



Photo: Kate Marshall, IFRC

Mangroves, insured

How the new mangrove insurance facility in the Philippines will create many benefits

Short-term humanitarian funding streams are a challenge for the typically long-term implementation cycles of nature-based solutions. In the Philippines, a new funding model seeks to tackle that challenge. Led by Philippine Red Cross and Princess Margriet Fund of The Netherlands Red Cross, the mangrove insurance facility* aims to integrate multiple funding streams.

Struck by an average of around 20 typhoons per year and affected by many other natural hazards, the Philippines rank as the world's most disaster-prone country. With 7,600 islands and a coastline of 36,300 km, many coastal communities are at risk from typhoon-related storm surges, as Typhoon Haiyan tragically demonstrated in 2013.

Mangroves can greatly reduce wave height and thus the impact of storm surges (while bringing many other benefits). Yet, the country has lost almost half its mangrove forests, and of the remaining 264,000 hectares (3.5 times the size of Singapore), less than 20% are protected.

With its strong role in disaster risk reduction (DRR), Philippine Red Cross has recognised the potential of mangroves and invested in afforestation in many parts of the country. However, taking such initiatives to scale is a daunting task: most humanitarian and DRR funding is for project cycles of three years or less, and conventional funding tends to be

too limited to implement programmes at ecosystem scale and over periods of at least ten years. A new funding model for nature-based solutions (NbS) is needed.

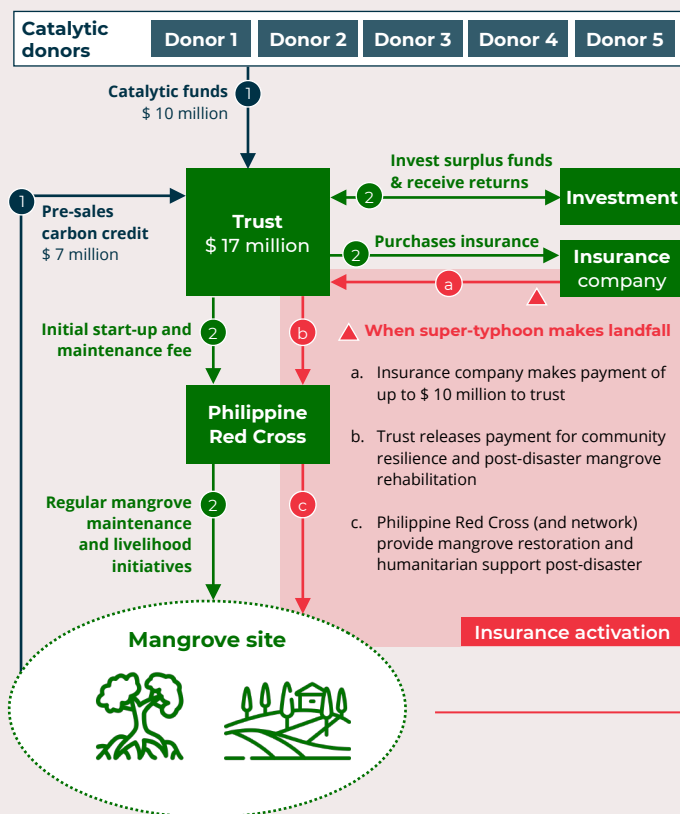
Enter the mangrove insurance facility, which aims to protect and restore mangrove forests in key areas where they provide essential DRR value to coastal communities. The insurance will furthermore provide funding to humanitarian assistance work that is complementary to existing funding mechanisms.

Here is how it aims to work: *first*, a trust fund is established. In the initial model, this seeks to have a volume of USD 17 million. Funding will come from two sources: a) a range of 'catalytic donors' who are expected to provide total seed funds of USD 10 million, and b) the pre-sale of carbon credits.¹ To enable this pre-sale, a large mangrove area must be identified that can be protected and that has high protective value for local communities.

* The initiative is supported by the Humanitarian Innovative Finance Hub (HIFHUB) hosted by the Danish Red Cross.

1. A carbon credit is a tradable certificate that represents the right to emit one tonne of carbon dioxide (CO₂) or equivalent amounts of other greenhouse gases. An entity that emits fewer green-house gases than its target can sell its excess credits to another that exceeds its limits. This system encourages businesses to invest in cleaner practices.

Protecting one hectare of mangroves is equivalent to 1,100 tonnes of CO₂ and thus, carbon credits. To meet the pre-sale carbon credit target of USD 7 million, the mangrove area must be of significant size.



How it works: the mangrove insurance facility

Goal: Long-term (25 - 30 years) mangrove plantation and restoration activities as climate adaptation initiatives to protect communities.

1. **A trust fund** of \$17 million will be set up to efficiently raise funds from catalytic donors and the pre-sales of carbon credits:
 - a) Catalytic funds: \$10 million
 - b) Pre-sales of carbon credits: \$7 million

2. The trust will fund **several activities**:
 - a) initial start-up of the project (one-off)
 - b) mangrove maintenance and livelihood initiatives
 - c) purchase of insurance

Trust surplus will be invested to earn additional returns (low-risk investments, such as fixed deposits and government bonds).

- ▲ When a super-typhoon makes landfall and fulfils the criteria, the insurance will be activated. This allows for post-disaster mangrove rehabilitation as well as humanitarian support.

Second, the trust fund will cover several activities — the initial project set-up, the monitoring and maintenance of mangrove forests, and the purchase of parametric insurance for the designated mangrove area. This type of insurance offers pre-specified payouts in the case of a trigger — in this case, a super-typhoon making landfall in the area with clear minimum criteria.²

To earn additional returns, the trust fund also invests surplus in low-risk options, such as term deposits and government bonds.

Philippine Red Cross receives money from the trust fund to set up the project, to maintain, rehabilitate and monitor mangroves, and to support programming towards more resilient livelihoods.

Third, in the event of a triggering super-typhoon, the insurance company makes a payout (around USD 10 million, based on agreement) to the trust fund. The trust then pays Philippine Red Cross to restore mangroves damaged by the typhoon and to provide humanitarian support to local communities.

Nature, communities, and PRC thus stand to gain from this long-term funding innovation.

While the mangrove insurance facility holds strong potential that may help provide long-term funding for nature-based solutions, it is also complex and not without challenges.

Stanley Fu of the Princess Margriet Fund and Netherlands Red Cross has been working on the model since the very start. He says that much progress has been achieved: modelling has been refined and crucial partners been won — including an insurance partner and a prospective donor.

But as with any innovation, new models need to gain acceptance. The details around the creation and working modality of the trust fund, the identification of suitable mangrove areas, and the quest to find more catalytic donors are key challenges.

Nevertheless, the project team is optimistic that the model will gain traction and that it has the potential to contribute to a transformation of disaster risk finance.

2. In conventional insurance models, the policy holder insures for damages and losses (which must be demonstrated and verified).

By contrast, with parametric insurance the policy holder will receive payouts in case of the trigger (irrespective of any actual damages).

This makes payouts faster and easier for the context of the mangroves — after all, assessing, quantifying and verifying typhoon-induced damages to mangroves would be difficult at best.

For this reason, parametric insurance is gaining traction as a suitable tool for disaster risk finance.

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