Restoring ecosystem services for smallholder farmers

Vietnam So'n Tho commune

Reforestation and agricultural landscape restoration have been employed to reduce the impacts of climate-related hazards on local communities.

Nature-based Intervention:

An ecosystem-based adaptation pilot was conducted in So'n Tho commune, a mountainous area of Vietnam comprised of 75% forest and 15% agricultural land. The upper slopes of the landscape were planted with native timber species to restore lost biodiversity. The middle part of mountain slopes were planted with orange trees using pineapple and peanut pinto trees as contours. Nearly 12,000 seedlings were planted as well as forty hectares protected to restore the low density forest area of the commune. Compost from increased vegetation and agricultural output provided organic fertilizer for orange farmers.

Overview of context and outcomes:

Smallholder farmers depend on the landscape for various ecosystem services. Therefore, the ecosystem-based adaptation scheme aimed to reduce the risk of climate-related hazards including droughts, heat waves, whirlwinds, storms and ensure food security through increased agricultural resilience and forest restoration. Furthermore, farmers generated additional income from beehives placed in the forest that also contributed to pollinating trees.

Case effectiveness on

Climate change

Mitigation: Not reported

Although not reported, it is likely that reforestation and improved landscape management will contribute to climate change mitigation on a small scale.

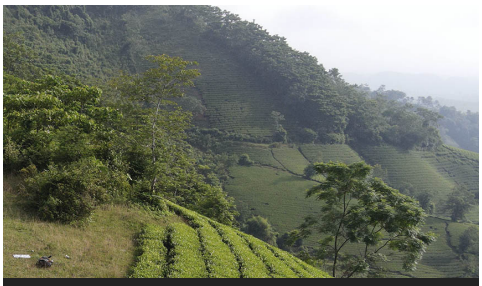
Adaptation: Positive

The reported improved conservation of local ecosystems and improved management of agricultural land will likely contribute to increased resilience in the face of climate change related hazards. Community members participating in focus groups reported improved regulating services including microclimate regulation, moderation of extreme events, reduced soil erosion, and better regulation of water flows.

Ecosystem health

Ecological effect: Positive

The community has reported that 40 hectares of native forest are now better protected and 12,000 seedlings of native trees have been replanted likely contributing to restoring biodiversity losses.



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Conducted at landscape scale

Intervention type
Protection
Restoration

Ecosystem type
Montane/Alpine

Climate change impacts addressed
Loss of food production
Other climate impact
Freshwater flooding
Wind damage
Reduced water availability
Soil erosion
Reduced soil quality
Loss of timber production

Instigators
Not specified

Societal challenges
Biodiversity conservation
Climate change adaptation
Disaster risk reduction
Economic and Social development
Food security
Health
Energy security
Water security

Literature info
Peer reviewed
Case methodolgy reported

External case resources
Read resource 1

Socioeconomics

Community members have reported the increased provisioning of food products and firewood and the regulation of water flows increasing underground water storage capacity. Community members attest that these provisioning services contribute to the food, water, and energy security of local households as well as providing additional income-generating opportunities. Furthermore, community testimony reports that increased agricultural productivity has allowed for the greater provisioning of medicinal plants.