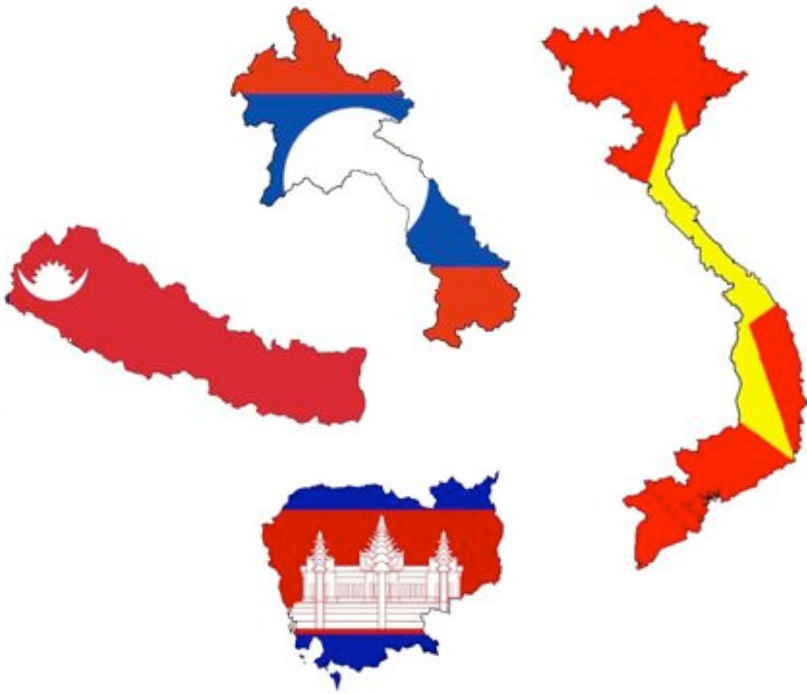


A comprehensive approach towards smallholder benefits from an economic, social and environmental point of view

Summary

Developing Sustainable Pro-Poor Biofuels



The Mekong Region & Nepal



Connecting People's Capacities



For a living planet

Contents of the CD

- Developing Sustainable Pro-Poor Biofuels (Full Report)
- Round Table Sustainable Biofuel (RSB) Version 0
- Meta Standard WWF
- Biofuel Factsheet Lao PDR

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Background

- The study was commissioned by SNV and WWF as part of their global partnership on sustainable Bioenergy;
- Completed January 2009;
- Four target countries: Cambodia, Lao PDR, Vietnam and Nepal;
- Main feedstocks investigated: Sugarcane, Cassava, Maize, Soybean and Jatropha;



Objectives

Main Objective:

“To develop sustainable strategies and options for the development of biofuels in Cambodia, Lao PDR, Vietnam and Nepal for reducing poverty among rural households within an environmentally sustainable framework.”

Specific Objectives:

- To identify the main opportunities, threats and options for smallholder farmers maximising long term social, environmental and economic benefits;
- To develop awareness and cooperation among stakeholders;
- To select priorities and make recommendations;
- To develop a concept for interventions or initiatives for sustainable pro-poor biofuels in Cambodia, Lao PDR, Vietnam and Nepal;
- To identify the strategic positions open to SNV and WWF to have the most appropriate impact in the sector.

Report Main Outlines

- Chapter 1 describes the background and aims of the study and presents SNV and WWF roles in biofuel development;
- Chapter 2 gives an overview of the region, of the current government policies, the initiatives and a description of the stakeholders;
- Chapter 3 presents case studies and analyses of different potential biofuel feedstocks;
- Chapter 4 examines a set of hot topics considered to be highly relevant to the biofuels sector in the region;
- Chapter 5 suggests possible intervention axes for SNV and WWF.



Hot Topics Addressed

- **Food versus fuel:** Can the agricultural sector meet biofuel demand without compromising food security? Farmers might benefit from high commodity prices but what about net purchasers of food?
- **Land use and tenure security:** What is the current policy environment in the region concerning biofuels specifically and sustainable agricultural development in general?
- **Climate change and environment:** How effective are biofuels in mitigating climate change? Are we using the right yardstick to determine the amount of energy required to produce biofuels in developing countries where farmers are less likely to use inputs (e.g. nitrogen fertilisers) or practice mechanised farming?
- **Impact on poverty alleviation:** How does biofuel development affect the energy needs, savings and income generation for households and employment opportunities of the rural poor?



Hot Topics Summary

- **Food versus fuel?** Biofuel feedstocks do not appear to be a threat to food security because smallholders first act to protect household security nets. In general, a bigger issue in the region is how to manage limited water and land resources to promote both food and fuel production;
- **Land use and tenure security?** There is a risk that under existing land tenure systems in the four countries, large scale plantations of biofuel feedstocks could affect land security among smallholders;
- **Climate change and environment?** Further research is required; however if biofuel feedstocks are farmed using the low input (besides slash-and-burn) then GHG emissions could be negligible unless deforestation takes place. Sustainable standard guidelines should apply for the sector development;
- **Impact on poverty alleviation?** Biofuels in the region do appear to have a significant potential to contribute to poverty alleviation in the region by increasing incomes and providing energy security. This assumption is based on business models involving smallholder production and community usage of biofuels.

Summary of Findings

- The four target countries have rich and diverse ecosystems;
- Low GDP economies based largely on smallholder agricultural systems;
- Apart from Vietnam, biofuel policies and biofuel production initiatives are in the early stages of development;
- Biofuel markets appear confined to domestic needs or regional outsourcing rather than large-scale export markets;
- Low intensity subsistence farming systems, weak value chains and inadequate market linkages are presently restricting the capacity of smallholders;
- Although biofuel stakeholders are beginning to appear and to launch biofuel initiatives, the absence of environmental governance and detailed biofuel sector planning may risk the sustainability of the development;
- Smallholders benefit from community-based biofuel initiatives especially when they capture and control the highest value addition from biofuel enterprises and achieve farm energy security at the household and community levels;

Summary of Findings (Cont.)

- Smallholders could benefit from plantation with biofuel contracts depending on contract enforcement and preliminary agreements;
- Smallholders require extension services and training for optimal production;
- Foreign biofuel enterprises tend to apply business models and approaches from their own countries, which are often unworkable in selected countries;
- All of the feedstocks have high labour requirements if grown as plantations, which can lead to difficulties for smallholders if extra labour must be hired;
- Only maize and soybean can be grown exclusively in the dry season so as not to compete with rice growing in the wet season. However, they are also both cropped as food for humans or animals;
- No actual analyses of GHG reductions were carried out during the study. However from the literature, there are no striking differences among the crops for biodiesel or among feedstocks for ethanol production;
- Based on the analysis, the greatest net benefits for smallholder farmers in Cambodia, Lao PDR, Vietnam and Nepal are offered by *Jatropha* for biodiesel (especially when grown in hedges) and Cassava for bioethanol.

Intervention Axes for SNV-WWF

- 1. Supporting production at community level;*
- 2. Applying Inclusive Business models to biofuel production;*
- 3. Supporting national policies for sustainable biofuel ;*
- 4. Global knowledge development;*
- 5. Promoting sustainable biofuel standards (RSB);*



Main Recommendations

- Environmental considerations should be mainstreamed into biofuel policy and regulation development processes in coordination with the ministries and provincial authorities concerned;
- Priority should be given to smallholders producing cassava and sugarcane in addition to Jatropha because they produce the highest on-farm benefits, produce the highest biofuel yields, employ simple technology, and have low cost of production;
- The private sector should be encouraged to adopt best practices addressing environmental and social issues of their operations;
- Incentives should be provided to attract investment from both domestic and foreign sources to develop suitable biofuel;
- Resources and Stakeholders should be mobilised to participate in and finance adaptive research in biofuel feedstocks;
- An apex centralised institution should be established to address current gaps in knowledge, skills, equipment and capital to carry out integrated planning and management of a standard biofuel program.



SNV

Connecting People's Capacities

SNV is a Netherlands-based international development organisation that provides advisory services to local organisations in developing countries. SNV supports local actors by developing their capacity to strengthen their performance to effectively realise poverty reduction and good governance.

SNV is dedicated to a society where all people enjoy the freedom to pursue their own sustainable development. We contribute to this by strengthening the capacity of local organisations.



For a living planet

The Earth is at a critical point where the decisions and actions taken by one species - ours - will determine the future of all life. In order to survive and prosper, we must urgently change our course. We must ensure a healthy planet where people and nature thrive in a stable environment, now and for generations to come. The only way to ensure this is to preserve biodiversity, the places they live, and reduce humanity's impact - our footprint - on their natural habitats. This work must start right now.



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