PEDRR
Ecosystems for Adaptation and Disaster Risk Reduction

ADVANCING IMPLEMENTATION OF THE
Sendai Framework for Disaster Risk Reduction (2015-2030) through

Ecosystem Solutions

In 2015, the international community adopted three major global policy agreements, which brought forward the 2030 Sustainable Development Agenda. The first of these global agreements was the Sendai Framework for Disaster Risk Reduction (SFDRR) which was adopted at the Third World Conference on Disaster Risk Reduction in Sendai, Japan, in March 2015. The SFDRR now serves as the global framework to guide disaster risk reduction efforts over the next 15 years (2015-2030) and succeeds the Hyogo Framework for Action (HFA 2005-2015).

In the same year, in October, the UN General Assembly endorsed the 17 Sustainable Development Goals (SDGs), which will guide national and local development agendas until 2030. In December 2015, the Paris Agreement on Climate Change was adopted and resulted in firmer commitments to reducing carbon emissions globally as well as in articulated principles for climate change adaptation. A number of international environmental conventions, namely the UN Convention to Combat Desertification (UNCCD), Convention on Biological Diversity (CBD) and the Ramsar Convention on Wetlands, also reached key decisions on disaster risk reduction and actions on climate change. A common thread running through all these global policy agreements in 2015 is a clear recognition of the role that ecosystems play in safeguarding development gains, and in building resilience against disasters and climate change.

The Partnership for Environment and Disaster Risk Reduction (PEDRR), a global alliance of 22 member organizations of UN, civil society and specialized agencies, actively supported Member States and country representatives throughout the negotiations of the SFDRR. Since 2008, PEDRR has facilitated implementation, knowledge sharing and collective actions related to ecosystem-based approaches to disaster risk reduction and climate change adaptation (Eco-DRR/CCA). Through the SFDRR, there is new opportunity to raise global actions and scale up investments in Eco-DRR/CCA. The challenge now is to implement the SFDRR and translate the environmental components under its four priorities into tangible actions.

This policy brief reflects PEDRR's analysis of the SFDRR from an Eco-DRR/CCA perspective but recognizes the important linkages across the 2030 Sustainable Development Agenda. This brief examines the role of ecosystems and environment in the SFDRR and highlights opportunities for implementing integrated ecosystem management and risk reduction strategies in countries and communities. It outlines a Roadmap for advancing implementation of the SFDRR through Eco-DRR/CCA and reflects on the scope for promoting Eco-DRR/CCA as an integrated strategy that delivers across the 2030 Sustainable Development Agenda.

Ecosystems, Disaster Risk Reduction and Adaptation

Ecosystems function as natural or green infrastructure that offers solutions for reducing disaster and climate risks. Sustainable ecosystem management is an integral part of disaster risk reduction and adaptation to climate change impacts. Water-related hazards account for 90% of all disasters, which are also being aggravated by climate change; therefore, how we use and manage water and land-based resources – and the ecosystems that sustain them – is central to disaster and climate risk management.

The most vulnerable people in many countries rely on ecosystems for their livelihoods and resilience. Working with local communities on sustainable ecosystem management contributes to effective disaster risk reduction and climate change adaptation strategies, and at the same time helps achieve local and national development priorities.

If managed wisely, ecosystems can act as a buffer against hazards and reduce the impact of hazards, including loss of lives, assets, livelihoods and damage to critical infrastructure and basic services. For example:

- restored mangrove belts can protect coasts against high waves and storm surges;
- well-functioning floodplains can reduce floods downstream;
- hill reforestation, agro-forestry and terrace agriculture can prevent landslides as well as ensure the sustainable provision of water resources downstream;
- fully-functioning ecosystems also build local "socio-economic" resilience against disasters by sustaining livelihoods and providing important products to local populations in times of crisis.

Ecosystem-based approaches to Disaster Risk Reduction and Climate Change Adaptation (Eco-DRR/CCA) apply ecosystem-based solutions, such as the conservation, restoration and the sustainable use and management of land, wetlands and other natural resources, in disaster and climate risk management. It recognizes the interdependency between human well-being, ecosystems, and changing risk patterns.

There is no single magic bullet: Eco-DRR/CCA should be part of broader disaster and climate risk management strategies, and complemented by other measures, such as built infrastructure, avoidance of high risk zones, building codes, early warning and evacuation procedures.

The role of ecosystems and environment in the SFDRR

With seven global targets and four priorities for action, the SFDRR places emphasis on disaster prevention through risk-sensitive development programming, as well as in disaster response and reconstruction. Hence, the SFDRR pushes for greater integration of DRR across the development sectors, policies and strategies.

For the first time, the SFDRR recognizes the role of ecosystems and environment as a cross-cutting issue in disaster risk reduction:

- Poor land management, unsustainable use of natural resources and degrading ecosystems are highlighted as underlying drivers of disaster risk.
- Environmental impacts of disasters are recognized.
- Countries are explicitly encouraged to strengthen the sustainable use and management of ecosystems for building resilience to disasters.

Ecosystems will now need to be taken into account in undertaking risk assessments (Priority Action 1), in risk governance (Priority Action 2) and investing in resilience (Priority Action 3).

The SFDRR specifies a range of actions focused on integrated environmental and natural resource management approaches to disaster risk reduction:

- Assess disaster risks, vulnerability, capacity, exposure, hazard characteristics and their possible sequential effects on ecosystems at the relevant social and spatial scale;
- Mainstream disaster risk assessments, mapping and management into rural development planning and management of, inter alia, mountains, rivers, coastal flood plain areas, drylands, wetlands;
- Integrate DRR in global, regional and national policies related to environment, natural resource management and biodiversity;
- Establish mechanisms and incentives to ensure high levels of compliance with existing laws and regulations addressing land use, environmental and resource management, and updating them, where needed, to ensure an adequate focus on disaster risk management;
- Transboundary cooperation that enables policy and planning for the implementation of ecosystem-based approaches with regard to shared resources at appropriate scales, such as within river basins and along coastlines, recognizing the impact of transboundary environmental conditions on disaster risk;
- The active engagement of environmental managers in national platforms for the adoption and implementation of disaster risk reduction strategies and plans aimed at strengthening economic, social, health and environmental resilience;
- The use of environmental impact assessments as important tools to achieve risk-sensitive public and private investments;
- Collaboration for the implementation and coherence of relevant international instruments and tools.

The SFDRR further emphasizes a multi-hazard approach to DRR, including new references to technological hazards and environmental emergencies.

Maximizing the linkages between ecosystems, disaster risk reduction and climate change adaptation across the 2030 Sustainable Development Agenda

Annex 1 outlines each of the major post-2015 global policy agreements as well as key decisions adopted by multi-lateral environmental conventions and their relevance for advancing implementation of Eco-DRR/CCA. Countries around the world will clearly be seeking ways to implement these post-2015 global policy agreements and commitments, also referred to as the 2030 Sustainable Development Agenda. There is pressing need for integrated strategies and approaches that collectively support implementation of the 2030 Agenda.

Sustainable ecosystem management provides opportunities for bridging the 2030 Agenda and delivering multiple priorities and commitments, including for sustainable development, disaster risk reduction and climate change adaptation. Annex 1 elaborates on the key provisions related to Eco-DRR/CCA which have been adopted and the direct implications for countries and communities when these provisions are implemented. There is clearly great momentum for implementing Eco-DRR/CCA in global policy fora, which will need to be "downscaled" into tangible actions in countries and communities.

Going beyond the SFDRR

The SFDRR sends a clear signal to safeguard and restore ecosystems as a vital strategy for a sustainable and secure world. However, there remain a number of issues and challenges that are not sufficiently addressed in the SFDRR. In addition, while some of the environmental components in the SFDRR are not new (i.e. environmental degradation as a risk driver was also highlighted in the HFA), barriers remain which could impede implementation of the SFDRR priorities. Some of these gaps may be addressed through implementation of the other global policy agreements in the 2030 Agenda. Hence, ensuring coherence and mutual reinforcement across the 2030 Agenda is critical in implementing the SFDRR and beyond.

Key issues that require further attention include the following:

Need for mainstreaming Eco-DRR/CCA as part of risk-informed, sustainable development

Although the concept of Eco-DRR/CCA is now internationally recognised with robust knowledge and practice, Eco-DRR/CCA approaches are not yet fully mainstreamed into national development policies and programmes. The SFDRR should have articulated more clearly the rationale for promoting and investing in Eco-DRR/CCA measures to support mainstreaming in countries.

In the SFDRR, countries are urged to strengthen the use and management of ecosystems with approaches that incorporate disaster risk reduction (paragraph 30 (n), but does not explicitly urge countries to integrate ecosystem conservation, rehabilitation and sustainable use in disaster and climate risk reduction policies or across other sectors as a means for building resilience. Given the range of actions specified in the SFDRR, countries should be integrating Eco-DRR/CCA in their SFDRR national implementation plans.

The other post-2015 global policy agreements can also help to bridge this gap. For instance, inter-linkages between ecosystem management, climate change and disaster risk reduction are reflected in the targets under the Sustainable Development Goals 2,6, 11, 14 and 15. The Paris Agreement on Climate Change has articulated principles of climate change adaptation that include recognition of ecosystem-based approaches. Moreover, the CBD 12th Conference of the Parties (CoP9 Decision XII/20), the Ramsar Convention 12th (CoP Resolution XII/13) and the UNCCD 12th CoP have all endorsed decisions that promote Eco-DRR/CCA in national conservation and environmental management strategies as well as in risk management plans and programmes.

Increased attention for integrated water and wetland management to reduce disaster risk

Given that 90% of disasters are induced by water-related hazards, better management of water resources should therefore play an important role in disaster risk reduction. However, the role of water resource management and wetlands in disaster risk management is under-reflected in the SFDRR.

Since 1900, the world has lost 64% of its wetlands through drainage, conversion and land-use and urbanization pressures. Loss of wetlands translates to reduced ecosystem services, compromising water and food security and the regulation of floods and droughts, thus leaving communities more vulnerable. Global policy frameworks such as the SDGs, CBD (Decision XII/20), Ramsar Convention (Resolution XII/13), the UNCCD and the Paris Agreement have all acknowledged water resources and wetlands as indispensable to achieving a sustainable and secure world.

Need for all-of-society engagement, with emphasis on community participation

The SFDRR calls for an all-of-society engagement and emphasizes the importance of involving local and national governments, community-based organizations, indigenous peoples, the scientific community and the private sector.

However, there should be a strong emphasis on the role of communities. Priority should be given in particular to people in vulnerable situations who are disproportionately impacted by disasters, and their engagement in the design, implementation and monitoring of development policies and plans.

Communities know best what risks they face, understand the uncertainties and complexities of their realities, and are inevitably the first to respond when disaster strikes, especially in least developed countries and fragile states. Therefore, to achieve lasting impacts, it is essential to engage at-risk communities and local actors in disaster and climate risk reduction efforts, as key drivers of change. Civil society organizations also play an important role in enabling local community participation and facilitating integrated development approaches.

Promote Eco-DRR/CCA in disaster preparedness, response, recovery and reconstruction

The SFDRR does not refer to ecosystems or environment under Priority Action 4: Enhancing disaster preparedness for effective response and to build back better in recovery, rehabilitation and reconstruction.

Given the importance of ecosystems and the services they provide to disaster-impacted communities, protecting, maintaining and rehabilitating ecosystems in post-disaster contexts is critical for the immediate and long-term recovery of people. Significant

country-level experience on sustainable recovery and reconstruction already exists (in many cases, supported by PEDRR partners) and should be leveraged to influence future implementation under Priority 4.

- **Tracking progress on local, national and global environmental efforts to reduce risks**

While environment and ecosystems are clearly referenced under the SFDRR's Expected Outcome, Goal, Guiding Principles and Priorities for Action, environment and ecosystems are not mentioned under the seven global targets of the SFDRR. The exclusion of ecosystems from the SFDRR global targets will pose major challenges in monitoring progress on environmental efforts to reduce risks.

Targets and indicators under the Sustainable Development Goals (especially Goals 2, 6, 11, 14 and 15) can therefore be leveraged to track progress in sustainable ecosystem management, which also deliver towards building disaster and climate resilience. However, new and improved metrics will be needed to better understand and evaluate the environmental impacts of disasters.

PEDRR's Roadmap for implementation of the SFDRR

Practical guidance is now needed by countries and communities to translate the SFDRR into concrete actions. This guidance should take into account other global policy commitments, so that national and local disaster risk reduction efforts are reinforced by and contribute towards the 2030 Sustainable Development Agenda.

This proposed Roadmap elaborates on key tangible steps for taking action on Eco-DRR/CCA under each of the SFDRR's four Priorities for Action:

1. Understanding disaster risk;
2. Strengthening disaster risk governance to manage disaster risk;
3. Investing in disaster risk reduction for resilience;
4. Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction.

PRIORITY ACTION 1: Understanding disaster risk

Incorporate ecosystems in risk assessments at the appropriate levels and timescales

- Assess disaster and climate risks at different spatial (local, landscape) and temporal (immediate, mid-term and long-term) scales: regional dimensions and root causes of risk and vulnerability are better captured through landscape or catchment level assessments. This includes identifying linkages between ecosystem and land use changes and risk patterns.
- When natural resources cross borders, such as within river basins and along coastlines, collaborate at the transboundary level to assess risk at landscape scale and define coordinated, transboundary risk reduction strategies and actions.
- Develop hazard and risk maps and operational monitoring systems: make use of satellite imagery, GIS assessments and existing monitoring data to identify changes in land use, ecosystem functioning and/or water flows and their impacts

on increasing risks at a broader landscape/catchment level. This information might be readily available, but in most cases additional assessment and data gathering will be required.

- Consider both the hazard mitigation and provisioning services (e.g. food, water, shelter) provided by ecosystems in risk assessments.
- Complement national-level risk assessments with community-level vulnerability assessments: Undertake community-level vulnerability assessments and baseline studies that focus on the changes that have occurred in the last 30 years within the community and the surrounding area to understand changing patterns of vulnerability and disaster risk. This assessment should identify the environmental root causes of risk and opportunities for improved ecosystem and natural resource management. Build up the capacity of local authorities in systematically conducting participatory community risk assessments. Complement and validate this assessment with national data and advice from knowledge institutes and government agencies.

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PRIORITY ACTION 2: Strengthening disaster risk governance to manage disaster risk

Strengthen multi-stakeholder processes for planning and implementation of Eco-DRR/CCA interventions

- PEDRR urges countries to engage local communities in order to:
  - » prioritise the most at-risk, poorest and marginalized population groups, in particular those living in areas affected by insecurity and conflict, in national disaster risk reduction policies and interventions;
  - » decentralize decision-making and resource allocation for disaster risk reduction and climate change interventions at the appropriate local level when possible;

- recognize local and indigenous knowledge, alongside scientific knowledge;
- link risk reduction policies and strategies to poverty, conflict and vulnerability reduction.

- Identify relevant stakeholders in development planning at the local, provincial and national levels to design and implement integrated risk reduction programmes. Much can be learned from well-established cross-sectoral planning mechanisms, such as integrated water resources management (IWRM), integrated coastal zone management (ICZM) and land-use planning.
- Involve technical experts from humanitarian, development and environment fields and policy makers from relevant disciplines (e.g. economics, land-use planning, hydrology, and engineering).
- Provide communities and civil society organisations that represent them, with the space to engage in dialogues with other communities, government units and organisations in order to identify sustainable and appropriate options for risk reduction.
- Engage relevant stakeholders, for instance municipal governments, national environmental and disaster management agencies, river basin authorities, coastal zone managers and local communities, with regard to shared transboundary resources, and develop coordinated risk reduction strategies.

Create an enabling public and private policy environment for Eco- DRR/CCA

- Assess existing national DRR policies, plans and investments, as well as non DRR-specific environmental, land use and development policies and plans and identify entry points for promoting Eco-DRR/CCA implementation.
- Include environmental, social and risk reduction safeguards in development policies and planning, in specific sectors such as logging, mining and aquaculture, which have a strong influence on increasing disaster risk.
- Incorporate a disaster and climate risk reduction lens when implementing Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs) to prevent unintended environmental impacts that may exacerbate risk and to promote Eco-DRR/CCA mitigation measures.
- Screen performance of public and private investments against resilience criteria and sustainability safeguards.
- Remove environmentally harmful subsidies, which could exacerbate ecosystem degradation and disaster risk.
- Work with the private sector to harness their expertise, resources and networks in order to encourage and scale-up investments in Eco-DRR/CCA in countries where they are operating. This may include collaborating with private businesses in specific sectors, such as insurance, tourism, agriculture and water.
- Engage government regulatory bodies to support and endorse private sector investments in natural infrastructure and Eco-DRR/CCA measures.

Developing Eco-DRR/CCA indicators to support monitoring of the SFDRR implementation

- Work with national focal points responsible for monitoring and reporting on the SFDRR implementation and select national-relevant indicators that relate to Eco-DRR/CCA;
- Establish local and national monitoring and evaluation mechanisms, as appropriate, which tracks progress of environmental efforts and promotes coherence across the 2030 Sustainable Development Agenda.
- Test Eco-DRR/CCA related indicators for local relevance;
- Regularly review and update risk reduction plans, in terms of their environmental sustainability and contribution to long-term risk reduction and resilience.

PRIORITY ACTION 3: Investing in disaster risk reduction for resilience

Budgeting for ecosystems

- Analyze costs, benefits and trade-offs for different risk management scenarios. Ensure these analyses fully capture gains or losses in ecosystem services provision that impact on disaster risk and resilience.
- Earmark public resources at local and national levels to support investment in Eco-DRR/CCA, including for protecting, restoring and sustainably managing wetlands, forests and drylands.
- Identify significant national projects and initiatives where there are already committed or pledged budgets and maximize opportunities for incorporating Eco-DRR/CCA components or measures.
- Include budgets for utilizing expertise on environment and disaster risk reduction in designing, planning, monitoring and evaluating Eco-DRR/CCA interventions.
- Include ecosystem-based approaches in risk-informed, land-use planning
- Integrate ecosystem conservation, restoration and sustainable management of land, wetland and other natural resources, as part of risk management strategies in both rural and urban development planning. Ensure that the plans include measures that address the environmental root causes of disaster risk.
- Plan Eco-DRR/CCA interventions locally, at community and household level and at a landscape or catchment level
- Integrate Eco-DRR/CCA measures in sectoral development plans at local, regional and national scales, such as in land use and water management, both in rural and urban contexts.
- Consider “green infrastructure” or building with nature approaches in urban land-use zoning to cope with water-related disasters, including both floods and droughts.
- Ensure that disaster risk reduction, climate change and development interventions do not negatively affect high conservation value areas or cause unintended environmental impacts.

Develop national and local capacities for Eco-DRR/CCA

- Develop capacities of local and national governments, communities, academia, private sector and civil society organisations in accounting for:

  1. the services that ecosystems deliver, how people and sectors (agriculture, forestry, water and sanitation, health and safety) benefit from these services;

  2. how ecosystems are connected across landscapes (e.g. upstream-downstream, along coastlines) and what implications this has for disaster risk;

  3. root causes of ecosystem degradation and how changes in ecosystems, such as land and resource-use, water flow regimes, natural vegetation cover, livelihood strategies, pollution, etc. affect exposure, vulnerability and resilience.

- Strengthen specific skills in designing, implementing, and monitoring effective Eco-DRR/CCA programmes or projects.
- Engage universities as well as regional and national training institutions and embed Eco-DRR/CCA curricula in teaching and training programmes, in order to cultivate a new generation of policymakers, decision makers, practitioners and researchers who promote Eco-DRR/CCA approaches.
- Enhance awareness within the private sector and strengthen the business case to invest in Eco-DRR/CCA and natural or green infrastructure solutions.
- Promote open access, online technologies, such as Massive Open Online Courses (MOOCs), to scale up and disseminate knowledge and practice on Eco-DRR.

Become Eco-DRR/CCA ambassadors

- Identify high-profile "ambassadors", especially from the non-environment sectors, who are able to explain and promote Eco-DRR/CCA globally, in countries and communities.

PRIORITY ACTION 4: Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction

- Consider the environmental impacts of disasters and incorporate ecosystem rehabilitation/restoration/protection measures as part of Post-Disaster Needs Assessments and recovery and reconstruction plans.
- Ensure disaster response, recovery and reconstruction activities do not have adverse environmental impacts and do not create or exacerbate vulnerabilities to future disasters. Screen disaster response, recovery and reconstruction plans

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Become a member of the Friends of PEDRR Network and sign up to receive our weekly PEDRR Eco-DRR newsletter.

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The Partnership for Environment and Disaster Risk Reduction

Asian Disaster Preparedness Center (ADPC) • Council of Europe • Global Fire Monitoring Center (GFMC) • Global Risk Forum • International Union for the Conservation of Nature (IUCN) • ProAct Network • Stockholm Environment Institute (SEI) • The Nature Conservancy (TNC) • UN International Strategy for Disaster Reduction (UN/ISDR) • United Nations Development Programme (UNDP) • United Nations Educational, Scientific and Cultural Organization (UNESCO) • United Nations Environment Programme (UNEP) • United Nations University-Institute for Environment and Human Security (UNU-EHS) • Asian University Network of Environment and Disaster Risk Reduction (AUEDM) • Helvetas Swiss Intercooperation • Wetlands International • World Wide Fund for Nature (WWF) • Convention on Biological Diversity (CBD) • Ramsar Convention on Wetlands • World Business Council for Sustainable Development (WBSCD) • International Institute for Sustainable Development (IISD) • Global Network of Civil Society Organisations for Disaster Reduction (GNDR)

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Annex 1. Key provisions on Eco-DRR/CCA in the 2030 Sustainable Development Agenda

Source: Renaud, Sudmeier-Rieux, Estrella, Nehren (eds). 2016. Ecosystem-based disaster risk reduction and adaptation: Linking science, policy and practice. Springer: In press.

Policy Agreement	Summary Description	Number of Signatory Parties (Member States)	Key provisions on Ecosystem-based DRR/CCA in the Agreement	National-level instruments/mechanisms for implementing the Agreement and scope for promoting Eco-DRR/CCA through these instruments
Sendai Framework on Disaster Risk Reduction - SF DRR (2015-2030)	The SFDRR is the global framework on Disaster Risk Reduction, with seven targets and four Priorities for Action. It seeks to prevent new and reduce existing disaster risk through the mainstreaming of disaster risk reduction across all development sectors, programmes and policies. While the SFDRR is a voluntary, non-binding agreement, it calls for an all-of-society engagement, with governments having the primary role of reducing disaster risk.	187 Member States adopted the SFDRR at the 3rd World Conference on DRR in March 2015. The SFDRR was subsequently endorsed at the UN General Assembly's 69th Session in June 2015	The SFDRR recognizes ecosystem degradation as a driver of risk as well as the environmental impacts of disasters. A new milestone is that the sustainable management of ecosystems is recognized as a key measure for building resilience to disasters. The role of ecosystems will need to be taken into account in disaster risk assessments (Priority Action 1), strengthening risk governance (Priority Action 2) and investments in disaster resilience (Priority Action 3). The SFDRR also calls for greater collaboration between institutions and stakeholders from other sectors, including from the biodiversity and environment sectors. It calls for ecosystem-based approaches to be implemented in transboundary cooperation for shared resources, such as within river basins and shared coastlines.	Countries will develop their national and local DRR strategies and plans. A focus on strengthening environmental resilience and ecosystem-based approaches could be featured in national and local DRR strategies, with targets and indicators developed as appropriate. Eco-DRR/CCA should also be mainstreamed across sectoral development plans and strategies (e.g. environment, water, agriculture, rural and urban land-use planning, etc.) (see also Sustainable Development Goals, below).

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Sustainable Development Goals – SDGs (2015-2030), also the 2030 Sustainable Development Agenda	With a total of 17 goals and 169 targets, the SDGs focus on three main areas: (i) eradication of poverty; (ii) protecting the planet from degradation, while ensuring that economic, social and technological progress occurs in harmony with nature; and (iii) promoting universal peace and just and inclusive societies. While the SDGs are not legally binding, governments are expected to take ownership and establish national frameworks for the achievement of the 17 Goals.	193 UN Member States have endorsed the SDGs, at the UN General Assembly's 70th Session in September 2015.	A major pillar of the SDGs is protecting the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change. Sustainable ecosystem management is explicitly addressed under targets of Goals 2, 6, 11, 14 and 15, and with reference to curbing environmental degradation under Goal 8. DRR (and resilience) is explicitly mentioned under targets of Goals 1, 2, 4, 9, 11, 13 and 15, with reference to strengthening resilience under Goal 14. Climate change (and climate extremes) is explicitly mentioned under targets of Goals 1, 2, 11, 13, with reference to ocean acidification under Goal 14 and climate-related hazards under Goal 15. Maximum inter-linkages between ecosystems, DRR and climate change actions can therefore be supported under Goal 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture), Goal 6 (Ensure availability and sustainable management of water and sanitation for all); Goal 11 (Make cities and human settlements inclusive, safe, resilient and sustainable), Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development) and Goal 15 (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss).	193 countries will develop their respective National Sustainable Development Strategies or National SDG Frameworks, and countries are tasked to develop corresponding indicators for each of the targets listed under the SDGs. To maximize integration between ecosystems, DRR and climate change, efforts can focus initially on Goals 2, 6, 11, 14 and 15 where there are already strong linkages, as expressed through their respective targets: Goal 2 – Target 2.4 Goal 6 – Targets 6.5, 6.6. Goal 11 – Targets 11.4, 11.a Goal 14 – Target 14.2 Goal 15 – Target 15.1, 15.3

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UNFCCC 21st Conference of the Parties - Paris Agreement on Climate Change	The Paris Agreement seeks to significantly scale-up climate actions and deal more comprehensively with climate change impacts to safeguard development and eliminate poverty. Countries committed to hold the global average temperature to well below 2°C above pre-industrial levels (and to pursue efforts to limit the increase to 1.5°C). It specifically aims to "significantly reduce the risks and impacts of climate change and foster climate resilience". Countries have also agreed to a global goal for adaptation that considers enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change.	195 Countries adopted the Paris Agreement, which is legally binding.	The Paris Agreement recognises protecting the integrity of ecosystems and biodiversity for both climate change mitigation and adaptation actions. It specifically lays out principles of adaptation that takes ecosystems into consideration. It also calls for integrating adaptation into relevant environmental policies and actions, where appropriate, as well as for building resilience of ecosystems through sustainable management of natural resources. It further recognises the importance of reducing the loss and damage associated with climate change impacts, including extreme events and slow onset events, and the role of sustainable development in reducing risk of loss and damage. Within the Warsaw International Mechanism for Loss and Damage associated with Climate Change, it calls for early warning systems, preparedness, comprehensive risk assessments and management as well as a range of insurance solutions.	National adaptation planning (NAP) enables all developing and least developed country (LDC) Parties to assess their vulnerabilities, to mainstream climate change risks and to address adaptation. In decision 1/CP.20 the COP also invited all Parties to consider communicating their efforts in adaptation planning or consider including an adaptation component in their intended nationally determined contributions (INDCs). Efforts should focus on ensuring that NAPs and INDCs incorporate the key adaptation principles set out in the Paris Agreement, which include taking into account building ecosystem resilience in adaptation and protecting the integrity of ecosystems. Eco-DRR/CCA projects and technical assistance can be supported through: • Green Climate Fund • Climate Technology Centre and Network (CTCN)

Other Multi-lateral Environmental Agreements with direct references to the post-2015 sustainable development agenda				
Policy Agreement	**Summary Description**	**Number of Signatory Parties (Member States)**	**Key provisions on Ecosystem-based DRR/CCA in the Agreement**	**National-level instruments/mechanisms for implementing the Agreement and scope for promoting Eco-DRR/CCA through these instruments**
Convention on Biological Diversity (CBD), 12th Conference of the Parties, Decision XII/20	The CBD recognised for the first time in international law that the conservation of biological diversity is a universal concern for humankind and is integral to sustainable development. It covers all ecosystems, species, and genetic resources. The CBD is a legally-binding agreement.	Under the CBD, there are 168 signatory Member States	Decision XII/20 on Biodiversity and Climate Change and DRR recognises that while biodiversity and ecosystems are vulnerable to climate change, the conservation and sustainable use of biodiversity and restoration of ecosystems can play a significant role in climate change mitigation and adaptation, combating desertification and disaster risk reduction. It calls on governments and other relevant organisations to promote Eco-DRR/CCA approaches and integrate these into their respective policies and programmes. Decision XII/20 supports implementation of the Aichi Targets, specifically Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	168 countries are obligated to develop, implement and regularly review their National Biodiversity Strategic Action Plans (NBSAPs), which should take into account Decision XII/20 and integrate DRR and climate change actions in their respective NBSAPs. CBD signatory Member States can leverage Decision XII/20 to advocate for a stronger role for biodiversity conservation and ecosystem-based approaches in local and national DRR strategies as well as in National Adaptation Plans (NAPs).

Policy Agreement	Summary Description	Number of Signatory Parties (Member States)	Key provisions on Ecosystem-based DRR/CCA in the Agreement	National-level instruments/mechanisms for implementing the Agreement and scope for promoting Eco-DRR/CCA through these instruments
Ramsar Convention (or formally the Convention on Wetlands of International Importance), 12th Conference of the Parties, Resolution 13	The Ramsar Convention provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It is a non-binding agreement. The Convention uses a broad definition of wetlands. It includes all lakes and rivers, underground aquifers, swamps and marshes, wet grasslands, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and all human-made sites such as fish ponds, rice paddies, reservoirs and salt pans.	There are 169 signatory Member States, also referred to as Contracting Parties.	Resolution 13 on wetlands and disaster risk reduction strongly encourages countries to mainstream disaster risk reduction measures in wetland management plans, especially Ramsar Sites, which integrate the principles of ecosystem-based management and adaptation against natural hazards and accelerated sea level rise. It further calls for integration of DRR in all relevant policies, action plans and programmes. It further calls on countries to integrate ecosystem management related considerations, in particular relating to wetland and water management, in their national disaster risk reduction and climate change adaptation strategies.	169 countries can promote Eco-DRR/CCA approaches through wetland management plans, which cover 2,231 Ramsar-designated sites with a total surface cover of 214,936,005 ha. Ramsar Contracting Parties can leverage Resolution 13 to promote Eco-DRR/CCA in wetland management policies and plans (in both Ramsar and non-Ramsar wetland sites), as well as in national and local DRR and CCA strategies, plans and programmes.

Policy Agreement	Summary Description	Number of Signatory Parties (Member States)	Key provisions on Ecosystem-based DRR/CCA in the Agreement	National-level instruments/mechanisms for implementing the Agreement and scope for promoting Eco-DRR/CCA through these instruments
United Nations Convention to Combat Desertification – UNCCD , 12th Conference of the Parties	The UNCCD provides the global framework for tackling the issue of land degradation and desertification. It is the only legally-binding international agreement with a focus on sustainable land management. The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as drylands. It seeks to improve the living conditions for people in drylands, to maintain and restore land and soil productivity, and to mitigate the effects of drought.	194 countries and the European Union are Contracting Parties to the UNCCD	At the 12th CoP in October 2015, Parties to the UNCCD reached a breakthrough, with the adoption of the land degradation neutrality (LDN) target. This means that Parties have agreed that the amount of healthy and productive land should stay stable starting in 2030. Parties also agreed to develop indicators for measuring progress in LDN and for enhancing land resilience to climate change and halting biodiversity loss linked to ecosystem degradation. Outcomes of CoP-12 strengthens implementation of the UNCCD's 10-year Strategic Plan and Framework (2008-2018), which was adopted in 2007 at CoP-8. This Strategic Plan seeks to reverse and prevent land degradation and desertification, and specifically recognizes the important services provided by ecosystems, especially in dryland ecosystems, for drought mitigation and the prevention of desertification. The following strategic objectives and expected impacts outlined in this Strategic Plan have direct relevance to Eco-DRR/CCA , calling for enhanced measures on sustainable land management: • Objective 1 - Expected impacts: 1.1., 1.2 • Objective 3 - Expected impact 3.1	National Action Programmes (NAPs) are the key instruments to implement the Convention, which are often supported by action programmes at sub-regional (SRAP) and regional (RAP) levels. The UNCCD urges Parties to align their action programmes, as well as other relevant implementation activities relating to the Convention, to the UNCCD's 10-Year Strategy. With the adoption of the LDN target, countries will have to formulate their own respective strategies for achieving LDN and integrate them into their NAPs. Countries can thus leverage the agreements reached at CoP-12 to promote the sustainable use, conservation, and restoration of ecosystems and biodiversity in the context of reducing the risk of desertification and drought.