and investment:

1. **Invest in accessible multi-hazard early-warning systems.**

2. **Strengthen gender-responsive, age-sensitive and inclusive preparedness for complex emergencies at all levels.**

3. **Apply lessons identified from the Covid-19 pandemic response for future preparedness and recovery planning and approaches, including for pandemics.**

4. **Develop new accessible and inclusive disaster-resilience tools for building back better that address existing, emerging and future risks.**

Gaps, challenges and current status

The Covid-19 pandemic demonstrated that the European and Central Asian region needs to invest in preparing for simultaneous multi-country risks. This requires not just an all-of-government approach but transboundary and inclusive all-of-society approaches to prepare for both response and resilient recovery. Response and resilient recovery investments and regional agreements have built on civil protection collaboration, facilitated largely by regional institutions. Covid-19 policy responses show the potential benefits of further regional collaborations, regulations, agreements and institutions for sharing resources, innovations and expertise from all sectors of society. The response to and recovery from COVID-19 pandemic has highlighted the systemic, complex and interconnected nature of multi-country, multi-hazard risks – with lessons for future climate change-driven risks.

Responses to zoonotic diseases like Covid-19 and environmental and climate risks highlight the benefits of extending traditional civil protection-led responses to incorporate all-of-society approaches that include a wide range of relevant stakeholders in risk assessments and decision-making – in particular, highly impacted groups, local communities and displaced populations – and engaging financing and business sectors, as well as environmental and health expertise and government ministries. The response to and recovery from COVID-19 pandemic highlights the value of multi-stakeholder collaboration, scientific knowledge, technological innovation and evidence-based guidance and solutions, as well as the socioeconomic importance of gender-responsive, age-sensitive and inclusive safety nets – informed by the SDGs and the vision to 'leave no one behind'.

Transformative opportunities and way forward

Covid-19 pandemic, climate change and the complexity of existing, emerging and future risks make clear the need for a paradigm shift in preparedness, response and recovery. Regional organizations and programmes such as Copernicus and Horizon Europe provide innovative research and tools for future inclusive early-warning systems and collaborations. In addition, scientific and technological advances such as geographic information systems, earth observations, big data and spatial planning enhance multi-hazard early-warning systems and near-time monitoring of complex emergencies, including across borders.

All-of-society and inclusive approaches, collaborations and agreements can help move preparedness beyond civil protection mechanisms and ex-ante resilient recovery planning, accelerating existing resilience strategies, including green deals and other resilient-building systems. Inclusive systems and collaboration with representatives of vulnerable groups, communities and civil society organizations can help mitigate the impact of hazardous events, transform resilience-building during recovery and reduce the marginalization and disproportionate impact on high-risk groups.

Connecting processes

The EFDRR Roadmap 2021-2030 articulates part of the EFDRR's commitment to implement the Sendai Framework and its global and regional platforms. The EFDRR meetings allow for reflection and redirection of priority and investment areas highlighted in the Roadmap 2021-2030. The Sendai Framework Monitor remains a vital tool for reporting national progress towards the four priorities, seven targets and 38 global indicators of the Sendai Framework 2015-2030.

1. Examples of leading initiatives include E-STAG, Horizon, Copernicus, JRC, UN-GGIM and GEOSTAT.

Annex 1 | Enabling approaches for a disaster-resilient European and Central Asian region by 2030

The Roadmap 2021-2030 identifies five enabling approaches required to achieve a disaster-resilient European and Central Asian region by 2030. Policy and decision makers at all levels can benefit from these enabling approaches to support regional, national or local commitments or policies.

Enabling approach 1 – **All-of-society, inclusive and responsive approaches to accelerate understanding and investment in disaster risk reduction and resilience.**

All-of-society approaches benefit from the experiences, knowledge, capacities and resources of potentially transformative sectoral and under-engaged actors at local, national and regional levels. EFDRR countries are committed to multi-stakeholder, all-of-government and all-of-society approaches and agreements, including the Convention on the Rights of Persons with Disabilities.

Supporting and engaging at-risk groups in strategic planning and actions can facilitate access to their knowledge and expertise to support inclusive and accessible resilience-building. Covid-19 pandemic highlighted the multiple risks facing vulnerable groups, communities and individuals – including women, elderly people with disabilities, migrants, displaced communities, youth and the LBGQTI+ community – and how these risks are often exacerbated by marginalization. Representative and community groups, including for marginalized and at-risk communities, play a key role in promoting broader engagement. They have the capacity, expertise and resources, as well as an understanding of the specific requirements of the communities they represent, to ensure that risk reduction actions benefit all.

There is a need for a new social contract on disaster risk and climate change that articulates citizen responsibilities and obligations, as well as what can be expected from governments, municipalities, the private sector and other actors. A new social contract can set out what disaster risk means for people and their lives, based on the notion of resilience as a 'public good'.

Multi-stakeholder, all-of-society approaches harness collective knowledge and resources for shared intersectional approaches to disaster and climate resilience-building. This enabling approach recognized the value of diverse perspectives and contexts of resilience. All-of-society approaches, platforms and forums foster inclusive understanding and multi-stakeholder investment, as well as articulate the roles and responsibilities for risk reduction. These approaches engage multiple government sectors, improving the coherence of investments and decision-making. Efforts to engage diverse systems to promote collective aims include, for example, incorporating expertise on biodiversity, climate modelling, disability, gender equity or youth-related issues. Engaging science and technology stakeholders helps to inform evidence-based planning for investments in disaster risk reduction as well as helping to reduce the risk of existing investments. The knowledge, expertise and resources of data and technology specialists, regulators and the private sector, including the insurance, banking and finance sector, can contribute to enhancing capacities, resources and advocacy efforts at regional, national and local levels. Knowledge management systems play an important role in facilitating exchanges and shared learning between different ministries and relevant stakeholders, as well as in managing uncertainty in decision-making.

Gender-responsive, age-sensitive and inclusive policies, strategies, frameworks, agreements, standards, regulations and laws, as well as a shared understanding of risk and the mutual benefits of inclusive approaches for resilience-building, promote further engagement with different parts of society. EFDRR is committed to an all-of-society approach and, to this end, engages regional federations, groups and advisory structures such as the European Scientific and Technical Advisory Group (E-STAG). Opportunities exist to identify and share coherent national and regional all-of-society processes, approaches and collaborations, and further engage with climate, environment, biodiversity and other resilience actors.

Enabling approach 2 – **Coherent approaches to leverage the disaster risk reduction agenda and improve coherence with other global agendas to risk-inform future climate change, environment, biodiversity, sustainable development, equity and inclusion, green and other policies, strategies, investments and action agendas at all levels.**

Disaster risk reduction is both mutually dependent on and supporting of many of these global and regional agendas. However, while governments recognize the benefits of coherent resilience policies, strategies and approaches, many struggle to align these with the multiple frameworks and agreements that exist: the Sendai Framework, the future scenarios of the Paris Agreement, the Agenda 2030 with Sustainable Development Goals (SDGs) and other agreements such as those on biodiversity or urban agendas. Progress towards coherence and leveraging global agendas is fragmented across regional, national and local-level strategies, actions and commitments. This hinders investment at scale for accelerated action. Different national and sub-national governments, intergovernmental organizations, and initiatives support existing and emerging planning guidance for resilience goals, indicators or city planning, and coherent approaches for sustainable risk-informed development, multi-stakeholder collaboration platforms, spatial planning, nature-based solutions or systems protecting critical infrastructure. EFDRR countries

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1. Examples of leading initiatives include E-STAG, Horizon, Copernicus, JRC, UN-GGIM and GEOSTAT.

and stakeholders continue to identify gaps and opportunities to increase coherence in approaches at regional, national and local levels – including investments to address identified gaps.

Enabling approach 3 – **System-wide approaches to protect critical infrastructure systems and investments against future climate and disaster risk, including during recovery.**

Regional, national and local policies and strategies increasingly recognize the complex risks associated with the integrated and digital systems that protect critical infrastructure and sectors such as health, transport, water, energy, communication and food security. Critical systems depend on global supplies and integrated technologies that work across administrative boundaries. Risk-informing investments in critical systems needs to take account of a range of existing, emerging and future contexts, especially in relation to climate change and technological risk. Systems approaches to risk assessment and planning help to highlight vulnerabilities such as the risk of cyber incidents or the disruption of supply chains for medical or emergency equipment. National Focal Points surveyed for this Roadmap identified protecting critical infrastructure from cascading risks as the top action area for development and investment. EFDRR supports the sharing of increasingly contextualized tools, approaches and targets for resilient critical infrastructure, and regionalized approaches to transboundary systems or resilience-building actions. Recovery from Covid-19 pandemic and other hazardous events, demonstrates the opportunities for building multi-hazard resilience through resilient recovery investments and learning, including building green, digital and socioeconomic resilience.

Enabling approach 4 – **Evidence-based approaches to risk-inform policies, strategies, plans, regulatory frameworks, decisions and actions.**

The use of robust evidence, and disaggregated and geographical data is critical in helping to reduce risk. Current methods have evolved from historic hazard-informed approaches, but now increasingly benefit from advances in science and technology, as well as the use of disaggregated data (by geographical location, sex, age and disability status) or data on emerging issues such as displacement. These advances contribute to a deeper understanding of existing, emerging and future disaster and climate risk and help to inform relevant actions. There has been an increase in the availability of local, regional and national decision-making tools and intelligence to support decision-making and prompt risk-informed action. However, the availability of contextualized analyses and decision-making tools at the local level remains fragmented. Global and regional science and technology actors are producing and promoting an increasing amount of accessible scientific,

spatial, socioeconomic and demographic evidence and disaggregated data that can be used to inform and improve decision-making, particularly in relation to the uncertainty around future scenarios. Earth observation, geospatial, nature-based and scientific data and analyses – for example, from EuroGEO or the Copernicus programme – helps to identify and communicate solutions and the benefits of transboundary risk reduction and collaboration. However, governments and decision makers can further benefit from the abundance of data and advantages of spatial, nature-based, eco-system and other evidence-based approaches.

Enabling approach 5 - **Regional, local and contextualized approaches to support transboundary, national and local policy and strategy coherence, investments and collaboration.**

Global and regional intergovernmental organizations, investments and initiatives support contextualized, gender-responsive, age-sensitve and inclusive mitigation/prevention, disaster preparedness, risk reduction and resilience – as part of both sustainable development and recovery efforts. Importantly, these organizations and initiatives provide policy and strategy leadership and build political and administrative commitment to disaster risk reduction. Regional organizations can tailor and facilitate, in collaboration with relevant stakeholders, the sharing of resources and knowledge, as well as disaster risk reduction approaches and tools that are adapted to local geographic, administrative and socioeconomic conditions. Regionalization, localization and contextualization facilitate knowledge exchange and learning between countries and stakeholders within shared and compatible frameworks, including through peer reviews, joint benchmarking and monitoring, and the development of collective aims. Regionalization, localization and contextualization improves awareness, understanding and communication of solutions based on shared and comparable risks and political, demographic and socioeconomic profiles. EFDRR invites multi-stakeholder bodies and countries to develop and share guidelines, and normative and voluntary standards, to enhance local-level engagement and action.

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1. Examples of leading initiatives include E-STAG, Horizon, Copernicus, JRC, UN-GGIM and GEOSTAT.

Annex 2 | 2021-2030 Roadmap contributors

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1. Examples of leading initiatives include E-STAG, Horizon, Copernicus, JRC, UN-GGIM and GEOSTAT.