



ASEAN STORM RESILIENCE FUND

The Association of Southeast Asian Nations (ASEAN) is an established inter-governmental organization that has spearheaded cooperation in the region since 1967. Member states are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand & Viet Nam.

CHALLENGES

Some of the world's most climate-vulnerable countries are in the ASEAN region. Here, 300 million people live in rural communities where frequent storm damage deepens poverty. Typhoons, already a seasonal threat, are projected to intensify by up to 14% in magnitude and 22% in frequency in the next 80 years. Cyclone Nargis, which killed over 138,000 people in Myanmar in 2008, and Typhoon Haiyan, which struck the central Philippines in 2013 resulting in a death toll of over 10,000, are poignant examples of the gap between needs and action.

SOLUTION & IMPACT

With 80% of ASEAN's population still living in potentially vulnerable rural areas, climate disasters cannot be solved through emergency relief alone. Notably after Cyclone Nargis, the US \$95 million pledged in foreign aid fell \$25 million short of Myanmar's requirements for shelter, and could not prevent mass migration of displaced populations. Experience shows that resources can be more efficiently allocated to "shrinking the needs", i.e. strengthening communities to withstand multiple bouts of extreme weather. In doing so, countries avoid the socio-economic costs of homelessness and unemployment, and the region avoids downstream humanitarian and security issues posed by food insecurity and climate refugees.

With a fund size of US \$3.5 million, the ASEAN Storm Resilience Fund is a financing vehicle that aims to enable the reinforcement of 40,000 homes in starter projects in the most vulnerable areas of the Philippines and Myanmar, via microfinancing loans at below market interest rates. The approach is made more robust by combining:

- Regional cooperation, oversight, and scalability through the Association of Southeast Asian Nations (ASEAN)
- Local knowledge of farming co-operatives
- Technical expertise of IGOs/NGOs: Engineers Without Borders (EWB), the World Meteorological Organization (WMO) and the Global Environment Facility (GEF)
- Capital and agility of the private sector

HIGH POTENTIAL FOR SCALING

40,000 homes are only the beginning. Similarities in the type of weather extremes experienced, and the prevalence of farming cooperatives throughout ASEAN, make this initiative highly scalable. Using an iterate-and-proliferate approach, we estimate that subsequent phases of the ASEAN Storm Resilience Fund can service 1,000,000 homes spanning Lao PDR, Thailand, and Viet Nam. This approach may also prove effective in surrounding regions, particularly Bangladesh, China and the Southwest Pacific islands where a further 200 million people are at high risk from extreme weather.

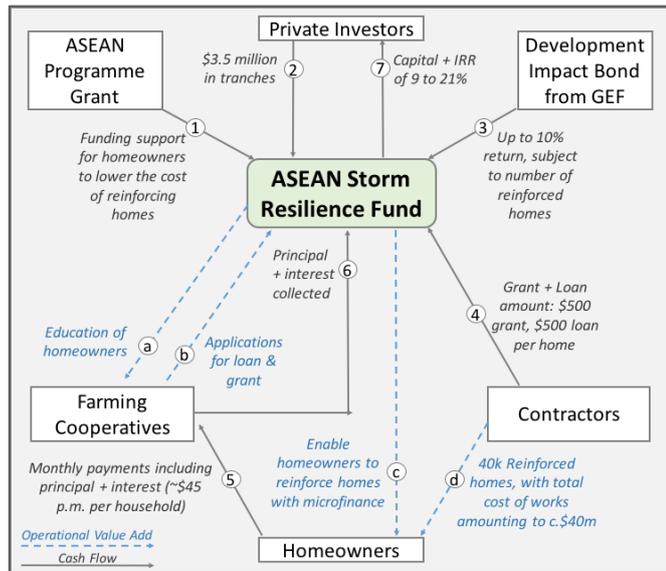
KEY DETAILS

Fund Size	US \$3.5 million
Investment Criteria	<ul style="list-style-type: none"> • Reinforcement projects must focus on homes and farmsteads for weather resilience • Loans and grants will be given to applicants only in groups through a farming co-operative • Co-operatives must engage an accredited contractor
Target Returns	9% - 21% (gross of fees)
Fees	2% management fee on committed capital, 20% performance fee on returns > 15%
Partners	ASEAN (through its Secretariat), Engineers Without Borders, World Meteorological Organization, Global Environment Facility
Geography	Southeast Asia, focus on the Philippines and Myanmar
Target Investors	Family Offices, Private Banks, Impact-Oriented Investors
Asset class and capital structure	Private Equity + Development Impact Bond (return enhancer paying up to 10% p.a.)
Time horizon	3 years to 5.5 years (callable commitments to year 2)
Metrics for social impact	Number of reinforced homes in target region Target to reinforce c.40,000 homes
Risk Factors	See Due Diligence section

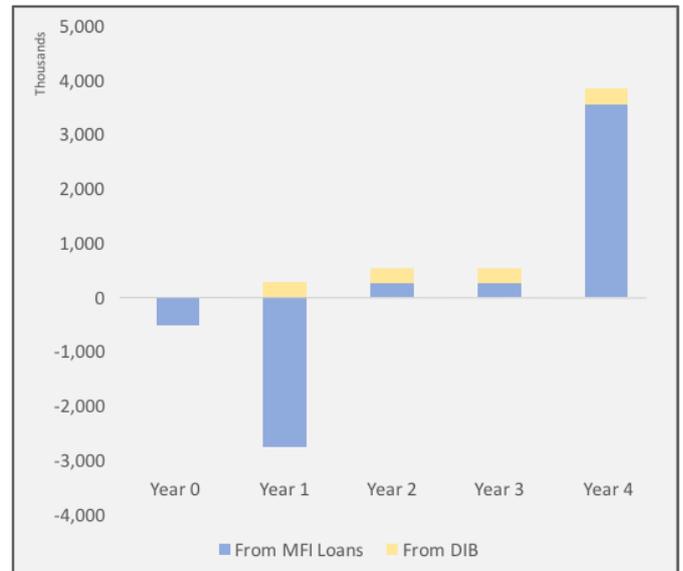
KEY ASSUMPTIONS

- Reinforcing 1 home costs US\$1,000, and is financed by 50% microfinance loan and 50% grant to lower costs for homeowners
- Loans made on unsecured basis to c.1,000 homes a month at 15% interest rate, 12-month repayment schedule
- Monthly loan repayments capped at 15% of average income of \$320 per month
- Loan loss rate of 2-10%, excluding acts of god

FUND DIAGRAM



BASECASE CASHFLOW PROJECTIONS¹ (US \$)



INNOVATIVE ELEMENTS

Efficient use of capital to enhance IRR	Investor capital is called only when required, instead of upfront. Called capital is disbursed in monthly tranches to fund microfinance loans to homeowners, which are structured as amortising loans - reducing capital at risk and allowing the recycling of capital (i.e. repayments from earlier tranche can be reused to finance subsequent tranches, reducing future capital calls).
Development Impact Bond serves as a return enhancer	Returns from a DIB will be earned from meeting social impact metrics, and this can be used to enable cheaper microfinancing loans. This serves to align return to investors with the social impact metric of reinforcing more homes. Furthermore, DIB returns are on the committed fund size of \$3.5 million (i.e. estimated capital required to achieve desired outcome), whereas paid-in / outstanding capital will vary (up to \$3.5 million) due to timing of capital calls and repayments. This mismatch further enhances returns to investors.

DUE DILIGENCE

An infrastructural project of this scale is prone to risk. The table below summarises how risks will be addressed.

Category	Mitigation
Governance	<ul style="list-style-type: none"> High-level oversight and audit will be provided through the ASEAN Secretariat, ensuring that key performance metrics are met. A lean Programme Office will be created to disburse funds, track project metrics and track that co-operatives are not mismanaging repayments. Funds will be directly disbursed to contractors, to avoid the money being diverted for other use. Farming co-operatives will be given mechanisms to report errant contractors to the Programme Office. Site visits by ASEAN officials and Programme Office will be scheduled.
Environmental	<ul style="list-style-type: none"> Projects will be undertaken sequentially, such that only a controlled percentage of homes being reinforced are at-risk at any given time. In worst-case scenario where affected households fully default, capital is still expected to be preserved due to above-mentioned mitigation efforts.
Operational / Technological	<ul style="list-style-type: none"> Engineering advisories will be sourced through Engineers Without Borders. To ensure good local integration and ease adaptation to local conditions, contractors will leverage on-the-ground knowledge of the co-operatives.
Market	<ul style="list-style-type: none"> Relatively predictable cashflow allows for FX hedges to be made effectively. As weather-induced catastrophes are familiar to many communities in Southeast Asia, there is likely to be a strong take-up rate. The ASEAN structure can be used to engage / select reliable farming co-operatives. In turn, the use of co-ops – trusted local institutions familiar to farmsteads – allows benefits to be conveyed and increases take-up rate.
Credit	<ul style="list-style-type: none"> Loans will be made on a group/community basis, whereby the lack of repayment would potentially cause increase in interest rates or loss of availability of financing for other parties in the community going forward (use of social pressure). Amortising loan structure to reduce capital outstanding with each payment, with payment to be capped at 15% of household income.

¹ Cashflow profile varies depending on various factors and is for illustrative purposes. For more information, please contact KOPONAN HAIYAN.