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COMMISSION STAFF WORKING DOCUMENT

**Action Plan on the Sendai Framework for Disaster Risk Reduction
2015-2030**

A disaster risk-informed approach for all EU policies

Action Plan on the Sendai Framework for Disaster Risk Reduction 2015-2030

A disaster risk-informed approach for all EU policies

I. Setting the scene

Global trends, including population growth, unsustainable urbanisation and poor land management, ecosystem degradation and climate change, have led to an increase in the frequency, intensity and impact of disasters over the last decades. Improvements in disaster risk management have led to substantial reductions in the number of lives lost in some countries. However, millions of people remain affected by natural disasters every year¹ and the economic damages incurred continue to increase².

At the international level, work on disaster risk management is drawn together under the Sendai Framework for disaster risk reduction 2015-2030, adopted by United Nations (UN) Member States at the third UN world conference on disaster risk reduction in March 2015 and endorsed by the UN General Assembly.³ The Sendai Framework is the successor instrument to the Hyogo Framework for Action 2005-2015. As the first of the post-2015 development agreements, the Sendai Framework is the basis for a disaster risk-informed and resilient sustainable development agenda.

The Sendai Framework is a voluntary instrument providing a new global approach to disaster risk management policy and operations. It represents a shift in the policy approach at the global level from *disaster management* to *disaster risk management*: the goal is to prevent new and reduce existing disaster risks, through an all-of-society and all-hazards risk approach⁴ across economic, social, and environmental policy areas, with a view to reduce vulnerability and increase resilience. States, their national and local authorities, regional and international organisations and other stakeholders, are invited to implement the four priorities of the Sendai Framework⁵. Seven agreed global targets, most of which should be achieved by 2030, will be measured globally by appropriate indicators⁶ to contribute to the implementation of the priorities.

The European Union (EU) has played a leading role in the negotiations of the new Framework and many of the Sendai recommendations are based on existing EU disaster risk management policies and programmes, including most of the ongoing civil protection, development cooperation and humanitarian aid actions. There are also several links to other EU policies, including climate change adaptation, critical infrastructure protection, flood risk management, water and biodiversity protection, research and innovation and global health security, food and nutrition security. Compared to the Hyogo Framework for Action, the Sendai Framework is both innovative – including targets, promoting all-of-society and all-of-States engagement – and broader, introducing new focus areas such as ecosystem conservation and restoration, education and cultural heritage, among others. It also foresees a strong role for regional organisations in supporting the efforts of countries in reducing disaster risks.

¹ "The human cost of natural disasters 2015: A global perspective", Centre for Research on the Epidemiology of Disasters (CRED)

² Global Assessment Report on Disaster Risk Reduction, 2015, United Nations Office for Disaster Risk Reduction (UNISDR)

³ A/RES/69/283, adopted by the General Assembly on 3 June 2015

⁴ Includes natural and man-made hazards, and related environmental, technological and biological hazards and risks.

⁵ http://www.preventionweb.net/files/44983_sendaiframeworksimplifiedchart.pdf

⁶ The indicators will be developed by December 2016 by an open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction (A/RES/69/284).

Translating the Sendai Framework into tangible actions should be done in coherence with other 2015 and 2016 international agreements and processes, including the 2030 Agenda for Sustainable Development⁷, the Addis Ababa Action Agenda⁸, the Paris agreement adopted under the United Nations Framework Convention on Climate Change (UNFCCC)⁹, the World Humanitarian Summit¹⁰, and the New Urban Agenda following the third UN Conference on Housing and Sustainable Urban Development - HABITAT III¹¹.

The Sendai Framework - An opportunity to develop a disaster risk-informed approach for all EU policies

The Sendai Framework is the basis for a *disaster risk-informed approach* to policy-making, offering a coherent agenda across different EU policies to strengthen resilience to risks and shocks and supporting the EU priorities of investment, competitiveness, research and innovation.

The implementation of the Sendai Framework is an opportunity for the EU to take forward its disaster risk management agenda and to reinforce its efforts to increase resilience to shocks and stresses. Investing in disaster risk management enhances resilience and can act as a driver of innovation, growth and job creation. This is true both inside and outside the EU, where low and middle-income countries are disproportionately affected by disasters. Through building the resilience of people, ecosystems, infrastructure, policies and planning processes, and taking into account climate-related risks and the need for adaptation, the Sendai Framework implementation also forms part of the EU's contribution to the 2030 Agenda for Sustainable Development.

The purpose of the Action Plan is to build on the Sendai Framework and the mentioned international agreements and processes, to further enhance and promote disaster risk management and its integration in EU policies. The Action Plan highlights the European Commission experience so far and translates the Framework priorities across existing EU policies. Some of the actions identified may also complement EU Member States' initiatives to implement the Framework.

II. Achieving the priorities of the Sendai Framework – A contribution of all EU existing policies and practices

Significant achievements, made both through Union policies and financial support, are already contributing to the implementation of the Sendai Framework. A mapping analysis of EU policies against the four Framework priorities is available in Annex 1.

The first priority - "**Understanding disaster risk**", mainly addressing data, risk and vulnerability assessment, spreading of good practices, building knowledge and improving research and education, are extensively covered by many of the existing civil protection, humanitarian aid, climate change adaptation, environment and research policies and actions.

The second priority - "**Strengthening disaster risk governance to manage disaster risks**" is

⁷ A/RES/70/1, adopted by the General Assembly on 25 September 2015

⁸ A/RES/69/313, adopted by the General Assembly on 27 July 2015

⁹ Decision 1/CP.21

¹⁰ A/70/709, Report of the Secretary-General for the World Humanitarian Summit

¹¹ A/RES/66/207, adopted by the General Assembly on 14 March 2012

strongly linked to a number of existing EU actions on civil protection (such as planning for risk management, assessment of capabilities, peer reviews) and on humanitarian aid (local and community coordination, capacity building). There are also linkages with environmental management and cross border cooperation, including through cohesion and development policies.

The third priority - "**Investing in disaster risk reduction for resilience**", links to development, humanitarian aid, cohesion, environment, climate change, research and innovation, rural development, employment and construction policies. There is further a reference to "disaster induced human mobility", linked to the Agenda for Migration.¹² The priority also contains several recommendations on health policy, cultural heritage and tourism.

The fourth priority - "**Enhancing disaster preparedness for effective response and to Build Back Better**" addresses issues covered by civil protection policy (such as early warning, training, exercises, sharing response capacities, host nation support and the European Medical Corps), humanitarian aid (EU Aid Volunteers, early action and local responses), environmental protection and development policies.

III. Action Plan Implementation Priorities

The mapping exercise shows that, while several policy initiatives are already contributing to implement the Sendai Framework in a fragmented way, a more systematic risk-informed approach for all EU policies in order to reach the Sendai objectives does not exist.

Such a risk-informed approach could consist of four key areas related to the four Sendai priorities:

- (1) Building risk knowledge in EU policies;
- (2) An all-of-society approach in disaster risk management;
- (3) Promoting EU risk informed investments; and
- (4) Supporting the development of a holistic disaster risk management approach.

Building on existing EU policy and legislation, presented in Annex 1, the Action Plan identifies for each of these key areas a series of measures that could form the backbone of an EU risk-informed policy landscape.¹³

Key Area 1 – Building risk knowledge in all EU policies (Sendai Priority 1 "Understanding disaster risk")

- Promote the **collection and sharing of baseline loss and damage data**

¹² European Agenda for Migration COM(2015) 240 final

¹³ The Action Plan also complements the Action Plan for Resilience in crisis prone countries 2013-2020 (SWD(2013)227 final) and the Disaster Risk Reduction Implementation Plan (SEC (2011)215 final)

- Use **foresight, scenarios and risk assessments** for better preparedness to existing, emerging risks and new types of risks
- **Further engage with the research community** to better address disaster risk management knowledge and technology gaps and to **encourage stronger science-policy interface in decision-making**

Key Area 2 – An all-of-society approach in disaster risk management (Sendai Priority 2 "Strengthening disaster risk governance to manage disaster risks")

- Explore the **potential of educational measures for reducing disaster risks**
- Facilitate exchange of good practices and improvements in disaster management policy and operations through **mutual learning and expert review**
- Work with stakeholders, including local authorities, civil society and communities, to develop specific **strategies for risk awareness** that include the most vulnerable groups, such as children and youth, elderly, persons with disabilities and indigenous people
- Cooperate with the **private sector** to encourage business-driven innovation in all areas of disaster risk management
- Strengthen the links between **disaster risk management, climate change adaptation and biodiversity strategies**
- **Reinforce** the links between **disaster risk management, climate change adaptation and urban policies and initiatives**
- Support the development of **inclusive local and national disaster risk reduction strategies**, with active engagement of local actors - authorities, communities and civil society
- Assist **regional organisations in supporting national authorities to implement the Sendai Framework**, including the development of National and Regional platforms for disaster risk reduction

Key Area 3 - Promoting EU risk informed investments (Sendai Priority 3 "Investing in disaster risk reduction for resilience")

- Promote **risk-informed investments in all EU external financial instruments**, including multilateral and bilateral development assistance

- Track **investments in disaster risk reduction** in all humanitarian and development assistance programmes
- Promote **risk-proofed investments in the EU**, including in the context of the Investment Plan for Europe¹⁴
- Promote the use of mechanisms for **disaster risk financing, risk transfer and insurance, risk-sharing and retention**
- Foster and implement **ecosystem-based approaches to disaster risk reduction**

Key Area 4 - Supporting the development of a holistic disaster risk management approach (Sendai Priority 4 "Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction")

- Develop good practices on the integration of **cultural heritage in the national disaster risk reduction strategies** to be developed by EU Member States
- Enhance **preparedness and response capacities for disasters with health consequences** and cooperation between health authorities and other relevant stakeholders
- Facilitate **capacity building of local and national authorities and communities** and other actors in managing disaster risk
- Support the development and better integration of **transnational detection and early warning and alert systems** for better disaster preparedness and response action
- Integrate the **"Build Back Better"** objective into the assessment methodologies, projects and standards for disaster risk management and resilience

IV. Next steps: Moving forward disaster risk management within the global agenda

Disaster resilience has been mainstreamed in the 2030 Agenda for Sustainable Development, the Financing for Development conference (Addis Ababa Action Agenda) and in the Climate Change Conference (COP 21), in particular with regards to loss and damage¹⁵. Ecosystem-based disaster risk reduction has been discussed at the 12th meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP XII), which adopted Decision XII/20 on Biodiversity and climate change and disaster risk reduction.¹⁶ The 3rd UN Conference on Housing

¹⁴ Regulation (EU) 2015/1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013 — the European Fund for Strategic Investments, OJ L 169, 01.07.2015., p. 1

¹⁵ The Paris Agreement gives recognition to the important link between disaster risk assessment and management and the need to alert, minimize and address loss and damage due to climate change impacts.

¹⁶ <https://www.cbd.int/decision/cop/default.shtml?id=13383>

and Sustainable Urban Development - HABITAT III, which will establish a global New Urban Agenda, is also an opportunity to support measures improving urban resilience, in line with the Sendai Framework.¹⁷

Several of the ideas enshrined in the Sendai Framework, were also echoed by the UN Secretary - General's High Level Panel on Humanitarian Financing proposals for the World Humanitarian Summit (WHS)¹⁸, resulting in the WHS Grand Bargain commitment¹⁹, and the UN Secretary - General's Agenda for Humanity²⁰. The Agenda, welcomed by the Council²¹, called for fulfilment of the recommendations adopted in Sendai and for a new way to manage and prepare for disasters, shifting from reactively managing crises to proactively managing risks and fostering risk-informed sustainable development. The WHS commitments²² will also have an important role in implementing the Framework.

These mutually supportive international processes and agreements will allow for strengthened coherence across institutions, policies, goals, indicators, and measurement and monitoring systems for implementation.

V. Implementation: Monitoring and evaluation

The table in Annex 2 includes a set of priorities with specific activities coordinated by the European Commission, with a timeline for implementation until 2020. The European Commission will carry out regular reviews of the Action Plan to assess progress. In implementing the Plan, it will be essential to work together closely with all stakeholders, including EU Member States, civil society and private sector.

Annex 1: Achieving the priorities of the Sendai Framework: a contribution of all EU existing policies and practices

(1) Sendai Priority 1: Understanding disaster risk

Key policies and practices contributing to the implementation of this priority include:

Assessment of risks (Sendai paragraphs 23, 24(b), 24(c), 25(a), 25(b), 25 (g))

- Building on Member States' **multi-hazard national risk assessments** made available to the European Commission, in line with the Union Civil Protection legislation²³, the European Commission is updating its first cross-sectoral overview of risks in the EU²⁴. This will be

¹⁷ Council Conclusions, HABITAT III: The European Union and its Member States' objectives and priorities for the 3rd UN Conference on Housing and Sustainable Urban Development, 12.05.2016, 8824/16

¹⁸ ["Too important to Fail: Addressing the humanitarian financing gap"](#)

¹⁹ http://reliefweb.int/sites/reliefweb.int/files/resources/Grand_Bargain_final_22_May_FINAL-2.pdf

²⁰ <http://sgreport.worldhumanitarianissummit.org/>

²¹ Conclusions of the Council and the Representatives of the Governments of the Member States meeting within the Council on the World Humanitarian Summit, 12.05.2016, 8850/16

²² [WHS Chair's Summary "Standing up for humanity: Committing to action"](#)

²³ Decision No 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on a Union Civil Protection Mechanism, OJ L 347, 20.12.2013, p. 924

²⁴ First version of the EU Overview of Risks published in 2014: SWD(2014)134

followed by an assessment of the risk management capability conducted by each EU Member State at national or, as appropriate, at sub-national level.

- **Risk assessment and mapping requirements** have been included in a number of legislative instruments, such as the Floods Directive²⁵, the Directive on major-accident hazards involving dangerous substances (Seveso-III)²⁶ and the Directive on European critical infrastructures²⁷. Within the EU Framework on Health Security, ad hoc assessments of risks caused by serious cross-border threats of environmental origin are made available by the European Commission through the Health Security Committee, either by its own initiative or upon request of EU Member States.
- **Risk assessments** are part of EU policy implemented by **the European Structural and Investment funds (ESIF)**. They are a precondition for funding under the thematic objective 'Climate change adaptation and risk prevention and management' from the European Structural and Investment Funds in the 2014-2020 period. National climate change adaptation strategies are required, where appropriate, to inform national risk assessments. This ensures that EU funds are spent in a strategic framework and supports the implementation of the civil protection legislation, as well as promotes further advancement and integration of climate change adaptation and disaster risk reduction policies.
- In the context of external policies, progress has been made in **global crisis and disaster risk assessment** through creation of the Index for Risk Management - INFORM²⁸, an open-source risk assessment tool developed to support decisions about crisis and disaster prevention, preparedness, response and resilience. As of 2015, INFORM is also used for regional and national assessments, to support development of local risk models tailored to specific regions and countries to be used in humanitarian, development and other planning and programmes. This approach is based on four pilot projects implemented in 2015 in the Sahel and Eastern Africa regions, Lebanon and Colombia.
- The implementation plan of the **European consensus on humanitarian aid**²⁹ prioritises efforts to improve evidence-based decisions through promoting the development of innovative solutions, such as INFORM, global multi-risk early-warning systems and global built-up and population exposure datasets derived from remote sensing, such as Global Human Settlement Layer³⁰.

Science-policy interface (paragraphs 24(h), 24(i), 24(g))

- The **Disaster Risk Management Knowledge Centre (DRMKC)** is the European Commission point of reference in strengthening the interface between science and policy.³¹ It responds to the

²⁵ Directive 2007/60/EC on the assessment and management of flood risks

²⁶ Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

²⁷ Directive 2008/114/EC on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection

²⁸ www.inform-index.org

²⁹ Implementation Plan of the European Consensus on Humanitarian Aid SWD(2015)269 final

³⁰ <https://ec.europa.eu/jrc/en/scientific-tool/global-human-settlement-layer>

³¹ The DRMKC brings together a number of initiatives in Disaster Risk Management, such as the Community of Users for Crisis

Sendai call on existing networks and science organisations to facilitate the use of scientific findings, improved research and technology. The DRMKC provides a coherent interface between science and policy by contributing research on hazard modelling, forecasting and early warning systems, crisis management technology, critical infrastructure protection, risk standard setting (e.g. Eurocodes³², disaster loss and damage data³³, lessons learnt), and risk assessment methodologies, often based on research networks within EU Member States.

- A range of research projects has been funded by the EU within the 7th Framework Programme with a direct or indirect support to the previous Hyogo Framework for Action, while further actions are being developed in the Horizon 2020 Framework Programme for Research and Innovation, which have a direct impact on the Sendai recommendation on the science-policy interaction. The European Commission coordinated in 2014 the development of a **Community of Users for Crisis Management and Disaster Risk Management** to enhance networks and information sharing around security research.
- Examples of science-policy interface include the **Global Flood Partnership network**³⁴, a cooperation framework between scientific organisations and flood disaster managers worldwide to develop flood observational and modelling infrastructure, leveraging on existing initiatives for better predicting and managing flood disaster impacts and flood risk globally.
- The **Climate ADAPT platform**³⁵, developed to improve climate resilience in the EU, provides a wealth of information on risks and vulnerabilities and on disaster risk reduction.
- The **Water Information System for Europe (WISE)**³⁶, the **Biodiversity Information System for Europe (BISE)**³⁷, and the **Natural Water Retention Measures Platform**³⁸ are also linking scientists, EU institutions, EU Member States and the general public.
- The **Critical Infrastructure Warning Information Network (CIWIN)** is an internet based information and communication system foreseen to facilitate the implementation of the European Programme for Critical Infrastructure Protection (EPCIP)³⁹.
- Ongoing research actions with the **European Commission's in-house scientific centre - Joint Research Centre (JRC)**, **EU Framework Programmes for Research and Innovation**⁴⁰ and the **Copernicus Programme**⁴¹ cover several of the Sendai Framework recommendations, in particular regarding the role that science and technology play globally in risk reduction actions.

Management and Disaster Risk Management around Security research, <http://drmkc.jrc.ec.europa.eu>

³² The Eurocodes provide a common approach for the design of buildings, other civil engineering works and construction products.

³³ Including the Major Accident Reporting System (eMARS) or the eNATECH database (natural hazard-triggered technological accidents)

³⁴ <http://gfp.jrc.ec.europa.eu/>

³⁵ <http://climate-adapt.eea.europa.eu/>

³⁶ <http://water.europa.eu/>

³⁷ <http://biodiversity.europa.eu/>

³⁸ www.nwrm.eu

³⁹ [http://ec.europa.eu/dgs/home-affairs/what-we-](http://ec.europa.eu/dgs/home-affairs/what-we-do/networks/critical_infrastructure_warning_information_network/index_en.htm)

[do/networks/critical_infrastructure_warning_information_network/index_en.htm](http://ec.europa.eu/dgs/home-affairs/what-we-do/networks/critical_infrastructure_warning_information_network/index_en.htm)

⁴⁰ <https://ec.europa.eu/programmes/horizon2020/>

⁴¹ <http://www.copernicus.eu/>

- The EU has established regular **dialogues with partner countries on science, technology and innovation**. For example, the EU Africa High Level Policy Dialogue allows for the exchange of information of good practices, joint priority setting and implementation of activities in the areas of earth observation data, prediction, climate services and climate adaptation approaches.

Data analysis, collection and management (paragraphs 24(a), 24(f), 25(a) 25 (c), 25(g))

- The European Commission developed **guidance to EU Member States for improving the coherence and completeness of the national disaster damage and loss data** recording process, necessary for supporting evidence-based disaster risk management policies and actions. It proposes elements of an assessment methodology for recording damage and loss data and recommends simplified aggregate figures for sharing the data following a common data exchange format.⁴²
- The EU has been supporting 40 countries to **build and improve National Disaster Loss databases for disaster loss accounting**, 30 countries in capacity building to develop **probabilistic risk assessments** and 15 countries in **integrating disaster risk reduction and climate change adaptation in development and public investment planning**.⁴³ The EU support has been given through an international cooperation and development programme related to building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction, implemented and coordinated by the United Nations Office for Disaster Risk Reduction (UNISDR) from 2012-2015. The project supported the preparation of the Global Assessment Reports (GAR 2011, 2013 and 2015)⁴⁴ by the UNISDR, by providing the means to conduct modelling and investigate disaster risk from the national to the global level. The African, Caribbean and Pacific (ACP) **Compendium of Risk Knowledge** was developed through the 10th European Development Fund support under the Intra-ACP Cooperation envelope for Disaster Risk Reduction.⁴⁵

(2) Sendai Priority 2: Strengthening disaster risk governance to manage disaster risks

Key policies and practices contributing to the implementation of this priority include:

Mainstreaming of disaster risk management in policies (paragraph 27(a))

- **Disaster risk management considerations have been integrated in a number of EU policies:** cohesion, transport and energy, research and innovation, climate change adaptation, critical infrastructure protection, cross-border health threats, internal security, development cooperation, external conflict prevention and crises resolution⁴⁶, green infrastructure, integrated coastal management, agriculture, environmental protection, biodiversity, food and nutrition security, water, flood risk management and major industrial accident prevention.

⁴² <http://drmkc.jrc.ec.europa.eu/partnership/Disaster-Loss-and-Damage-Working-Group>

⁴³ EUR 7 million contribution from the general budget of the Union under the Development Cooperation Instrument (DCI), Regulation (EU) No 233/2014 of the European Parliament and of the Council of 11 March 2014 establishing a financing instrument for development cooperation for the period 2014-2020, OJ L 77, 15.3.2014, p.44

⁴⁴ <http://www.preventionweb.net/english/hyogo/gar/>

⁴⁵ https://ec.europa.eu/europeaid/sites/devco/files/acp-compendium-risk-2015_en.pdf

⁴⁶ The EU's comprehensive approach to external conflict and crises, JOIN(2013) 30 final

- New policies **have been developed in a sustainable way to minimise damage from disasters**; for instance, the revised Environmental Impact Assessment (EIA) Directive⁴⁷ is mainstreaming the concept of disaster and climate change proofing in all new project developments in Europe; the offshore Directive⁴⁸ includes provisions for limiting the consequences of accidents through risk assessment and management actions; and the trans-European transport networks⁴⁹ and energy infrastructure⁵⁰ guidelines include provisions to make sure that all transport and energy projects to be developed are climate and disaster resilient.

Assessment of risk capacity (paragraph 27(c))

- Under the Union Civil Protection Mechanism⁵¹, EU Member States have committed to learn from each other in managing disaster risks through assessments of **risk management capabilities**. The European Commission has developed risk management capability assessment guidelines⁵² that countries can use to assess their own capabilities.

Climate change and disaster risk reduction (paragraphs 28(b), 28(c))

- The 2013 **EU Climate Change Adaptation Strategy**⁵³ recommends that adaptation strategies and plans are implemented in synergy and full coordination with disaster risk management policies and plans. The Guidelines for adaptation planning⁵⁴ help EU Member States to develop, implement and review their adaptation policies to ensure coherence with national disaster risk management plans. Up to March 2016, 20 national adaptation strategies had been adopted by Member States and nine national action plans, while several Member States are in the process of either planning or reviewing their adaptation strategies and action plans.

Land-use planning and policy (paragraph 27(d))

- Under the **Strategic Environmental Assessment Directive (SEA)**⁵⁵, when assessing the significant environmental effect of plan or programme, the EU Member States have to take into account the risk to human health and to the environment, e.g. due to an accident.
- Under the **Seveso Directive**⁵⁶, EU Member States need to identify establishments with

⁴⁷ Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, OJ L 124, 25.4.2014, p. 1

⁴⁸ Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC, OJ L 178, 28.6.2013, p. 66

⁴⁹ Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU, OJ L 348, 20.12.2013, p. 1

⁵⁰ Regulation (EU) no 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 13/2009, (EC) No 714/2009 and (EC) No 715/2009, OJ L 115, 25.4.2013, p.39

⁵¹ Decision No 1313/2013/EU of the European Parliament and of the Council on a Union Civil Protection Mechanism, OJ L 347, 20.12.2013, p. 924

⁵² Risk Management Capability Assessment Guidelines (2015/C 261/03)

⁵³ An EU strategy on Adaptation to climate change, COM(2013)216 final

⁵⁴ Guidelines on developing adaptation strategies SWD(2013) 134 final

⁵⁵ Directive 2001/42/EC of the European Parliament and the Council on the assessment of the effects of certain plans and programmes on the environment, OJ L 197, 21.7.2001, p. 30-37

⁵⁶ Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC 197, 24.7.2012, p. 1

hazardous activities⁵⁷, consider the information in land-use planning and have certain information obligations for citizens (e.g. emergency plans).

- The Floods Directive is promoting **sustainable land use practice in the flood risk management plans** to be developed by EU Member States.

Building codes (paragraph 27(d))

- At European level, Eurocodes, a set of European Standards for the structural design of buildings and civil engineering works, produced by the European Committee for Standardisation (CEN), are addressing climate and disaster resilience in different infrastructure sectors. In addition, pursuant to the **EU Strategy on Green Infrastructure**⁵⁸, and bearing in mind the contribution of green infrastructure to disaster risk management and reduction, the European Commission is assessing how green infrastructure technical standards, particularly in relation to physical building blocks and procedures, could contribute to the further deployment of Green Infrastructure. In this context, green Infrastructure-related standards are included in the Union Work Programme for European Standardisation (UWP) for the coming years.

Local level implementation (paragraphs 27(e), 27(f), 27(g))

- The 2016-2019 '**Making cities sustainable and resilient: implementing the Sendai Framework for Disaster Risk Reduction 2015-2030 at the local level**' EUR 7.5 million joint initiative with UNISDR, UN-Habitat and the European Commission, funded through the Global Public Goods and Challenges programme, aims to improve understanding of, and capacity to, address disaster risks at the local level, including in crisis-prone cities, to support national and local disaster risk reduction and climate change adaptation strategies. UN-Habitat will focus on building local capacities in crisis-prone cities and support humanitarian partners, while UNISDR will address resilience in locations that are highly exposed and have institutional capacity gaps, such as Least Developed Countries.
- The **Covenant of Mayors for Climate and Energy**⁵⁹ brings together thousands of local and regional authorities voluntarily committed to implementing EU climate and energy objectives on their territory. New signatories pledge to address climate change mitigation and adaptation, and secure sustainable and affordable energy, in an integrated manner. The Covenant of Mayors' model is also being supported in other regions of the world. The new and global Covenant of Mayors for Climate and Energy was launched by the European Commission in 2015.
- Since 1996 and more than 750 projects funded worldwide, the **Humanitarian Aid Disaster Preparedness Programme - DIPECHO** enables replication of community based approaches and proven good practices to risk reduction (e.g. safer schools, hospitals, and urban resilience).

⁵⁷ See also the eSPIRS, supporting EU Member States and the European Commission in their risk management-related decision making processes by giving an insight into the geographical distribution of risk from Seveso establishments.

⁵⁸ Communication COM(2013)249

⁵⁹ <http://www.covenantofmayors.eu>

- Under the EU Civil Protection Mechanism, preparedness and prevention projects are supported, many of which focus on local and community prevention and risk reduction measures.

Exchange of good practices through peer reviews (paragraph 28(e))

- **Voluntary Peer Reviews** funded by the EU have started in 2015/2016 with four reviews in EU Member States and two reviews in enlargement and neighbouring countries. The EU programme aims to enhance the profile of disaster prevention and preparedness, encourage stakeholder cooperation, initiate a policy dialogue and facilitate exchange of best practice among EU Member States, enlargement and neighbouring countries.

(3) Sendai Priority 3: Investing in disaster risk reduction for resilience

Key policies and practices contributing to the implementation of this priority include:

Investment for resilience (paragraphs 30(b), 30(c))

- Investments in disaster risk management, climate change adaptation and ecosystem conservation and cultural heritage restoration have been promoted in EU policy implemented by **the European Structural and Investment Funds (ESIF)**. Member States have allocated over 29 billion EUR to the ESIF thematic objective '**Climate change adaptation and risk prevention and management**'. This includes EUR 460 million in territorial cooperation programmes (cross-border, interregional and transnational), more than EUR 7 billion in regional and urban development and EUR 21 billion in rural development. Disaster resilience and risk prevention and management are further promoted horizontally in all other priorities covering more than EUR 454 billion of EU co-financing. **Climate and disaster proofing** is built into the appraisal of major projects for cohesion policy support and it is a prominent topic in **macro-regional strategies**, such as for the Danube and Baltic Sea Regions.
- The Council underlined in its **Conclusions on Resilience** of 28 May 2013 the importance of bringing together political dialogue, humanitarian and development work and priorities in a comprehensive, coherent and effective approach to achieve better results on the ground. The Council emphasised that building resilience not only reduces suffering and loss of life, but it also improves cost effectiveness. The **EU Resilience Approach** calls for better linking of humanitarian aid and development cooperation from the pre-crisis stage onwards, in order to better anticipate, prepare for, and respond to a crisis or disaster, and to build resilience. It points out that **multi-sectoral and multi-level approaches** (local, national, regional, global) have the potential to address the interlinked and causal dynamics of vulnerability and fragility, whilst optimising capacities from each level or sector.
- Risk management approaches are an integral part of humanitarian aid and development assistance programming within all sectors and contexts. The **Resilience Action Plan** of June 2013⁶⁰ promotes resilience as a central objective of the EU external assistance. The Resilience Action Plan identifies 3 priorities: (1) EU support to the development and implementation of

⁶⁰ SWD(2013) 227 final, Action Plan for Resilience in crisis prone countries 2013-2020

national resilience approaches integrated in National Development Plans; (2) Innovation, learning and advocacy; and (3) Methodologies and tools to support resilience. The **Resilience compendium**⁶¹ is showcasing a diversity of risk reduction and resilience investments from different parts of the world. The EU's implementation of the 2030 Agenda for Sustainable Development (including the Addis Ababa Action Agenda) within EU development policy⁶² will also help to strengthen EU work on resilience in partner countries.

- The European Commission has introduced a **Resilience Marker**⁶³, a tool to assess the extent to which humanitarian actions funded by the European Commission integrate disaster resilience considerations. The EU development cooperation supports the integration of climate change adaptation, the use of environmental and climate risk assessment tools in cooperation programmes through various mainstreaming tools, such as the "**Guidelines on integrating the environment and climate change into EU international cooperation and development**"⁶⁴.
- The initiatives **SHARE**⁶⁵ and **AGIR**⁶⁶ aim to foster the resilience of communities that are regularly affected by food insecurity and protracted conflicts. Building on these two regional initiatives, the **PRO-ACT** initiative aims at strengthening resilience of vulnerable communities at global level, by selecting priority areas of intervention and better targeting the root causes of food insecurity. To ensure complementary of action, the initiative is funded by different sources, depending on the nature and the location of the crises, which includes a total allocation of EUR 525 million from the Global Public Goods and Challenges (GPGC) thematic program⁶⁷.
- In 2016 the EU launched, with the Food and Agriculture Organization of the United Nations (FAO) and the UN World Food Programme (WFP), the **Global Network for Food Insecurity, Risk Reduction and Food Crises Response** to stimulate better coordination within the international community and promote joint planning and joint response to food crises.
- Since its establishment in 2007 with an initial envelope of about EUR 300 million, the **Global Climate Change Alliance (GCCA)**⁶⁸ has supported 51 programmes in 38 countries, mainly Least Developed Countries and Small Island Developing States in their endeavours to adapt to climate change. Since then, the initiative had also received EUR 37 million from five EU Member States and EUR 37 million from the Intra-African, Caribbean and Pacific programme (Intra-ACP)⁶⁹. With the new Multiannual Financial Framework 2014-2020, the new phase and EU flagship initiative '**GCCA+**' has a budget of about EUR 350 million.⁷⁰ The GCCA+ focuses on policy dialogue and technical and financial support to the implementation of national climate change adaptation and mitigation policies, with a stronger emphasis on the binding role of knowledge management and communication. It continues supporting vulnerable countries, mainly LDCs and SIDS, by increasing their resilience to adapt to climate change and enhance mitigation co-benefits.

⁶¹ http://ec.europa.eu/echo/files/policies/resilience/eu_resilience_compendium_en.pdf

⁶² http://ec.europa.eu/smart-regulation/roadmaps/docs/2016_devco_003_european_consensus_on_development_en.pdf

⁶³ http://ec.europa.eu/echo/files/policies/resilience/resilience_marker_guidance_en.pdf

⁶⁴ http://ec.europa.eu/europeaid/sites/devco/files/mainstreaming-guidelines-2016_en.pdf

⁶⁵ Supporting Horn of Africa Resilience

⁶⁶ Alliance Globale pour l'Initiative Résilience Sahel

⁶⁷ Commission Implementing Decision of 23.7.2014 adopting a Multiannual Indicative Programme for the Thematic Programme "Global Public Goods and Challenges" for the period 2014-2020 C(2014) 572 final

⁶⁸ Funded under the Programme for Environment & Sustainable Management of Natural Resources including Energy (ENRTP)

⁶⁹ http://ec.europa.eu/europeaid/node/100990_fr

⁷⁰ Funded under the EU thematic programme Global Public Goods and Challenges

- The **Intra-ACP Cooperation Strategy 2014-2020** adopted in 2015, includes a chapter on resilience building, with a specific objective aiming to contribute to the resilience of ACP population through the improvement of preparedness, risk management and resilient recovery. Financial provisions responding to this objective are established indicatively at EUR 100 million committed until 2018. Resilience relevant specific objectives are also included in the chapter on climate change with a foreseen financial provision of EUR 155 million to be committed in 2016 and 2017.
- As part of the partnership between the European Union and ACP countries, targeted support for disaster risk reduction has increased under the 10th EDF Intra-ACP strategy to a total amount of EUR 180 million. The **ACP-EU Natural Disaster Risk Reduction (NDRR) Programme** (EUR 60 million) implemented by the Global Facility for Disaster Reduction and Recovery (GFDRR) and started in 2011, aims to build resilience to natural disasters by enhancing disaster risk management and climate change adaptation in African, Caribbean and Pacific countries which are parties to the Cotonou Agreement. The programme provides technical assistance for disaster risk management and climate change adaptation policy development and implementation and a fast-track mechanism to support ACP countries in the aftermath of a disaster with rapid technical assistance to build capacity for post-disaster needs assessments and integrate disaster risk management into recovery planning.
- Three disaster risk reduction programmes have started in 2014 and will continue until 2020 to support and accelerate the effective implementation of the comprehensive regional disaster risk reduction strategies and frameworks: **"Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities"** approved in 2013 (EUR 80 million), ACP-EU Building Safety and Resilience in the Pacific (EUR 20 million) and ACP-EU Natural Disaster Risk Management in the CARIFORUM (EUR 20 million).
- The European Commission approved a new EU Regional Programme in support of Environmental Sustainability and Climate Change Mitigation and Adaptation in Latin America, **EUROCLIMA+**. The programme will cover 18 countries, with a budget of EUR 40 million for the first phase, in support of disaster risk reduction and management, forests, biodiversity and ecosystems and urban resource efficiency.
- Through its long term assistance programme, the European Commission pays specific attention to support development in the neighbourhood, prevention and preparedness national strategies, early warning system and risk information system. The European Commission runs in parallel two regional programmes: **"Prevention, Preparedness and Response to Man-made and Natural Disasters Programmes" (PPRD) in the Neighbourhood East** (Phase II: 2014 - 2018; EUR 5.5 million) and **South** (Phase II; 2013 - 2016; EUR 5 million). Their aim is to stimulate the development of a regional approach to all type of disasters, while reinforcing institutional cooperation between the Partner Countries and the EU Civil Protection Mechanism. A similar programme is on-going in the Western Balkans and in Turkey, with a special focus on flood disasters. The **IPA Prevention, preparedness and response to floods in the Western Balkans and Turkey** (EUR 4 million; 2015 - 2018). Further technical assistance is planned to also enhance Western Balkans and Turkey regional hazard mapping and assessments.
- The European Commission supports its neighbouring countries in their efforts to mitigate and adapt to climate change. The regional programmes **Clima East** (2012 - 2016, EUR 19.2 million) and **Clima South** (2013-2016; EUR 5 million) assist beneficiary countries in meeting

their commitments under the UNFCCC agreements and in initiating pilot projects that demonstrate the relevance of ecosystem-based approaches for climate mitigation and adaptation. Attention is also devoted to those adaptation measures that help reduce the hazardous impact of climate change in the countries of the Neighbourhood.

Ecosystem-based approaches on disaster risk reduction (paragraph 28(d))

- The European Commission promotes **ecosystem-based approaches** that contribute to the **conservation, enhancement and restoration of biodiversity, ecosystems and ecosystems services** in urban, rural, coastal and natural areas. These initiatives constitute a positive and cost-efficient way of supporting disaster risk reduction and adaptation to climate change, while often providing significant co-benefits in terms of climate change mitigation or human health, safety and well-being. **Nature-Based Solutions**⁷¹ for urban and territorial resilience use nature's complexity, power, features and processes to address such challenges in a systemic manner. The **EU Research and Innovation strategy** aims at providing robust knowledge and evidence base about the cost-effectiveness, economic viability and long term benefits of Nature-Based Solutions through the EU Framework Programme for Research and Innovation, Horizon 2020⁷². In addition, the implementation of such approaches is ensured by the thematic objective 5 of the European Structural and Investment Funds (ESIF).
- The European Commission has adopted a **Green infrastructure strategy**, promoting the development of green infrastructure in the EU terrestrial (including urban, rural and coastal) and marine areas, and addressing green infrastructure solutions to boost disaster resilience.⁷³ In parallel, the European Commission contributes to developing tools to map and assess urban ecosystems, green infrastructure and their services, with the aim of providing guidance to further deploy green infrastructure solutions in cities.
- With a view to further the Green Infrastructure Strategy's implementation, the European Commission is exploring the development of an instrument on trans-European priority axes for Green Infrastructure in Europe, a so-called **TEN-G**⁷⁴ (echoing other existing trans-European networks in grey infrastructure sectors). Such a TEN-G would bring significant benefits for increasing resilience and reducing vulnerability of EU citizens' ecosystems, with consequential positive effects on disaster risk management and reduction.
- The EU is also financing and innovative financing facility, the **Natural Capital Financing Facility**, to demonstrate the bankability and economic viability of projects that promote adaptation to climate change through natural solutions. The goal is to leverage private sector financing and show that natural capital projects can be a good investment and at the same time further develop resilience to climate impacts.
- The EU has been supporting the United Nations Environment Programme (UNEP) to

⁷¹ For more information on Nature-Based Solutions see: <https://ec.europa.eu/research/environment/index.cfm?pg=nbs>

⁷² Nature-Based solutions in Horizon 2020 Work Programme 2016-2017 on Climate action, environment, resource efficiency and raw materials: http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-climate_en.pdf and on Cross-cutting activities (Focus Areas):

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-focus_en.pdf

⁷³ COM(2013) 249 final

⁷⁴ The Commission Communication on Green Infrastructure foresees that it should carry out an assessment of the opportunities for developing an EU TEN-G initiative and recent calls from the Council (Conclusions, 16 December 2015) and the EP (Resolution on the biodiversity mid-term review, 2 February 2016) reconfirm their support to the development a TEN-G initiative.

implement a project on "**Promoting Improved Ecosystem Management for Sustainable and Disaster-Resilient Development**" during the 2012-2016 period. The project aimed to demonstrate the potential for applying ecosystem-based approaches for disaster risk reduction by undertaking field-based demonstration projects in four countries - Haiti, Sudan, Democratic Republic of the Congo and Afghanistan - developing knowledge, training products and undertaking global advocacy. The project further demonstrated the opportunities for integrating disaster risk reduction and climate change adaptation through ecosystem-based approaches.

(4) Sendai Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction

Key policies and practices contributing to the implementation of this priority include:

Preparedness, response, and recovery measures (paragraphs 32, 33(a), 33(b), 33(c))

- Through the **Union Civil Protection Mechanism**⁷⁵, the EU is committed to enhancing disasters' preparedness and facilitating a rapid and efficient response, among others, through the development of a **European Emergency Response Capacity** in the form of a voluntary pool of EU Member States response capacities on stand-by for urgent deployments. Under the Civil Protection Mechanism, EU Member States are setting-up standardised and interoperable response modules and are keeping their teams in constant preparedness through training and exercises. The operational hub of the Mechanism is the **Emergency Response Coordination Centre (ERCC)**, which monitors emergencies around the globe 24/7, and coordinates the response of the participating countries in case of a crisis within and outside the EU. The EU also funds preparedness projects, many of which focus on local and community preparedness.⁷⁶
- The **European Medical Corps (EMC)**, as a part of the existing European Emergency Response Capacity established under the Union Civil Protection Mechanism, is the framework for mobilising medical and public health experts and teams for preparedness or response operations inside and outside the EU. It is European Union's contribution to the Global Health Emergency Workforce, set up under the helm of the World Health Organization (WHO).

Training (paragraphs 33(f), 33(h), 34(h))

- The EU Civil Protection Mechanism runs a comprehensive **training programme**⁷⁷, offering experts from all over Europe knowledge of the requirements of European civil protection missions and helping them to improve coordination and assessment skills in disaster response.
- The **expert exchange system** of the EU Civil Protection Mechanism allows for the secondment of civil protection experts from one participating state to another. This exchange provides participants with knowledge and experience on all aspects of emergency intervention and the different approaches of national systems.

⁷⁵ Decision No 1313/2013/EU of the European Parliament and of the Council on a Union Civil Protection Mechanism, OJ L 347, 20.12.2013, p. 924

⁷⁶ http://ec.europa.eu/echo/files/aid/countries/factsheets/thematic/civil_protection_en.pdf

⁷⁷ http://ec.europa.eu/echo/what/civil-protection/experts-training-and-exchange_en

Disaster early-warning and assessment mechanisms (paragraphs 33(b), 34(c))

- The **Copernicus Emergency Management Service (EMS)** supports disaster preparedness and response activities through satellite mapping and early warning products. Disaster risk throughout the world is assessed through the **Risk & Recovery Mapping (RRM) tool**⁷⁸ supported by satellite imagery. RRM works in complement to the Copernicus Rapid Mapping, which responds to immediate emergency in case of a man-made or natural disaster. The EMS early warning component provides floods and forest fire forecasting and monitoring products through the **European Flood Awareness System (EFAS)**⁷⁹ and the **European Forest Fire Information System (EFFIS)**⁸⁰. Both systems support the activities of the Emergency Response Coordination Centre (ERCC) and aim to run operationally on a global scale.
- The European Commission is managing the implementation of the European Parliament Pilot Project "**All Risk Integrated System Towards the Holistic Early-Warning (ARISTOTLE)**", aiming at exploiting science and technology within the disaster management field, establishing a "European Natural Hazard Scientific Partnership" and providing scientific advices to the ERCC. It represents a significant step towards a stronger cooperation between the scientific community and the operational community at a European level.
- The project '**Strengthening capacities for Post Disaster Needs Assessment and Recovery Preparedness (PDNA Roll-Out II)**', financed under the **Instrument contributing to Stability and Peace (ICsP)**⁸¹, aims to contribute to building resilience of countries following natural disasters/emergencies by strengthening the capacities of regional organisations and national governments to assess, plan, implement and monitor recovery processes. Building on a successful first phase of collaboration (AAP 2011, Instrument for Stability (IfS)⁸², Article 4.3), in cooperation with UNDP, this project will consolidate and increase the capacities for post disaster assessments and recovery planning, particularly for national governments in high risk countries as well as for regional inter-governmental organisations. Geographical coverage will include ten countries and five regional inter-governmental organisations over a period of three years.

Protection of cultural heritage (paragraphs (30(d))

- The European Commission has been tasked, in the framework of the **Work Plan for Culture (2015 - 2018)**⁸³, to conduct a study on safeguarding cultural heritage from natural and man-made disasters. This study will provide an overview of the information given by existing EU-funded projects and coordination initiatives, map existing strategies and governance models in 28 EU Member States on risk analysis, assessment and management, identify competence centres and compare existing tools (risk maps, informative systems).
- Horizon 2020 research call has been published to mitigate the impact of climate change and natural hazards on cultural heritage sites, structures and artefacts.

⁷⁸ <http://emergency.copernicus.eu/mapping/ems/ems-risk-and-recovery-mapping-products>

⁷⁹ www.efas.eu

⁸⁰ <http://forest.jrc.ec.europa.eu/effis/>

⁸¹ Regulation (EU) No 230/2014 of the European Parliament and of the Council of 11 March 2014 establishing an instrument contributing to stability and peace, OJ L 77, 15.3.2014, p. 1

⁸² Regulation (EC) No 1717/2006 of the European Parliament and of the Council of 15 November 2006 establishing an Instrument for Stability, OJ L 327, 24.11.2006, p. 1

⁸³ Council Conclusions on a Work Plan for Culture (2015-2018), 25.11.2014, 16094/14

Health and disaster risk reduction (paragraphs 30(i), 31(e))

- Under the **EU Framework on Health Security**, the European Commission works with EU Member States to take forward coherent preparedness and response planning for serious cross-border threats to health, including environmental threats, in particular with a view to achieve complete implementation of the International Health Regulations and enhanced intersectoral collaboration and business continuity planning. The European Commission is developing an action plan with peer reviewed country assessments, capacity building through training and scenario exercises and exchange of best practice as the main pillars. Under the Framework, national measures with a cross-border impact are notified among the EU Member States and the European Commission through the **Early Warning and Response System**.
- The European Commission, together with funding organizations from other countries, has established the **Global Research Collaboration for Infectious Disease Preparedness (GloPID-R)**⁸⁴. GloPID-R is a network of research funding organisations from across the globe with the World Health Organisation as an observer. The objective of the Network is to bring together research funding organizations on a global scale to facilitate an effective research response within 48 hours of a significant outbreak of a new or re-emerging infectious disease with pandemic potential.
- The EU is funding a **research on Emerging Epidemics** under the Seventh Framework Programme for Research and Development (FP7) and Horizon 2020 (H2020)⁸⁵ addressing the understanding, early detection and rapid response to diseases, development of drugs and vaccines and effective communication in outbreak management.

⁸⁴ <http://www.glopid-r.org/>

⁸⁵ <http://ec.europa.eu/research/health/index.cfm?pg=area&areaname=emerging>

Annex 2: Action Plan on the Sendai Framework for Disaster Risk Reduction 2015 – 2030

| Key Area 1 - Building risk knowledge in all EU policies (Sendai Priority 1 "Understanding disaster risk") | | | | |
|---|---|-------------|--|----------------------------------|
| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET ⁸⁶ |
| 1. Promote the collection and sharing of baseline loss and damage data | 1.1 Identify gaps and possible solutions in disaster loss data required for the Sendai Framework monitoring at EU level | 2016 | Improved measurement and monitoring of disasters' impact and strengthened support to monitoring of the Sendai Framework targets' indicators in EU and partner countries | (a), (b), (c), (d) (e), (f), (g) |
| | 1.2 Support at least 20 partner countries to collect disaggregated data on loss and damage at the local and national level | 2016 - 2020 | | |
| 2. Use foresight, scenarios and risk assessment for better preparedness to existing, emerging and new types of risks | 2.1 Set-up an expert group to improve planning capacities through development of medium-term and long-term scenarios on existing and emerging risks and threats at pan-European level | 2016 - 2020 | Improved risk assessment and enhanced risk management capabilities to reduce hazard exposure and vulnerability to disasters at regional, national and local levels in EU and partner countries | (d), (e), (f), (g) |
| | 2.2 Update the 'Overview of natural and man-made disaster risks in the EU' ⁸⁷ | 2017 | | |
| | 2.3 Review and update the preliminary flood risk assessments and associated areas of potential significant flood risk under the Floods Directive (2007/60/EC) | 2018 | | |
| | 2.4 Through the support system of the Disaster Risk Management Knowledge Centre (DRMKC), provide scientific and practical know-how to local, national and regional disaster risk assessment initiatives | 2018 | | |

⁸⁶ http://www.preventionweb.net/files/44983_sendaiframeworksimplifiedchart.pdf

⁸⁷ SWD(2014) 134 final

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|--|--|-------------|--|---------------|
| | 2.5 Support the implementation of at least 5 Subregional Index for Risk Management – INFORM risk assessment models in partner countries, to analyse long-term multi-hazards and exposure, coping capacities and vulnerabilities and support joint multi-stakeholder and multi-year planning with national, regional and local actors | | | |
| 3. Further engage with the research community to better address disaster risk management knowledge and technology gaps and to encourage stronger science-policy interface in decision-making | 3.1 Identify key research priorities for disaster risk management at EU level through dialogue with relevant stakeholders, and promote dissemination and use of research results on disaster risk management through Horizon 2020, Community of Users on Disaster Risk and Crisis Management and the Disaster Risk Management Knowledge Centre (DRMKC) | 2016 - 2020 | Enhanced interface between science and policy for a stronger knowledge base for decision-making | (d), (e), (g) |
| | 3.2 Strengthen the role and scope of the Disaster Risk Management Knowledge Centre (DRMKC) as the European Commission's main point of reference for disaster risk management network-building, knowledge building and sharing | 2017 - 2020 | | |
| Key Area 2 - An all-of-society approach in disaster risk management (Sendai Priority 2 "Strengthening disaster risk governance to manage disaster risks") | | | | |
| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
| 4. Explore the potential of educational measures for reducing disaster risks | 4.1 Support projects integrating disaster risk reduction (DRR) into existing educational systems, such as curricula on DRR, and in education services provided in emergencies and in conflict situations | 2016 - 2020 | Improved understanding and knowledge on educational measures to create more risk-informed and inclusive communities through learning on risk and risk perception | (d), (e), (f) |

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|---|---|-------------|--|---------------|
| 5. Facilitate exchange of good practices and improvements in disaster management policy and operations through mutual learning and expert review | 5.1 Implement 12 peer reviews of disaster risk management policies (6 in EU Member States, 6 in EU neighbouring countries) and promote the use of the peer review concept locally and globally | 2016 - 2018 | Improved disaster risk management policies and strategies through mutual learning at local and national levels | (e), (f), (g) |
| 6. Work with stakeholders, including local authorities, civil society and communities, to develop specific strategies for risk awareness that include the most vulnerable groups, such as children and youth, elderly, persons with disabilities and indigenous people | 6.1 Organise a dedicated workshop on sharing of knowledge and experience on disaster-risk awareness raising for citizens and all stakeholders | 2017 | Improved awareness of societies and different vulnerable and marginalised groups on underlying disaster risks and disaster coping capacities | (g) |
| | 6.2 Facilitate scientific support through the Disaster Risk Knowledge Centre (DRMKC) to provide risk information to help people appreciate risks and coping actions, in coordination with other initiatives | 2017 - 2020 | | |
| 7. Cooperate with the private sector to encourage business-driven innovation in all areas of disaster risk management | 7.1 Explore mechanisms to foster public-private partnerships and private investment in disaster risk management | 2016 - 2020 | Enhanced resilience of businesses to disaster risks and increased private investment in disaster risk management | (d), (f) |
| | 7.2 Showcase existing innovation and research using the Disaster Risk Management Knowledge Centre | 2016 - 2020 | | |
| | 7.3 Establish inclusive private sector development cooperation approaches supporting disaster risk reduction in vulnerable, fragile and conflict affected environments | 2016 - 2020 | | |
| 8. Strengthen the links between disaster risk management, climate change adaptation and biodiversity strategies | 8.1 Publish a report presenting the opportunities and needs for disaster risk reduction and climate change adaptation integrated policies | 2017 | Strengthened coherence between climate change adaptation strategies and risk management | (e), (f), (g) |

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|---|--|-------------|---|---------------|
| | <p>8.2 Contribute to environmentally sustainable and climate-resilient development through regional cooperation programmes, and through the Global Climate Change Alliance+ (GCCA+) support to at least 20 most vulnerable countries, mainly Least Developed Countries (LDCs) and Small Islands Developing States (SIDS), to increase their resilience to adapt to climate change and develop climate change adaptation and mitigation strategies</p> | 2016 - 2020 | plans at national level in EU and partner countries. | |
| | <p>8.3 Contribute to the two-year workplan implementation of the UNFCCC Executive Committee of the Warsaw International Mechanism for Loss and Damage</p> | 2016 - 2017 | | |
| | <p>8.4 Strengthen EU cooperation in addressing climate – fragility risks in partner countries through the EU climate diplomacy action plan coordinated by the EEAS</p> | 2016 – 2020 | | |
| | <p>8.5 Taking into account CBD COP XII/20 on biodiversity and climate change and disaster risk reduction and follow-up, develop guidance on green infrastructure, ecosystem-based adaptation and disaster risk reduction</p> | 2017 | | |
| <p>9. Strengthen the links between disaster risk management, climate change adaptation and urban policies and initiatives</p> | <p>9.1 Establish urban resilience policy and practices through developing guidance and methodologies and learning from experiences (e.g. evaluations and studies), also addressing the specific needs of persons and groups in a marginalised and vulnerable situation, including persons with disabilities, displaced persons and migrants</p> | 2017 | Improved understanding of disaster risk management in urban settings and enhanced support and contribution to disaster-resilient towns and cities | (d), (e), (f) |

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|--|--|-------------|---|---------------|
| | 9.2 Support at least 20 cities in partner countries, including crisis-prone cities, to strengthen their capacities in addressing disaster risks at the local level and in developing and implementing national disaster risk reduction and climate change adaptation strategies | 2016 - 2019 | | |
| | 9.3 Join and support the Global Alliance for Urban Crises ⁸⁸ and contribute to the New Urban Agenda, to be agreed at the HABITAT III conference | 2016 | | |
| | 9.4 Integrate disaster risk management policy and practices into the Urban Agenda for the EU, Global Covenant of Mayors, Covenant of Mayors for Climate and Energy and Smart Cities and Cities of the future | 2016 - 2020 | | |
| 10. Support the development of inclusive local and national disaster risk reduction strategies , with active engagement of local communities and civil society | 10.1 Ensure regular exchange of good practices on design and implementation of all-inclusive local and national strategies and plans for disaster risk reduction | 2016 - 2020 | Strengthened local and national resilience to disasters, including to small-scale natural disasters, through active engagement of all actors – governments at all levels, civil society, affected population and private sector | (e), (f) |
| | 10.2 Support the development of national prevention and preparedness strategies through neighbourhood assistance in at least 10 countries and through development assistance in at least 20 most vulnerable countries, mainly Least Developed (LDCs) and Small Islands Developing States (SIDS) | 2016 - 2020 | | |
| 11. Assist regional organisations in supporting the national authorities | 11.1 Facilitate organisation of the Regional European Platform for disaster risk reduction | 2017 | Improved regional coordination efforts aimed at reducing disaster | (e), (f) |

⁸⁸ <http://unhabitat.org/global-alliance-for-urban-crises/>

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|---|--|-------------|--|---------------|
| to implement the Sendai Framework, including the development of National and Regional platforms for disaster risk reduction | 11.2 Support projects strengthening the disaster risk management capacities of regional inter-governmental organisations | 2016 - 2020 | risks and improving preparedness | |
| Key Area 3 - Promoting EU risk informed investments (Sendai Priority 3 "Investing in disaster risk reduction for resilience") | | | | |
| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
| 12. Promote risk-informed investments in all EU external financial instruments, including multilateral and bilateral development assistance | 12.1 Explore the development of Multi-Hazard Risk Assessment and Analysis Guidelines for Disaster Risk Management mainstreaming in development cooperation sector programs | 2016 - 2020 | Increased level of disaster risk consideration in the external investments' planning and implementation phases | (f) |
| | 12.2 Mainstream the EU humanitarian aid "Resilience marker" in the project identification and formulation appraisal approach of EU Development cooperation | | | |
| 13. Track investments in disaster risk reduction in all humanitarian and development assistance programmes | 13.1 Support development of disaster risk reduction policy marker in the Total Official Support to Sustainable Development (TOSSD) system | 2016 - 2020 | Improved measurement of DRR investments in EU external assistance | (f) |
| | 13.2 Use the EU humanitarian aid "Resilience marker" and Key Results Indicators on DRR as a systematic tracking of how resilience is built into EU humanitarian and development programmes | 2016 - 2020 | | |
| 14. Promote risk-proofed investments in the EU, including in the context of the Investment plan for Europe | 14.1 In line with the Sustainable Development Principle ⁸⁹ , promote consideration of disaster resilience and risk prevention and management in the European Structural and Investment Funds programmes' implementation | 2016 - 2020 | Increased level of disaster risk consideration in the internal investments' planning and implementation phases | (d), (e), (g) |

⁸⁹ Regulation (EU) no 1303/2013 of the European Parliament and of the Council of 17 December 2013

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|--|---|-------------|---|---------------|
| | 14.2 Integrate climate and disaster risks proofing into the appraisal process of major projects for cohesion policy support | 2016 - 2020 | | |
| 15. Promote the use of mechanisms for disaster risk financing, risk transfer and insurance, risk-sharing and retention | 15.1 As a follow-up to the 2013 Green Paper on the insurance of natural and man-made disasters ⁹⁰ , organise a high-level round table with the insurance sector and relevant EC services to explore how to strengthen the use of risk financing, risk transfer and insurance products as an incentive for risk awareness, prevention and mitigation | 2016 - 2017 | Strengthened evidence base for understanding of costs and benefits of risk financing, transfer and insurance products in the area of disaster risk management | (c), (d) |
| | 15.2 Support effective risk financing, risk transfer and insurance solutions and markets for vulnerable people and critical public assets at risk, including through the G7 InsuResilience initiative ⁹¹ and the ACP-EU DRR IntraACP programs funded by the European Development Fund (EDF) | 2016-2020 | | |
| 16. Foster and implement ecosystem-based approaches to disaster risk reduction | 16.1 Produce an assessment framework and guidance for developing Green Infrastructure in cities | 2017 | Enhanced awareness and demonstration of the added value of ecosystem approaches to disaster risk reduction | (d), (e) |
| | 16.2 Assess the opportunities for developing an EU TEN on Green Infrastructure | 2016 | | |
| | 16.3 Set up a repository for EU research projects, demonstration projects and other EU funds programmes related to Nature-Based Solutions | 2017 | | |

⁹⁰ COM(2013)213 final

⁹¹ http://www.bmz.de/g7/en/Entwicklungspolitische_Schwerpunkte/Klimawandel/index.html

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|---|--|-------------|---|---------------|
| | 16.4 Support the implementation of ecosystem-based approaches to disaster risk reduction through development assistance in at least 20 most vulnerable countries, mainly Least Developed Countries (LDCs) and Small Islands Developing States (SIDS) | | | |
| Key Area 4 - Supporting the development of a holistic disaster risk management approach (Sendai Priority 4 "Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction") | | | | |
| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
| 17. Develop good practices on the integration of cultural heritage in the national disaster risk reduction strategies to be developed by EU Member States | 17.1 Ensure exchange of information among Member States on existing strategies and practices for risk assessment and prevention for safeguarding cultural heritage from natural and man-made disasters in the framework of the European Agenda for Culture, also drawing on EU-funded research projects | 2016 - 2020 | Increased consideration of cultural heritage safeguarding in the national disaster risk reduction strategies | (e), (g) |
| 18. Enhance preparedness and response capacities for disasters with health consequences and cooperation between health authorities and other relevant stakeholders | 18.1 Implement European Medical Corps (EMC) as a framework for mobilising medical and public health experts and teams for preparedness or response operations inside and outside the EU | 2016 - 2017 | Strengthened preparedness and operational capacity for response | (d), (e), (g) |
| 19. Facilitate capacity building of local and national authorities and communities and other actors in managing disaster risk | 19.1 Fully implement the Resilience Action plan aiming at reducing future humanitarian needs by enhancing strategic complementarity between humanitarian and development action for reducing risk and vulnerabilities of people affected by crises and disasters | 2016 - 2020 | Strengthened community, local and national resilience of partner countries, including in situations of fragility and protracted crises, through enhanced disaster risk reduction capacity and improved early action to anticipate and | (e), (f), (g) |

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|---|--|-------------|---|---------------|
| | 19.2 Support capacity-building at community level of at least 100 organisations in partner countries, including on DRR, through the EU Aid Volunteers Programme ⁹² | | reduce humanitarian need | |
| | 19.3 Select, train and deploy approximately 350 EU Aid Volunteers per year (until 2020) in vulnerable and disaster-affected communities in partner countries | | | |
| | 19.4 Support to the long term development and neighbourhood assistance programmes in prevention, preparedness, early warning system and risk information capacity building activities, including through the support of appropriate social safety net mechanism and social protection systems | 2016 - 2020 | | |
| 20. Support the development of multi-hazard early warning and alert systems for better disaster preparedness and response actions | 20.1 Develop and better integrate transnational detection and multi-hazard early warning and alert systems through the Union Civil Protection Mechanism | 2016 - 2020 | Strengthened effective, nationally compatible, regional multi-hazard early warning mechanisms | (g) |
| | 20.2 Through the Copernicus Emergency Management Service, continue providing timely geo-spatial information, such as satellite-based maps, for disaster preparedness, emergency response and recovery monitoring | 2016 - 2020 | | |
| 21. Integrate the " Build Back Better " objective into the assessment methodologies, projects and standards for disaster risk | 21.1 Reinforce the "Build Back Better" element in the existing needs and risk assessment guidance, tools and projects, such as Post Disaster Needs Assessment - PDNA | 2016 - 2020 | Increased level of disaster resilient public and private infrastructure | (d), (f) |

⁹² http://ec.europa.eu/echo/what/humanitarian-aid/eu-aid-volunteers_en

| IMPLEMENTATION PRIORITY | ACTIVITY | TIME-FRAME | OUTPUT | SENDAI TARGET |
|---------------------------|--|-------------|--------|---------------|
| management and resilience | 21.2 Integrate climate change adaptation into European standards for infrastructure (energy, transport and buildings, including Eurocodes) through existing work with standardisation organisations | 2016 - 2017 | | |