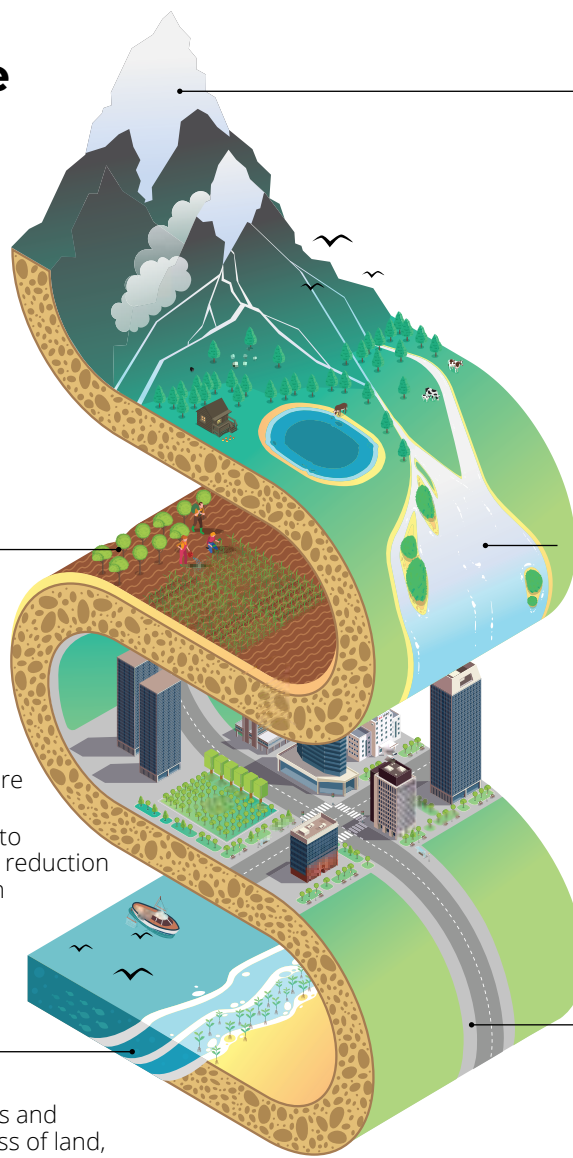


# NATURE-BASED SOLUTIONS

Helping communities to reduce disaster risk, adapt to and mitigate climate change through nature.

**Nature-based solutions (NbS)** are actions to **protect, sustainably manage** or **restore an ecosystem** that address societal challenges, such as disaster risk, climate change, food security, water security or human health. They might include protecting and restoring forests, the protection of mangroves and coral reefs, the conservation or restoration of wetlands, or the creation of urban greenspaces. NbS can address all three components of the risk equation - preventing or mitigating **hazards** themselves, limiting people's **exposure** to hazards and limiting people's **vulnerability**. The many co-benefits of NbS (e.g. economic, social, environmental) clearly distinguish them from grey infrastructure such as dikes or dams. NbS can create immediate jobs while at the same time supporting a transition to a **greener, job-rich** and **climate resilient economy**. National Red Cross and Red Crescent Societies can play a **key role in implementing such approaches**, as part of both their longer-term programmes and life-saving activities.

## How can we use nature to help communities build resilience to extreme weather events and climate change?



### Mountains, forests and watersheds

**Hazard:** Intense rainfall causes landslides, soil loss and siltation  
**Solution:** Protect and restore forests to stabilise soils and slow water runoff



**Hazard:** Wildfires lead to loss of life and assets  
**Solution:** Protect and manage forests to prevent wildfires



### Farmland



**Hazard:** Drought leads to crop failure and livestock loss  
**Solution:** Implement agroforestry to reduce evaporation and make better use of soil moisture



**Hazard:** Flooding leads to loss of assets, crop yield reduction and transport disruption  
**Solution:** Protect and restore forests to slow water runoff

### Rivers and Wetlands

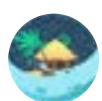
**Hazard:** Flooding leads to loss of assets, contaminated waters and crop yield reduction  
**Solution:** Restore wetlands to absorb and filter flood waters



**Hazard:** Drought reduces the flow of rivers  
**Solution:** Protect and restore forests and watersheds to regulate the flow of rivers



### Coasts



**Hazard:** Rising sea levels and coastal erosion cause loss of land, livelihoods and assets  
**Solution:** Restore coastal wetlands



**Hazard:** Storm surges lead to loss of life and assets  
**Solution:** Protect and restore mangroves, marshes and reefs to buffer coasts and absorb floodwaters

### Cities

**Hazard:** Intense rainfall causes urban flooding  
**Solution:** Restore passageways for water, expand green spaces and introduce porous surfaces to reduce flood risk



**Hazard:** Urban heat islands can cause heat stress  
**Solution:** Expand green spaces in and around cities



# Nature-based solutions are...



Effective



Cost efficient



Scalable



Widely applicable



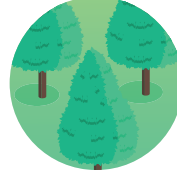
Upland forest restoration can **slow water runoff and reduce river flooding by up to 80%**

*(Filoso, S et al., 2017)*



A 500 m mangrove forest **reduces wave height by 50 to 100 %**

*(Losada, I.J. et al., 2018)*



**One in three people** are closely dependent on forests and forest products

*(FAO & UNEP, 2020)*



NbS can provide over **1/3 of the climate mitigation needed to stay below 2°C by 2030**

*(Griscom, B. W. et al., 2017)*

## Why is the **Red Cross and Red Crescent network** well positioned to engage in NbS?

**National Societies around the world are implementing NbS** – from mangrove and coral reef restoration in Jamaica and Vietnam, to tree planting in Kenya, wetland restoration in India and soil restoration in Haiti.

**1** **Local actors play a critical role** in ensuring NbS approaches are respond to local needs, inclusive and sustainable. The buy-in, support and understanding of local communities is essential to protect or restore ecosystems.

**3** **Our presence before, during and after crises** enables us to take the time needed to implement NbS as part of long-term resilience building programmes while ensuring they also contribute to humanitarian objectives.

**2** **Our 160,000 local branches and 14 million volunteers** play an important role in community mobilization, awareness raising and education, which can be catalysed for solutions that benefit both communities and nature.

**4** **As auxiliaries to their governments,** National Societies are uniquely placed to advocate for NbS to be integrated into relevant laws, policies, frameworks, plans and investments at local, regional and national levels.

## **Partnerships with environmental organizations are key to ensure NbS are effective and appropriate**

IFRC has a global partnership with **The Nature Conservancy (TNC)** and **World Wildlife Fund (WWF)**, and is a member of the **Partnership for Environment and Disaster Risk Reduction** and **Global Mangrove Alliance**.

### **IFRC Plan and Budget 2021-2025 target**

**100 National Societies harness the power of nature through nature-based solutions, with a particular focus on planting of trees and mangroves**

For more information visit: [preparecenter.org/site/nbs/](https://preparecenter.org/site/nbs/)

