

VIETNAM: Promoting Climate Resilient Infrastructure in Northern Mountain Provinces of Vietnam

Issues:

The fifteen provinces of Northern Vietnam have very poor infrastructure compared to the rest of the country. The number of roads is amongst the lowest nationally. Likewise, there is a low proportion of irrigated land and communities often lack reliable and convenient access to clean water. Market structures tend to be poorly sited and constructed. In addition, where there is infrastructure, it is typically either of poor quality or in a poor state of repair.



Figure 1: The northern mountains of Vietnam comprise 15 provinces.

Viet Nam's topography and exposure to monsoons and typhoons make it highly prone to climate-change and climate-related disasters. The impacts of climate related disasters are high and increasing, due to a series of ecological and socio-economic factors that increase vulnerability. The northern mountain provinces are facing a number of related challenges, the most notable of these being:

- increasingly intensive and regular flash floods leading to damage to public and private property and lives;
- increasingly intensive and regular landslides leading

to damage to infrastructure, in particular to the closing of roads; and

- localized droughts leading to water shortages for agriculture and domestic consumption.

Therefore an already degraded and sparse rural infrastructure network is being threatened by the additional risks of climate change. Furthermore, there are major investment programmes to improve and rehabilitate this infrastructure which are also exposed to this risk. This, in turn, threatens to undermine efforts to reduce poverty in Vietnam, particularly in the Northern provinces. The objective of the project is to increase the resilience of local, critical economic infrastructure in the northern mountains areas of Vietnam to the adverse impacts of climate change, and to create a policy framework conducive to promoting resilient northern mountains zone development.

Project Summary

- Country: Vietnam
- Project Budget: \$3,400,000 (joint UNDP/ADB)
- Project Funding Source: GEF/SCCF
- Project Co-Financing: \$145,165,000
- Project Period: 2012-2015
- Implementing partner: Ministry of Agriculture and Rural Development

Actions:

The project comprises four specific outcomes which collectively seek to build long term resilience into the planning, design and implementation for rural infrastructure within the challenging geographic environment of the northern mountain provinces of Vietnam:

1. Mainstream climate change adaptation into rural infrastructure policy and planning

This outcome will lead to the preparation of a series of tools to help to integrate climate change into the planning, design, implementation and monitoring of rural infrastructure projects. An important element will be the preparation of a technical paper to guide provincial planners in Northern Mountain provinces and experts on how to: utilize existing information on climate change; assess the vulnerability of plans to climate change; assess likely climate change impacts; assess likely costs of climate change, and; determine cost-effective, alternative plans that are less vulnerable to climate change. A further step will be the preparation of a Manual to guide the design, construction and implementation of rural infrastructure projects, as well as a technical paper reviewing existing construction standards and codes, discussing strengths and weaknesses regarding climate change, and making initial recommendations on which standards to revise.

2. Enhance capacities for climate resilient infrastructure planning in northern mountain provinces

This outcome will begin with the development of coarse climate vulnerability assessment, covering all 15 northern provinces, which will ensure the use of the latest data and techniques in climate scenario analysis and vulnerability mapping. This information will be used as the centre-piece in a package of materials to raise the awareness of decision-makers across the provinces on how climate change is undermining poverty reduction efforts. This will be followed by in-depth climate change impact assessment work in two provinces – Son La and Bac Kan. More detailed maps will be developed based on historical data, local conditions, population, poverty, and best available climate scenarios. These maps will identify the places that are most vulnerable to climate change in the Province and will provide an important input informing provincial development strategies. A cadre of experts covering all fifteen provinces will be trained in order to be able (i) to prepare, interpret and utilize provincial level climate vulnerability maps and (ii) mainstream climate change into development plans will be trained.

3. Support adoption of low cost physical measures to climate proof rural infrastructure

Rural infrastructure in Viet Nam is designed according to relevant government standards and specifications. These standards and specifications are rigid, out of date, and tend to focus narrowly on issues such as pavement thickness or width of canal but not at the broader environment in which the infrastructure exists. As a result, current infrastructure can be vulnerable to poor performance, rapid deterioration or failure even under existing climatic conditions. SCCF funds will be

used, under the guidance of ADB, to demonstrate practical, cost-effective and convenient ways to climate proof four sub-projects in two provinces: Bac Kan and Son La. Two rural roads, one irrigation scheme and one river embankment will be climate proofed. This will demonstrate that it is possible to increase climate resilience, that the benefits of adaptation can outweigh the costs, and that this can be done without causing delays to the infrastructure project cycle. Activities will be accompanied by a programme to monitor resilience. A key indicator will be to assess the change in relative resilience and/or deterioration rates of the infrastructure attributable to the impacts of climate change (as compared to control sites that have not been assisted by the project).

4. Disseminate best practices and lessons learned

All project activities will be assessed and the lessons learned from their implementation will be captured and disseminated to other provinces and other countries embarking on similar processes. These lessons will form a crucial input to inform Vietnam's plans and strategies to adapt to climate change. The Project will play a pivotal role in enhancing local knowledge and capacities, which will in turn enable Vietnam to scale up and replicate these interventions.

Expected Impacts:

The project is in the final stages of detailed preparation and is expected to be under implementation during 2012. The whole approach is one of 'learning by doing'. Demonstration sub-projects will serve as a school of learning, and national and provincial level capacity will be developed by involving concerned institutions and individuals in all steps of the demonstration sub-projects. By project completion, individual and institutional capacity will have been built, information will be improved and more readily available, and practical knowledge on how to adapt more widely available. These factors will leave Vietnamese stakeholders well placed to continue adapting rural infrastructure to climate change.

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