



*Empowered lives.
Resilient nations.*

UNDP & THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION

Supporting Progress in over 160 Countries

Zero-Carbon, Risk-Informed, Sustainable.

UNDP SINCE SENDAI

UNDP's disaster risk reduction (DRR) efforts help countries achieve the Sustainable Development Goals (SDGs) by both delivering and protecting development gains from the impacts of disasters and climate change. By working with governments and partners towards 'risk-informing' national, local and sectoral development planning processes, UNDP helps build the resilience of communities and nations in line with the Sendai Framework for Disaster Risk Reduction and the Paris Climate Agreement.

In 2016, UNDP's country level DRR and recovery efforts have reached **expenditures of US\$2.1 billion** (2005 – 2016); a significant increase from the USD\$ 1.7 billion in 2015 at the World Conference on Disaster Risk Reduction. Through enhanced integration with climate change adaptation and a firm focus on partnerships and mechanisms to deliver on Sendai, UNDP, since 2005, has helped 148 countries develop national and local DRR strategies and action plans; supported 84 countries to understand and communicate risks through disaggregated risk assessments; worked with 90 countries to strengthen their legal and regulatory frameworks for DRM; and supported 110 countries to develop post-disaster recovery capacities.

To facilitate cooperation and accelerate action, UNDP has been a key partner to several global initiatives that correspond to the targets of Sendai. These include the **Capacity for Disaster Reduction Initiative (CADRI)**, which aims to enhance the ability of UN agencies to support governments to deliver comprehensive disaster risk reduction strategies; the **Global Preparedness Partnership**, which aims to strengthen preparedness capacities locally and reduce the need for international assistance; the **Insurance Development Forum (IDF)**, which is designed to optimize and extend the use of insurance related facilities to protect vulnerable actors against shocks and natural hazards; and the partnership on **Post-Disaster Needs Assessments** with the UN Development Group, the European Union and the World Bank.

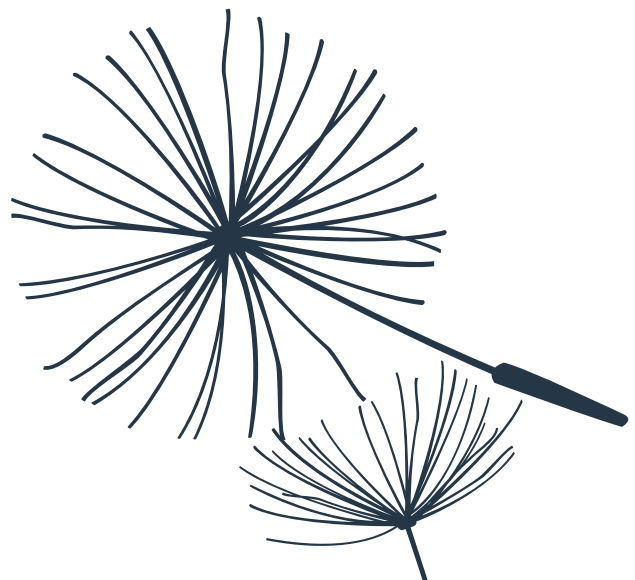
UNDP AT CANCUN

UNDP's participation at Cancun emphasizes three key elements that are needed to ensure the Sendai Framework is a success:

1. An enhanced **partnership approach** to delivering Sendai: the DRR community needs a Member States driven mechanism to engage and drive forward progress, drawing on comparative advantages and avoiding duplication while filling gaps as needed.
2. More **predictable financing** for disaster risk reduction and recovery: A large portion of resources for DRR remains subsumed into larger humanitarian operations. It is essential that development investments and budgets are disaster risk-informed, and that access to climate finance for highly synergetic DRR measures be provided.
3. Clearer **linkages with SDGs and the Paris climate commitments**: The Sendai Framework and the Paris Agreement both aim to build resilience, as do several SDG targets and indicators. A coherent approach to ensure that all DRR initiatives are complementary to and, ideally, drive action across other areas is central to success.

THE FUTURE OF RISK REDUCTION

The Global Platform at Cancun represents the first significant opportunity for the international community and national actors to discuss the progress of implementing Sendai. Now is the time to solidify the gains made thus far: the inseparability of risk from development; the underwriting of the SDGs through delivering on Sendai; the essential focus on the governance of risk; how delivering risk reduction not only reduces economic losses but delivers significant opportunity. Now is the time to deliver results.



UNDP PARTICIPATION AT THE 2017 GLOBAL PLATFORM FOR DISASTER RISK REDUCTION

TIME	EVENT TYPE	NAME OF EVENT	VENUE
MONDAY 22 MAY 2016			
12:00 - 16:00	Preparatory Meeting	Learning from history: Building resilient societies in Mesoamerica and the Caribbean	Expo Center 8
15:00 - 19:00	Preparatory Meeting	National DRR strategies: Taking Commitment to Action	Expo Center 3
15:30 - 17:00	Preparatory Meeting	Global Preparedness Partnership Foundational Planning Meeting	Expo Center 4
TUESDAY 23 MAY 2016			
11:30 - 13:00	Preparatory Meeting	Capacity Development Consultation Seminar	Expo Center 8
15:00 - 16:30	Preparatory Meeting	Insurance sector consultation meeting	Sunrise 11
16:00 - 18:00	Preparatory Meeting	UN coordination & preparatory meeting (by invitation)	Expo Center 2
16:30 - 18:00	Preparatory Meeting	Positioned for action: Displacement and the Sendai Framework	Sunrise 10
WEDNESDAY 24 MAY 2016			
10:00 - 11:30	Working Session	Sendai Framework Monitor Consultation	Arena F
13:30 - 14:25	Side Event	Understand and take action on risk from the vision of indigenous communities in Mexico.	Expo C 1
16:15 - 17:45	Working Session	Risk Information & Loss Databases	Arena F
17:50 - 18:45	Side Event	From Sendai to the SDGs: Institutionalizing Grassroots Women's Leadership for Greater Resilience	Expo C 1
17:50 - 18:45	Side Event	From Sendai to Cancun: Understanding of Disaster Risk in the Latin America and Caribbean region	Sunrise 12
17:50 - 18:45	Side Event	Enhancing the effectiveness and evaluation of risk governance across scales	Expo C 2
THURSDAY 25 MAY 2017			
9:00 - 11:00	Plenary	National & Local DRR Strategies	Arena A
13:00 - 13:55	Side Event	Connecting Public and Private Sectors in Disaster Risk Management for Sustainable Development.	Sunrise 10
17:00 - 18:30	Working Session	DRR Governance	Arena E
FRIDAY 26 MAY 2016			
10:15 - 10:30	Ignite Stage	Risk Reduction and Resilient Development in Protected Areas in Mexico	Expo Center Main Foyer
16:00 - 16:55	Side Event	Partnering for risk-informed development	Expo C 3
16:00 - 16:55	Side Event	The Sendai Framework in the Arab Region: A Climate Risk Nexus Approach	Sunrise 11

For information on UNDP's engagement at Cancun, please contact **Angelika Planitz** at angelika.planitz@undp.org.

For partnerships discussion, please contact **Jan Kellett** at jan.kellett@undp.org.

For media interviews, please contact **Carl Mercer** at carl.mercer@undp.org.

UNDP'S INVESTMENT IN DISASTER RISK REDUCTION

12 YEARS

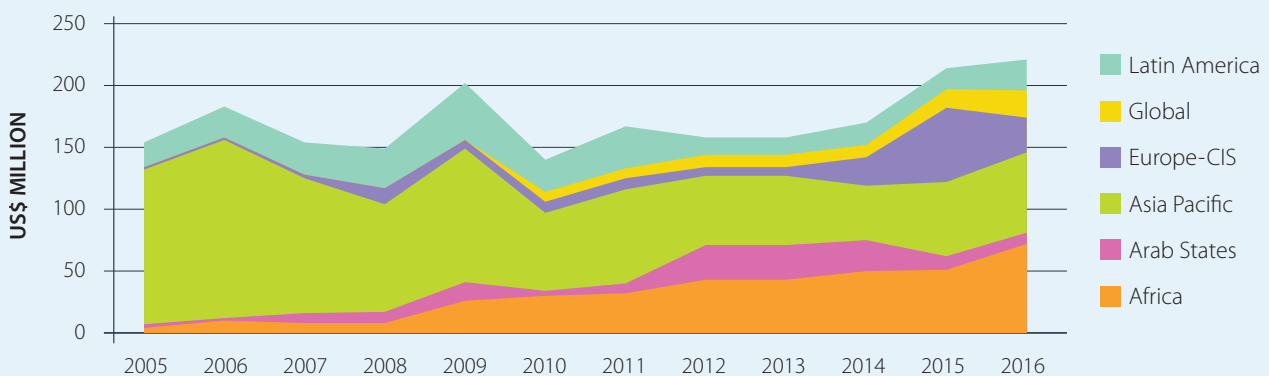
160+ COUNTRIES

\$2.1 BILLION

TOTAL EXPENDITURE BY REGION (2005-2016)



EXPENDITURE PER REGION PER YEAR (2005-2016)

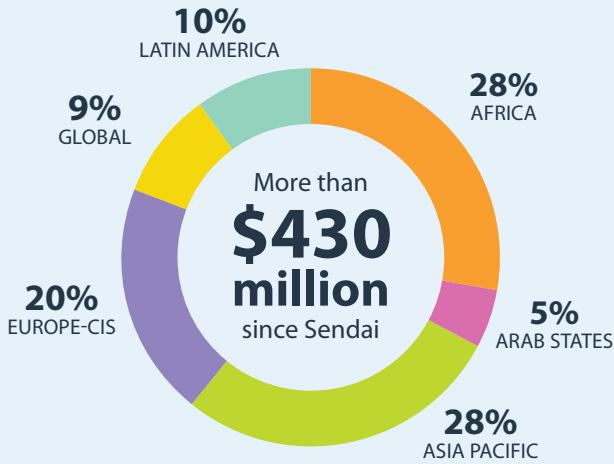


UNDP SUPPORT BY THEMATIC AREA 2005-2016 (BY # OF COUNTRIES)



SINCE SENDAI, 2015/2016

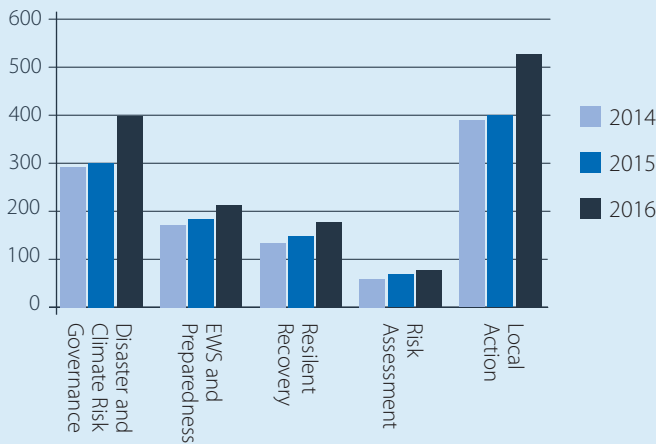
UNDP'S INVESTMENT IN DRR SINCE SENDAI



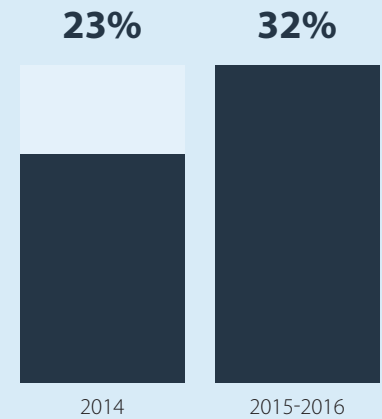
NUMBER OF COUNTRIES SUPPORTED BY THEMATIC AREA SINCE SENDAI



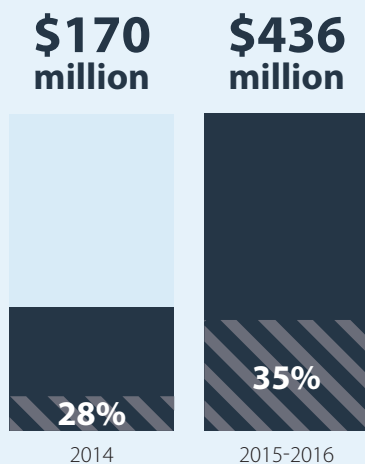
NUMBER OF PROJECTS BY THEMATIC AREA COVERED



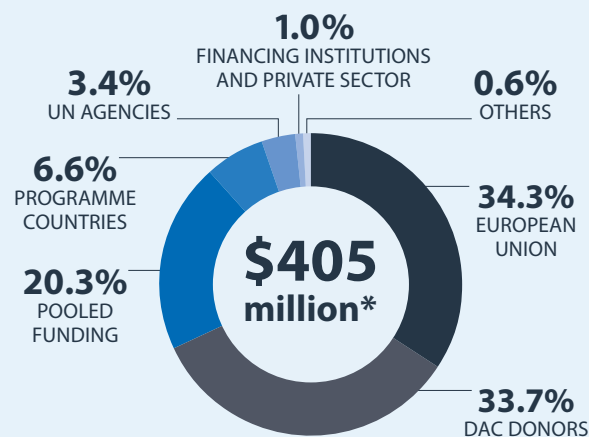
DRR EXPENDITURE WITH GENDER CONSIDERATION



INTEGRATED CLIMATE ADAPTATION & DRR EXPENDITURE SINCE SENDAI



UNDP'S INCOME BY DONOR CATEGORY (2012 - 2016)



* Income data reflect only the direct donor contribution and excludes UNDP core resources.

OUR WORK IN FOCUS

BOSNIA AND HERZEGOVINA

In 2016, UNDP continued to assist communities affected by the 2014 flood, which impacted over one million people and cost over 2 billion EUR, as well as worked with the Government on broader disaster risk reduction. Support included strengthening governance, early warning and technological systems for DRR.

SUPPORT TO FLOOD & LANDSLIDE RECOVERY

Between 2014 and 2016, support was provided for both infrastructure and social recovery. 4,600 homes were reconstructed and communal infrastructure, including 120 bridges and roads and 31 water and sanitation facilities, were repaired. These works helped to re-open access to markets, schools, agricultural fields, health centers and other key services. To facilitate access to education, 168 schools were repaired, benefiting 70,000 students.

Restoring economic activities was also a key element of the recovery process, as many small enterprises and farmers lost their main source of livelihoods. The recovery project thus helped to protect and create more than 5,600 jobs and to re-start agricultural production for 1,270 commercial and subsistence farmers.

To improve the safety of populations at risk of landslides and to protect infrastructure and assets exposed, UNDP has been supporting local governments and communities in thirteen municipalities to rehabilitate and stabilize seventeen at-risk locations. Efforts were based on extensive geological research used to identify the physical properties of soils and rocks around the sites. Depending on findings, work was undertaken to design the most appropriate structures or repair those that were distressed.

In 2016, training on landslide risk management was also delivered to municipalities and enabled representatives to understand the methods for monitoring landslides, landslides stability analysis, and construction methods for rehabilitation. The training program has been adopted by Geological Institutes of Bosnia and Herzegovina and can be replicated throughout the country.

EARLY WARNING AND DISASTER RISK GOVERNANCE

Bosnia and Herzegovina has limited institutional and legal frameworks on climate change or disaster risk reduction, and sector plans do not address these important challenges. Given this, steps were taken in 2016 to review the existing legislative and institutional framework in the country and

identify the most appropriate entry points for integrating DRR into regulatory and policy frameworks, as well as how to mainstream DRR into key sector policies and plans. These efforts are currently underway.

Given the lack or poor quality of hydro-meteorological and spatial data for monitoring and the limited capacity of local institutions to collect and analyze data, an assessment was undertaken to identify the main gaps and the solutions needed to improve existing systems. Based on the assessment, UNDP provided support to collect spatial and hydro-meteorological data, as well as prepare flood hazard and risk maps for the Vrbas river basin. A geoportal was developed, which links spatial data with historical hydro-meteorological observations and socio-economic information, and contains a database of flood damages. Work is underway to enable the direct transfer of real-time data into the forecasting platform.

Similarly, UNDP helped to develop the Disaster Risk Analysis System, an integrated multi-hazard risk information management tool. The System is an online platform that houses valuable data and information about floods and landslides, and contains data on precipitation and water levels from Hydrometeorology and Water Agencies, as well as spatial data on infrastructure, land use, and population. Hazard maps can be projected onto google maps, and overlaid with specific vulnerability data to inform prevention or response planning when needed. The tool serves to promote greater awareness of risks and vulnerabilities affecting local communities, and enables fast computer spatial risk assessments, which empowers communities and authorities with the evidence needed to take risk-informed, preventive actions. This tool will be scaled up to other municipalities in the country.

Finally, to accompany the digital and institutional support, assistance was given to establish a hydro-meteorological network in Vrbas river basin. This consisted of 28 gauges (20 precipitation, 2 meteorological and 6 hydrological), as well as training in how to monitor and operate the equipment. This network is a first in Bosnia and Herzegovina and allows for the automatic measuring of water levels and discharge, rainfall, and other meteorological parameters in real time. Plans are underway to establish institutional arrangements for a broader, national, flood forecasting and early warning system.

The initiatives implemented with UNDP support in 2015/2016 empowers government authorities and communities through better knowledge and information, and technological and engineering solutions that ultimately reduce risks, save lives and avoid economic losses. These efforts contribute to Priorities 1 & 2 of the Sendai Framework, on understanding disaster risk and strengthening disaster risk governance respectively.

NEPAL

Building on sustained disaster risk reduction work with Nepal, UNDP's efforts since Sendai include extensive support to post-earthquake recovery, as well as the expansion of efforts to reduce Glacial Lake Outburst Floods (GLOFs).

BUILDING-BACK BETTER AFTER THE 2015 EARTHQUAKES

Following the 2015 Gorkha earthquake, which destroyed or damaged nearly 800,000 homes and government buildings, including schools and health facilities, UNDP provided significant support to Government efforts for recovery and reconstruction. This included support to establish the National Reconstruction Authority, developing recovery frameworks, and providing technical resources and assistance for recovery planning. UNDP also set up a human resource facility through which recovery experts with specialized skills could be assigned to the National Reconstruction Authority.

UNDP's support to longer term recovery also includes training 2,000 local masons and engineers on safe building practices and on methods to assess damaged buildings, as well as the institutionalization of a training course at a national vocational training institute.

Awareness raising campaigns have also been used to reach more remote areas where spontaneous recovery efforts by the affected population are common. Radio broadcasts promote safe construction practices, and a new UNDP initiative, the 'Mobile Video Van', has guided over 18,000 homeowners on earthquake-safe housing construction.

In a further effort to build resilience through recovery, two innovative housing designs were introduced by UNDP in collaboration with Nepal's Institute of Engineering and the National Centre for People's Action in Disaster Preparedness of India. One design uses 'debris block masonry', which builds blocks from the debris of damaged buildings, thereby decreasing building costs, while the second uses 'random rubble masonry' with GI wire containment technology. This improves safety and reduces the use of timber and water. Each of these designs helps to both manage the issue of debris and rubble while also addressing longer term resilience. UNDP also assisted the Department of Urban Development and Building Construction to develop a *Catalogue for Reconstruction of Earthquake Resistant Houses*, which illustrates 12 alternative materials and technologies with 17 model designs that are cost-efficient and environmentally friendly.

MITIGATING FLOOD OUTBURSTS FROM THE IMJA GLACIAL LAKE

The glaciers in Nepal's Himalaya are shrinking due to global warming, and the melting threatens to burst twenty glacial lakes, six of which have been identified as 'critical'. As warming continues, downstream communities are at risk of large-scale

flooding. The Imja Glacial Lake within the Sagarmatha National Park is one of these glacial lakes. This growing risk threatens the lives, property and livelihoods of downstream communities.

Working in partnership with Nepal's Department of Hydrology and Meteorology, UNDP has been helping to reduce these risks. This has included the construction of a 13km gabion embankment and the rehabilitation of a 3km drainage system to reduce the risk of flash floods. In addition, efforts have been undertaken to lower the water level of the Imja Glacial Lake, which in turn alleviates the hydrostatic pressure in the moraine dam and reduces the risk of failure and the potential of a flood. Already, the project has succeeded in lowering the water level of the Imja Lake by 3.4 meters, protecting communities as far as 50km downstream.

To accompany this, early warning systems have been put in place in the periphery of Imja Lake; taskforces have been formed, trained and equipped with community based early warning systems; and local government authorities and communities have been trained to bring greater knowledge and skills on flood risk management. Over 12,000 people residing in the area are now safer with these new measures in place.

STRENGTHENING DISASTER RISK GOVERNANCE

For over a decade UNDP has worked closely with the Government to strengthen the capacity of key agencies and sectors, for example through technical support to the National Planning Commission to mainstream disaster risk reduction into the national planning process. Since 2012, UNDP in partnership with the Ministry of Home Affairs, has established a network of 56 Emergency Operations Centers in Nepal, to serve as the main coordination hubs for disaster preparedness and response in the country. The centers proved to be a critical resource when the earthquakes struck Nepal in 2015.

Nepal's exposure to natural hazards and its high vulnerability to climate change has the potential to significantly impact economic development and the livelihoods of millions of people, especially the poorest and most marginalized. To safeguard development progress that the country has achieved thus far, as well as the large recovery investments made during the post-earthquake reconstruction process, it is critical to support the Government to adopt policies and practical measures in climate change adaptation and disaster risk reduction.

Integrating the principles of building-back-better in recovery contributes to one of the four priorities for action in the Sendai Framework, as well as to the global targets, for example to substantially reduce by 2030 the number of people globally affected by disasters. Overall, UNDP's support to Nepal, covering governance, early warning, preparedness, risk information and building back better, supports action against each of the priorities of the Sendai Framework.



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Resilient nations.*

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