



District Map of  
Nanggroe Aceh Darussalam Province



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World Agroforestry Centre  
TRANSFORMING LIVES AND LANDSCAPES



 = Action sites



Trees, Resilience and Livelihood  
Recovery in the Tsunami-affected  
Coastal Zone of West Aceh  
and North Sumatra

Rebuilding Green Infrastructure  
with Trees People Want



[www.worldagroforestrycentre.org/sea/projects/regrin/](http://www.worldagroforestrycentre.org/sea/projects/regrin/)

## The Action

At the time of the December 2004 tsunami the presence of trees certainly reduced the damage and loss of human lives. The call to develop and protect coastal forests has been quick and loud. Trees are also economically important to the region. Thus, coastal zone management must provide both environmental protection and meet economic targets for local livelihoods. Even before the tsunami 40-60% of the economy of West Aceh and Nias depended on tree crops. Furthermore, the economic activity of the district centres on the coast and damage to their markets and transport infrastructure affects the people inland as well. ReGrIn is an initiative by the World Agroforestry Centre (ICRAF) in collaboration with the Indonesian Soil Research Institute (ISRI), the Indonesian Research Institute for Estate Crops (LRPI) and the University of Hohenheim. It aims to help the establishment of economically valuable trees that are likely to survive similar disasters in the coastal zone and provide environmental services. ReGrIn Project is operating in West Aceh District, focusing on four sub-districts (Johan Pahlawan, Meureubo, Samatiga and Arongan Lambalek) and Gunung Sitoli on Nias Island.



## Objectives

To rebuild green infrastructure as a system of diverse trees in the coastal landscape fulfilling environmental protection and production functions with **trees people want**, and to enhance the resilience of livelihoods through improved market links for tree products.

The action covers four major issues:

- a Innovative solutions:** a coastal forest management approach based on an appraisal of pre and post-tsunami situations from the perspective of local stakeholders and policy shapers. This focuses on the human and social capital needed for effective coastal zone management rather than only meeting physical targets.
- b Gender-sensitive participatory approaches:** gender-specific perspectives and preferences are incorporated in selection and management of trees and other home garden components with nutritive benefits.
- c Added value through a replicable pilot project with positive environmental change in the urban and coastal context:** Although the focus is on West Aceh and Nias, the approach is relevant to other similar districts in Sumatra, with local non government organisations contributing to further dissemination of project output.
- d Sustainability:** By focusing the restoration of coastal protection forests on the trees that people want and that positively contribute to their livelihoods, there are built-in incentives for action to carry on beyond the duration of the project.

## Component and Activity

- 1 Participatory assessment of damage, opportunities for short term recovery and long term improvement of tree crop production and trade**
  - Assessment of coastal zone livelihoods and impact of the tsunami
  - Market assessment
  - Local strategies to cope with tsunami and earthquake disasters
  - Appraisal of tree diversity in the coastal zone
- 2 Tsunami damage to soils, suitability assessment of soil for tree crops**
  - Soil and water monitoring
  - Tsunami damage assessment
  - Tree site matching and tree based rehabilitation
  - Technical assistance to local government and other institutions
- 3 Short term recovery using tree-crops and recovery of trade and marketing**
  - Farmer organization and capacity enhancement
  - Quality planting material and nursery development
  - Farmer training
  - Revival of market mechanisms and support to processing or semi-processing of tree products

- 4 Preparedness for long term opportunities: adapting land use plans to expected economic geography considering local comparative advantage; and enhancing knowledge systems and farmer cooperation**
  - Economic assessment and prediction models for land use options
  - Ecological simulation and long term impact and environmental assessment of major tree based systems
  - Support government and local institutional planning and implementing land use alternatives
  - Support land use planning using trees people want
  - Ex-ante impact assessment of infrastructure recovery; coastal protection forests with trees of economic value
  - Special access to markets for products from disaster affected areas
  - Strengthening local institutions to undertake land use assessment, planning and implementation in rehabilitation of disaster affected coastal zone areas
- 5 Lessons learnt about the emergency response provided in the post-tsunami situation**
  - Role of tree crops in the physical mitigation and socio-economic recovery of tsunami affected coastal and inland communities
  - Resilience of tree crops under different agro-ecological and socio-economic conditions
  - Impact of the post-tsunami emergency response on the tree crop sector