

Land Restoration and Climate Change Mitigation through low cost Farmer Managed Natural Regeneration in Timor-Leste

Tessema, Segenet., Orleans, Francisco., Cardoso Henriques, Natalino., Pati Tpoi, Roni. and Bennett, Kahukura.

World Vision Timor-Leste

Av. Dos Direitos Humanos, Estrada de Bidau, Bidau Mota Klaran, P.O Box 43, Dili Timor-Leste Tel: +670 331 28 30

Abstract

The majority of Timor-Leste's population depends upon subsistence agriculture. As a result of this, households become vulnerable to extreme weather events which are exacerbated during El Niño years and expected to increase due to climate change. The concept of Farmer Managed Natural Regeneration (FMNR) was born out of Niger in the 1980s with the aim of creating a productive environment resulting in sustainable development. FMNR includes many traditional practices worldwide, such as coppicing and pollarding. FMNR came to Timor-Leste in 2011, beginning in Aileu. Since then it has expanded to cover an area of 85.5 hectares in the municipalities of Aileu and Bobonaro. Communities which have implemented FMNR have been able to control soil degradation and landslides as well as utilise the wood for energy and construction while generating an income from fruit trees that are integrated into the system.

Introduction

Farmer Managed Natural Regeneration

- A rapid, low cost and easily replicated approach to restoring and improving agricultural, forested and pasture lands.

Benefits of FMNR

Social Benefits	Partnerships and networks. Community ownership and empowerment. Increase in security, health and resilience through provision of sustainable sources of firewood and food production
Environmental Benefits	Reduction in soil erosion, soil enrichment, increase in water availability and biodiversity. Climate change adaptation and mitigation
Economic Benefits	Supply of food, fuel, clothing, construction materials, medicine and cash

World Vision Timor-Leste is undertaking FMNR activities in Aileu and Bobonaro. So far these two projects have benefitted 2,051 individuals and covers 85.5 hectares.

Method

The successful implementation of FMNR relies upon two different methodologies co-existing with adequate implementation. The first is the knowledge of the physical practice and the second acceptance by the community. Although the physical practice of FMNR is relatively easy, community buy in is key as the land must be intensively managed for regeneration and reforestation to occur. FMNR does not require a strict uniform methodology but



Straight Talk Foundation, 2014. *Tree Talk: Regreening from Stumps*. 13(2):1-4

does require adaptation to local environments and cultures as well as community involvement. This is to ensure that fires, cutting and slashing of trees are managed adequately and known by all members of the community.

Challenges

The dominant existing tree species in Timor-Leste is eucalyptus which is currently not considered a high value timber. Those species with high timber value have long rotation periods and the success of an activity such as FMNR depends largely on economic return of existing species. Information on the role of non-timber species in FMNR is not available. Timor-Leste is a tropical country and still has high amounts of trees for fodder and fuel with less desire to begin maintaining and regenerating the environment.

Further Research:

Identification of tree, shrub, herb and crop species to meet economic or environmental challenges. Research into Timor-Leste specific tree protection, generation and management techniques. Integration of FMNR and other conservation techniques. Research into the impact of FMNR on the water cycle, floods, droughts, crop yields, livestock production and household income.



FMNR site with terracing in Fahiria, Aileu municipality (Authors own, 2015)

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