

NOVEMBER 2017

NATURE-BASED SOLUTIONS TO DISASTERS

x Climate change is increasing the frequency, intensity and magnitude of disasters, leading to a higher number of deaths, injuries, and displacement. A solution to reducing risks from disasters, complementing conventional engineering measures such as sea walls and storm channels.

x However, investment in 'natural infrastructure' is underexplored in policies aimed at reducing risk.

x There is an urgent need to invest in nature-based solutions to disaster risk reduction in order to minimise our vulnerability to future events.

What is the issue?

According to the Emergency Events Database, in the last ten years, over 730,000 people have lost their lives, over 1.9 million have

including slow-onset events such as drought. They can also reduce the secondary impacts from non-climate-related disasters such as landslides following an earthquake.

Forests and other vegetation help stabilise slopes and therefore reduce the risk of landslides. Wetlands can help regulate floods. Coastal vegetation and natural features such as sand dunes and mangroves can provide protection from storm surges, strong winds and cyclones. Healthy coral reefs can reduce wave energy during coastal storms.

In 2013, when Typhoon Haiyan hit the Philippine province of Leyte, 5,500 people died from storm surges along exposed coastlines. However, several communities in the same area remained relatively unaffected, and credited the presence of mangroves with saving their lives and properties.

Following Hurricane Katrina, the US Congress in 2013 approved US\$ 500 million to restore and reconnect ecosystems around the Gulf Islands and in the Jean Lafitte National Park on the New Orleans coast. These green spaces will help prevent economic damage and loss of lives from future extreme events.

Murti, R. and Buyck, C. (ed.) (2014). *Safe Havens*.

However, despite its value in reducing the risk of disasters and building communities' resilience to climate change, investment in 'natural infrastructure' has been underexplored in disaster risk reduction policies.

Why is this important?

Nature-based solutions, such as conserving forests, wetlands and coral reefs, can help communities prepare for, cope with, and recover from disasters,

Nature-based solutions also generate local employment and economic opportunities, reducing the need to import technical expertise and labour as in the case of engineering and construction. Investment in these solutions to reduce risk can therefore be included in public-sector stimulus packages and social development programmes.

