



# How EU is supporting Nature-based solutions for DDR and Climate Change Adaptation in developing countries?

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# ECO-DRR Project

- Global advocacy
- Technical assistance/  
Capacity building
- Pilot demonstrations:  
testing the Eco-DRR  
approach in 4 countries  
in different ecosystems
- Knowledge products/  
Publications
- Partnerships



# Catchment-based approach for slope stability and flood control in Afghanistan

<http://web.unep.org/disastersandconflicts/node/579>



**Ecosystem in focus:**  
mountains, forests, rangelands

**Target:** 7 villages in 3 village clusters

**Location:** Bamyán Province, Afghanistan

**Main hazards targeted:** Harsh winters, avalanche and floods

**Intervention:**  
Promoting sustainable, risk-sensitive land-use planning in the Koh-e Baba watershed; linking green and resilient village development planning to valley and watershed scale development planning

<http://web.unep.org/disastersandconflicts/node/579>

Reforestation of eroded, flood prone slopes



BEFORE



AFTER



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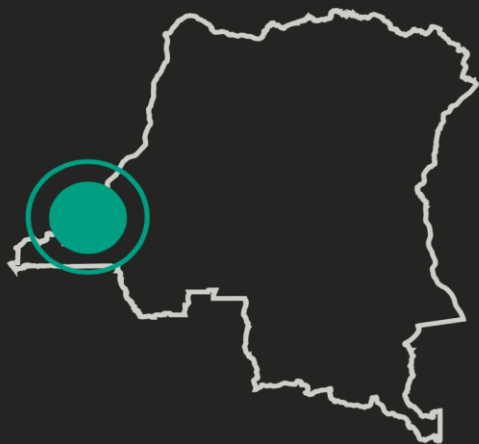
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## **Afghanistan Results:**

- Establishment of community tree nurseries to service the 7 villages, with each nursery producing 200,000 saplings
- Tree planting of 140,000 tree cuttings in selected avalanche and flood prone areas in the 7 villages
- Trainings delivered on community-based nursery management
- Community-based early warning and disaster preparedness trainings developed and delivered
- Village-level Green and Resilient Development planning undertaken in 7 villages
- Cluster village-level development planning undertaken in the 3 village clusters, based on the 7 village development plans
- Cluster village development plans feed into the Koh-e Baba Mountain Area District Plan, developing one coherent development framework
- National and community-level awareness raising on ecosystem-based disaster risk reduction

# Integrated watershed management for flood risk reduction and improved water quality in DR Congo

<http://web.unep.org/disastersandconflicts/node/492>



**Ecosystem in focus:** river basin, high rainfall savanna with gallery forests

**Target:** 1,400 inhabitants in 10 villages (zones of the Lukaya watershed)

**Location:** Lukaya River Basin, outside of capital city Kinshasa  
<http://web.unep.org/disastersandconflicts/node/492>

**Main hazards targeted:** Floods, Soil / gully erosion, Poor water quality (associated risk of water-borne diseases)

**Approach:** Linking downstream and upstream communities through risk-sensitive river basin management in the Lukaya river basin

Gully erosion control downstream through revegetation



## DR Congo Results:

- Establish an integrated peri-urban water catchment management plan for the Lukaya River Basin that integrates an Eco-DRR approach, including river water quality monitoring, rainfall and flood monitoring, and baseline mapping
- Strengthened local capacities to undertake catchment management planning that integrates Eco-DRR, including a series of workshops on IWRM for the Lukaya River Users Association and development of IWRM Plan with early warning and disaster preparedness integrated
- Mitigate flood impacts and improve river water quality through improved land-use plans and ecosystem rehabilitation activities, including reforestation covering 15 hectares, slope and river bank stabilization and construction of a sedimentation basin
- Engage national policy process and promote IWRM-DRR in the national water resources management policy and water law

# Integrated water resource management for drought and flood risk reduction in Wadi El Ku, Sudan

<http://web.unep.org/disastersandconflicts/node/625>



**Ecosystem in focus:** drylands and wadi

**Target:** 5 communities with 30,000 inhabitants

**Location:** Kilimondo locality, North Darfur

<http://web.unep.org/disastersandconflicts/node/625>

**Main hazards targeted:**  
Drought and floods

**Approach:** Strengthening community-based water resource management in a sub-catchment in the Wadi El Ku to provide water for food security and restore natural vegetation cover; and linking to state-level water resource management



Community nurseries and forests help restore natural vegetation cover

## SUDAN Results:

- Rehabilitation of an existing water reservoir to replenish groundwater and support agricultural production
- Crop production on 1,500 acres of newly irrigated land
- Soil and gully erosion control activities covering 200 acres, including terracing, tree planting and revegetation
- Establishment of 4 community forests covering 24 acres and one nursery to grow 12,000 seedlings
- Re-seeding of degraded pastureland covering 700 acres
- A community-based wadi management committee established for operation and maintenance of the water reservoir, groundwater monitoring, and disaster preparedness
- Demarcation of the migratory route of pastoralists (40 km) to reduce localized conflicts with farmers over land use and access
- Revolving funds to support and maintain the seedling nursery, community-based animal health workers, and water reservoir management
- Environmental trainings on soil and gully erosion control, improved land and grazing management, community forestry, agricultural extension, and drought risk management
- National awareness raising on Eco-DRR and influencing the national water policy



# Ridge-to-reef approach for building coastal resilience in Port-Salut, Haiti

<http://web.unep.org/disastersandconflicts/node/533>



**Ecosystem in focus:** coastal and marine habitat

**Target:** 90 fishermen, 20 farmers and 300 households

**Location:** Port-Salut municipality, South Department

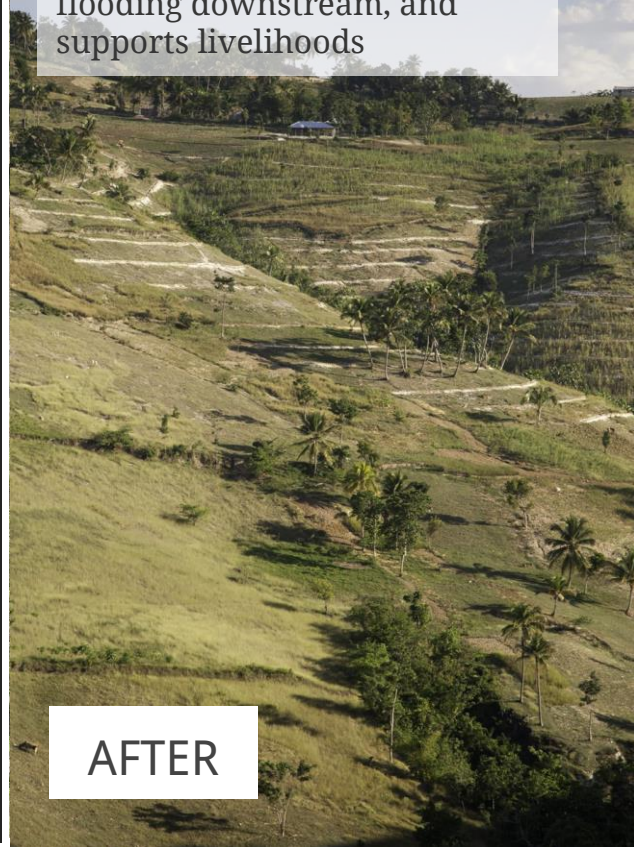
<http://web.unep.org/disastersandconflicts/node/533>

**Main hazards targeted:** Flooding and storm surge

**Approach:** Promoting sustainable and resilient coastal zone management, through ridge-to-reef, ecosystem-based solutions



Sustainable vetiver production with terracing upstream helps to reduce heavy soil run-off which exacerbates coastal flooding downstream, and supports livelihoods



AFTER

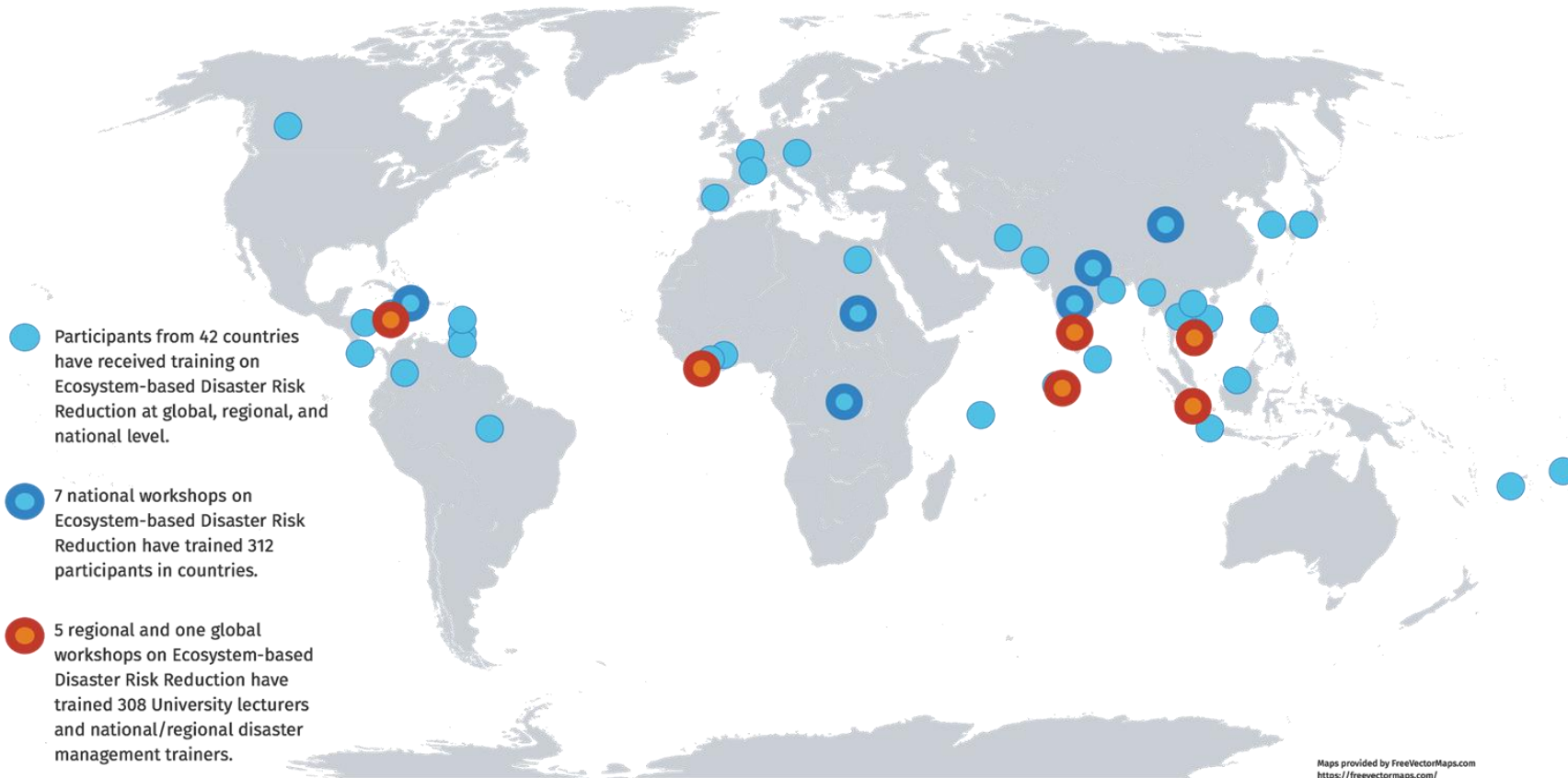
## HAITI Results:

- Strengthened capacities of the Port Salut Municipality to lead in coastal zone development that promotes environmental sustainability, green growth and disaster risk reduction
- Establishment of tree nursery targeting 130,000 seedlings and Reforestation of the shoreline and along riparian forests/streams to buffer local communities against flooding
- Improved coastal and marine zoning for sustainable resource management
- Small-scale sustainable fisheries developed to promote ecosystem-based and disaster resilient livelihoods
- Participatory action plan developed for the fishing community
- Fleet improvement and maintenance, e.g. boat repairs
- Early warning and disaster preparedness plan in place
- Community awareness-raising on the role of coastal and marine ecosystems in disaster risk reduction

# UNEP Global Efforts to Advance Ecosystem-based Approaches to Disaster Risk Reduction



2012-2016



# PEDRR

Ecosystems for Adaptation  
and Disaster Risk Reduction

# The Partnership for Environment and Disaster Risk Reduction



Asian Disaster Preparedness Center (ADPC) • Asian University Network of Environment and Disaster Risk Management (AUEDM) • Council of Europe • Global Fire Monitoring Center (GFMC) • Global Risk Forum (GRF) • Helvetas Swiss Intercooperation • 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) • Wetlands International • World Wide Fund for Nature (WWF)

[www.pedrr.org](http://www.pedrr.org)

# The Partnership for Environment and Disaster Risk Reduction

- ❖ Global alliance of 21 UN, international, and civil society organizations - and growing
- ❖ Committed to increasing global awareness and implementation of Ecosystem-based solutions for Disaster Risk Reduction and Climate Change Adaptation

New members:



Convention on  
Biological Diversity



World Business Council for  
Sustainable Development

iisd

International  
Institute for  
Sustainable  
Development

Institut  
international du  
développement  
durable



GNDR  
Global Network of Civil Society  
Organisations for Disaster Reduction

# Strengthening capacities for Eco-DRR implementation

- National Trainings on Ecosystem-based Disaster Risk Reduction
- Graduate-level course on Eco-DRR
- Regional Trainings of Instructors on Eco-DRR/CCA targeting universities and training institutions

Visit: [www.pedrr.org](http://www.pedrr.org)



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# Massive Open Online Course (MOOC)

- 12,000+ enrolled from 183 countries
- 2 tracks: Leadership track (3 weeks) and Expert track (13 weeks)
- 36% received Overview of Eco-DRR = 4,320 individuals
- Facebook created by students with over 10,000+ followers
- Visit: [www.themooc.net](http://www.themooc.net)



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