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CLIMATE MITIGATION IN THE LEAST CARBON EMITTING COUNTRIES

Dilemmas of Co-benefits in Cambodia and Laos

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Cover photo: Mira Käkönen; Kampot Cement Waste Heat Power Generation Project was the first Clean Development Mechanism (CDM) project in Cambodia that issued certified emission reductions (CERs) successfully.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAU	Assigned amount unit
ADB	Asian Development Bank
APCF	Asia Pacific Carbon Fund
CCX	Chicago Climate Exchange
CCBA	Climate, Community and Biodiversity Alliance
CCBS	Climate, Community and Biodiversity Standard
CCCD	Cambodian Climate Change Department
CDM	Clean Development Mechanism
CDM EB	Clean Development Mechanism Executive Board
CER	Certified Emissions Reduction
CF	Community Forestry
CFL	Compact fluorescent lamp
CFSP	Cambodian Fuel-wood Saving Project
CLiPAD	Climate Protection through Avoided Deforestation Program
CO ₂	Carbon dioxide
CRDT	Cambodian Rural Development Team
DNA	Designated National Authority
DOE	Designated Operational Entity
EE	Energy efficiency
EEP	Energy and Environment Partnership
EIA	environmental impact assessment
ELC	Economic Land Concession
ERU	Emissions Reduction Unit
ESF	Electriciens Sans Frontières
ET	Emissions Trading
ETS EU	Emissions Trading Scheme EU
FA	Forestry Administration
FAO	United Nations Food and Agriculture Organization
FCF	Future Carbon Fund
FCPF	Forest Carbon Partnership Facility
FFRC	Finland Futures Research Centre
FPIC	Free Prior Informed Consent
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GERES	Groupe Energies Renouvelables, Environnement et Solidarités
GHG	Greenhouse gas
GNI	Gross National Income
GS	Gold Standard
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit

GWP	Global Warming Potential
Ha	Hectare
HFC	Hydrofluorocarbon
ICS	Improved cooking stove
IGES	Institute for Global Environmental Strategies
INES	Interlinkages between Energy and Livelihoods
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JICA	Japan International Cooperation Agency
LDC	Least Developed Country
LDCF	Least Developed Country Fund
LULUCF	Land Use, Land-Use Change and Forestry
MAFF	Ministry of Agriculture, Forestry and Fisheries (Cambodia)
MDGs	Millennium Development Goals
MEM	Ministry of Energy and Mines (Lao PDR)
MEE	Ministry of Employment and the Economy (Finland)
MFA	Ministry of Foreign Affairs of Finland
MIME	Ministry for Industry, Mines and Energy (Cambodia)
MLUPC	Ministry of Land Management Urban Planning and Construction
MOE	Ministry of Environment (Cambodia)
MRV	Measurable, Reportable, Verifiable
NAPA	National Adaptation Programme of Action
NAMA	Nationally Appropriate Mitigation Action
NBP	National Biodigester Program
NCU	National Coordination Unit (of EEP)
NGO	Non-governmental organization
NKS	Neang Kongrey Stove
NLS	New Lao Stove
NRB	Non-renewable biomass
NTFP	Non-timber forest product
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
PCF	Prototype Carbon Fund
PDD	Project Design Document
PES	Payment for Ecosystem Services
PFC	Perfluorocarbon
PIN	Project Idea Note
PoA	Programme of Activities
PRSP	Poverty Reduction Strategy Paper
RCU	Regional Coordination Unit
RE	Renewable energy
REDD	Reduction of Emissions from Deforestation and Forest Degradation
R-PP	Readiness Preparing Proposal

SCCF	Special Climate Carbon Fund
SHS	Solar Home Systems
SNV	Netherlands Development Organization
SLRS	Solar Lantern Rental System
SUFORD	Sustainable Forestry and Rural Development Project in Lao PDR
tCO ₂ e	1 metric ton of carbon dioxide equivalent
TEKES	Finnish Funding Agency for Technology and Innovation
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCM	Voluntary carbon market
VCS	Voluntary Carbon Standard
VCU	Verified (or Voluntary) carbon unit
VER	Verified (or Voluntary) Emission Reduction
VER+	Verified Emission Reductions (Standard)
VOS	Voluntary Offset Standard
WB	World Bank
WCS	Wildlife Conservation Society
WDR	World Development Report
WREA	Water Resource and Environment Administration (Laos)
WTE	Waste-to-energy
WWF	World Wildlife Fund

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1. INTRODUCTION

Development has entered a time where it cannot be thought of without reference to climate change. While historically development in the industrialized countries has to a great extent been driven by a fossil fuel based economy, this option is no longer seen as viable for developing countries, which are expected to pursue different pathways of development. At the same time, the impacts of a changing climate affect the poorest countries and populations disproportionately, and multilateral policy declarations signed by most countries underline that there must be an effort to prevent and mitigate this. The effects of climate change onto development policies and practice is also reflected in donor countries' change in perception. Donor countries have begun increasingly integrating climate change objectives into development cooperation programmes and official development assistance (ODA). While significant in terms of discontinuing support to fossil fuels and attempting to increase resilience, this trend also brings into the fore new dilemmas. The main dilemma which emerges – and is explored further in this book – is when development cooperation finance is used in the least developed countries for projects and policies which are principally oriented towards climate change mitigation.

The primary aim of development cooperation has been and remains poverty reduction and sustainable development. While there can be synergies between climate change policies and the goals of poverty reduction, these are not automatic or self-evident. In some cases there can even be more trade-offs than synergies when attempting to attain both goals. Recent academic literature has noted that synergies between poverty reduction and adaptation can be found, but when it comes to mitigation, trade-offs become more likely (Ayers and Huq 2009; Gupta 2009; Michaelowa and Michaelowa 2007). This simply relates to the fact that the target groups of development finance and climate mitigation finance do not necessarily overlap. The poorest groups rarely are the highest emitters of greenhouse gases whereas the higher polluters often are the richer groups and countries. This has led developing countries fearing that integrating climate change objectives into official development assistance may imply a diversion of resources from one target group, country or region to another.

The case is ever the more pertinent for the least developed countries (LDCs), which have contributed the least to climate change. At the same time they are the most vulnerable to the impacts of climate change. In this book, we also denote the least developed countries more positively by the term 'the least carbon emitting countries', which aptly portrays their current nominal contribution to global greenhouse gas concentrations. Simultaneously the term highlights the significance of current decisions for future emissions trajectories. The type of policies and practices supported by development assistance will significantly shape the emissions pathways of the least carbon emitting countries. Historically development assistance has contributed to increasing greenhouse gas emissions through, for example, aid to fossil fuels. An important step forward in development cooperation has been the attempt to steer support away from activities and processes that aggravate climate change (such as building energy infrastructure based on fossil fuels) or increases the vulnerability of people to the impacts of climate change. As such, there is a need to consider development and climate change policies from an integrative point of view.

At the moment climate change has been linked to development assistance in multiple, complex and mixed ways. We aim to untangle some of the connections between climate change mitigation and ODA through exploring four different climate initiatives in Laos and Cambodia, which both belong to the group of least developed countries. These are the Clean Development Mechanism (CDM) under the Kyoto Protocol, Reducing Emissions from Deforestation and forest Degradation (REDD+), and Voluntary Carbon Markets (VCM). In addition, a new donor funded energy initiative is examined via the analysis of the Environment and Energy Partnership (EEP) initiated by Finland in 2002, and now funded also by other Nordic countries. The mitigation initiatives have been selected to represent a variety of ways in which official development assistance funds have been mobilized to support climate mitigation in the least developed coun-

tries. From these four mitigation initiatives, EEP is the only one fully funded by official development assistance. The CDM and VCM are based on the carbon offset markets¹, but for example capacity building for CDM can and has been financed through ODA. The finance of REDD+ is still an open question at the international policy level, and currently one of the more heated discussions. Thus far REDD+ capacity building, readiness preparation, technical activities for carbon measurement and actual pilot projects have all been funded with development assistance, in addition to other types of funding. The realities on the ground in Laos and Cambodia explored in this book demonstrate that while official development assistance and the carbon markets are two different sets of funding and financing, they often become intertwined in various ways.

1.1 Research context, scope and methodology

The empirical analysis for this book rests on case studies that have covered four different initiatives attempting to pursue sustainable development and climate mitigation targets simultaneously: the EEP, CDM, VCM and REDD+. The four mitigation initiatives are briefly presented and introduced in Box 1.1. These mitigation initiatives have been studied by research conducted in Laos and Cambodia. The fieldwork was carried out in Cambodia and Laos during 2011. The cases on the CDM and voluntary markets focus especially on Cambodia, the REDD+ chapters focus separately on Laos and Cambodia and the EEP in turn covers both countries. The material for the case studies includes key-informant interviews, observations from site visits, focus-group discussions as well as project and policy documents. Each chapter contains a more detailed description of how the research was setup.

There are several reasons for the relevance of these two least developed countries when analysing the four mitigation mechanisms. Both countries aim to graduate from LDC-status, and it will be interesting to follow the effects of these pursuits on CO₂ emissions. As examples of least developed countries, both Laos and Cambodia have significant experience of climate mitigation mechanisms. Firstly, both countries have been the central stages for introducing, developing and piloting REDD+ approaches. Secondly, especially Cambodia has been a leading country among the LDCs in gaining CDM projects and also in advocating reforms that would make the CDM more LDC-friendly. Thirdly, Cambodia and Laos are both target countries of bilateral development cooperation through Finland's EEP Mekong programme. Finally, while the voluntary markets are quite new and the projects receiving finance from the VCM are few in these countries, at the same time the field seems to be dynamic and the projects have interesting connections to development assistance as well as to the compliance markets and REDD+.

¹ The carbon market refers to the buying, selling and trading of carbon dioxide and other greenhouse gases (measured in tons of carbon dioxide equivalents, tCO₂e), which permits flexibility by allowing voluntary or binding emissions reduction commitments to be met through mitigation projects by other actors, allowing for a cost-efficient mitigation of emissions (Bumpus).

Box 1.1 The four mitigation initiatives

EEP: The Energy and Environment Partnership Program (EEP) is a Finnish development cooperation project which aims at promoting the use of renewable energy and energy efficiency, and combating climate change. There are EEP Programs in the Mekong Region, Southern and East Africa, Indonesia and the Andean Region. In this report, the focus is solely on EEP Mekong projects in Laos and Cambodia. EEP Mekong has been funded by Ministry of Foreign Affairs of Finland (4,9€M) and the Nordic Development Fund (3€M) in 2009–2012. The overall long term objective of the program is: “to contribute to improved access to energy and energy services and reduction of greenhouse gas emissions.” EEP aims to achieve this by supporting national policy, legislation and institutional frameworks, developing renewable energy (RE), waste-to-energy (WTE) and energy efficiency (EE) technologies and services (through partnership projects), and by providing information and capacity building for RE, WTE, EE and energy markets. EEP provides different options for projects, including studies and surveys as well as feasibility studies and policy development. EEP projects can be carried out by a host of actors, ranging from research centres to NGOs to consultancy firms.

CDM: The Clean Development Mechanism (CDM) is one of the three flexibility mechanisms that are part of the UNFCCC’s 1997 Kyoto Protocol, which entered into force in 2005. As a market mechanism situated in developing countries, the CDM has a twofold objective. First, CDM gives flexibility to the industrialised Annex I countries to meet their binding emissions reduction targets by acquiring certified emissions reductions (CERs) from mitigation activities in developing countries. Second, CDM includes a requirement for industrialized countries to assist developing countries in achieving sustainable development. Thus far important buyers of CERs have included EU countries and also companies that are part of the EU Emissions Trading Scheme. Majority of CDM projects have been in the emerging economies of the developing world – namely China, India, and Brazil. Only 1.1% of registered CDM projects are located in LDCs. Cambodia is an especially interesting case as, with Uganda, it has the most registered CDM projects in LDCs, both countries having five registered projects.

VCM: Voluntary carbon markets (VCM) function outside of the compliance markets and enable companies and individuals to purchase carbon offsets on a voluntary basis. A VCM project generates Verified or Voluntary Emissions Reductions (VERs). VERs are verified by a host of different standards, which have their own rules and requirements. Among the most popular standards are the Voluntary Carbon Standard (VCS) and the Gold Standard. In a way, VCM can be seen as complementary to the official compliance markets as it enables individuals NGOs, institutions or companies to voluntarily offset their emissions by the purchase of carbon credits from carbon offset projects. A significant part of VCM projects are carried out in the global South, where emissions reductions are cheaper. Even though only two projects in Cambodia and none in Laos are selling VERs in VCM, there is an increasing interest towards voluntary market. VCM operates in a variety of fields ranging from renewable energy and energy efficiency to forestry projects. Due to their flexible nature, voluntary markets can at least in theory be accommodating for smaller scale projects with more direct benefits for communities and for the poor. This, however, is not necessarily the case. The VCM is especially vulnerable to changes in the global economy, and the demand of VERs can be significantly affected by recessions.

REDD+: Estimates have put the amount of emissions because of deforestation and forest degradation at around 8-20 % of all GHG emissions, with the IPCC at the higher end of this figure with 18 %. The Stern report (2006) claimed that addressing tropical deforestation is the fastest and cheapest way to achieve needed large-scale emissions reductions. Targeting deforestation as a source of emissions has been discussed for several years in international fora. In 2007 the United Nations Framework Convention on Climate Change (UNFCCC) with the Bali Action Plan agreed on the importance of policy approaches and positive incentives for Reducing Emissions from Deforestation and Forest Degradation (REDD+). REDD+ is an effort to create a financial value for carbon stored in forests, and to incentivize forest protection. As REDD+ is still a mechanism in the making, its final structure is as of yet unclear. REDD+ activities are currently funded through a variety of international initiatives, including UN-REDD under FAO and UNDP, the World Bank’s Forest Carbon Partnership Facility (FCPF) and Norway’s International Climate and Forest Initiative, as well as voluntary market initiatives. REDD+ is currently not linked to the compliance market of the Kyoto Protocol. In both Laos and Cambodia, land-use change and deforestation are highest-emitting sectors and the potential for REDD+ in these countries is considered high, making them interesting areas to study the options and obstacles for REDD+ in the least developed countries.

The analysis and discussions of the four mitigation mechanisms and their relation to development assistance in Cambodia and Laos evolve around three main dimensions:

Multiple benefits refer to win-win situations where emission reductions, sustainable development and poverty reduction, are achieved simultaneously. All of the four mitigation mechanisms studied in this report

are in policy texts presented as able to create multiple benefits. The ability to generate pro-poor and sustainable development benefits is also a pre-condition for the use of development assistance to support the mitigation efforts. Despite the optimistic tone and win-win storylines often present in policy texts, reality is seldom this simple: mitigation actions can also create trade-offs, especially with poverty reduction actions. A central question in the analysis of all mitigation initiatives is: how are the four mitigation initiatives able to produce multiple benefits in LDC countries like Laos and Cambodia? And how do the initiatives differ in this respect?

Capacity building is a key element for carrying out climate mitigation in developing countries. It has often been stated that one of the challenges for the least developed countries to benefit from mitigation mechanisms, and also from potential multiple benefits, relates greatly to the institutional capacity (or lack thereof) in these countries. One of the main roles of development assistance in mitigation mechanisms such as the CDM and REDD+ has been to support capacity building to enable LDCs to enter the carbon markets. A closer look deserves to be taken at the nuances of the different capacity building needs, especially in the least developed countries and on whose terms the needs should be identified and addressed. In addition, it is important to ask whether capacities are supported in order to be able to set agendas, or rather simply to implement agendas set by other actors. Therefore, in the chapters we ask: what kind of capacity building activities have been carried out related to the mitigation initiatives? And what could be the most meaningful ways to support the capacities that the mitigation initiatives and the fostering of multiple benefits would require?

Ownership has been highlighted as an important principle of development cooperation, codified in the Paris Accord, the Accra Agenda for Action and most recently in the Busan Partnership for Effective Development Cooperation. Ownership is sometimes understood quite instrumentally as a tool to enhance aid effectiveness, but taken further it also implies notions of enhancing equity and balancing power relations between donors and recipients in setting the development agenda. In policy and discussions where climate mitigation has been integrated into development cooperation, discussions on ownership have, however, been almost non-existent. This report explores and analyses how the integration of climate mitigation and development assistance look from the ownership perspective. The report asks: how do the questions of ownership figure in the mitigation initiatives in Laos and Cambodia and what could be the ways to strengthen the wider ownership of mitigation initiatives in the LDCs?

In effect, all three questions are closely interrelated, and questions of ownership are strongly linked to multiple benefits and capacities. If the mechanisms bring only global benefits, building local ownership becomes more challenging. If there are limited capacities in the countries to take part in the agenda setting of mitigation objectives and sustainable development and pro-poor targets, again, ownership is likely to be limited. Thus the report aims to expand on previous debates about ownership in development discourse to the arena of climate change policies.

The analysis of the four studied initiatives, EEP, CDM, VCM and REDD+, allows us to discuss the different kinds of funding arrangements and institutional architectures in mitigation efforts, and to explore how they work for the least developed countries and for the poor. It also enables discussions from the comparative perspective of the different capacity building needs and ownership dilemmas that the different mitigation mechanisms may imply. Through the analysis in this book the aim is to present some suggestions on how to approach dilemmas related to integrating climate change with development cooperation, especially in the context of the least developed countries.

1.2 Structure of the book

The chapters of this book are built around different case studies and they will provide the reader with a broad picture of climate change mitigation mechanisms operating in the context of the least developed countries, namely Laos and Cambodia. Each chapter sheds light to the different dilemmas in the field of climate mitigation and development assistance. The objective of the different case studies is also to enable

analysis of the relationships and linkages between the three dimensions presented above: multiple benefits, capacity building and ownership.

Chapter 2 by Kamilla Karhunmaa, Otto Bruun and Mira Käkönen introduces the background of international climate change policy. A key question for developing countries in climate change negotiations is the lack of clarity over how to define “new and additional” funds to support climate activities in developing countries.

Chapter 3 by Otto Bruun and Mira Käkönen discusses the role of one donor country, Finland, in combining climate change and development policy. The chapter is based on a textual analysis of the key Finnish development policy documents in 2007–2011.

Chapter 4 by Visa Tuominen takes a close look at the Environment Energy Partnership (EEP) in the Mekong region as a case in which poverty reduction and mitigation objectives are integrated into a bilateral development program. As such, the program exemplifies a shift towards climate change mitigation from the more traditional objectives of development cooperation such as poverty reduction and sustainable development.

Chapter 5 by Mira Käkönen shifts the discussion from an ODA-funded mitigation programmes to the market-based compliance mechanisms of the Kyoto Protocol. The chapter discusses the main constraints, barriers and challenges of the Clean Development Mechanism (CDM) especially in the context of Cambodia, which currently hosts the highest number of registered CDM projects amongst the least developed countries. It explores whether the CDM could be rendered into a mechanism that in addition to emission reductions brings local environmental and social benefits to the least developed countries and to the host communities in them.

Chapter 6 by Hanna Kaisti maintains the attention on energy-related projects in the carbon markets, while shifting the discussion from the compliance market to the Voluntary Carbon Markets. Only a few projects in Cambodia get funding from voluntary markets, but the number is expected to increase in the future both in Cambodia and in Laos. The chapter discusses the possible linkages between development assistance and the Voluntary Carbon Market, focusing on the options and obstacles faced by the project developers to receive funding from the VCM in order to upscale, extend and lengthen projects that have been started with development assistance.

Chapter 7 by Try Thuon and Kamilla Karhunmaa looks at the current practices in Cambodia’s two pilot REDD+ projects. The focus is particularly on the current threats to forest areas and livelihoods and to what extent could REDD+ attempt to mitigate these. Tenure arrangements and livelihoods remain a key concern for the communities residing in the REDD+ areas.

In **Chapter 8** Otto Bruun analyses the entrance of the forest agenda into climate mitigation policies through an evaluation of REDD+ in Laos. The chapter walks through the international level to the setting up of national institutions. Through looking at the deforestation drivers and their relation to the governance being built up through pilot cases and central administration, the chapter compares the different options available and how REDD+ is situated in relation to national development targets.

The concluding **Chapter 9** summarises the results from the different case studies, and attempts to draw some comparative comments. In addition, it analyses the four mitigation mechanisms studied and the experiences related to them in Laos and Cambodia from the point of view of potential multiple benefits, capacity building challenges and opportunities, and ownership dilemmas. The conclusion ends with a look at possible futures: how is the relationship between climate change mitigation and development assistance envisaged from here on?

2. WHEN CLIMATE MEETS DEVELOPMENT – AN INTRODUCTION TO CLIMATE POLICIES CARBON MARKETS AND OFFICIAL DEVELOPMENT ASSISTANCE

Kamilla Karhunmaa, Otto Bruun and Mira Käkönen

Climate change and its various social, political and economic impacts have been confronted by a variety of policy responses. This chapter sets the background of climate change policies and serves as an introduction to the themes explored in this book. It briefly introduces the history of international climate policy and the birth of the carbon markets, focusing on the most relevant questions and implications for developing countries. These include the role of new and additional climate finance for developing countries and the implications of focusing on mitigation activities in the least carbon emitting countries.

International efforts to mitigate and adapt to climate change have been codified in the United Nations Framework Convention on Climate Change (UNFCCC), which since 1992 has gathered over 160 signatories. In the framework convention, signatories have committed to the “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (UNFCCC 1992; 5). The framework convention itself does not, however, provide guidance on the means and measures for achieving this stabilization, nor is there consensus amongst the parties what “dangerous anthropogenic interference with the climate system” in practice could signify. In 1997 the parties of the UNFCCC negotiated the Kyoto Protocol to provide targets and methods for reducing greenhouse gas concentrations in the atmosphere. The Kyoto Protocol contains legally-binding emissions reductions targets for most industrialized countries (known as Annex 1 countries), which are to be achieved during the first Kyoto commitment period of 2008-2012. The emissions reductions are country-specific and measured using greenhouse gas (GHG) emissions levels in 1990 as a baseline. Non-Annex I countries, to which developing countries belong to, have no binding emissions reduction targets set out in the Kyoto Protocol. This is based on the signatories of the UNFCCC acknowledging that developed and developing countries have “common but differentiated responsibilities and respective capabilities” with regards to climate change (UNFCCC 1992). In the preamble of the UNFCCC it is also acknowledged that a majority of historic and current emissions originate from the industrialized developed countries.

As the Kyoto Protocol was negotiated in the late 1990s, the carbon markets became formalized as the relevant policy response to climate change. The idea behind carbon markets stresses efficiency as a key policy goal. In regulating climate change, efficiency can be maximised when emissions are transformed into economically scarce resources and a market is created for trading them. In economic terms, climate change is labeled an externality, the impacts of which are not reflected in current market prices (cf. Stern 2006). On a longer time scale, investment decisions would be guided by a high carbon price, serving to steer investments away from fossil fuels and towards developing a low-carbon economy. As Newell and Paterson (2010; 34) summarize:

“[B]y the time the Kyoto Protocol had been agreed in 1997, it had become absolutely normal to think that the appropriate way to deal with climate change is not so much to focus on restricting fossil fuel use, but on the creation of markets. Governments, international organizations and private actors were all focused on the creation of markets for emissions, of new or expanding markets for renewable energy technologies and of new investment opportunities.”

The focus on economic efficiency and the creation of markets for carbon has, however, sidelined other concerns, such as the important equity implications of carbon market approaches to regulating climate change. The ideas of ecological modernization behind the carbon markets are further explored in Chapter 3.

To function, the carbon markets require a tradable commodity. The commodities traded on carbon markets are often generically called carbon credits. One carbon credit is equivalent to one tonne of carbon dioxide equivalent (tCO_{2e}). Avoided or mitigated GHG emissions are transformed into tCO_{2e} by calculating the equivalent impact of various greenhouse gases in terms of their global warming potential as compared to the global warming potential of carbon dioxide. Different carbon credits are produced in different ways, either by reducing emissions or offsetting emissions. An offset is produced when a reduction in a unit of GHG emissions is used to compensate a unit of emissions released elsewhere. The offset produced must prove to be additional to what would have occurred in a business-as-usual scenario. This signifies that the project from which the offset is produced must go beyond business-as-usual financial and regulatory practice and not be counted towards another emission reduction scheme.

Many private and public actors were involved in the creation of markets for greenhouse gas emissions. Consequently a variety of markets and terms has arisen around carbon markets. ‘Carbon market’ is a wide umbrella term, which generally refers to all actions where units of tCO_{2e} are being sold, bought or traded (Bumpus 2011). Within the carbon markets, a distinction is often made between the compliance market and the voluntary carbon market:

- The *compliance market* refers to a market in which participants comply with agreed upon regulations. The term is most often used to refer to the market created for the flexibility mechanisms of the Kyoto Protocol (International emissions trading, Joint Implementation, Clean Development Mechanism). The emission reductions targets agreed in the Kyoto Protocol are legally-binding.
- The *voluntary market* refers to markets that buyers and sellers of carbon credits engage in on a voluntary basis (in comparison to compliance to regulation). The voluntary market involves the sale and purchase of carbon credits by different types of actors wishing to offset their own emissions. Buyers in the voluntary market include, for example, individuals, firms, non-governmental organizations and governments. The tCO_{2e} units sold in the voluntary carbon market are generally referred to as Voluntary or Verified Emissions Reductions (VERs).

In the compliance market, the flexibility mechanisms were designed to provide the industrialized Annex-I countries with a cheaper means to achieve their own emissions reduction targets. Emissions trading has globally become a key response to climate change, despite its shortcomings in comparison to a carbon tax (cf. Hepburn 2007). Emissions trading provides an economic incentive for actors to reduce their greenhouse gas emissions. In short, a central regulatory authority issues fewer polluting allowances than the polluting actors require. Because fewer allowances are issued than what the polluters need, allowances become valuable and trade with a positive price. The price provides an incentive to reduce emissions when this is cheaper than purchasing allowances. Various carbon credits are traded in the different markets of the Kyoto Protocol, including assigned amount units (AAUs) and Certified Emissions Reductions (CERs). In addition to emissions trading, the Kyoto Protocol defines two project-based mechanisms that allow Annex I countries to meet their emissions reductions in a flexible manner. In Joint Implementation (JI), an Annex 1 country can invest in GHG reduction activities in another Annex 1 country. Emissions reductions produced by JI are awarded credits called Emissions Reductions Units (ERUs). In the Clean Development Mechanism (CDM), an Annex 1 country can fund emissions reductions projects in developing countries (i.e. non-Annex 1 countries) and receive Certified Emissions Reductions (CERs) to assist in meeting the domestic targets set out by the Kyoto Protocol. Both JI and CDM projects must be additional: had the project not been implemented, the tCO_{2e} reduction would not have occurred.

Out of the variety of different carbon markets and projects, the most relevant ones for the developing countries are the CDM and VCM. Both involve a wide array of actors, including the buyers of credits, the suppliers and implementers of credits and the intermediaries involved in delivering the credits to the buyers.

CDM and VCM activities in Laos and Cambodia and their potential to bring about pro-poor and sustainable development benefits will be looked at in greater depth in Chapters 5 and 6.

Climate change mitigation activities and carbon markets are on-going reality in developing countries and also in the least carbon emitting countries. Especially two general concerns have arisen regarding the operationalization of climate change policies in developing countries according to UNFCCC principles. The first relates to how developed countries have understood and implemented “new and additional” financial resources for aiding developing countries in responding to climate change and what are the links to official development assistance. The second question follows directly from the first and is concerned more specifically with the allocation of climate finance funds between mitigation and adaptation projects and policies in the least developed countries.

2.1 Defining “new and additional” climate finance

The principle behind mobilizing new and additional financial resources for global environmental problems stems from Agenda 21 and the Earth Summit in Rio in 1992.

“1.4. The developmental and environmental objectives of Agenda 21 will require a substantial flow of *new and additional* financial resources to developing countries, in order to cover the incremental costs for the actions they have to undertake to deal with global environmental problems and to accelerate sustainable development “. (UNDESA 1992)

At the negotiations, developing countries managed to push for including a commitment to provide new and additional financial resources to developing countries into the agreement. This promise is grounded in the normative commitment of developing countries’ right to develop as the first priority of development assistance. As global environmental problems have increased and been incorporated into international policies, at the same time the fear has arisen in developing countries that funds previously dedicated to development cooperation would now be diverted towards addressing environmental issues. These fears are amplified by the fact that most industrialized nations have failed to meet the target of directing 0.7 % of their GNI towards development assistance, pledged already over forty years ago in 1970 (UN 1970 paragraph 43) and reiterated since at the UN International Conference on Financing for Development in Monterrey in 2002 (also known as the ‘Monterrey Consensus’). As long as the 0.7% target remains unattained, developing countries doubt where new and additional funds could come from to meet environmental goals.

The UNFCCC and the Kyoto Protocol acknowledge that climate change will affect the poorest populations and nations disproportionately. Both have been designed with the aim of preventing and mitigating this. The promise of new and additional funds for assisting developing countries in climate change mitigation and adaptation was first iterated in Article 3 of the United Nations Climate Change Convention (UNFCCC) in 1992. The same promise has since been reiterated in several key international climate policy documents, including the Kyoto Protocol (1997), the Bali Action Plan (2008), and the Copenhagen Accord (2009).

“The developed country Parties and other developed Parties included in Annex II shall provide **new and additional** financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1.” (UNFCCC 1992; Article 3, emphasis added)

In the Copenhagen Accord of 2009, new and additional climate finance was codified into two separate promises: fast start finance to be met in the short term (2010-2012) and longer term financial commitments to be met after 2020.

“...provide new and additional resources, including forestry and investments through international institutions, approaching **USD 30 billion for the period 2010-2012** with balanced allocation between adaptation and mitigation. Funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States and Africa... developed countries commit to a goal of mobilizing jointly **USD 100 billion dollars a year by 2020** to address the needs of developing countries.” (UNFCCC 2009; 7, emphasis added)

The promise of new and additional climate finance can aptly be described as an essential requirement that is clearly iterated in climate policy documents. In reality, however, there is an astounding mismatch between the codified principle in international environmental agreements and the delivered climate finance pledges.

Following the COP15 negotiations, industrialized nations have pledged 34.5 M USD in fast start finances to developing countries². These pledges are to be met in 2010-2012. However, lacking an internationally set common operational definition, industrialized nations have unilaterally defined new and additional climate finance and its relationship to official development assistance. Ambiguity and overlap with ODA funds are pervasive in industrialized countries’ definitions and in the operationalization of fast start climate funds. The wealthier industrialized nations, such as Luxembourg, Norway and the Netherlands, who have already committed 0.7 % of their GNI to development assistance, can claim climate finance as additional to any funds over and above 0.7 % GNI³. Other donor nations have addressed the issue differently. For example, Finland is meeting its pledges through a net increase in finance, using the COP15 year 2009 as a baseline. All Finnish fast start financing is also counted as ODA (WRI 2011). The Finnish definition of fast start finance is presented in Box 2.1.

² climatefundsupdate.org, accessed 14.08.2012

³ Stadelman et al. (2010) contest that funds over 0,7 % GNI could automatically be accounting as “new and additional” as countries already achieving 0,7% may divert existing ODA commitments and re-label them as “new and additional” climate finance

Box 2.1 Defining new and additional climate finance: the case of Finland

Finland is currently meeting the climate finance pledges it committed to in the Copenhagen Accord through a net increase in climate funding in 2010–2012, using funds committed to climate finance in 2009 as a baseline (WRI 2011). All fast start climate finance is counted as official development assistance. Since Finland has defined 2009 climate finance as its baseline, all increases in climate finance in the years 2010–2012, which are above 2009 levels can be defined as new and additional. In addition, as the development part of ODA is still increasing in 2010–2012, climate finance may be defined as new and additional.

The European Union has committed to providing 7.2 billion € of fast start financing in 2010–2012. Finland's share of this is 110 million euros. In the baseline year of 2009, Finnish fast start finance was 26.8 € million. In 2010 finance increased to 41.6 € million. With 2009 as a baseline, the net increase was thus 14.9 € million. The provided estimates for 2011 and 2012 are 51 € million and 44 € million respectively.

In light of the discussion on defining an internationally acceptable baseline for new and additional, the Finnish definition does, however, carry some problems. Finnish ODA has been increasing over time, and is expected to increase even more in the future. Indeed, Finland has committed to reaching the 0.7% of GNI target by 2015 (Council of European Union 2005). Thus when compared to a *pre-defined projection of development assistance*, as suggested by Stadelman *et al* (2010a; 2010b) Finnish ODA is not new and additional. In absence of a commonly defined baseline, however, the question of a baseline will remain as one of opinion and most heated debate.

An interesting phase in Finnish climate financing is expected for following years. The new government began its work in 2011, and its revised spending limits for 2012–2015 outline that development assistance funds for 2013–2014 will be frozen at 2012 levels (1 124 million €). Funds are expected to increase again slightly in 2015. While future GNI is difficult to predict, the budgetary constraints would most likely lead to a decrease in ODA as a percentage of GNI. Estimates place ODA in 2014 at 0.51% of GNI according to these new budgetary constraints. It will be interesting to follow the effects of this on climate finance, which currently comes from development assistance. As development assistance decreases, what will be the percentage of climate finance within development assistance? Will it increase or decrease?

The same revised spending limits suggest that funds from the auctioning of emissions permits could be funneled into development assistance. This could assist Finland in increasing its ODA as a percentage of GNI while funds are otherwise cut. It does, however, carry some problems. The price from auctioning permits will vary and be subject to market fluctuations. It is thus difficult to predict the amount of funds that can be received from auctioning permits. Within development assistance, what will be the percentages guided towards climate projects and development projects? The proposed freezing of development assistance funds as well as using funds from permit auctioning raises questions about the likelihood of Finland reaching the 0.7% target by the time limit of 2015.

In this book, the aim is to highlight the implications of differing donor country definitions of 'new and additional' climate finance, which often result in climate finance overlapping with ODA. Tracking the actual deliverance of climate finance pledges and their overlap with ODA is beyond the scope of this book⁴. In this book, the focus is on the effects of diverse and mixed definitions of new and additional climate finance for the least carbon emitting countries. A relevant question explored in the following chapters is: to what extent do mitigation initiatives with links to ODA result in pro-poor and sustainable development benefits? This question is significant for the least developed countries, which generally are the most dependent on aid. For them, any diversion of ODA funds from their principle function of poverty alleviation can imply a true trade-off of resources.

⁴ For a more systematic overview of fast start finance pledges and their operationalization, see e.g. Stadelman *et al* 2010, Ciplet *et al* 2011 and the website www.faststartfinance.org.

2.2 Mitigation in the least emitting countries

The second important question for the least developed countries relates to how international climate finance funds are allocated between mitigation and adaptation activities. As outlined above, the variety of definitions of “new and additional” results in ambiguity and overlap with ODA funds. If ODA is used to support climate change activities in the least developed countries, these activities should also support the primary purpose of development cooperation, namely poverty reduction.

Internal climate policy documents (e.g. UNFCCC 2009) call for a balanced allocation between mitigation and adaptation finance, and a prioritization of adaptation for the most vulnerable developing countries. As seen from the graph below (Figure 2.1), however, mitigation finance has been strongly favoured over adaptation in the deliverance of funds.

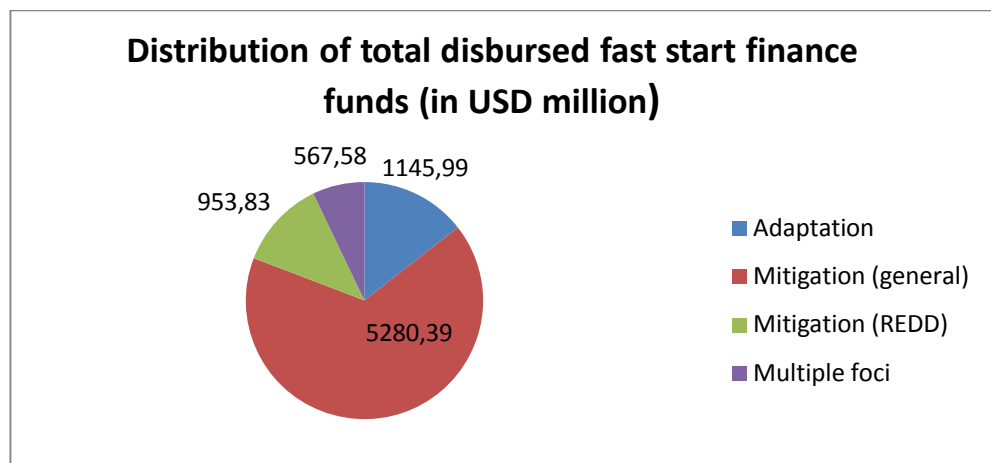


Figure 2.1 Distribution of total disbursed fast start finance funds (in USD million)⁵

This is the case also for the low income countries, where adaptation financing does not surpass mitigation.

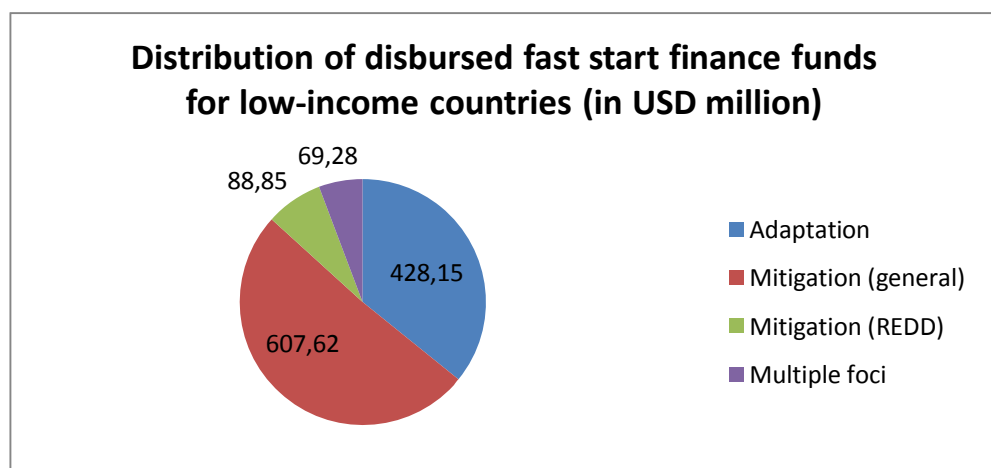


Figure 2.2 Distribution of disbursed fast start finance funds for low-income countries (in USD million)⁶

⁵ data from www.climatefundsupdate.org, accessed 15.08.2012.

⁶ data from www.climatefundsupdate.org, accessed 15.08.2012.

The focus on climate change mitigation is an important question in the context of the least carbon emitting countries. These countries contribute nominally to global GHG emissions. For example, annual per capita emissions of Laos and Cambodia are around 0.3 t CO₂e compared to the global annual per capita average of 4 t of CO₂e or Finland's 12 t of CO₂e. While LDC emissions are generally on a rising trend, emissions reductions in them will not contribute significantly towards the reduction of global GHG levels. Funding climate change mitigation in the least developed countries also implies that less finance from the fast start finance pledges is available for adaptation activities. This presents a direct contradiction of international environmental agreements that clearly call for prioritizing adaptation funding for the least developed countries. Further, in the current situation where climate finance carries various levels of links to ODA, adaptation funding might be better justified in the context of development. Recent academic literature finds that adaptation policies are more likely to resonate with the primary aims of ODA, namely poverty reduction and sustainable development (Ayers and Huq 2009; Gupta 2009; Michaelowa and Michaelowa 2007). This, of course, depends strongly on *how* adaptation policies are executed (cf. Brown 2011).

In all the different mitigation initiatives explored in this book, mitigation has been justified by presenting its synergy with poverty reduction. Focusing on multiple positive outcomes and synergies per se is often characteristic for policy and necessary for constructing consensus and unifying disparate perspectives (cf. Hall *et al.* 2011). At the same time, however, overly consensual and optimistic storylines of win-win situations can easily result in diverting attention away from the possible trade-offs at stake and in obscuring the need for making difficult choices over policy priorities. Mitigation initiatives and the use of ODA in the least carbon emitting countries is an area of contestation, with significant implications for both climate and development policy. There is a strong need for empirical research on the synergies and trade-offs between climate mitigation activities and poverty reduction objectives. There is also a need to look at the various mitigation initiatives currently being carried out in the least carbon emitting countries and how these differ in terms of their impacts on poverty reduction and sustainable development. This book aims to present findings from two least carbon emitting countries and mitigation initiatives in them. The book is intended as a contribution to ongoing discussions where climate change policies meet development.

3. CLIMATE ORIENTED DEVELOPMENT POLICY IN FINLAND: WHAT ROLE FOR MARKET MECHANISMS?

Otto Bruun and Mira Käkönen

It is estimated that developing countries will bear 75-80 % of the costs of adapting to climate change (WB 2010). At the same time the 50 poorest countries of the planet have very low emission levels, historical and present. The incorporation of climate objectives into development cooperation is well justified, however, there are good reasons to ask how and on whose terms this is being done.

The analysis of this chapter focuses on the “climate oriented development policy” of one particular donor country: Finland. Finland reoriented its development policies in 2007 through a new development policy program, which aimed at integrating climate and developmental policy targets. This has materialised in funding and activities, and the proportion of Finnish aid to climate related activities has been one of the highest of all donors since 2007. So far donors have committed more funds to climate mitigation than to adaptation in developing countries (see Chapter 2). Finnish fast start public climate finance, also counted as development assistance (see Box 2.1), reflects this: in 2010, 49.9% was for mitigation, 39.4% for adaptation and 10.7% for forest-related climate mitigation. The Finnish development policy of 2007 was justified by claims of synergies between climate and poverty reduction objectives. While adaptation to climate change by definition supports vulnerable communities, mitigation funding mostly ends up targeting the higher emitters – presenting a risk of diverting funds away from the poorest segments in society. In this chapter the discussion is specifically on the integration of mitigation objectives to the development agenda.

The analysis is based on a close reading of key policy texts. These include the Development Policy Programme of 2007 (MFA 2007) and the guidelines developed for the energy (MFA 2005), environmental (MFA 2009a) and forestry sectors (MFA 2009b). Additional material consists of key-informant interviews with Ministry for Foreign Affairs (MFA) officials. The analysis focuses on discursive policy story-lines that define problems in certain ways and justify specific interventions. The discussion is on how the story-lines enable and call upon certain kind of policies, experts, mechanisms and technologies while possibly sidelining others.

3.1 Climate mitigation, carbon markets and ecological modernisation

One of the main policy responses in the climate change mitigation front has been the creation of carbon markets. When the Kyoto Protocol was agreed in 1997 the focus was not only on binding emission reduction targets but also on the ways of meeting these targets flexibly through the creation of new markets for carbon credits and offsets. A carbon offset is a reduction in a unit of greenhouse gas emissions made to compensate (i.e. offset) a unit of emissions released elsewhere. Thus far the most significant carbon market for developing countries has been formed by the Clean Development Mechanism (CDM), which is one of the Kyoto Protocol’s flexibility mechanisms. It allows industrialised countries to meet part of their emission reduction targets by buying credits from mitigation projects carried out in developing countries. To a great extent the CDM operates in the energy and industrial gas sector. The main mitigation mechanism addressing the forest sector in developing countries is Reducing Emissions from Deforestation and Forest Degradation (REDD+), which has been in the making since the 2007 climate summit. In REDD+ efforts are made to limit emissions from tropical deforestation through governance reform, forest inventory improve-

ment and payments for ecosystem services to forest users. REDD+ is an effort to create financial value for carbon stored in forests. Activities that promote this create marketable carbon credits.

The assumption for actors, including governments and several NGOs, is that carbon trade and markets lead to positive incentives for change through forming a market price for carbon emissions. This implies the birth of a model that combines capitalism's need for continual economic growth with low-carbon industrial development (Newell and Paterson 2010). While many of the United Nation's climate summits aiming to mobilise the political will among governments to act have been seen as failures, the private climate business sector has grown. The sector consists largely of actors in the industrialised North. The carbon markets require a very elaborate and complex institutional framework, which is challenging to set up especially in developing countries. Significant support for the setting up of required legal, administrative and technical frameworks has been given through official development assistance for example in the form of capacity building and technical assistance.

The market oriented mitigation policies described above seems to rely on particular ideas of how environmental problems can be solved. These ideas can be traced to the identified shift from discussing the "limits to growth" to the co-existence of economic growth and environmental protection. Ecological modernisation has been understood as a discursive framing embodying this turn (Hajer 1995). It rests on a belief that the co-existence of economic growth and environmental protection is possible through a gradual transformation of the state and the market to promote green regulation, technology, investment and trade. Instead of focusing on structural changes in the economy a central role is given to technological fixes. Strategies leaning on ecological modernisation form a continuum: on one end importance is given to regulation and restructuring of institutional structures and on the other end to market mechanisms, based on an idea of "green capitalism" (Bäckstrand and Lovbrand 2006). The framework of market-based environmental policy has been especially manifest in the context of climate change mitigation. In the market-oriented approach direct regulation is replaced by the creation of new environmental commodities, which are put up through the monetary valuation of ecosystem services, or of the entire carbon cycle as in the case of carbon markets (cf. Costanza et al. 1987). The core assumption is that this is more cost-efficient and flexible than direct regulation or banning environmentally problematic processes.

The discourse of ecological modernisation emerges around different win-win storylines, which claim that economic, ecological and social targets can be realised simultaneously. The analysis now shifts to the win-win story lines the integration of development and mitigation objectives in Finnish development policy rests on.

3.2 Finnish climate-oriented development policy

The 2007 Government Programme announced that "Finland will place greater emphasis on climate and environmental issues" in development policy (Prime Minister's Office 2007; 9). This statement of political intent was followed up by an influential Development Policy Programme, complemented by guidelines for environment, forestry and water sectors in 2009. The energy guidelines dating to 2005 gained new traction with the new policy.

The justification for the climate-oriented development approach rests on several win-win narratives, which lean on the discourse of ecological modernisation. The concept of sustainable development, the main guiding principle for the development policy, is closely related to the rationale of ecological modernisation because it assumes that economic growth and environmental protection are compatible. These two objectives are also presented as non-conflicting with poverty reduction. Further, the guidelines for environment emphasise that the "eradication of poverty and climate change mitigation and adaptation are complementary issues in developing countries and cannot be viewed as separate issues" (MFA 2009a; 10). This is a new and specific version of a win-win storyline, which aims to legitimise the integration of climate objectives to the development agenda.

The central themes of ecological modernisation, the decoupling of economic growth from environmental degradation, the economic calculation of ecological services and the promotion of clean technology, are all present in the policy documents. Especially in relation to the climate goals a central role is given to technological innovations as well as to market-based mechanisms. An important objective is making resource use in developing countries more effective and work on climate change mitigation more cost-effective. This seems to give space for one more “win” added to the win-win narratives – the opportunity to export Finnish know-how and clean technology utilising the concept of “Finnish added value”. The environmental guidelines highlight the importance of creating opportunities for the private sector, while the public sector and development institutions are given a supporting and facilitating role through focusing on administrative capacity building, promotion of technology cooperation by supporting the creation of a favourable investment climate and by boosting private investment.

In this approach the main environmental sectors are interpreted through their relevance to climate change. It is stated that mitigation is dealt with in the energy and forestry sectors (carbon sinks), and adaptation in the water sector and rural development. According to the policy documents these are the same sectors where Finland’s special expertise is to be found, and where Finland is framed as an international problem solver. Next the chapter delivers a closer look at the two main sectors related to mitigation – energy and forestry – and discusses the optimistic win-win narratives in the light of recent academic research.

3.3 Energy and CDM in development cooperation

Energy has been on the development cooperation agenda of the Ministry of Foreign Affairs of Finland explicitly since 2005 when the ministry published guidelines for energy in development aiming for “the mobilisation of not only development cooperation but also Finnish expertise and companies to offer energy services and increase the importance of renewable energy” (MFA 2005; 2). The development policy program of 2007 and the 2009 guideline paper for environment prioritise a sustainable energy economy through private sector cooperation and trade. The Clean Development Mechanism (CDM) and thus carbon markets have been highlighted as an important dimension of energy cooperation with developing countries. In the 2009 guidelines it was stated that “Finland actively advances the implementation of CDM projects as far as possible in all least developed countries” (MFA 2009a; 10). The synergies between mitigation and poverty alleviation are stressed in different forms, for example, by highlighting how the provision of energy can reduce poverty.

Energy policies have materialised in different projects and funding decisions, the flagship program being the Energy and Environment Partnership (EEP) which supports different renewable energy projects. It started in Central America and was recognised as a successful model, which after 2007 has been replicated in several other regions. CDM has been fostered by channelling support to the to the Asian Development Bank’s Carbon Market Initiative and to the Nairobi Framework which aims to promote CDM to Southern Africa. For more discussion on the Nairobi Framework, see Box 3.1. The EEP has also been to some extent connected to the CDM as at least in Central America the initiative was “expected to bring about such increased awareness and skills which can be of use in developing and implementing Clean Development Mechanism (CDM) activities.” (INDUFOR 2008)

Box 3.1 The Nairobi Framework

CDM capacity building supported by official development assistance

The purchase of Certified Emissions Reductions (CERs) generated from CDM projects is not ODA-eligible. However, capacity building activities for the CDM are eligible for official development assistance (ODA). When support and funds to CDM capacity building are channeled through development assistance the importance for these activities to promote sustainable development becomes more pronounced. In Finland, CDM related support has thus far been given to the Nairobi Framework, which aims to extend the scope of CDM activities to sub-Saharan Africa. Finland has also supported the Technical Support Facility of the Asian Development Bank's Carbon Market Initiative, which aims to increase the volume of clean energy and energy efficiency projects in the Asian Pacific Region. Finnish support to the Technical Support Facility totaled 1,5 M EUR in 2007-2008. In comparison to the Nairobi Framework, the Technical Support Facility aims to combine technical support with increased finance options for actual CDM project development.

Concerns about CDM projects reaching the least developed countries, especially those situated in sub-Saharan Africa (SSA) were behind the launching of the Nairobi Framework in 2006 by the UN. The Nairobi Framework (NF) aims to increase the level of participation of developing countries, especially the LDCs, in CDM projects and thus enhance the geographical scope of the CDM. As such, the NF is intended to address the second goal of the CDM by promoting sustainable development. As a policy initiative, the framework has set out five objectives with which it aims to achieve these goals: 1) Build capacity in developing CDM project activities 2) Build and enhance capacity of CDM Designated National Authorities to become fully operational 3) Promote investment opportunities for projects 4) Improve information sharing/outreach/exchange of views on activities/education and training 5) Inter-agency coordination (UNFCCC, 2010a).

The framework is supported by various governments through international organisations and multilateral donors, including UNFCCC, UNDP, UNEP, UNCTAD, UNITAR, World Bank, and the AfDB. The work programme of 2010 outlines 37 past, present and future projects. Finland has supported the Nairobi Framework with 200 000€ in 2007. This money was directed at a capacity building program in sub-Saharan Africa, administered by the UNDP and UNEP. The US \$1.5 million project was also financed by the governments of Spain (EUR 450 000) and Sweden (US \$675 000). The project operated on the basis of forming a "regional cluster" of CDM capacity development, to reap benefits from economies of scale and tailor activities based on specific regional needs. UNDP's Environment and Energy Group (EEG) in New York had the primary role in executing the project and was supported by the UNDP Regional Bureau for Africa, UNDP Country Offices, UNEP Risoe Centre, the Regional Project Coordinator, short-term consultants and the MDG Carbon Facility.

As a market-based mechanism, the CDM relies on the existence of market infrastructures and conditions conducive for foreign direct investment (FDI) in the host countries. However, these rarely exist in the LDCs, at least to a full extent and operational capacity. The Nairobi Framework presents the lack of CDM projects in developing countries as the result of a combination of various barriers within the host countries themselves. The main barriers identified are a risky investment climate; limited capacity to identify and implement CDM projects; and high transaction costs. The framework is therefore tailored to address these problems specifically, which can be seen from the distribution of projects according to the five objectives.

	UNFCCC	UNEP	UNDP	UNCTAD	UNITAR	AfDB	WB	Total amount of projects per objective
1. Build capacity in developing CDM project activities		4	1		1	1		7
2. Build and enhance capacity of CDM Designated National Authorities to become fully operational	1	3	1	1		1		7
3. Promote investment opportunities for projects	2	2	1	1		2	3	11
4. Improve information sharing / outreach / exchange of views on activities / education and training	2	2	2	1		1	3	11
5. Inter-agency coordination	1							1
Total amount of projects by coordinating agency	6	11	5	3	1	5	6	37

Table compiled from UNFCCC, 2010b. Nb. the table presents some double counting, as several projects were hosted by two or more coordinating agencies/donors, and addressed two or more objectives simultaneously.

A majority of the projects address the third and fourth objectives (11 projects respectively). Most policy documents focus on creating and supporting an “enabling environment” for the CDM and bringing in more climate finance. The private market is intended to flourish by creating information products and tools. Further, several documents outline how climate finance could be integrated into development assistance. The lack of CDM projects in developing countries is attributed to an investment environment deemed ‘risky’ by mainstream financial institutions. The Nairobi Framework focuses on developing the host countries’ capacities for the CDM, by targeting local financial institutions and raising their awareness through, for example, regional carbon forums. Countries own commitments to developing infrastructure (such as financial institutions and legal arrangements) suitable for increasing investments is important. An inadequate investment climate is a wide problem in LDCs and extends beyond merely CDM-related investments. Changing the general investment climate would require measures beyond the scope of the Nairobi Framework (Byigero *et al* 2010). An area which has not been targeted by the Nairobi Framework is the other side of the coin: investor perceptions. While, understandably, the extent to which the framework can influence such a complex issue as investor perceptions is limited, there is potential scope for activities in this area as well. For example Byigero *et al* (2010:187) see that “the NF might better address itself, at least as far as Objective 3 is concerned, to promoting information on success stories in Africa and allaying investors’ fears, than to activities within Africa itself”. Another key barrier identified by the Nairobi Framework is the lack of local capacity to acquire and implement CDM projects at national and sub-national levels. To solve this, the framework focuses on establishing DNA’s in all developing countries that are signatories of the Kyoto Protocol, and developing their capacities through workshops and innovative learning. A majority of projects have, however, focused on developing the technical capacities of DNAs in relation to the CDM project cycle, and ignored wider institutional settings. To succeed, capacity development should go beyond targeting only the DNA’s and raise awareness and knowledge in other levels of government. Further, DNA’s would benefit from having a strong political mandate and financial support to apply the capacity development efforts.

The Finnish supported capacity building program in sub-Saharan Africa serves as an example of the challenges the Nairobi Framework attempts to address. While conscious of the purposes of capacity building, “capacity development activities were regarded as a means to an end, rather than end in themselves” (UNDP, 2009; 8), only a few projects were developed into the CDM pipeline and none proceeded to registration. This is a factor of several issues. First and foremost, sub-Saharan economies mainly have low GHG emissions and thus the potential to decrease emissions is low. Projects also lack access to finance, which can be attributed to several reasons including a challenging investment climate and lack of CDM capacities. The project had difficulties in combining the technical support and capacity building to activities that would have assisted in acquiring financing.

The capacity building of the UNDP-UNEP programme contained several positive elements. An emphasis was placed on hiring national project coordinators instead of the all too common “fly-in fly-out” consultants. Further, it was acknowledged how different countries participating in the programme are at various stages of CDM development. Thus no universal, “one size fits all” solutions could be presented. The programme emphasized South-South exchanges with, for example, DNA visits. Finally, the programme attempted to place more emphasis on aiding developing countries determine their own sustainable development criteria.

Past CDM investment flows have tended to mirror the flows of FDI more generally. The Nairobi Framework presents increasing the geographical scope of the CDM as a method for increasing the deliverance of sustainable development by the CDM. However, when ODA funds are used to support activities such as those of the Nairobi Framework, it can be asked is merely extending the geographical scope of the CDM sufficient for securing sustainable development benefits? The CDM projects initiated through the Nairobi Framework would still have to demonstrate their contribution to local sustainable development in the host countries. In its current mode the Nairobi Framework is unlikely to greatly alter the distribution of CDM projects to be more favourable towards the LDCs. The Nairobi Framework does not extend deep enough to target the structural causes of developing countries being unable to attract CDM investments, nor does it facilitate the creation of wider institutional mechanisms with abilities to host CDM projects. Governance decisions, such as the EU’s decision to limit CERs generated after 2012 only to those from the LDCs, can have a much wider impact on the uptake of CDM in the LDCs.

EEP and CDM are presented as win-win mechanisms in terms of greenhouse gas emission reductions and sustainable development. However, the success and replication of the EEP model was declared without any thorough evaluation of the poverty reduction impacts in Central America. On the CDM there is already plenty of research carried out that indicates that the mechanism as such has been unable to bring significant co-benefits and in some cases CDM projects have had negative environmental and social impacts (Boyd et al 2009). For a more thorough discussion on the potential for the CDM to deliver co-benefits, see Chapter 5. It is also noteworthy that amongst CDM projects, the provision of rural energy has been one of the rarest project types thus far because it is seldom financially attractive for private sector actors.

3.4 Forest Carbon Mitigation and Finnish Development Policy

The reduction of deforestation and forest degradation in developing countries has been argued to be the cheapest way to quickly reduce global emissions, as the sector currently accounts for approximately 10 % of global emissions. At the moment REDD+ preparedness activities and pilot projects are ongoing in tropical forest countries with considerably increases to development funding in the forest sector. The Finnish policy documents see mitigating climate change through halting deforestation as a key opportunity, where Finland drives an “inclusion of forest carbon sinks within the emission trading in the future” (MFA 2009a; 12). The 2007 Development Policy Programme argues for active management of forests because “[s]ustainably managed forests grow faster and capture more carbon than forests in a natural state” (MFA 2007; 19). The program does pay attention to the multiple values that forests protect or harbour. Especially the role of the private sector and technology in the forestry sector is underlined. The Finnish involvement is legitimated by the strong role of forestry sector in Finland. The Finnish value-added principle has, according to Ministry officials, in practice during 2007-2011 led to aid being used towards the technical baseline measurements of forest carbon sinks. Here Finnish leading companies have been expected and able to win open tenders by the Ministry for Foreign Affairs.

As up to 2 billion people globally rely heavily on forests for their livelihoods, there is little doubt that there is room for win-wins between poverty reduction and environmental protection. However, the policy documents for the forest sector seem to argue that multiple benefits can be reached in mitigation projects, and do not make explicit how to avoid replicating the disappointing results of previous integrated forest conservation and development projects, or the unequal distribution of benefits in most market initiatives (Hall et al. 2011). It is observed that the REDD+ preparedness activities (also financed directly and indirectly by Finland) tend to highlight forest destruction by poor communities and disregard other drivers of

deforestation that often lead to adverse impacts for poorest communities (mining, hydropower, tree plantations). For more discussion on defining the drivers of deforestation in Laos, see Chapter 8. If rent-seeking elites seek to benefit from payments for forest carbon sinks this implies a further trade-off for poor communities (Brandon and Wells 2010).

3.5 The will to mitigate: fostering co-benefits or buying legitimacy for flexible emission credits and export interests?

So far the carbon markets have not demonstrated any strong tendency to create pro-poor outcomes and they have fallen short on expectations for co-benefits. The quest for measurable mitigated emissions to sell in carbon markets seems to overrun other social and environmental targets. Can official development assistance (ODA) funds then rescue this situation by altering the functioning of these markets towards the benefit of poor communities and contributions to sustainable development more generally? Proponents argue: potentially, and probably yes.

It is not, however, only the fostering of co-benefits that is motivating the will to mitigate with development assistance. Firstly, as already discussed above, the use of ODA for mitigation has been seen in Finland as a way to create an enabling environment for clean technology investments and for Finnish experts. Other donor countries as well have used ODA to foster their own clean technology companies and as a way to develop CDM/REDD+ projects in the recipient country. Secondly, the attractiveness of mitigation activities that advance the carbon markets can relate to the offset logic, which provides a cheap and flexible way for countries and companies in the North to fulfill their own emissions reduction commitments. Thirdly, CDM and REDD+ -related ODA finance offers a possibility to pursue legitimacy for a climate change agenda dominated by the global North. The influence of ODA money is greatest in the least developed countries where the dependency on development aid is the strongest.

These self-interests are likely to be counter-productive vis-à-vis the objective to steer mitigation initiatives to deliver meaningfully to the poor. The expertise and technology orientation, as in the case of Finland, is very much ignoring the past failures in development cooperation that have been explained by a technology push approach, which does not give priority to local needs, conditions and knowledge. The main concern here is that self-interest driven projects create a demand for and dependence on commercial, Northern- and corporate-controlled clean technologies rather than for projects that support the recipient's development and mitigation priorities. In the case of mitigation "out-sourcing" interest, aid is likely to divert to countries and sectors with the largest and easiest mitigation potential from the sectors where the most depressing needs for development and poverty alleviation may lie (Michaelowa and Michaelowa 2007; Gupta 2009). What is missing is a strict policy framework that would really limit these counter-productive self-interests – without one, co-benefits are difficult to come by.

3.6 Conclusions

This chapter has looked at the climate-orientation in Finnish development policy in the years 2007-2011. The approach in development policy has been discursively legitimized through win-win storylines that show how the integration of climate and development targets lead to co-benefits. Indeed, the targets of sustainability and environment in development are indispensable. However, problematic story-lines that give legitimacy for strengthened private sector orientation, for the extension of carbon markets and for the promotion of Finnish export interests through development cooperation can also be found. The approach, strongly leaning on a market-oriented form of ecological modernisation, overlooks and sidelines several contradictions between the targets of poverty reduction and market-based private-sector led mitigation. It is worrying as the new Finnish development policy was referred to in the EU as an inspiring pioneering mod-

el or “beacon” (Remes 2011). The overly optimistic and consensual story-lines of multiple synergies can also free policy-makers from making truly transformative choices.

It is important to note that the discourse of ecological modernisation does not address issues of political economy but rather renders environmental questions technical and manageable and gives the impression that these are non-political questions. The win-win storylines identified in the analysed policy texts lead to problematic diversions of public attention. Firstly, they divert focus from topical ecological distribution conflicts (on land, water, forest) in developing countries. Secondly, through focusing on mitigation in the developing world attention is diverted from industrialised and rapidly developing countries’ responsibilities to address climate change. Finally, win-win storylines often do not sufficiently emphasize the need for finding wholly different technologies and practices in developing countries than those of the global North, which would be more suitable to their conditions and constraints.

4. THE ENERGY AND ENVIRONMENT PARTNERSHIP IN THE MEKONG REGION: INTEGRATING CLIMATE CHANGE INTO DEVELOPMENT COOPERATION

Visa Tuominen

“Every activity that we [finance] in these countries is of course development also, but for us the key is really to determine whether it’s [relevant for] climate change.”
- Donor -

4.1 Introduction

This case study analyses the Energy and Environment Partnership (EEP) in the Mekong region, which is a Finnish development cooperation program that aims at responding to climate change by promoting the use of renewable energy (RE) and energy efficiency (EE). It is a grant offering program designed to promote the use of renewable energy, energy efficiency and clean technologies, and it is financed by the Ministry for Foreign Affairs of Finland⁷ (MFA) with the Nordic Development Fund (NDF), with contributions of 4,9€m and 3€m respectively for the period of 2009–2012. As such, it provides an illustrating example of the growing number of development cooperation programs which deal directly with climate change.

This section explores how the EEP Mekong integrates the objectives of poverty reduction, as pronounced in the Millennium Development Goals (MDGs), and climate change mitigation, what this integration implies for the outcomes of the program and the sustainability of the outcomes. The EEP is looked at as a development cooperation program funded by official development assistance (ODA). The analysis would look different if the program were analysed as a climate finance project as these two have certain different objectives. Herein an emphasis is placed on poverty reduction and ownership issues. Climate finance projects are mainly concerned with mitigation and adaptation although they can also include elements that contribute towards poverty reduction and take into account ownership issues. The questions this section aims to answer are:

1. What kind of development does the EEP promote?
 - a) What kind of a climate finance mechanism is the EEP and how does it work?
 - b) What is the role of climate change mitigation in the EEP?
 - c) How are ownership issues taken into account in the program?
2. Is the win-win approach contributing to cost effective solutions and if not, why?
 - a) How will poverty reduction and sustainable development be achieved in the projects?
 - b) What obstacles does the EEP approach face in Cambodia and Lao PDR?

⁷ In the Central American EEP the other donors taking part in the EEP include the Central American Integration System, the Central American Commission on Environment and Development and the Austrian Development Cooperation.

The structure of this case study will follow along the lines of these questions. This first section introduces the methodology of the study. After that the approach of the EEP towards development will be analysed. This section will start with a description of the EEP; its structure, aims and extent. Building on this in the third section the role of climate change mitigation in the EEP is explored and afterwards an ownership perspective will be added. Ownership will be used in analysing the climate change component of the program.

The fourth section takes a look at the links between energy and development and utilizes this understanding with regards to the EEP. This is done in order to gain an understanding of how the so called win-win approach can deliver in a development cooperation program. The role of two key objectives of the Finnish Development Cooperation Policy – poverty reduction and sustainable development – will then come under scrutiny. Following is a look at the different obstacles identified and the reasons for the possible short-comings in the program. This part will also identify capacity development needs in the fields of RE and EE in Cambodia and Laos from the perspective of the objectives of the EEP. The final section of this case study will summarize the findings and insights presented and discuss these points reflecting on the role that the EEP can have as a part of Finnish development cooperation.

Methodology of the case study

This case study is based on material collected in interviews with the key actors of the EEP Mekong and on program and project documents, and their analysis. Earlier EEP experiences, namely from the Energy and Environment Partnership with Central America, were initially looked at in order to identify the strengths and challenges of the program. The people identified for the interviews in the Mekong can broadly be categorized into three groups which are:

- i. Donors (Ministry for Foreign Affairs of Finland and Nordic Development Fund)
- ii. EEP program staff (including members from the steering committee and the regional coordination unit)
- iii. Projects that secured funding from the First call for proposals.

A decision to treat all the material collected with interviews anonymously was made at an early stage in order to provide the interviewees a possibility to speak openly about the program.⁸

The desk study, which was planned to be conducted before the fieldwork, faced problems due to the poor availability of documentation on the program. Although the original research plan acknowledged that the EEP Mekong had only been initiated in 2009, the lack of up-to-date information on the program and projects at the end of 2010 came as a surprise. The underlying assumption had been that the disclosure policy would have been decided upon at the initiation of the program and that key documents would be available online or at least within reach upon request. However, email correspondence with the Regional Coordination Unit (RCU) revealed that this was not the case.

The regional coordination unit of the EEP Mekong published documents and information on their webpage during the implementation of this study and the level of transparency significantly increased. The MFA was also cooperative during the research and provided the documents requested concerning the program. Specific information about the projects, which are not publicly available, have been used to aggregate data and draw conclusion in this research, without identifying the projects in question or revealing delicate information. Unfortunately all of the information and documentation on the EEP that are supposed to be public and available, were still not been published at the end of 2011.

⁸ Still, as the program is relatively small and at the time of carrying out the fieldwork it was at an early stage of implementation, it may be possible to identify some of the respondents. However, this issue was clear to the interviewees and this may have led to some self-censorship with possible delicate issues.

At the point of carrying out this research the EEP Mekong had just recently been initiated and therefore results and impacts will not be assessed as none of the projects had yet finished. Instead the analysis focuses on what observations can be drawn from the setup of the EEP Mekong. The analysis is limited to the projects that were successful at obtaining funding from the First round of Call for Proposals of the EEP Mekong. Although this limits the scope of the study, it provided the possibility to get an early analysis on the EEP Mekong. This was essential for finding areas that might have been neglected as well as pointing out the strong points of the program. Also, as the funding was originally announced only for 2009–2012 the chosen schedule was the only one that enabled an analysis of the program before the funding might potentially have been terminated. It must be acknowledged that the structure of the program has been under revision and a great number of projects have received funding since the fieldwork was carried out. As such this research reflects best the EEP at its initiation and the situation before the Second Call for Proposals.

4.2 The Energy and Environment Partnership in the Mekong Region – what is the EEP and how does it work?

The first EEP program was launched during the United Nations World Summit on Sustainable Development in Johannesburg in 2002 and it started running in Central America in 2003. Positive results from the program encouraged Finland to replicate the EEP to the Mekong Region, Southern Africa, Indonesia and the Andean Region. The focus of this analysis is on the EEP Mekong and all references to the EEP in this article refer specifically to the EEP program in the Mekong Region, unless otherwise stated. The countries involved in the EEP Mekong are Cambodia, Lao PDR, Thailand and Vietnam.

The overall long term objective of the program is: **“to contribute to improved access to energy and energy services and reduction of greenhouse gas emissions.”** The key indicators reflect the three main parts identified for achieving the overall objective. They are: (i) more people and particularly rural households should have improved access to modern, reliable energy services, (ii) renewable sources of energy should constitute a greater share of the total energy and consumption in the Mekong region, and (iii) the growth rate of CO₂ emissions is reduced. The EEP Programme aims to achieve these objectives through three components which are divided as follows⁹:

1. Support to national policy, legislation and institutional framework
2. Development of renewable energy (RE), waste-to-energy (WTE) and energy efficiency (EE) technologies and services (through partnership projects)
3. Information and capacity building for RE, WTE, EE and energy markets.

The EEP Program has different financing options to support studies, surveys and demonstration projects, feasibility and pre-feasibility studies, policy development, and the dissemination and exchange of information. As such the aims and objectives of the program are similar to the REEEP (Renewable Energy & Energy Efficiency Partnership) program, but they differ in geographical focus. The maximum amount the EEP can provide to a single project is 200 000€. Eligible actors for funding range from companies to research centres and from NGOs to consulting firms.

The most important decision-making body of the EEP is its steering committee, which consists of a representative from the MFA and NDF, two representatives from each participating country and a representative from the Asian Institute of Technology, which seems to bring a good level of country ownership to this level of EEP decision-making. It is further strengthened by a rotating chairmanship among the participating countries in the steering committee and the supervisory board. The role of the Supervisory Board

⁹ EEP Mekong, 2010

is to give general guidance while the day-to-day management and operation of the program are run by the Regional Coordination Unit (RCU). Each country has its own National Coordination Unit (NCU), which manages the program on a country level and each national unit is based in the ministry, which is responsible for the operations that the EEP most closely relates to in each country. In Cambodia the NCU is located at the Ministry of Industry, Mines and energy and in Lao PDR at the Ministry of Energy and Mines. The EEP organization structure is shown in Figure 4.1.

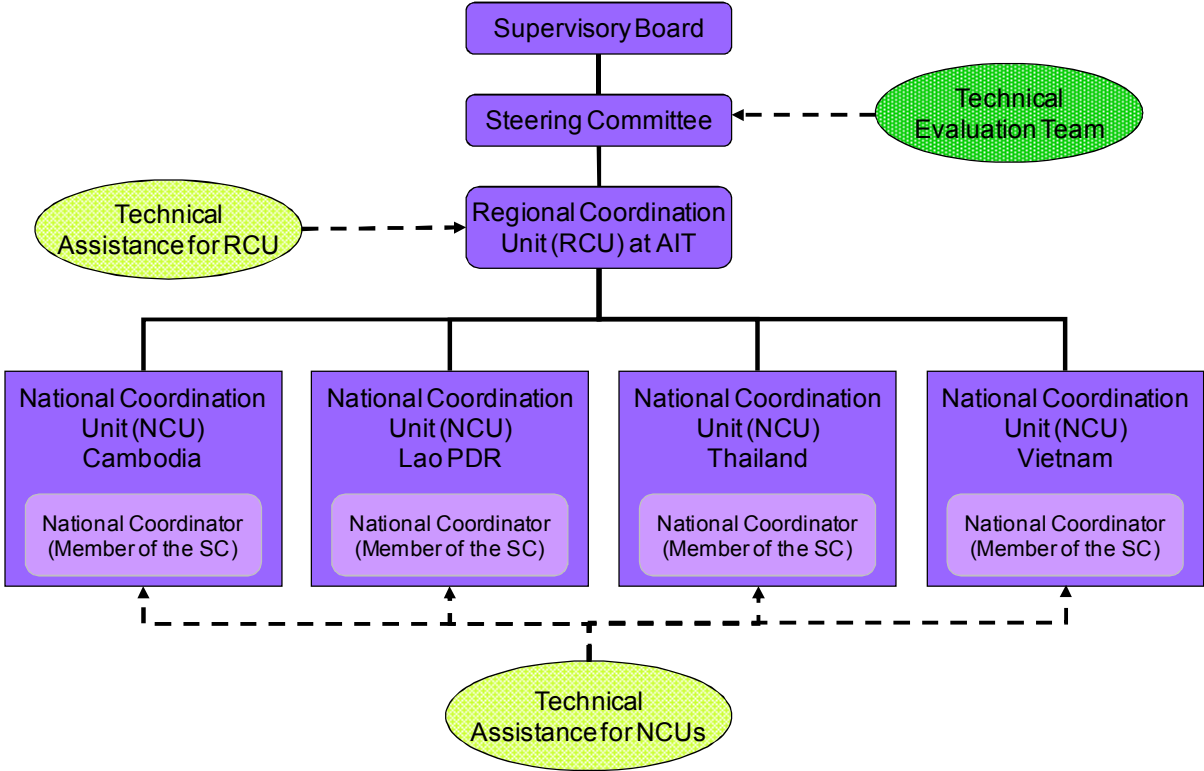


Figure 4.1 The organizational structure of EEP Mekong¹⁰

All project proposals are first checked for relevance to the country’s energy policies by the respective national coordination unit and regional proposals are submitted to the RCU directly. After each call is closed the steering committee comes together to decide which projects get chosen for funding. The structure guarantees a level of political commitment from the participating countries as the representatives of the responsible ministries have to approve each project before they can receive funding. As such, the final decision of the funded projects is political as it follows the technical assessment of the projects. This system guarantees a certain level of country ownership for each project, but on the other hand this might stop some projects from being carried forward due to political reasons.

The evaluation grid for the project proposals and other relevant information concerning the requirements for the projects that can receive funding were clear and published on the program’s website. Still some of the applicants for EEP funding were not aware of this. The applications for funding are submitted to Calls for Proposals. The EEP is a demand driven mechanism in the sense that it does not specify certain activities it will fund, but rather a field of activities and certain criteria that projects have to meet. Countries of the EEP can choose their own national priorities for specific calls, but so far only Thailand has used this option and has had one targeted call, while other countries have not wanted to limit the scope of eligible technologies or choose a field to focus on. The chief technical advisor of the EEP presents the projects to

¹⁰ EEP Mekong website, accessed 8.5.2011

the Steering Committee which then selects the projects to receive funding in each call. According to the interviewees the steering committee meets in good spirit and is not strongly influenced by national interests, but rather tries to select the best projects overall with regional significance.

As one of the interviewees pointed out: “I haven’t seen any kind of partisanism, the steering committee are playing a very fair game, and they will not necessarily go against a project because it’s not in their country, or strongly support a project because it is in their country.” The steering committee has also followed the program guidelines in ensuring that the projects receiving funding are part of the EEP priorities and their sustainability has been evaluated.

Large scale projects or projects without a replication potential have also been ruled out. As such the EEP seems to be doing a fairly good job at selecting projects for funding in terms of trying to fill up funding gaps in the RE & EE sectors, and aiming to select projects with regional relevance. Five projects¹¹ were selected from the First Call for Proposals out of which four are located in Cambodia and/or Lao PDR. An overview of these four projects is given in Table 3.1. While most projects involve more aspects than simply one, they have here been described by their main focus which is technological in two of them and capacity building in the other two.

Table 4.1 EEP projects from the First call for proposals located in Cambodia or Laos

Name of lead organisation	Short description of the organisation	Project name	Main activities and focus	Partner organisations	Country of operations
Cambodian Climate Change Department	Department of Cambodian Ministry of Environment	Energy Savings Siem Reap - Promoting and Demonstrating Energy Conservation in Siem Reap, Cambodia	Aims to promote and demonstrate energy conservation and energy efficiency. Awareness raising activities. Solar water heaters and compact fluorescent lamps.	1) UNEP Risoe Centre (Denmark), 2) Department of Energy Technique (Cambodia), 3) Royal University of Phnom Penh (Cambodia), 4) Cambodian Research Centre for Development (Cambodia)	Cambodia
Elec-triciens sans frontières	A French NGO, specializing in sustainable access to energy	Green electricity for 24 villages of the Phongsaly district, Phongsaly province in Laos	Pico-hydro turbine installation and related training.	CominKhmere (Cambodia)	Lao PDR and Cambodia
Finland Futures Research Centre	A Finnish research unit of the University of Turku.	Interlinkages between energy and Livelihoods - Data, Training and Scenarios for Sustainable Energy Planning in Laos (INES)	Data collection and development of energy planning models with and for MEM. Capacity building.	Department of Electricity, Ministry of Energy and Mines (MEM), Lao PDR	Lao PDR
Kam-works	A social enterprise operating and registered in Cambodia.	Improving access to solar energy for rural electrification in Cambodia by removing financial and technical barriers	Demonstrating solar lanterns and solar home systems and introduction of a microloan scheme.	1) Cambodia Mutual Savings and Credit Network (Cambodia), 2) Pico Sol Cambodia	Cambodia

¹¹ A sixth project from the First Call was signed after this study was carried out.

The partnership concept proved to be particularly successful in the Central American EEP and an internal identification mission to the Mekong region before the launch of the EEP Mekong found that this integral element of the EEP concept was also adaptable for the Mekong region. One reason for the uptake of this model is to enhance technology transfer. Secondly, the program document states that: “new and innovative energy initiatives and partnerships are necessary if significant increase of renewable energy production and improved access to services is to be achieved.”

The involvement of the private sector in development is not a new phenomenon but it was not until the late 1990s that donors started channelling larger amounts of public development finance to support private sector development mostly in the form of public-private partnerships. The increase mainly filled a gap left by the privatization of state utilities and the underlying rationale was that investment needs in developing countries could not be covered by public finance alone. This is also the approach adopted widely in climate finance where the private sector is given a large role in contributing to the mitigation efforts. Although the partnerships may work well in some cases most experiences from the 1990s were not encouraging. The crucial point is that public finance with a clear development mandate is used to support private investment, which by definition aims at generating profits. However, the projects analysed in this case study did not have a strong role from private actors. It was admitted by most actors interviewed that in an LDC context renewable energy technologies still need subsidies to be economically competitive with more polluting technologies, which have lower initial investment costs.

4.3 Mitigation potential of small scale electrification

Achieving the MDGs will improve the livelihoods of the most vulnerable communities and individuals. The discussion on mainstreaming climate change into development cooperation is based on the idea that human vulnerability to climate change is reduced when successful adaptation takes place and climate change is mitigated and at the same time the living conditions of those vulnerable are improved (Ayers and Huq, 2009). This is also the approach adopted in the EEP. There is no real conflict between the short term goals of immediate issues that development policies are aimed at, and the long-term goals of protecting livelihoods from the impacts of climate change. (Klein et al. 2005, 584)

Linking mitigation to development activities carries some risk of trade-offs between the two goals, in comparison to linking adaptation with development. (Gupta, 2009, 209) There are also apparent risks that the additionality, which climate finance is supposed to have, will not be realized when mitigation activities are integrated with current modes of development assistance. This is more apparent with the LDCs that have negligible emission compared with the developed countries or emerging economies such as China, India or Brazil. The UNFCCC principle that climate finance needs to be new and additional is largely supported by developing countries in order to guarantee that the industrialized countries fulfil their commitments of reducing their own emissions and funding climate activities in developing countries. (Ayers & Huq, 2009, 680)

While rural energy generation projects can bring real development benefits for the local population they are usually not efficient in reducing GHG emissions. This is obvious when one considers that rural households do not have much energy consumption anyway as long as they are not connected to an electricity grid, but rather depend on local small-scale energy production. Large scale emission reduction projects can usually be carried out with lower costs for the same level of outcome in terms of emission cuts. To curb emissions growth it would be sensible to target middle-class energy consumption in countries that achieve the MDGs by introducing efficiency standards and policies once sales of appliances take off. By electrifying rural schools and hospitals the same results in this respect cannot be achieved. This shows that climate policy that targets limiting the emissions of developing countries is most efficient when it targets the middle-class, as well as countries that have reached a certain level of development. (Michaelowa & Michaelowa, 2007, 12-16) The beneficiaries of climate finance and development aid seem to be different within a nation-

al scope as well as on an international level. Those targeted by mitigation are likely to be high polluters (non-LDC), while those targeted by development aid are the poorer countries.

Similar ideas are held by a number of the key actors of the EEP, which was obvious when they were asked about the amount of mitigation achieved with the program or individual projects. The donors and the administrative personnel saw the mitigation component of the program clearly embedded in the program design and one of them emphasized that:

“The two objectives of our programme are to give better access to energy to people and mainly rural poor and minorities, and those people who are not having an easy access, [...] and then the second is to reduce greenhouse gas emissions. *Every project that we implement reduces greenhouse gas emissions.*”(emphasis added)

A programmatic approach, where all the EEP projects would be bundled up, was seen as a future possibility where significant emission reductions could be made. However, at the moment the projects saw the mitigation potential negligible, which was clear from some of their answers. The mitigation potential from energy in the case of Laos was questioned by a project leader:

“The mitigation issue in Laos is of course different from many other countries, because at the moment the emissions in Laos are very small, they are only coming from the transport sector and electricity production is totally hydro based at the moment and there's not very much industries which are using fossil fuels.”

Yet another project leader pointed out the focus of their project which is in line with the EEP approach:

“We are connecting people, poor people, who have low consumption, so that means that savings of energy, I doubt that they will be very high. [...] So if you want really to save a lot of energy, you have to work with either big consumers, one big consumer it can work or very, very large scale consumers. [...] One or two kilowatts is not going very far.”

And in a sentence regarding the situation of Cambodia and Laos: “we don't have big mitigation projects because we don't have such potential.” The EEP Mekong has an objective of reducing GHG emissions and it will be interesting to see what future evaluations will tell us about how the program has performed. As the projects are relatively small it seems unlikely that significant direct emission reductions would take place. This hypothesis is also supported by earlier academic studies on mitigation projects targeting poor people and LDCs. Another curious issue is how these emission reductions will be evaluated. Even though the program has a plan for monitoring CO₂ emissions no such evaluation plans were in place for most of the individual projects at the time of conducting this research.

4.4 Ownership perspectives in the EEP

A look at certain perspectives of ownership in the EEP will now be explored in order to find out a) how they have been taken into account in the program and its projects and b) to shed light on what implications this can have for the results of the program.

The principle of ownership goes a long way back in the tradition of development cooperation, but its importance has become highlighted recently in the Paris Declaration, the Accra Agenda for Action and the Busan Partnership for Effective Development Cooperation. In the Paris Declaration of 2005 ownership was adopted as the most important principle in improving aid effectiveness in donor – recipient relations. In its core, ownership can be defined as practices leading to shared participation and control over the content of development activities, aimed at also making them work better - a key question in the least developed countries. Ownership is a multidimensional set of negotiated continuous power-relations, which are

never absolutely fulfilled in a recipient-donor relationship, but can rather be seen as commitments beneficially informing the whole institutional network involved in this process (for discussion on practice oriented processes see Geiger 2009; Gherardi 2009; for institutions see Ostrom et al 2002).

Before moving on it is worth pointing out two dimensions of ownership that are significant in the following analysis. First, here ownership on a programmatic level is taken to include the role the recipient governments have over, for example, the initiation, objectives, continuance or discontinuance of a program. These issues are closely linked with the international context where climate change is discussed. Second, ownership within the program refers to the relations and interactions between the donor and the partners within the program structure.

The underlying idea of ownership is that when the recipients of aid have control over their own development and can exercise control over development interventions, it is likelier for them to be committed to their goals and therefore have a stake over the results. This will also contribute to achieving the goals, given the necessary means are present. Here, the focus will be on the ownership of the agenda that governs the EEP and as such forms the basis of the approach the EEP has adopted, with its implications for certain processes in the EEP structure, current actors of the EEP. The ownership within the projects will also be briefly discussed.

Climate change is the result of the practices of the industrialized countries and it is their shared responsibility to respond to its effects today. The least developed countries have contributed the least to climate change but stand to lose the most. According to the principle of the UNFCCC of “common but differentiated responsibilities” the burden of reducing emissions lays mostly in the industrialized countries, with very few commitment required from the LDCs. Climate change mitigation is the agenda of the industrialized countries with no emission reduction contributions required from the LDCs. From this perspective it is quite clear that Cambodia and Laos have very little if any ownership over the agenda of climate change mitigation.

This does not mean that the countries in question are not committed to renewable energy initiatives. Rather, their interest in RE is easier to explain through their interest in energy as such, or in trying to attract potential foreign investments. This is problematic for a “demand driven” approach to climate change mitigation in any LDC country as the *demand* does not refer to the needs or demands of the recipient country in question, but to actors within that country and in the case of the EEP, also to actors outside the countries. The demand in the case of climate change mitigation is created outside the context where the process takes place. In some cases this can result in the demand being answered by actors with a background and a mindset similar to where the demand is created, rather than the geographical place where these activities take place. Although the program makes an effort to distinguish projects that truly respond to local needs rather than serving only the needs of foreign consultants, this is not what ownership over an agenda means and a *demand* for funding in such case is no proof that it would be otherwise. This is not to say that the projects the EEP supports could not be very successful in providing clean energy to rural poor that have earlier lacked access to reliable energy, but that if these expected results are fulfilled, it is unlikely due to the RE aspect within the project. This would seem to show that the EEP is at odds with the ownership agenda concerning its focus on RE, and especially in terms of climate change mitigation.

The large scope of possible technologies and different types of projects to receive funding were praised by all of the people interviewed for this study. The most important reason for viewing this approach of the EEP favourably was that it allows for a broad approach to energy issues, where projects with a narrow focus might have fewer possibilities for success. Related to this the possibility to propose virtually any kind of project within the renewable energy and energy efficiency field, which suits the needs of the target countries, is seen as being very attractive.

Increased transparency of the selection process would serve well in answering questions about which projects get selected as well as providing more information on the funded projects for an external evaluation. This would allow for other actors and donors to learn from the successes and strong points of Finnish development programs and projects as well as allow for weaker points to be taken into account in future designs.

Another issue that should be considered is ownership for whom. A stated key beneficiary group of the EEP is the rural poor and women (in the online version of the program document). Naturally they have very little options for carrying out projects or making proposals. NGOs that are working closely with rural communities were mentioned as actors that are usually most capable of giving a voice to these communities, although great differences exist between different NGOs in terms of their capacities and whether they are of local or foreign origin.

Out of the four projects analysed in this study two project leaders are European and two local; the CCCD and Kamworks, of which the latter is owned and managed by Dutch individuals. The reasons for this and its implications are discussed briefly below. If this composition of project leaders is a trend and it continues why is it that actors of Western origin continue to win projects from the EEP? One possibility would be the lack of ownership over climate change mitigation, as this might lead to seeing renewable energy as uninteresting. Actors with Western origins, on the other hand, are more socialized to the issue as that is where the issues have been created and are widely discussed. Consequently, actors with a Western background would be more willing to tackle the issue home and abroad. However, a likelier cause for this situation would still seem to be the lack of capacity on the part of LDC actors to apply for funding successfully and carry out projects.

The individual projects themselves seem to be well designed to answer local needs and have a good level of ownership on the part of the beneficiaries. The Cambodian Climate Change Department is a national actor which is raising awareness on energy efficiency with demonstrations and public information dissemination. The primary beneficiary of the Finland Futures Research Centre's project is the staff of Ministry of Energy and Mines who approached the FFRC for the initiation of the project, and who are closely involved in the project implementation.¹² Both of the technologically focused projects had also elements with a strong ownership for the end-users. The solar lanterns that Kamworks is demonstrating and selling are designed in cooperation with a village in rural Cambodia and the final concept that was chosen for production was selected by the villagers. Kamworks is also assembling the solar lanterns in Cambodia. In the ESF project a village committee is set up without guidelines for the composition or procedures, which then selects the order of electrification in the village as all houses cannot be connected straight away.

In effect, what kind of development can we say the EEP promotes? As stated the EEP aims at increasing access to modern energy focusing on rural poor, ethnic minorities and women. It also aims at reducing the growth rate of GHG emissions and development through partnerships. There is an underlying assumption that energy is an important factor for achieving development and also that renewable energy and energy efficiency lead to emission reductions. As such, promoting renewable energy and energy efficiency is a win-win solution as they enable both development and mitigation results. Doing this through partnerships leads to a win-win-win model where ideally the private sector will also contribute to achieving these objectives with their own part in providing financing towards achieving these objectives. Although the actual mitigation achieved might be small in absolute figures, it is still development towards cleaner energy production and increased access to energy services in targeted areas. What is a little bit concerning is that the announced commitment period of the EEP to the region is very short. The EEP also seems to aim to fund a large number of projects for a few years. Achieving sustainable results is usually likelier with a good focus and a long commitment. The ownership is taken into account on the national level for project funding and also in the projects, but less so in the overall agenda of the program.

¹² The reader should be informed that Finland Futures Research Centre are an institution implementing an EEP project, and on the other hand, also carrying out this research. The analysis herein has been conducted by individuals not involved in activities related to FFRC's EEP project.

4.5 The win-win approach

The following section explores how the win-win(-win) approach described above is working for poverty reduction and sustainable development as well as looking at the obstacles the program and RE face in Cambodia and Lao PDR. As established earlier the EEP's main objectives are improved access to energy and the reduction of CO₂ emissions.

Energy and development

Poverty reduction and sustainable development are the two key principles of Finnish Development cooperation. While sustainable development is a concept that has been widely discussed and seems to be used more as a catch phrase nowadays rather than a concept clearly defining what development should look like, poverty reduction is clearly codified in the Millennium Development Goals with a number of qualitative and quantitative indicators. Energy is not included as such in any of the MDGs, but there are numerous ways in which access to energy can help in achieving the goals. Alleviating energy poverty has been called a prerequisite for fulfilling the MDGs for example by DFID (2002) and WHO (2006) (Urban, 2009, 683). Clean energy projects can, in addition to reducing emission, create employment opportunities, reduce time spent on energy provision or reduce air pollution from traditional fuels. Meeting the energy needs of the poor in a carbon-concentrated way presents an enormous global challenge.

When it comes to the MDGs, apart from MDG 7, which calls for "ensuring environmental sustainability", climate change related activities cannot usually be thought as having an important impact on poverty (Michaelowa & Michaelowa, 2007, 11). A key issue in collecting all the benefits from rural electrification is to make sure that the required co-factors are present. One interviewee's opinion was that a village should have access by road, health care, education, clean water and electricity to be able to eliminate poverty. While in another conversation the link between poverty reduction and energy came up slightly differently:

"For energy to reduce poverty very essentially is for what purposes the energy is used. Of course one important aspect is that the, kind of a survival strategy; that you must have food to eat, to be a living poor person and not dead. While of course dying would reduce poverty. But in a way, this type of survival and its type of energy use is one aspect which as such does not reduce poverty, but it's kind of a starting point."

Taking a full account of the required co-factors is unfortunately where the EEP seems to stop a little short. The program document and most actors in the EEP were able to name a number of benefits that access to energy can provide in combination with other factors, but the proposal evaluation grid neglects many of these factors. Even more concerning is if there will be no account of these links in the monitoring and evaluation plan. This was put well into words by an interviewee:

"When you bring energy you don't believe that all people will be able to study a longer time. Usually when you bring energy the first things they invest in is not in books but in a TV. So the creativity is not wonderful there. It is much more useful for example for you to bring light to a shopkeeper so they will sell longer, during night time as well, so they will improve their income."

This is not to say that people getting access to electricity should study, or neither where generated income should be spent. Ownership over people's own consumption and decisions; this is what many understand development to be. However, one should not expect literacy to improve merely by bringing electricity to a village, for example.

Sustainable development and poverty reduction in EEP

While the poor, women and ethnic groups are a focus in Finland's Development Policy Programme and the EEP, there is no mention about how the needs of these groups are taken into account in the program, and they are barely visible in project selection criteria. The project proposal evaluation grid for the First Call

awarded 0,5% of the total points available when: “The specific impact on gender is taken into account, notably health impact, or time used for energy related household tasks,”(EEP Mekong, 2009) and it was the only point in evaluation grid mentioning women or gender¹³. The same percentage was given to addressing local social acceptability and local “ownership” (quotation marks in the original). Both of these issues were acknowledged by the MFA and the Second Call awarded 6% where: “the project contributes to the improvement of the living conditions of the rural poor, ethnic minorities, women, children, and other marginalised groups.” This should be looked at in relation to the overall objective of poverty reduction, and could be compared, for example, to a Nordic partner’s participation to a project, which originally accounted for 10% in first round of EEP and for 5% in the Second Call. Judging by this, at the time of carrying out the study the program did seem to be developed to conform better to the objectives set in Finnish Development Policy Programme of 2007.

The poverty reduction aspect of the EEP seemed to be a complementary component in the program for some of the donors. It was acknowledged that, in general, renewable energy projects are always quite easy to label as mitigation but it is much harder to place them under poverty reduction. The NDF is mandated to focusing on climate, which naturally makes it their priority when looking at projects for funding. Yet, a focus on economic development was seen as a central component in another interview:

“The fact is right, I think on paper we are development programme, it’s in fact a programme which is in between development and economic cooperation, because they could be commercial projects as well. The fact is that it’s a partnership programme, it means that it can be research institutions, academics, NGOs, private companies, public companies, everyone can be part of it. From the line of your previous question [on the role of energy in development] [the objective] is to stimulate economic development. To stimulate the development of the area where they are and definitely economic development, sustainable economic development.”

By supporting small scale RE projects the objective of environmental sustainability becomes fulfilled in the EEP quite easily, at least as far as this study is concerned. Social and cultural factors and sustainability were not largely discussed, but it is worth noting that small-scale energy production usually has a good ownership over the production and use of energy. For example, large dam projects are usually more prone to causing social distortions than the installation of a pico-hydro. Electrification is also understood as a key component in both countries for development. However, the sustainability of the results of the individual projects raised more views and opinions. The long-term effects of awareness raising and capacity building projects are difficult to measure. Judging by the project designs, the two projects, that fit this category, seem to be responding to national needs and demands in the field of renewable energy and energy efficiency.

The sustainability of the projects, with a clear technological focus, was seen to be based on the costs and reliability of the technologies. One key issue seemed to be the high initial cost of RE technologies. A project leader noted that: “there is still the problem in their mind that they have to invest more to save more money, even with the solution with less than two years of return investment they’re still hesitating, still focusing on investment.” Another point raised in a few discussions concerned the life-span of the technologies used. Any unexpected issue with the technologies introduced by the first round of EEP could easily forfeit the economic sustainability of those projects and only time will tell how they will turn out. The main factor contributing to the overall sustainability of the technologically focused projects was seen by most actors to depend on the financial benefits they can provide.

¹³ Gender is one of the cross-cutting issues of Finnish development policy. The technological focus of the program was identified by many actors and some also pointed out that more consideration should be given to different issues, such as how to include, for example, gender aspects in the program. Nevertheless, for the most part of the program, gender issues had been taken into account in one way or another.

“I think that the level of sustainability of these projects will depend on how much can this project demonstrate to potential stakeholder about the benefits, financial mainly. So if we’ll manage to do so, show in a very clear monetary term that if you do that you will get benefit out of this.”

Without the economic benefits it seems unlikely that the use of the introduced RE technologies will kick-off and spread. The individual projects do seem to be well designed, but it is unclear what the role of the EEP funding for them is? The EEP is scaling up the use of both of the technologies, but can it demonstrate their potential for the local populations in just a few years? Unfortunately, it still seems unlikely that they would really gain much ground without the subsidies.

Obstacles the EEP faces in Cambodia and Lao PDR

As was mentioned above, the sustainability and success of RE technologies seem to be mostly dependent on the economic benefits these technologies can provide. The high initial cost of most RE technologies slows down, to say the least, the adoption of RE technology by local populations. Without a financial support or a subsidy from a donor it was doubted if these technologies would be adopted by the majority of the local populations for a long time to come. Businesses targeting Western consumers were seen willing to make the investment, as climate-friendly appeals to Western consumers and can be a selling point. Some specialists familiar with RE technologies also doubted the sustainability of RE in rural use at their current stage. This is due to the unreliability of the technologies in remote areas as well as poor maintenance and lack of skilled technicians and/or spare parts. Maintenance is especially difficult for household or village projects as it is difficult to have skilled technicians in each village. A technician travelling a long distance to a remote village reduces the cost-efficiency ratio. Further, as it also takes a lot of time it reduces the use-time of the technology in question.

For the RE technologies to spread widely the reliability of technologies and the long-term financial saving they would generate would need to be demonstrated, which is what some of the projects of the EEP aim to do. However, changing attitudes and the policy and economic environment in the countries to be more hospitable for RE is seen as a long process. At the same time cheaper Chinese RE technologies were seen as hampering the overall reputation of RE technologies. Energy efficiency initiatives are seen more viable, mostly because usually they do not involve changes in energy production, but rather consumption, and people can see a smaller electricity bill very soon as a direct result of their changes in behaviour or the adoption of energy saving lamps, for example.

Governments’ priority to provide a grid connection for their populations in both countries means that RE is sometimes seen as an interim measure. Unawareness of the governments’ plans for electrification can sometimes reduce the incentive to invest in RE of households and villages. Lack of awareness and capacity in RE and EE were also singled out as major obstacles in Cambodia and Lao PDR. The general public is not well aware of what kind of steps they can take to improve their energy efficiency and the amount of money they spend on energy. Neither is the awareness of RE extensive. On the technological front the lack of skilled technicians that could maintain and repair RE technologies are seen as an obstacle for the reliability and sustainability. On another level, the capacity of many national actors in both countries to write proposals of sufficient quality for donor funded projects seems to be low.

The projects of the first call aim at answering a number of these issues in a good manner. Unfortunately, the EEP funding has only been announced for three years, and it can be questioned how much can be achieved in such a short time. Also, the overhead costs are likely to be very high if the program will be terminated after only just three years. Many actors suspected the funding to continue after the first announced period. Unfortunately hearsay does not equal knowing, and this leaves room for improvement, especially from the perspective of predictability, which is said to improve the ownership of recipient countries over their own path of development.

While the win-win approach where poverty reduction is combined with climate change mitigation, and seen as an integral element in RE projects, is seen by many as extremely attractive, it seems that in terms of outcomes the issue is not that simple. If one considers climate change mitigation to embody the actual re-

duction of GHG emission and not just the idea of mitigating climate change, then small scale RE projects do not seem to be living up to the expectations. Furthermore, mitigation was seen by many as being to be the key element of the EEP, with poverty reduction results actually looking like the complementary objective of the EEP. Contribution towards poverty reduction can only be evaluated after the program has been running for a time and as such remains to be seen. Still, many actors implementing the EEP projects did not hold extremely high expectations in this regard.

4.6 Conclusions

Promoting RE and EE is a concept, which at the first hand seems very promising in providing pro-poor and sustainable development benefits. Unfortunately, collecting all of these benefits seems to be a harder task. The EEP is trying to tackle this challenge, but seems to be leaning stronger on mitigation than poverty reduction. The LDCs lack ownership of the agenda behind this approach, namely mitigating climate change. Even more, as actual emissions reductions seem very small, it seems to be that it's the idea of mitigating climate change that is controlling the agenda. If time shows that the contribution for poverty reduction does not deliver, EEP will look like a program where the ownership principle does not inform the process the way it should. The LDCs do not have an obligation to reduce their emissions, but they have a right to pursue their own development priorities. For Cambodia and Laos both, the national priority is poverty reduction. Energy can play a central role in development when utilized properly and all the necessary co-factors are in place.

For the final beneficiaries, namely the populations in Cambodia and Laos, the biggest reason for the adoption of RE is the price of the technologies. At the time RE remains expensive and the technologies adopted are subsidies by donors from industrialized countries or multilateral development banks. Industrialized countries have committed to supporting climate measures in developing countries, latest in the Copenhagen Accord in the form of Fast Start Finance. The issue is that these committed funds should be, and are claimed to be new and additional to development finance. However, the Energy and Environment Partnership in the Mekong Region is ODA-funded and as such seems to represent the diversion of ODA to climate change related activities.

The EEP acknowledges some gender aspects, but in practice it was unclear if gender was really a central issue in any of the projects. As a cross-cutting issue of Finnish Development Policy, gender receives little attention in the EEP. Finnish or Nordic added value does not seem extremely high in the projects. Nordic added value can be seen as promoting Nordic values and/or specific knowledge and technologies. Mostly it might be argued to be present in the focus on rural areas and the demand driven approach, the latter receiving praise in both countries. Still, it should be remembered to question whether all of the activities are really national priorities even if there are a number of private actors willing to carry out activities. From the point of view of ownership it is quite satisfying that the EEP does not look like a mechanism for subsidizing Finnish or Nordic companies or technologies. Then again some might consider it unfortunate that for example the promotion or mainstreaming of gender also receives so little attention. Looking at other climate finance mechanisms the lack of gender aspects seems to be more of a rule than an exception.

Both Cambodia and Laos have very little capacity when it comes to renewable energies. This is where the EEP seems to have found a spot where funding is really needed. The sustainability also seems better in these projects as the capacity is not tied to a certain process or technology. Enhanced capacity can increase the ownership of these countries when it comes to the capability to set their own priorities and agendas for both poverty reduction and climate change, and even more in enhancing their power to act independently.

For Finland it would be important to demonstrate its commitment to these countries and this agenda by improving the predictability of funding. It might also be worth considering the focus of this development co-operation program. Integrating development outcomes with climate change mitigation is not an easy task. As such the justified priority of LDCs and the ultimate objective of all development cooperation still is poverty reduction. Unfortunately there is a lack of clear signs that this is really what the EEP is aiming for at the time.

5. CDM AND ITS CHALLENGES TO DELIVER TO THE POOR: THE CASE OF CAMBODIA

Mira Käkönen

The Clean Development Mechanisms (CDM) is one of the three flexibility mechanisms of the Kyoto Protocol. Firstly the aim of the CDM is to give the industrialized countries of the North (more precisely Annex I countries) flexibility to meet their binding greenhouse gas (GHG) emissions reduction targets by allowing them to carry out emissions reductions projects in developing countries. From these mitigation activities Annex I countries (and actors authorized by countries with emissions reduction targets) can acquire certified emission reductions (CERs). The credits can also be sold further in the compliance market. The second objective of the CDM is to contribute to sustainable development in the host countries and communities through creation of environmental, social and economic benefits.

The range of possible projects is diverse including renewable energy, gas or methane capture projects and the destruction of powerful GHGs such as hydro fluorocarbons (HFC). If the North (or more precisely the Annex I countries of Kyoto Protocol) is to benefit from cheaper emission reductions, the South is expected to benefit from access to new sources of investment and from clean technology transfer. In this way the CDM has been seen also as ‘a way to enrol the Southern countries into efforts to address GHG emissions without reduction obligations’ (Newell and Paterson 2010) and to set up institutional infrastructure for monitoring the emissions.

In short, the CDM is supposedly a win-win mechanism in terms of GHG emission reductions and sustainable development. It is meant as a way to manage a global problem and also benefit local people. The relatively short history of CDM projects has been accompanied with criticism especially over the CDMs potential to bring about meaningful change in terms of required mitigation efforts and sustainable development. Now that decisions over the post 2012 period of Kyoto need to be taken, plenty of discussions are going on about the future of CDM and carbon markets in general. One of the discussions around the mechanism has been the unbalanced regional distribution of CDM projects. China especially, but also India and Brazil, have taken a lion’s share of the projects. So much so that some have dubbed the abbreviation of CDM to stand for ‘China Development Mechanism.’ Especially the least developed countries (LDCs) and Sub-Saharan Africa have a miniscule share of current projects. Cambodia is an interesting case as at the moment it tops the LDC chart with 5 registered projects. This chapter explores the constraints and challenges of CDM projects in the least developed countries. Could the CDM be rendered from a ‘China Development Mechanism’ to a ‘Cambodia Development Mechanism’ that actually brings local environmental and social benefits to the LDCs at a reasonable scale? This chapter addresses the issue by evaluating the suitability of the CDM specifically for the LDCs such as Cambodia. Official Development Assistance (ODA) has been seen as one way to level the playing field for the different developing countries and actors in developing countries to develop CDM projects and as a way to steer the CDM to deliver better to sustainable development objectives and to the poor. At the same time there has been a lack of clarity over how, when and where ODA should be used in CDM projects. For a discussion on how ODA is used for CDM capacity building see Box 3.1. This chapter highlights some aspects of the dilemmas in the CDM related ODA use.

The chapter is based on research work that has included literature review as well as empirical work. The empirical work consists of key informant interviews and group discussions that have been carried out mainly in Cambodia in May-June 2011. The empirical material also includes project documents like the Project Development Documents (PDDs) of the Cambodian CDM projects. In Finland two key-informant interviews were made in the Ministry of Foreign Affairs. Altogether 14 key-informant interviews and 6 focus

group discussion (4-8 participants in each group) were carried out. All interviews were recorded and transcribed.

In Cambodia the interviewed informants consisted of:

- Staff of the Climate Change Department in Ministry of Environment, which is the Designated National Authority (DNA) of Cambodia
- Representatives from the donor and INGO community (UNEP, UNDP, KfW and NEXUS)
- Local NGOs (NGO Forum on Cambodia and ADHOC)
- CDM developers or implementers of three different CDM projects
- Focus groups (6) in host communities of three different CDM projects

The topics of the expert interviews related to the informant's views on

- the opportunities and challenges of CDM projects in Cambodia
- the interests of different stakeholders in Cambodia
- the reasons for success and failures for the CDM projects in the pipeline and for the projects that have not entered the pipeline
- CDM's pro-poor and sustainable development potential
- the role of national authorities and DNA
- the role of donors, ODA and other development actors

Three CDM projects, ABC, Samrong Thom and Siang Phong were visited directly. In Samrong Thom also three group discussions were carried out in the host community. In addition visits were made to Kamchay hydropower project and K-Cement but due to difficulties in arranging an official visit it was not possible to enter the actual project sites or interview project developers. Instead group interviews were carried out in the host or near-by communities of these projects. The topics of the focus group discussions related to the possible positive and negative impacts of CDM projects and to the experiences with the project consultations.

5.1 CDM succeeded in taking off but how is it delivering in terms of its twin objective?

The CDM is still relatively young. The decision for flexibility mechanisms was done in Kyoto 1997 but the main operational guidelines for CDM were agreed upon in 2001. For the UN climate change secretariat and many national governments, CDM has created enthusiasm as it has expanded much faster than its designers anticipated. One reason for the rapid expansion of CDM was the decision in 2004 to link the CDM to the EU Emissions Trading System (ETS) market by enabling companies to meet some of their commitments by investing in CDM projects. The CDM has managed to generate interest among investors, project developers as well as carbon traders. Nowadays CDM has grown into a multi-billion dollar business or industry that reaches over 80 countries. Especially China, India and Brazil have been highly successful in attracting new investments to their countries. At the moment there are 4044 CDM projects registered and 4193 at a validation stage. More than 895 million certified emission reductions have been issued to 1491 projects (UNEP/Risoe May 2012).

While succeeding in its appeal for investors and project developers, the CDM has also received severe criticism since its very early stages. The discussion around the mechanism is understandable as like Boyd (2009) has noted the schemes are implemented under conditions of scientific uncertainty and with limited knowledge of the impacts on local well-being. Complaints have been raised e.g. on the cumbersome and expensive approval procedures. More substantially several NGOs, civil society groups as well as policy-makers and scientists have questioned whether the CDM has really managed to steer investments to where

they are most needed and where they can really make a difference (Bakker et al. 2011). This relates to the unbalances in the sectoral distribution of projects and to the problems of so called low-hanging fruits. In terms of created CERs around 75% has come from projects that eliminate powerful greenhouse gases like hydrofluorocarbons (HFC) making this type of projects highly over-represented. There have also been several large hydropower projects in China which probably would have gone forward anyway, with or without the CDM, but which nonetheless were accepted as CDM projects. With regards to hydrofluorocarbon (HFC) projects, concerns have been raised that the CDM has created perverse incentives to over-produce HFCs so that companies would get paid to stop doing it.

CDM projects in Least Developed Countries (LDC)			
Countries	Number of projects in pipeline	Number of projects registered	kCERs expected by the end of 2012
LDC Total	77	30	13373
Bangladesh	4	2	1381
Bhutan	3	2	503
Cambodia	7	5	1226
Lao PDR	9	1	1331
Nepal	6	4	1062
LDC Asia & Pacific	29	14	5503
Cape Verde			
Congo DR	4	2	1118
Equatorial Guinea			
Ethiopia	1	1	179
Lesotho	1		79
Liberia	1	1	187
Madagascar	3	1	138
Mali	1	1	94
Mozambique	1		63
Rwanda	4	3	135
Senegal	5	1	786
Sudan	2		367
Tanzania	7	1	1771
Togo	1		5
Uganda	14	5	2024
Zambia	2		
LDC Afrika	47	16	6946
Yemen	1		924
LDC Middle East	1		924
Projects rejected by DOEs or EB or withdrawn are not included.			

Table 5.1 CDM projects in Least Developed Countries. Source: UNEP Risø CDM/JI Pipeline Analysis and Database, October 2011

The CDM's performance in terms of sustainable development benefits has been also widely debated. The expected sustainable development benefits have included employment and health benefits, reduced expenditure on energy and improvements in local infrastructure. In their early study of first registered CDM projects Sutter and Pareño (2007) observed that while a majority of the purported GHG reductions were reliable in scientific terms, only less than 1% of the projects contributed significantly to sustainable development. Also more recent studies have similarly concluded that the sustainable development objectives have been secondary and often overlooked (e.g. Boyd et al. 2009, Teräsväinen 2009, Newell and Patterson 2010). Quite wide agreement exists that expectations on CDM's potential to deliver to the poor have not

been met (Newell et al. 2011). The synergies between the two core objectives of CDM have proven to be far from self-evident. It has been noted that the considerable economic value of CDM finance leads to the maximization of CERs and not to the maximization of sustainability benefits to the host country and host communities (Boyd et al. 2009). Projects that would have the most potential in poverty alleviation, like rural renewable energy provision have thus far been the rarest ones (Newell et al. 2011). It is simply economically more viable to target big polluters such as large cement factories than poor villagers using biomass or fossil fuels in relatively small quantities. In addition, project developers that are interested in pro-poor rural energy projects have often found out that the high transaction costs and complex methodologies of CDMs make it too difficult for these projects to be economically viable.

The more profound criticism of the CDM has suggested that the mechanism creates new North-South inequalities by using the South as a sink for Northern emissions, obscures the differences between emissions for luxury and emissions for survival and with all the complex methodologies and new institutional infrastructure created to produce flexibilities in emission reductions distracts attention and human capacities away from the more fundamental changes that are needed in societies to leave fossil fuels in the ground (Lohmann 2006; 2008; 2010, Böhm & Dahbi 2009).

The criticism has resulted in different attempts to improve the governance of CDM (Paulsson 2009, Newell and Paterson 2010). These include stricter monitoring of the additionality of the projects which is the main concern in terms of achieving true emission reductions¹⁴. As one result stricter rules were set in place for HFC projects and in future HFC-23 projects will become ineligible e.g. in the EU. In hydropower projects the position of third party evaluators has become stricter and after 2008 a majority of projects failing to progress past the initial validation stage have been hydropower projects. (Newell and Paterson 2010.) In a recent commissioned study by the EC additional quality criteria were suggested for hydropower projects and even banning of credits generated by large hydropower projects was recommended to be considered (SEI et al. 2011).

To tackle the problems of unbalances in the sectoral distribution of projects and the inefficiencies of the project-by-project approach there are new proposals to expand the range of possible investments from individual projects towards sectoral reform and even whole policy reform programmes. Sectoral approaches have been seen as a way to reduce transaction costs and enable more actors to participate also from the public sector. These scaled-up mechanisms are expected to be more environmentally robust than the current CDM, and to give incentives for more holistically planned climate policies and implementation measures. They are also expected to reach sectors like transportation that have not been previously addressed by CDM approaches.

There have also been attempts to develop international voluntary standards that would create more incentives for and more comparability to the sustainable development benefits. The main example so far is the CDM Gold Standard that privileges more stringent sustainable development criteria. At the moment 37 of the registered CDM projects fulfil the Gold Standard (UNEP/Risoe 1st April 2012).

¹⁴ Projects that would be built regardless of the extra financial support provided by the sale carbon credits do not comply with the CDM's essential additionality requirements. That is if projects would go forward also without finance through CDM they are not additional. Additionality is one of the cornerstones of the mechanism. Each project allowed to register under CDM allows an industrialized Annex I country to emit an equal amount that the CDM project is counted to reduce. If the project is not truly additional there is no offsetting taking place.

5.2 CDM projects in the least developed countries

The flow of carbon finance mirrors the flows of finance in general: private investors are attracted to areas where they can make the highest profits with the lowest risks and where the physical and institutional infrastructure is reliable. Attracting CDM investments in LDCs is difficult because of political and economic instability, lack of capacity in administration, low availability of skilled staff and technical equipment and lack of data (De Lopez et al. 2009). Also the complexity of the approval process and the high up-front costs have been among the challenges for actors in LDCs to create CDM projects¹⁵. Possibly even more importantly as LDCs are also the least emitting countries the emission reduction potential in these countries is relatively low.

In October 2011 only 1.1% of projects registered or at validation stage are located in Least Developed Countries amounting to 77 projects in total. Cambodia and Uganda have the highest number of registered CDM projects. (See Table 5.1)

There are some improvements made to enable LDCs and smaller projects to better participate in CDM. Among the LDCs Cambodia has been very active in these initiatives. Cambodia e.g. made a proposal that led to abolishment of registration fees for LDCs and it has also pushed for further improvements like assumption of automatic additionality of certain project types and shortening registration procedures for projects in LDCs.

The creation of a programmatic CDM or Program of Activities (PoA) has been an attempt to allow smaller and more dispersed projects to access CDM finance and it is thought to be suitable especially for LDCs. The PoA has raised expectations that it could enhance chances for projects with quite low emission reductions potential but high sustainability benefits, such as small-scale renewable energy projects that focus on solutions on the household or village level. But even the methodologies of PoA are still often considered as too high-cost and cumbersome in LDCs. So far China, India and South Africa have the highest share of PoA projects that have entered the project pipeline.

Another relevant initiative that aims to tune CDM for smaller technologies (that have high scale-up potential) and to the needs in LDCs relates to standardized baselines. For example Müller et al. (2011) have tried to demonstrate that standardised baselines could improve access to CDM for currently underrepresented project types such as water purification, efficient charcoal production and rural electrification which would have high relevance for LDCs and also potential for pro-poor benefits (see e.g. Müller et al 2011). The most important thing that may change the course of the CDM's regional distribution is that it seems also that the "one size fits all" approach in mitigation mechanisms has come to its end (Bakker et al. 2011). As already stated above there are several new compliance market mechanisms on the table such as sectoral crediting, sectoral trading, and crediting Nationally Appropriate Mitigation Actions (NAMAs) that take moves beyond single project based approaches.

¹⁵ This is not to say that it would not be important to guarantee the additionality and environmental integrity of the projects which easily result in complex regulatory arrangements. However, for many LDCs these arrangements require capacities and resources that are often in short supply.

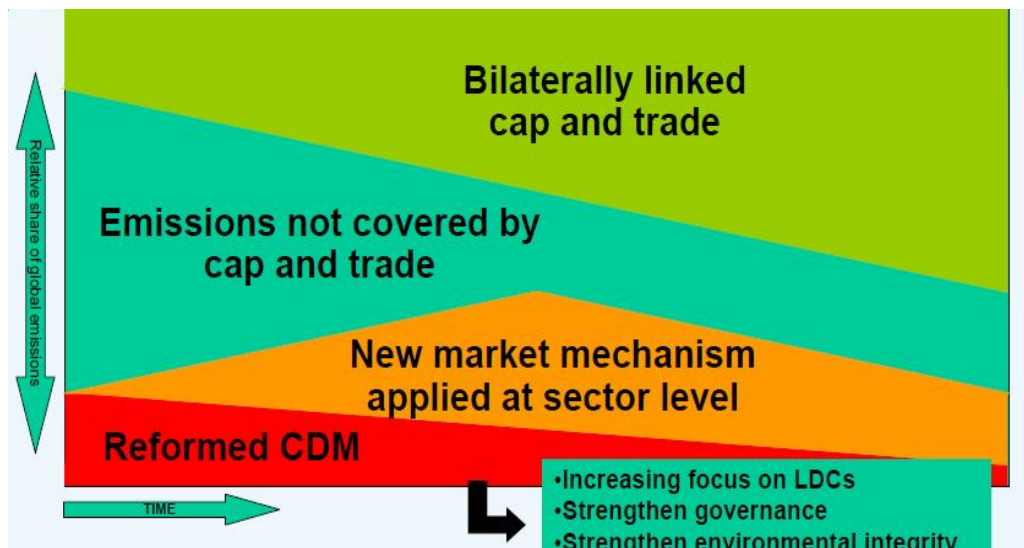


Figure 5.1 : EU's vision for carbon market transition (From EC 2012, presentation 'The role of international credits in the EU ETS after 2012', 21.2.2012, <http://www.ji-cdm-austria.at/blueline/upload/peterzapfelaustrianjicdmws2012.pdf>)

Many of the Annex I countries expect that this is a way how to enrol the more developed developing countries to certain mitigation obligations. For example, the EU wants to see significant mitigation commitments from emerging economies. CDM has been a way for developing countries to address GHG emissions *without* reduction obligations but now EU wants to see the emerging economies to address GHG emissions *with* reduction obligations (see Figure 5.1). EU has preferred that the mechanisms concerning 'large segments of the economy' would to some extent be seen as part of the host country's own contribution to mitigation, and then some of the reduced emissions could be sold as credits to industrialized countries and offset markets. This is also why it is thought that the new sectoral approaches would be tailored to more developed countries whereas the mitigation mechanisms for LDC's would still be more close to previous CDM approaches and LDCs are not expected to have mitigation obligations. Especially the programmatic approach of CDM has been seen as suitable for LDCs. EU's current position is that credits from CDM projects in non-LDC countries registered after 2012 are not eligible under the EU Emission Trading Scheme. Thus the current EU vision of future carbon markets includes a reformed CDM that increasingly shifts its focus to LDCs. This makes it very topical to discuss the experiences so far in the LDCs and as Cambodia is one of the leading CDM country among the LDCs the lessons from there are worth exploring.

5.3 Cambodia: leading the way for LDCs?

Cambodia had at the time of the fieldwork in May 2011 and still in October 2011 7 CDM projects in the pipeline (see Table 5.2 and Table 5.3), making Cambodia a leading CDM country amongst the LDCs. Five of the projects have been registered and two are still at validation stage. However, one registered project i.e. TTY Cambodia biogas project, has faced such financial problems that it has been practically terminated. Also other projects have faced challenges that have led to delays. Only one project, the Kampot Cement Waste Heat Power Generation Project has successfully already issued CERs (on May 2nd 2011). Angkor rice husk cogeneration project (ABC) has been the most delayed project but it is finally quite near to issuance stage. W2E Siang Phong biogas project is the most recent project. It is also the first Gold Standard project in Cambodia. It has advanced rapidly and it might be able to sell CERs soon, but as the carbon prices have been low it might still wait before doing that. The biogas project of Samrong Thom Animal Husbandry has successfully made its biogas plant operational but the project has faced some drawbacks in the monitoring process and thus it may not be selling CERs in near future.

Table 5.2 Registered CDM projects in Cambodia. Source: UNEP/Ris October 2011, Climate Change office of Cambodia and IGES May 2011

Title	Type	Annual emission reduction ktCO ₂ e/yr	Credit start to 2012 ktCO ₂ e	Issuance delay (months)	Project Participants	Credit buyer
Angkor Bio Cogen Rice Husk Power Project (ABC) (attached to a rice mill)	Biomass energy	52	293	54,2	Angkor Bio Co LTD. Mitsubishi UFJ Securities	Japan (Mitsubishi UFJ Securities)
TTY Cambodia Biogas Project (attached to a cassava starch factory)	Methane avoidance waste water	50	217	37,5	TTY Agricultural Plant Development IMEX Co Ltd Carbon Bridge Pte Ltd	n.a.
Methane fired power generation plant in Samrong Thom Animal Husbandry, Cambodia+C15 , (attached to a pig farm)	Methane avoidance, manure	5,6	23	34,5	Samrong Thom Animal Husbandry	Japan (Mitsubishi UFJ Securities)
Kampot Cement Waste Heat Power Generation Project (KCC-WHG) (attached to a cement factory)	EE own generation, cement heat	17	61	23,3	Kampot Cement Company Co. Ltd.	Denmark (Nordjysk Elhandel)
W2E Siang Phong Biogas Project Cambodia (attached to a cassava starch factory)	Methane avoidance, waste water	27	42	4,1	W2E Siang Phong Ltd	n.a.

The two projects at validation stage (see Table 5.2) include a Korean biogas project attached to a MH Bioenergy cassava ethanol plant in Kandal province and a Chinese large-scale hydropower project Kamchay in Kampot province. Especially the latter one has been controversial and its chances to get registered may not be so obvious. In addition to the projects in the pipeline, one project which was fostered by World Bank has been rejected by the Executive Board (see Table 5.2).

Table 5.3: CDM projects at validation stage and rejected projects. Source: UNEP/Riso October 2011, Climate Change office of Cambodia and IGES May 2011

	Title	Type	Annual emission reduction ktCO ₂ e/yr	Credit start to 2012 ktCO ₂ e	Project Participants
2 projects at validation	Kamchay Hydroelectric BOT Project	Hydro: new dam	370	432	Synohydro Corporation Ltd and The Royal Government of Cambodia, Electricite du Cambodge
	Biogas Project at MH Bio-Ethanol Distillery	Methane avoidance, waste water	53	158	MH Bio-Energy Co. Ltd.
1 project rejected	Cambodia-rural Electrification and TRansmission Project – 220 kV Interconnection between Cambodia and Vietnam	Energy Efficiency: Supply side	54	-	In Cambodia: Electricite du Cambodge (EDC), In Vietnam: Electricite of Vietnam (EVN) Power Company 2 (PC2) IBRD (World Bank) as trustee of Carbon funds

The national climate change department in the Ministry of Environment, which is the DNA of Cambodia has been active in creating an enabling environment for the CDM projects. It has 15 staff members, of which around half dedicate their time to mitigation issues, but some of them are also involved in monitoring adaptation processes.

Half of the CDM projects have been developed in relatively close cooperation or frequent communication with the DNA. These include projects such as the Samrong Thom pig farm’s biogas project and also the TTY and Siang Phong biogas projects. The Angkor rice mill cogeneration project has been developed quite independently but still the staff in the climate change department noted that they have been quite cooperative and joined, for example, the workshops on the CDM organized by the DNA. In turn the big international companies have developed their projects very independently. K-Cement is a joint venture of Thai Siam Cement. MH bioethanol project is developed by a Korean company and Kamchay hydropower project is under Chinese Sinohydro company. These companies seem to be well aware of how the CDM functions and their communication with national authorities has been very minimal.

A common nominator for the projects in the pipeline is that they are carried out by industries that in their respective sectors are the biggest ones on the Cambodian scale. At the same time all except the Kamchay hydropower project are according to the CDM methodology considered as small-scale projects. From the beginning the DNA, however, has tried to promote also smaller scale projects. The initial list of potential CDM projects developed by the national Climate Change office actually included also projects that build on small technologies like a national biodigester program that supports the extension of household biodigesters. These projects, however, have turned to the voluntary markets because the methodology requirements in the VCM are more flexible to small technologies and the transaction costs lower. In addition before 2008 the DNA has tried to assist Cambodian swine farmers to develop CDM projects and in acquiring methane capture and combustion technologies, but most of the farms with their 5000-10 000 tonnes CO₂ equivalents per year were below the limit of simplified small-scale technologies. Also because the required technology was not available in domestic market only the largest producer, and not the community- and family-based entrepreneurs, could contract the services and purchase the required technologies. The situation has been the same with other producers. The only cassava factories that have had the chance to develop a CDM project have been the biggest players with best international contacts in their field and yet e.g. the TTY project failed.

In recent years the programmatic approach, PoA, has been promoted by some actors. For example, the German development bank KfW and the Japanese research institute IGES have held workshops together with the Cambodian climate change office on PoA. UNEP, following the request of the Cambodian Cli-

mate Change office, has conducted a feasibility study of PoA (UNEP 2010). Several potential projects were identified, like a household biodigester program and a solar lantern programme but so far no PoA projects are under development. To a great extent this is because even in the PoA the monitoring methodologies for projects that use small and dispersed technologies are considered as too complex and costly.

The delays that the current pipeline projects have faced have related to fluctuating markets in such products as cassava and pigs. For example the situation for the swine farmers has been very unstable e.g. because cheaper meat imports from Vietnam and also the economic crisis in 2008 affected the swine producers. After 2008 many smaller farms had to stop their operation and also the biggest producer like the Samrong Thom farm reduced the number of pigs from 10.000 to 5000. Similarly the markets for cassava have been unpredictable. One of the main reasons why the TTY project had to be halted was that the business of cassava went down and the biogas component was not fed with enough waste.

Another key factor is the non-existence of local markets for required technical equipment and lack of skilled technical workers. The installation of the ABC's rice husk co-generation plant was almost dependent on Thai engineers. One cause for ABC's delay were the border conflicts between Cambodia and Thailand, as this has affected the availability of technical staff and the supply of technical equipment from Thailand.

5.4 Sustainable development benefits falling short of promises but still “better than the baseline”

The UNFCCC has outlined in the Marrakesh Accords of 2001 that host countries themselves set the definition of sustainable development and are responsible for its governance. This acknowledges that there is no “one size fits all” policy, and thus sustainable development criteria must be set in accordance with national development goals. This differs greatly from the governance of GHG emissions reductions which are strictly monitored at the international level. There are clear differences between the countries in their set development goals regarding CDM. For example, Brazil has been observed to pursue employment and to some extent income distribution objectives, China aims to advance its energy policy whereas Peru is focusing on more general local community needs (Boyd et al. 2009, Cole 2007). There are also different regulatory approaches. India, South-Africa and Brazil have developed very generic criteria and apply a desk-based checklist approach whereas in some countries DNA actually visits project sites and asks local communities about their expectations, needs and concerns (Boyd et al. 2009).

In Cambodia, the DNA has developed evaluation criteria for sustainable development benefits that has 4 pillars or categories: environmental benefits, social benefits, economic benefits and technology transfer. Under each category there are several indicators that are all based on government development priorities (e.g. National Poverty Reduction Strategy or the current Five-Year Socioeconomic Development Plan), environmental legislation (e.g. Sub-decrees on Air Pollution or Solid Waste Management), and other legislation such as labour or investment law. Each indicator under the four categories is evaluated according to three ratings: positive, neutral or negative. The evaluation scheme is built in such a way that negative results are not allowed in any of the indicators. Thus a negative outcome in one indicator or category cannot be offset by a positive outcome in another indicator or category. Their regulatory approach is close to the desk-based checklist approach, but with some projects the DNA has managed to build more close communication.

The Cambodian DNA is quite proud of the developed criteria and assessment framework and it is considered as an advanced one in the region. There have been some visits by Lao officials to learn from the Cambodian experience of setting and using the assessment framework. But as one interviewed person from the climate change office stated: *“This is our principle, but we must be flexible. In practice you don't easily get an ideal project.”* Overall the CDM projects now in the pipeline have performed quite modestly in terms of sustainable development benefits, some projects have fallen short of their promises and some projects have also had some negative impacts. The table below summarises the main observations of the registered projects. The projects that are still at validation stage have so far had more problematic sustainable development outcomes.

Table 5.4 Summary of observations regarding the sustainable development benefits and impacts of the registered and still operating CDM projects in terms of the main four elements of Cambodia's sustainable development criteria

	ABC	Samrong Thom	Kampot Cement heat project	W2E Siang Phong biogas project
Local environmental benefits	No concrete local environmental benefits	Improved water quality and prevention of odours.	No concrete local environmental benefits. Complaints from local communities that the host factory of the CDM component has caused local environmental problems, such as worsening of ground water.	Improved water quality and prevention of odours
Social benefits	Promises in PDD to electrify near-by villages have not materialised	Promises in PDD to electrify near-by villages have not materialised. Benefits local community by providing a shop of cheap battery caching.	No promised social benefits in PDD	No promised social benefits in PDD
Economic benefits	Benefits one of the largest rice mills in Cambodia enhancing its economic performance	Benefits the biggest pig producer in Cambodia enhancing its economic performance	Benefits the biggest cement factory in Cambodia enhancing its economic performance	Benefits the cassava factory that is among the biggest cassava producers in the country
in terms of employment	Staff, especially the technical staff are employed from Thailand. Angkor rice mill however is a significant local employer.	The biogas project has generated a few new jobs. Local community members complained that the farm in general has hired staff only from other provinces. There were also worries about the workers' rights: the workers lived inside the farm and seemed to have restricted possibilities to go out from there.	The CDM component has possibly been developed by foreign staff. The factory as such is a big employer in Cambodia. The local communities complained that locals have been hired mostly in the construction work but the permanent staff is principally from cities and elsewhere.	The staff required for the CDM component is small but the factory as such is a significant employer.
Technology transfer	First time the technology was applied in Cambodia The chosen technology is not easily replicated in other Cambodian rice mills. Promised technical trainings for local workers have not materialized.	First time the technology was applied in Cambodia but currently does not seem to be replicable to other producers in the country because they operate in smaller scale.	First time the technology was applied in Cambodia, but currently K-Cement is the only large cement factory in the country.	First time the technology was applied in the treatment of wastewater of Cassava and other similar factories. Possibilities for replication exist.

The projects that have offered the most clear direct benefits are the biogas projects. Both the Siang Phong cassava factory and the Samrong Thom pig farm used to have an open waste pond, which produced a lot of smell and contaminated the local environment. By covering the ponds and by better treatment of the waste water these problems have been solved. The other CDM projects have not presented such direct local environmental benefits.

In regard to social benefits there have been some unfulfilled promises at least partly due to the delays and changing circumstances. For example, the Angkor biomass project signalled in its PDD that it would probably have the capacity to produce more electricity than what the Angkor rice mill requires, enabling it to contribute to the electrification of the neighbourhood area by selling them reasonably priced electricity. However, as the project is nearing completion, the villages nearby have already been connected to the grid. The company does not want to go into difficult procedures to get the license from the Electricity Authority of Cambodia (EAC) to try and sell electricity with a cheaper price. Also Samrong Thom biogas project promised to electrify the near-by villages. However, after the project started the production capacity of the farm went down almost 50% due to fluctuations in the markets. Thus it is not producing significant amounts of extra energy. With the extra-electricity produced the farm has set up a new business: ice-making. Also it has a small shop for battery charging. The latter was the only positive contribution that the interviewed host community members commented to have received from the project as the battery charging shop charges only half of the price compared to the normal shops.

The technology transfer of CDM projects has been significant in the sense that all of the projects have been pioneer implementers of the respective technologies and at the same time they are significant and in the case of K-Cement the only actors in their respective fields. However, the chances for replications or scale-up are limited. The projects are large-scale in the Cambodian context (although according to CDM criteria all except Kamchay dam are small-scale projects), whereas most actors for example in the agricultural sector that could benefit from methane capture or biomass energy are small or medium scale enterprises who are too small to develop a project alone and for whom it is difficult to acquire the required equipment and services. It is actually quite ironic that methane capture from wastewater ponds that is considered in Cambodia's neighbouring countries i.e. in Thailand and Vietnam as simple technology is currently "a guarded secret and a competitive advantage for those businesses with access to it" (Lopez 2011). Also the co-generation technology that ABC opted is such that for the smaller-scale mills it is not viable to consider it. Also the transfer of knowhow has been quite limited. The skilled labour used in the projects has mainly been from Thailand or other countries. Some projects like the Angkor cogeneration project did promise in its PDD technical trainings for local workers, but these never materialised.

The economic benefits seem to be significant for the host companies of the CDM component or project and the host companies as such are significant employers although the CDM projects in themselves have not offered many new job opportunities. At the same time the companies often hired people from other provinces so the host communities of the projects have not received many new employment opportunities.

Some projects had actually also detrimental impacts. The two projects still at the validation stage seem to be the most problematic ones. There have been losses accounted in local fisheries adjacent to the MH bioethanol plant. Whether the losses are due to chemical substances discharged in waste water by the plant or changes in water temperature is still under investigation. In the case of the K-cement factory the CDM component as such has probably not caused negative impacts. The operation of the factory itself, however, was received by interviewed villagers in the vicinity of the factory with several concerns and complaints. The largest issue was the worsening of the quality of ground water.

The most controversial case is the Kamchay dam run by the Chinese Sinohydro company. The proposed dam will flood 2000 ha of Bokor National Park, an area rich in biodiversity. As such, it will not cause the usual dam-related problems of displacement and re-settlement. However, the project has been criticized from a wide range of actors, and it has incited already three public demonstrations. NGOs have complained about the lack of public consultation and information disclosure, with severely restricted access to the Environmental Impact Assessment and the Environmental Management Plan of the project. The protests have circled around issues concerning the local communities. At least four communities in the vicinity of the

dam are almost entirely dependent on non-timber forest produce from the area. Access to the parts of the forest that are not to be flooded is restricted by the project and villagers have not been compensated for the livelihood losses caused by this. This has caused several demonstrations. Another type of protests was evoked by the effects of the project's rock blasting, which showered local farms with chunks of rocks. The company agreed to pay compensations only after the villages blocked the road and did not let the company enter the blasting site (Phnom Penh Post 11 March 2009). The third protest related to supposed local employment benefits from the project. Local workers complained about low wages and delays in wage payments. While most of the workers were brought by the company from China, the most low-skilled workers were first locals. After the protests, the company hired workers from other Cambodian provinces.

The project, however, is supported by the Cambodian government officials who stress that the benefits overshadow these negative incidents. As a country dependent on energy imports, the project has the important benefit of securing a national electricity supply. Whether the project should qualify for CDM based on this, however, is questionable. It is possible that the project will face difficulties convincing the CDM EB of its additionality¹⁶ as the project was initiated well before its CDM application. Finally, critical voices have questioned the 44 year built-operate-transfer (BOT) agreement, claiming it will be more profitable for the Chinese company than Cambodia. One interviewed expert from the international donor community of Cambodia commented that if Kamchay gets approved, it would "serve as an example of CDM as the 'China Development Mechanism' even outside of China".

As many of the project participants in Cambodia are foreign companies also the revenues from selling CERs do not really benefit the actors in the host country. In some cases the issue of CER profits has created tensions. One potential CDM project in Cambodia has been a methane recovery project from a solid waste dump site in Stung Menchay. Several private sector companies from e.g. Korea, Germany and Italy have discussed developing a project with the municipality but without any successful agreements. One of the issues has been that the municipality wants to negotiate and have a share of the project or of the CER revenues. So far Cambodia has not considered taxation options to be the way forward. As one interviewed official stated:

"We don't know yet whether we could consider carbon as imported goods. If we impose tax on carbon or claim a share in CER it might be a kind of discouragement for all private companies to invest in CDM. So I think we are at a phase where we just have to encourage and try and promote the CDM. We are not like China where government gets shares from some CDM projects and still investors don't mind because the business is so lucrative."

Generally, despite shortcomings of the CDM projects and their co-benefits, the interviewed staff members of the Climate Change department considered the current projects as beneficial and important for the country. A comment from one interviewed official summarises well the perception of the DNA staff: *"Even if they [the CDM projects] do not deliver in all possible ways and some contributions fall short, we still encourage the CDM projects to go forward because at least they are better than the baseline would be"*.

It was viewed as positive that the sustainable development criteria is determined nationally and, at least in theory, the DNA can act as a gatekeeper and decide which projects can move forward to the CDM pipeline. The main source of frustration in the climate change department was that there is no real monitoring system in place on the compliance of environmental and social benefits. The staff of the department expressed that all in all they were not in an easy position to deal especially with the "big business actors". Without a clear mandate the possibilities to check whether the promises for economic, environmental and social benefits or technology transfer given in PDDs are met and to influence the projects to actually keep their promises are limited. As one interviewed official said *"Well our communication with the project normally ends*

¹⁶ About additionality see page 44.

when we issue them the approval letter to go forward. So after that, yes maybe we can request a visit, but that's it. This is private sector you know?"

Thus part of the governance challenges regarding the sustainability benefits of CDM projects can be traced back to the fundamental governance architecture of the CDM. Whereas the compliance monitoring is relatively strict with emission reductions, there is no standardized monitoring for sustainable development benefits which is the other part of CDM's twin objective. The loophole is that the actual issuance of CERs is decided purely on the basis of emission reductions monitoring and verification and there is no monitoring or verification of the sustainable development benefits that the project state in their PDDs (cf. Olsen and Fenhann 2008).

If the government officials find it challenging to influence the project design and foster approaches that would bring more benefits for the host communities, other stakeholders have even more difficulties to follow the project activities. The highly technical and closed nature of CDM procedures does not make it easy for civil society actors to meaningfully participate in them. Studies elsewhere have shown that stakeholder consultations related to CDMs are also often conducted in a selective manner, so that critical views are under-represented (Cole 2007, Corbera and Brown 2008). This seems to be the case in Cambodia as well. The interviewed local NGO representatives complained especially about the exclusive stakeholder consultations by the most controversial of the projects, the Kamchay hydropower plant.

5.5 Development finance, CDM and Cambodia

ODA has been seen as one tool to foster the CDM projects in LDCs that have limited resources for the DNA and lack of data, skilled staff etc. Development finance could be used to close off capacity and institutional gaps related to CDM procedures in LDCs. It could also be a way to strengthen sustainable development benefits. An interesting observation from the Cambodian case is that it seems that projects with a closer relation to the climate change department were also the ones that had somewhat more concrete benefits to their host communities. In comparison, the big international companies that developed their projects independently had more limited and in some cases even detrimental impacts. This suggests that an important element for projects that benefit the host country and communities is a well-functioning governmental agency that has been able to set up meaningful criteria and regulatory approach for sustainable development benefits. One part of CDM related ODA has been precisely the strengthening of capacity and resources of local administration.

In Cambodia the DNA has received support from three different projects so far. The EU EcoPro Asia project supported mainly in analysis on national greenhouse gas emissions and emission reductions potential. The UNEP/Risø centre has given support to institutional strengthening and capacity building. The most long term supporter has been Japanese IGES which is funded by Japanese Ministry of Environment. UNEP/Risø and IGES have both contributed to the setting up of the Cambodian DNA. They have helped in disseminating CDM awareness to the private sector and encouraged domestic actors to develop CDM projects. Importantly they have also assisted in developing assessment guidelines including the sustainable development criteria. In addition IGES has assisted Cambodia to take part in international climate change negotiations and supported Cambodia to submit proposals to the CDM Executive Board on how the CDM could be made friendlier to LDCs. Cambodia has made a proposal on the abolishment of registration fees for projects hosted in LDCs which was accepted and proposed shortening the period of registration procedures for small-scale CDM project activities.

Dilemmas of CDM related ODA

CDM related ODA can also be problematic. Researchers such as Michaelowa and Michaelowa (2007) have pointed out that donors often act out of self-interests that do not necessarily match with the priorities of the recipient. The fostering of co-benefits or more balanced and pro-poor distribution of projects is not

always the main motivations for CDM related ODA. Also the export interests of clean technologies and better out-sourcing possibilities for mitigation activities have been motivating factors (e.g. Matthews and Paterson 2005, Gupta 2009). This is why the danger in ODA use for CDM is that aid gets diverted to regions, sectors and projects with the largest and easiest mitigation potential from the sectors where the most depressing needs for development and poverty alleviation may lie (Dutschke and Michaelowa 2007, Michaelowa and Michaelowa 2007). There have been attempts to regulate the use of ODA and to rule out the possibility to use ODA to pursue CERs for the donor (see OECD/DAC 2004) but the regulatory framework is still partly unclear. Especially Japan has often managed to buy credits from projects it has funded with ODA. Also Denmark has used its development projects in its own CDM purchasing program. In Cambodia there have not been cases with this kind of problematic ODA use even though some self-interest from the donor's side has been observed.

In Cambodia the assistance from IGES for example was very much appreciated in the climate change office. IGES has been a key supporter for assisting Cambodia in influencing the CDM procedures to be simplified and made easier for LDCs. At the same time the Japanese are buyers for the CERs in at least two CDM projects, i.e. almost in half of the registered projects and they are waiting for the first issuance of credits. One Cambodian official, however, viewed the situation very pragmatically: *"We value very much their support. At the same time we understand they want to provide technical assistance. Because at the same time they are interested in purchasing CERs as well."* In the case of IGES it has to be also noted that the support has not been ODA money but money from the Japan's Ministry of Environment.

One of the expressed concerns in capacity building related support was the so called boomerang aid effect. This was described by one official as follows

"I think that should be ok...using ODA to implement capacity development projects but my view is that any capacity building projects should be designed as part of a bigger project, you know, developing capacity to do something else. Because capacity building project on its own will not have much impact on performance of institution or country. But overall I think it's ok to use ODA money to do capacity building activity as long as not big channel of money will go to back to the donor country like kind of boomerang. You know a big per cent of the fund go to consultants for example, especially if the bidding process is not stringent then the money just pass to your account and go back to your own country. This is called boomerang aid."

According to the interviewed officials the most problematic experience thus far related to CDM related support have been with development banks that have tried to turn already existing projects in their pipeline into CDM projects. Especially the ADB funded program PREGA (Promotion Of Renewable Energy, Energy Efficiency and Greenhouse Gas Abatement) that terminated in 2007 apparently in some disagreement was perceived to have dubious CDM interests. One interviewed official described this experience stating *"They wanted to include all kind of projects that already existed in their portfolio, even coal plants as CDM. We said no, that this is in your portfolio already and that this is just a normal investment project. It's not really CDM. But they wanted to make everything CDM. We disagreed with that."* World Bank in turn tried to take forward a transmission line project between Vietnam and Cambodia. At the same time the plans for regional grid have been part of ADB-led Greater-Mekong Subregion (GMS) Plan since the 1990's. GMS had been supported also by the World Bank. To a significant extent it is based on the establishment of a regional electricity-grid based market (Yu 2003). The project was rejected by the CDM Executive Board, possibly because of difficulties to prove the additionality. The World Bank was viewed critically also in terms of the sustainable development aspects of the CDM. *"In World Bank they are not interested in small projects. They want big projects with big investments with multimillion US dollars. So to be honest I think that they are really, not very interested in a kind sustainable development aspect of GHG mitigation projects."*

At the same time there has been ODA funded initiatives in Cambodia that try to help starting pro-poor projects and get them "packaged" for the carbon markets, both for voluntary as well as compliance market. The main example thus far has been a network called NEXUS that is based in Cambodia (although it is

registered in Singapore). They see their role as setting better standards for carbon markets including the CDM. An interviewed staff from NEXUS stated: *“We want to say, hey, this is good kind of energy access program, it’s sustainable, it’s clean energy, it’s reliable technology, it’s appropriate. And these are now available in carbon markets. It’s kind of showcasing and putting forward initiatives and ideas and maybe some of the CDM projects can learn from it as well.”* The work of NEXUS is discussed in more details in Chapter 6.

Main concerns: diversion of aid and ownership

In general the main concern among the Cambodian officials of the Climate Change Department seemed to be that donors have a strong preference on mitigation over adaptation. So far there had not been cases of clear diversion of aid but worries were expressed that this could be a problem in the future. According to an interviewed Cambodian official “Annex 1 countries should provide funding to mitigation that is new and additional. They should not be allowed to recycle the same money as ODA and climate change assistance. This is highly challenging as there is yet no firm mechanisms to verify what is ODA and what is not. Especially as long as 0.7% of GDP is not achieved”. The preference for mitigation funding is well manifested for example in Japan’s new climate initiative that allocates 80 per cent of the initiative’s funds to mitigation. Another official commented the Japan’s interests for funding mitigation: “Most of that money for mitigation will be used to support promotion of Japanese technology... But this is very difficult for us as a recipient country to have a firm position on this, because you need to balance your views very well with the donor.”

Still technology transfer was viewed as important. Some concerns were, however, expressed that recipient countries could be used as dumping sites for out-dated technology or as a testing ground for new and unproved technology. The challenges in technology transfer were seen to lie at the heart of the ownership question in very concrete terms, that of property rights. One interviewed official stated that it is not that difficult to own the idea of the need for clean technology. Instead, the main question is who will benefit from the CDM type mitigation projects if they are designed by the donor country’s technology promotion interest. The market mechanism in the CDM as such does not seem to be the best way to deliver technology transfer but then again it was seen probably as the only realistic way to go forward:

“We need this technology, but it is expensive. How can we afford it? If our potential for CERs and profits are low, who wants to invest in here? The discussions on global fund on technology transfer are fine of course but it will be difficult. The intellectual property rights will be the problem. No one is willing to give the technology just like that right away. And if we want to create a global fund to support technology transfer, fine, but who will give the money to this fund?”

5.6 Conclusions and future steps

The future for the CDM looked highly uncertain before the Durban Summit. Even though the number of projects in the CDM pipeline increased rapidly in 2011 this was mainly because many latecomers wanted to ensure their registration prior to the end of the Kyoto period in 2012. There have also been gloomy signs of record low carbon prices. The Durban agreement did support and now facilitates the continuation for the CDM even though the precise details of how the Kyoto Protocol will be extended are still to be finalised. There are also on-going efforts to strengthen confidence around the future of the compliance markets. For example the World Bank has tried to signal confidence by extending the Prototype Carbon Fund until 2023.

What seems to be happening is that the CDM will continue to be reformed and the focus will shift increasingly to the LDCs. EU’s current position is that credits from CDM projects in non-LDC countries registered after 2012 are not eligible under the EU Emissions Trading Scheme and the Effort Sharing Decision. Also the World Bank considers setting up a new post-2012 carbon fund for mitigation activities that focus on low-income countries and LDCs. An important question thus is how to make the CDM suitable

for countries with relatively low emission reduction potential and high sustainable development and poverty reduction needs. In addition if CDM entrepreneurs turn their eyes more towards the least developed countries the importance of strengthening the ownership of the CDM in LDCs comes to the fore as well as the importance to strengthen the capacity and resources of LDCs to have more influence over CDM investments.

Development finance has been seen as one way to foster more balanced regional distribution of CDM projects, to strengthen the required capacities in LDCs and to improve the performance of the CDM in terms of sustainable development benefits. With development assistance many DNAs for example have been established, supported and trained. So far Cambodia has been one of the leading countries among LDCs in terms of CDM projects. Active national authorities have been an important ingredient of this success. Still the sustainable development benefits of Cambodia's CDM projects have been very modest and some of the promised benefits outlined in the PDDs have not been met. CDM developers are often not too eager to work closely with the governmental planning agencies because their interest is to find the least-effort means to earn money (Whittington 2011). In the case of Cambodia the large international companies had the most limited contributions to local social and environmental benefits.

An area for ODA-supported capacity building lies in the environmental and social regulation of CDM projects. Governments that have difficulties in attracting investments are often not likely to lay down strong conditions for investment in general or for CDM investments in particular. In addition most of the local DNAs, especially in LDCs like Cambodia, have no concrete tools or resources to continue communication with or monitoring of the projects after they have received an approval letter from the DNA. A lack of resources can also easily result in difficulty to screen and follow up on the applications. Ideally the DNA should have enough resources to actually visit project sites and consult local communities about their development needs and concerns. This approach could enable more comprehensive ownership of the CDM projects also by the local communities (Cole 2007, Boyd et al. 2009). Development finance e.g. in terms of capacity building and support for DNAs could be used to enable this. In addition it could be considered whether the sustainable development benefits that have been promised in the PDDs could be somehow monitored and verified before the issuance of CERs. To ensure wider ownership the capacity building projects could also consider targeting civil society and NGO participation in addition to supporting the capacities of government and business actors.

For the use of CDM-related ODA, certain principles deserve to be highlighted. A guiding principle for donors and development assistance should be placing the priorities of the recipient country and its poorest communities first. Technology exportation interests or out-sourcing of emission reductions should not be the driving interests of mitigation-oriented aid. What is still missing is a strict policy framework that would really limit these potentially counter-productive self-interests of donors.

When discussing the prospects of the CDM in LDCs it is important to consider also the very structure and logic of the mechanism itself. The LDCs simply have a limited supply of large-scale emission reduction projects, as they are not big emitters in the first place. The same applies with the question of how CDM could better deliver to the poor. Therefore, it may be important to admit that there have been overly optimistic expectations of the CDM's potential to produce multiple benefits and especially benefits for the poor. There should be more consideration of other types of finance and mechanisms for the countries with relatively low emission reductions and high development needs. In terms of aid used for activities related to CDM (e.g. capacity building) this could mean that aid would often be better spent if it was directly channelled to projects that aim to enhance rural energy provision with sustainable renewable energy than for projects that enhance the development of CDM projects, which in LDCs like Cambodia often benefit the largest industrial actors of the country. This idea is similar to Bruggink (2012) who has stated that there is a fundamental difference between "solving problems related to rising affluence (energy infrastructure and mitigation) and problems related to persistent poverty (energy access and adaptation)" and following from this suggested that ODA funding should focus on the latter one where as new additional climate change funding could target the former ones.

6. VOLUNTARY CARBON MARKET: UNTAPPED POTENTIAL OR RISKY BUSINESS FOR PROJECT DEVELOPERS?

Hanna Kaisti

6.1 Introduction

Voluntary Carbon Market (VCM) refers to carbon markets outside the compliance markets. VCM has developed separately from the Kyoto process, and independently from governments' emission reduction targets and policies. VCM was originally initiated by companies and individuals in countries where governments were against joining the Kyoto Protocol, including the United States. The concept of a voluntary carbon market rose from frustration with the lack of state action, or in the situation where governmental policies were perceived to be slow, inadequate, or non-existent (Bumpus & Liverman 2008, 132).

There are two types of Voluntary Carbon Markets: legally binding and non-binding systems. In the legally binding Voluntary Carbon Market members join voluntarily, receive certain amounts of allowances and agree to legally binding emission reduction targets. An example of a binding cap-and-trade system is the Chicago Climate Exchange (CCX), which operated in North America from 2003 to 2010.¹⁷ The focus of this chapter, however, is the Over-the-Counter (OTC) voluntary market which is not driven by any emission caps and is not legally binding. Outside of the Chicago Climate Exchange, there is a wide range of voluntary transactions that make up a voluntary market. Since this market is not part of a cap-and-trade system, where emission allowances can be traded, almost all carbon offsets purchased in this voluntary market originate from project-based transactions. (Hamilton, Sjardin, Peters-Stanley and Marcello 2010, 7–8).

Like other carbon finance mechanisms, also the VCM has relatively short history. The first VCM project was implemented in 1989 in Guatemala. At the beginning VCM was considered to be the Wild West of carbon trading because it lacked regulation. Voluntary markets attracted controversy as all sorts of rogue traders started to enter carbon markets, trying to make easy profit. As a result, many dubious claims about offsetting projects and their emissions reductions and contribution to sustainable development were made. In response to these *carbon cowboys* (see Box 5.1) a range of different standards, or certification schemes, have been developed to introduce regulation and quality control. The Gold Standard and the Voluntary Carbon Standard are the two main certification schemes in the VCM, but numerous new third-party standards and registries have been introduced over the last couple of years and the competition among carbon offset standards has increased dramatically since large financial institutions, businesses and industries have gotten involved in the carbon trade. (Kollmuss et al. 2008, 14) The market can thus still be seen as young, unstable and very much emerging.

¹⁷ In 2010 the CCX ended emissions trading when IntercontinentalExchange (ICE) acquired the Chicago Climate Exchange parent company Climate Exchange Plc, along with the European Climate Exchange. ICE now administers the CCX registry and offset protocols under the CCX Offsets Registry Program. The operation ended in 2010 partly because the U.S. did not enact carbon cap-and-trade legislation. There were also reductions in the carbon trading activity. (Peters-Stanley et al. 2011)

Emission reductions in voluntary markets are called *Verified* (or *Voluntary*, depending on the source) *Emissions Reductions (VERs)*, or simply carbon offsets or carbon credits.¹⁸ Each carbon offset is usually taken to be equivalent to a ton of carbon dioxide. Carbon offsets occur when one actor (individual, company, NGO or state) invests in a project which results in a reduction of greenhouse gas emissions that would have not occurred in the absence of the project. (Bumpus and Liverman 2008, 135; Böhm and Dabhi 2009, 11) Voluntary Carbon Markets operate on project-based reductions of greenhouse gas emissions (see Figure 6.1 below). Projects generate emission reductions by reducing, capturing or storing GHG emissions. At the very general level the offset projects can broadly be split into three categories: renewable, energy efficiency and sequestration. (Strickland, Bumpus and Lovell 2007; Peskett et al. 2007) More specifically, offset projects could for example involve installing renewable energy technologies (e.g. biogas), implementing energy efficiency measures (e.g. by capturing and using heat from electricity generation for other purposes) or removing carbon dioxide from the atmosphere through carbon sequestration (e.g. by enhancing tree cover) (Böhm and Dabhi 2009, 14; Bumbus and Liverman 2008, 133). Many offset projects which are unsuitable to be registered as CDM projects can however enter the voluntary carbon market. For instance, the CDM has limited forestry activities to only afforestation and reforestation, ruling out a majority of forestry activities under REDD+. A large part of the voluntary projects in the developing countries are REDD+ projects, typically in areas with high conservation value.

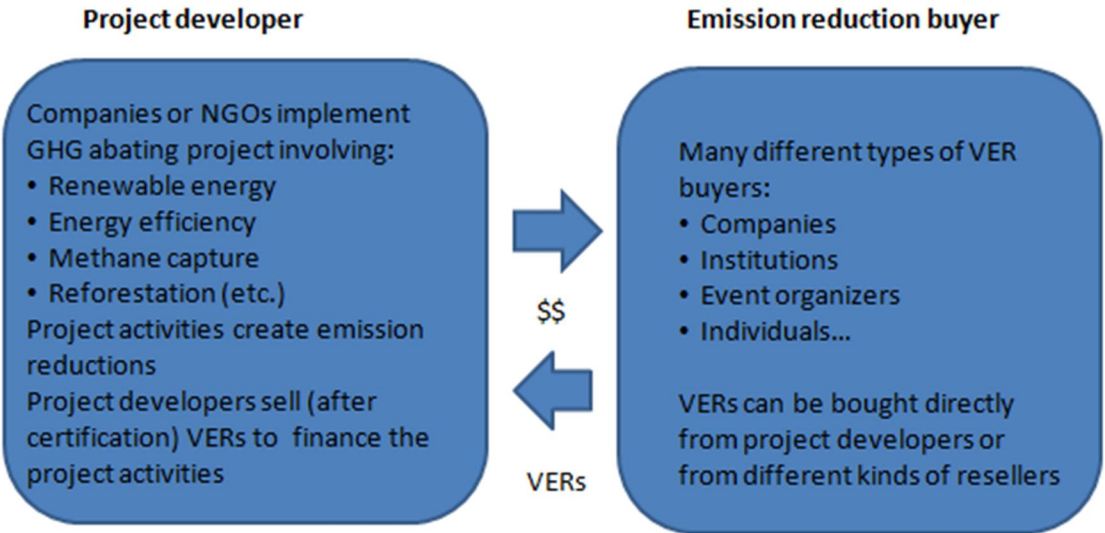


Figure 6.1 Project-based carbon offsetting in Voluntary Carbon Market

Buyers in the voluntary market cover a range actors, including individuals, corporations, non-governmental organizations, local municipalities, public sector actors, and universities. Companies often buy their offsets either directly from project developers or from resellers. Typical motivations for private companies include corporate social responsibility and other public relations-related reasons, as well as gaining experience of the carbon market to better influence future policy setting on regulatory requirements. Public sector institutions may hope to be seen by electors as a leading actor in climate change mitigation. Other reasons for buying include seeing the market as a useful mechanism to address environmental prob-

¹⁸ In this chapter VERs, carbon offset, carbon credit and carbon unit are used as synonyms concepts. Kelly (2010, 1) defines carbon offset as “a unit of carbon-dioxide-equivalent that is reduced, avoided or sequestered to compensate for emissions occurring elsewhere”.

lems and public sector actors wishing to attract more private investment for the cause (Bayon, Hawn and Hamilton 2007, 34–35).

Many companies, events and even countries have set targets to become carbon neutral. Carbon neutrality refers to achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered or offset, or buying enough carbon credits to make up the difference. Carbon neutrality is often achieved by buying carbon credits from voluntary markets. Companies like Google, Dell and Pepsi have self-proclaimed carbon neutrality and climate neutral initiatives. Several countries, e.g. Norway, Iceland, New Zealand and Costa Rica, have pledged carbon neutrality. (Kirby 2008) Also different events and publications can announce their climate friendliness. Even bands such as Coldplay and Pink Floyd have produced carbon neutral albums by planting enough trees to offset the CO₂, and the Rolling Stones have made carbon neutral tours (Geoghegan 2005; Robbins 2006).

Individuals buy offsets to reduce their carbon footprint, caused for example from flying or heating. Individuals that buy small quantities of carbon credits for a higher price are often called boutique shoppers. Numerous offsetting websites have made it easy for Northern consumers to offset their emissions. The easiness of buying carbon offsets at the same time as purchasing your airline flight online can be seen as part of the growth of online activism, or *dictivism*. (Goodman & Boyd 2011, 107) Frequent flyers, for example, who would like to do something about their carbon emissions (without changing travelling habits) can calculate and buy offsets on-line with a credit card. A return flight from Helsinki to Bangkok causes about 2.24 tons of CO₂ emissions and would cost, depending on website, about 20 € to offset. This money would then be spent for a green project such as tree-planting, wind or solar energy production, improved cook stoves etc. somewhere around the world. Figure 6.2 below shows an example of an on-line carbon calculator.

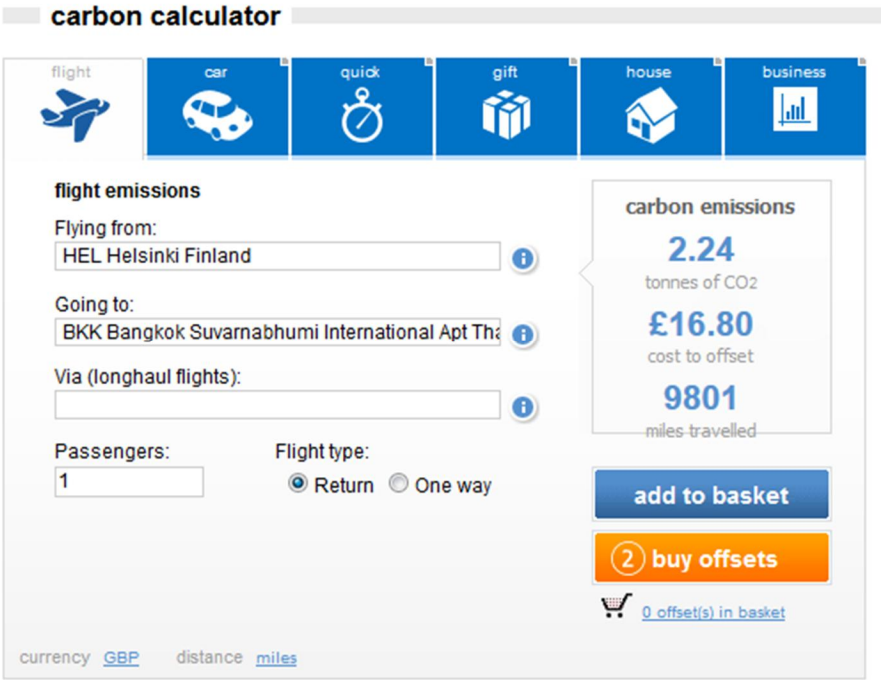


Figure 6.2 An example of an on-line carbon calculator. (Source: www.climatecare.org)

Carbon offsetting has been criticized for enabling the use of fossil fuels in the industrialised countries. Voluntary Carbon Market will not help us to reduce our addiction to fossil fuels, but in fact, they seem to provide an incentive for business-as-usual production and consumption patterns, and the continued growth of fossil fuel usage. (Böhm & Dabhi 2009, 20) The process of buying offsets actually encourages further consumption in industrialised countries, as the buyers can ease their guilt without making fundamental changes in behaviour, such as reducing flying. (e.g. Strickland 2007; Lovell et al. 2009).

6.2 Research questions, material and methods

Whereas most literature concerning the VCM usually concentrates on offset consumers, this chapter analyses the Voluntary Carbon Market from the perspective of offset project developers in Laos and Cambodia, and discusses the possible linkages between development assistance and the voluntary carbon market. The focus of this chapter is on development organisations and non-governmental organisations working in renewable energy or energy efficiency projects in Laos and Cambodia that have received – or tried to receive – both development funding and income from selling voluntary offsets. These organisations can be seen as nodes where the practices and realities of commercial market mechanisms meet the goals of development cooperation. Therefore, the analysis concentrates on the options and obstacles faced by the project developers to receive funding from the VCM in order to upscale, extend and lengthen projects that have been started with development assistance. The VCM is believed to be more accommodating for smaller scale carbon offset projects in the South, and to provide more direct benefits for communities and for the poor than what e.g. the CDM could offer. Compared to the CDM, which is often described as hierarchical and highly regulated, the VCM is based on horizontal networks and local project implementers that create and sell carbon credits. In principle, the VCM thus seems more accommodating for smaller scale projects than e.g. the CDM, which has increased the project developers' interest towards the VCM. However, as discussed below, this is not necessarily the case.

The primary research material consists of semi-constructed interviews conducted in Cambodia and Laos in 2010 and 2011; offset certification databases; offset companies' portfolios; and email correspondence with organisations. The desk study phase of the research began with an analysis of existing academic and non-academic research on the VCM. The second step was to identify the main VCM actors in Cambodia and Laos, especially those organisations that are already getting funding from VCM. The research presented here focused only on renewable energy (RE) and energy efficiency (EE) projects in the voluntary markets of Laos and Cambodia. Both countries also had several REDD+ schemes applying for certification with VCM standards, which are briefly outlined in Table 6.1. The REDD+ cases, however, were not analysed here. The VCM actors in Laos and Cambodia were identified through the analysis of the information obtained from the international carbon certification databases and off-set companies' project portfolios. VCM projects have to be certified in order to sell carbon offsets in the voluntary carbon market. All certification schemes keep a database of the verified projects. Off-set companies are usually middle-men who buy offsets from organisations and sell them to companies. They keep project portfolios in their websites to advertise their activities and to introduce the projects that produce carbon offsets to clients. Offset companies included here were Carbon Fund, Climate Care, Atmosfair, Carbon Neutral Company, Co2balance, Climate Friendly and Sustainable Travel International. The databases included Voluntary Carbon Standard, Standard for Verified Emission Reductions, Voluntary Offset Standard, Climate, Community and Biodiversity Standard, Plan Vivo System, Green-e Climate, and Social Carbon.

Furthermore, Cambodia and Laos based organizations that referred to carbon finance in their websites or project brochures were contacted by email in order to double-check the current status of the different organizations in the VCM. During the fieldwork phase in February-March 2011 interviews were made in Cambodia and Laos in three types of organisations; organisations that are already selling carbon offsets, those who are in the process of certification, and an organisation that provides capacity building in the certification and verification processes. Interviews made in the same organisations a year earlier related to other research (2010) were used, which increased the number of respondents and enabled to follow the organisations for a longer time. Interviews lasted about an hour each and were recorded. Topics of the thematic interviews were: (i) Certification process, monitoring, and reporting; (ii) expenditures and gains from the Voluntary Carbon Market; (iii) the use of carbon finance in the projects; (iv) Voluntary Carbon Market and Official Development Assistance; (v) ownership of projects funded by revenues from VCM in the least developed countries; (vi) the future of carbon finance.

Due to the VCM mechanisms and the actors in the voluntary market are perhaps lesser known than carbon finance mechanisms related to the Kyoto Protocol, the analysis begins with a general description of

how VCM operates. The following section introduces VCM offset providers and project developers from Cambodia and Laos. The aim is to look how relevant a source of funding carbon finance is for small project developers, which are often also using development assistance or other project funding. Also, this section discusses the reasons why so few organisations are receiving carbon finance from the VCM in these two countries. The chapter ends with a look at the future of the voluntary carbon market.

6.3 VCM actors, standards and project cycle

Voluntary Carbon Market connects the developing countries and the industrialized countries. VCM projects can take place anywhere in the world, but they are often implemented in developing countries where it is usually cheaper to reduce emissions due to lower labour and land expenses, less efficient industrial processes, and unused resource-related sinks. The offset buyers, resellers, consultants and certification schemes are mostly from industrialized countries. Offset sellers can be divided into four categories. There are *project developers* – the main focus of this chapter - who implement offset projects and sell offsets either directly to final customers, or to resellers. If the buyer purchases offsets from the project developer, also the money goes directly to the project. Often, however, the project developers sell all their offsets through different resellers, and therefore get a lower price. Offset resellers, who are often from North, include *wholesalers* that only sell offsets in bulk and often have ownership of a portfolio of credits; *retailers* who own and sell small volumes of carbon credits to individuals or organisations, usually online; and *brokers* who do not own credits, but facilitate transactions between sellers and buyers. (Peters-Stanley et al. 2011, 12) Carbon consulting firms as well as the offset certification standards are dominated by actors from the North, which leaves very little room for organisations, companies and NGOs from the South. Figure 6.3 below shows the actors and supply chain in the VCM.



Figure 6.3 Simplified supply chain of the retail carbon market (Bayon, Hawn and Hamilton 2007, 18)

In 2009 the highest prices, above 8 USD per credit, were paid for the solar, biomass, energy efficiency, wind and other methane projects. However these projects are also more expensive to implement and have higher transaction costs than for instance the destruction of industrial gases. Moderate prices, 4–8 USD, are applied to landfill and forestry-related projects. Avoided deforestation, agricultural land-based, wastewater, large hydropower, enhanced oil recovery and industrial gas projects had the lowest transaction prices, under 4 USD. In the VCM offset projects implemented in Cambodia the price was 12-15 USD per credit in 2011. (Interviews, March 2011)

The price of the sold VER depends on various issues, including how the project appeals to the potential buyers. Consumers prefer projects, which are associated with sustainable development and pro-poor and environmental benefits (Hamilton, Sjardin, Peters-Stanley and Marcello 2010, 36–37). In the Over-the-Counter voluntary market there are no obligations to buy offsets, and therefore offset sellers have to convince the buyers to purchase the offsets. Sellers often emphasize the synergies between climate change mitigation and poverty alleviation. They underline different positive side benefits of carbon offsetting imple-

mented in developing countries, such as poverty reduction, health impacts such as reduced indoor air pollution, and environmental issues like the preservation of forests. Projects with a storytelling appeal are selling best and for a better price, referring to carbon projects that bring development benefits in addition to emission reductions, such as sustainable development, poverty alleviation or ecosystem benefits. (Lovell, Bulkeley and Liverman 2009; Hamilton, Sjardin, Peters-Stanley and Marcello 2010, 58–59).

Also the certification has an impact on the price. Certification refers to the written assurance of a designated operational entity (DOE) of a certification scheme (e.g. the Gold Standard or Voluntary Carbon Standard) that during a specific period of time, a project achieved the reductions in emissions. Certification is also a quality label for the projects, because the implementation of the projects and the offsets produced by the project are under constant monitoring. There is variation between standards: some, like the Gold Standard, are stricter than others. However, if the project gets through the Gold Standard certification, it has better chances to sell offsets for consumers. The Gold Standard’s certification process is presented in Figure 6.4 below.

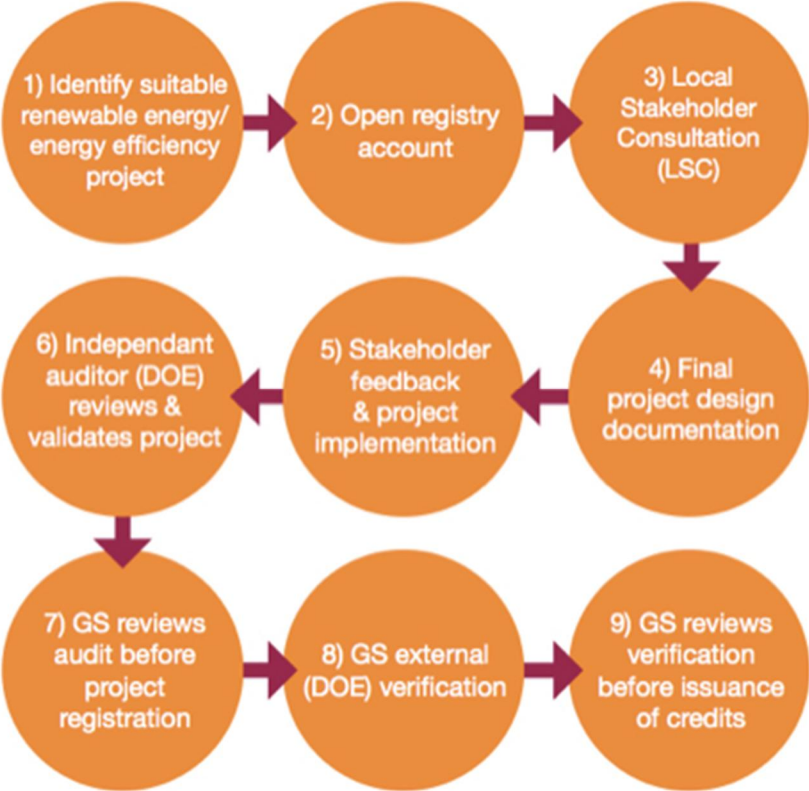


Figure 6.4 The Gold Standard (GS) Certification Process

The Gold Standard is supported by a large number of non-governmental organizations and it requires that offset projects bring sustainable development benefits. The Gold Standard only accepts energy efficiency and renewable energy projects, and explicitly excludes large hydropower projects, which often may harm local communities’ access to land, water and livelihoods, while also having a serious impact on the environment. It is often considered as the most rigorous standard in the carbon market, requiring that offset projects fulfil CDM method requirements, but also additional methods are included. An interviewee described the Gold Standard like this:

“The Gold Standard really demands sustainable development benefits. I mean that compliance buyers, especially if they got a big debt, will just go whatever: “I want cheap carbon to cover this”. They don’t care what they buy. But people who are buying for corporate image reasons will definitely look for some, some sexy development sort of benefits as well (laughter). And in fact

you can fetch a very, very high prices, higher than CDM prices if you've got a very, very good project and with a good name like the Gold Standard attached to it.” (Interview, February 2010)

All project developers wishing to register with the Gold Standard prepare a Project Design Document (PDD) as for CDM projects. To satisfy CDM criteria for carbon offset projects, evidence must be provided demonstrating that the project will:

- Deliver reductions in emissions that are additional to any that would occur in the absence of the project activity
- Undertake public consultation and provide assurances that there will be no significant adverse environmental impacts
- Comply with sustainable development criteria of the host country and receive host country approval
- Provide real, measurable and long-term mitigation benefits, using an approved baseline and monitoring methodology
- Avoid diversion of Official Development Assistance

However, as one interviewee pointed out, the Gold Standard has sustainable development criteria, but no poverty alleviation principles. Development practitioners have criticized the Gold Standard for this, and called for the inclusion of pro-poor criteria. (Email correspondence, January 2012)

The Voluntary Carbon Standard, which is regarded as less rigid by its environmental and social requirements than the Gold Standard, accepts all project types except the ones “that can reasonably be assumed to have generated GHG emissions for the purpose of their subsequent reductions”, which applies for instance to new facilities generating industrial gases. (Kollmuss, Zink and Polycarp 2008, 25) However, the Voluntary Carbon Standard can be combined with other carbon standards. For example in projects related to land-use, the Voluntary Carbon Standard can be combined with the Climate, Community and Biodiversity Standard criteria. Thus, at least in theory, the combination of standards can result with more sustainable development benefits than the Gold Standard. (Email correspondence, January 2012)

The steps of the Voluntary Carbon Market project cycle may differ depending on which VCM standard is applied. The standard will provide the exact steps. The timeline for each step of the VCM cycle varies greatly but the process takes at least one year. After registration and commencement of the operation of a project, monitoring is often done for one year prior to the verification and issuance of VERs. Typically, verifications and issuances are then completed on an annual basis. The project type as well as standard has a significant effect on the price of the carbon credits. A simplified picture of the offset project cycle is presented in Figure 6.5 below.

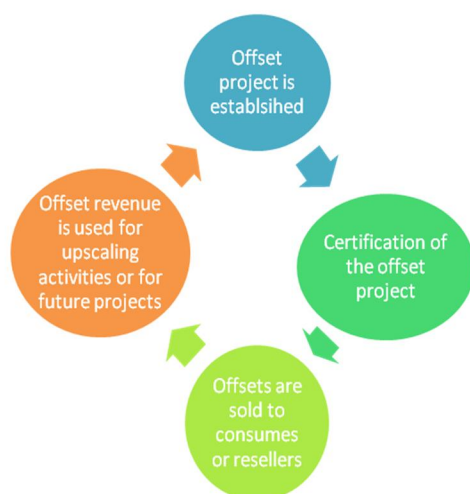


Figure 6.5 Simplified picture of the whole voluntary offset project cycle.

6.4 Project Developers' Perspective from Cambodia and Laos: Options and Obstacles

The voluntary carbon market is still quite a new field in general and in particular in Cambodia and Laos, where many organisations have tried to enter the Voluntary Carbon Market, but so far only a few have succeeded. Several Laos and Cambodia based organisations have been planning to sell offsets in the near future. Some have had tried but withdrawn later from the certification process. Table 6.1 below lists projects in Laos and Cambodia that have been certified, are at the moment in the process of certification, or have considered it but dropped the plans. The table shows that many organisations are interested in the VCM but most have dropped the plan to sell offsets in the voluntary market.

So far (as of January 2011) only two organisations in Cambodia are actually getting revenues from the Voluntary Carbon Market. Neither of them is a Cambodian organisation. The successful organisations are French non-profit organisation GERES (Groupe Energies Renouvelables, Environnement et Solidarités) and Dutch development organisation SNV. GERES is selling offsets from its improved cook stove program and SNV has a National Biodigester Program. Until now there has not been any project in Laos that would have been able to get funds from the Voluntary Carbon Markets. However in Laos there are several REDD+ projects, which are aiming to receive a Voluntary Carbon Standard and Climate, Community and Biodiversity Alliance Standard and entering the voluntary market.

Table 6.1 Projects that have already been certified, are at the process of certification or have considered certification but have for different reasons discontinued the process. (As of Dec. 2010)

Country	Organisation and Partners	Project(s)	Certification status (as of Dec. 2010)
Cambodia	GERES, Ministry of Industry, Mines and Energy of Cambodia, Improved cooking stove producers and distributors association of Cambodia (ICOPRODAC)	Dissemination of improved cooking stoves in Cambodia (Phase 3) (i) New Lao Stove Project (NLS) (ii) Neang Kongrey Stove (NKS), cheaper version of NLS (iii) Vattanak Stove (Palm Sugar Stove)	Voluntary Carbon Standard for NLS, the other stove projects have not been certified
Cambodia	SNV (Netherlands Development Organization) and Ministry of Agriculture, Fishery and Forestry of Cambodia	National Biodigester Programme Cambodia (NBP)	The Gold Standard
Cambodia	Nexus and Hydrologic Cambodia	Ceramic Water Purifier Project	Project has not been certified
Cambodia	SME Renewable Energy Ltd. and SME Cambodia & E+Co	Power generation by Bio-mass gasification	Project has not been certified
Cambodia	Cambodian Rural Development Team (CRDT)	Biodigesters	Project has not been certified
Cambodia	PACT, Terra Global Capital, the Royal Government of Cambodia and Forestry Administration, Community Forestry International	Oddar Meanchey REDD Project	Project has not been certified but is in process of applying for Climate, Community and Biodiversity Alliance Standard and Voluntary Carbon Standard
Cambodia	Wildlife Conservation Society of Cambodia, Government of Cambodia	Seima Protection Forest REDD Project	Project has not been certified but is in process of applying for Climate, Community and Biodiversity Alliance Standard and Voluntary Carbon Standard

Laos	SNV	Improved cooking stoves; Biodigester program	Projects have not been certified. For biogas the certification plans were dropped but for improved cooking stoves the certification process is beginning
Laos	Sunlabob	Solar Lantern Rental System program; Solar Home Systems	Projects have not been certified. Certification plans were discontinued with solar home systems.
Laos	Helvetas	Micro-hydro project	Certification was considered but the offsets would have been too small
Laos	USAID, FAO Government of Finland through one partner, SUFORD	REDD+	Project has not been certified. Project in the process of applying for Voluntary Carbon Standard and Climate, Community and Biodiversity Alliance Standard
Laos	Wildlife Conservation Society	REDD project in Bolikhamxay province in Nam Kading National Park REDD Project in national park areas of Nam Et and Phou Louey (NEPL)	Project has not been certified but is in process of applying for Climate, Community and Biodiversity Alliance Standard and Voluntary Carbon Standard (feasibility stage)
Laos	CLiPAD Financed by the German Government GTZ and KfW	Climate Protection through Avoided Deforestation Program (CLiPAD)	Project has not been certified but is in process of applying for Climate, Community and Biodiversity Alliance Standard and Voluntary Carbon Standard

6.5 Barriers faced by the offset project developers

Project developers listed several barriers why the projects have not entered the voluntary market. For many projects the certification process has been too complicated and expensive, or the carbon credits too small to make the projects feasible and profitable in the Voluntary Carbon Market. A project developer from Laos listed the following reasons for the disruption of the certification process in their project:

“Projects in Laos often aren’t big enough to justify the expense of getting certification i.e., there’s a cost barrier. There’s also a lack of internal manpower/experience/knowledge to initiate the process to begin with. Also lack of confidence that applications will be successful/there will be a market for it afterwards. Lack of historical data, maps and existing examples to help in developing a methodology, Also difficulty in obtaining “auditable” monitoring data once projects are implemented.” (E-mail correspondence with a project developer who has withdrawn from the certification process, November 2010)

Also cultural gaps between the worlds of development and finance can be a barrier. (Interview, February 2011) This means that the project developers that have earlier received funding from development assistance do not know how to act in the world of carbon finance. Due to the lack of capacity, the certification documentation is usually done by international consultants professionalised in carbon finance, which increases the costs. The certification process, including all documentation and application, can take up to a year and cost tens of thousands of dollars. One interviewed project developer described the long and complicated certification process where different standards, and both the CDM and the VCM, were considered. In the end the organisation ended up paying 100.000 € for all certification and verification processes:

“We began the process in March 2006 and we had a CDM base line study done by another organisation. We were thinking of going for CDM but decided that it was too time consuming and expensive. At late-2006 the consultants advised us to postpone CDM process and to voluntary market instead. Late-2007 we were contacted by an NGO interested to buy offset from the program. In April 2008 we made a contract according to which they will buy offsets 10 years’ time.

Price is good, and they also do the monitoring. But in 2009 there was an economic crises and carbon finance news began to appear in newspapers. The voluntary market was not as good as CDM. Economic crises affected the voluntary buyers, especially retail. Then this NGO suggested that we would go for the Gold Standard. Gold Standard! It is even worse than CDM! [i.e. strict standard to implement and monitor] (Interview, March 2011)

However, the expenses are not always that high. GERES was one of the early actors in the VCM (since 2003) and it opted for the only certification possible at that time, the Voluntary Carbon Standard. It used about 50 000 USD for the certification. GERES also had in-house experts and was not forced to use expensive consultants which reduced the costs significantly.

6.6 Success stories

What is common for SNV and GERES, which have been able to access the VCM in Cambodia, is that they have a long experience from biogas and improved cook stoves, and in this respect, the projects had matured and were working well when they began the carbon trade. The projects have been going on for years either with development assistance funding or other project finance before the VCM. These projects may be described as boutique offset projects in the sense that they provide also development and environmental benefits.

Improved cook stove program

Even for the two successful offset project developers, the road from starting the project to the selling of offsets is a long one. For example GERES, which has been one of the first carbon offset providers (from 2003), has worked in Cambodia since 1994 and in 1997 it launched a project to improve the efficiency of the cooking stoves. The first four years were spent on designing, testing and facilitation to establish a national network (GERES 2009, 15). By 2010 already one million improved cook stoves (New Lao Stoves) had been sold in Cambodia. These stoves are 22 % more energy efficient and they last 2-3 times longer than the ordinary stoves. GERES has calculated that the use of improved cook stoves has reduced more than 500,000 CO₂ emissions and consumers have saved 9,000,000 USD since 2003. Additionally, the New Lao Stove produces less indoor air pollution compared to the traditional stove. (GERES 2010) The carbon finance is used for funding for research and the development of other improved stoves, as well as for monitoring and quality control, which are required by the standard.

At the very beginning the European Commission funded the program, but when that funding ran out, GERES had to look for different sources of funding. It also received funds from other sources, including UNDP/GEF. Income from the VCM became an alternative to other project funding. If the income from other sources would have been steady, GERES perhaps would not have begun selling offsets in the first place, at least not in this scale.

“The [European Commission’s] funding ran out years ago! And so that’s why we turned to carbon finance in order to keep funding the project so it could be upscaled and basically set a new baseline for cook-, cooking stoves of that calibre in Cambodia. So, yeah, I mean if we had the funding we wouldn’t have gone to carbon finance, basically.” (Interview, February, 2010)

Carbon finance capacity-building

In 2008, based on its own experiences from the VCM, GERES incubated an organisation that provides capacity development in carbon finance for grassroots organisations that have projects that both mitigate climate change but also have poverty alleviation and/or environmental conservation element in it. The organisation was first called Carbon Solidarity Asia, but later renamed as “NEXUS – Carbon for Develop-

ment”. NEXUS is a non-profit global alliance of non-governmental organisations and eco-businesses and it aims to overcome the barriers that stop grassroots organisations and local project practitioners to get their share of the offset market. (Interview February, 2011). It focuses on scaling up best practices that contribute to climate change mitigation, environmental management and poverty alleviation.

National Biodigester Program

SNV has also successfully implemented biogas programs in many countries, including Nepal and Vietnam. In Cambodia, the National Biodigester Programme (NBP) is a joint venture intervention of the Ministry of Agriculture, Forest and Fisheries of Cambodia and SNV. Family size biodigesters produce biogas from cow and pig dung and other organic material and the gas can be used for cooking and lighting. The main benefits from the program are (SNV 2006):

- Reduction in the rate of deforestation and environmental deterioration by substituting fuel wood with biogas
- Improvement of hygiene and health of the rural population, especially of women and children, by elimination of smoke produced during cooking on fuel wood and by stimulating better management of dung by the attachment of latrines;
- Improvement of the financial situation of households by eliminating the need to buy expensive fuel wood. On average 2000 kg of fuel wood and 50 litres of kerosene will be saved annually per household;
- Increasing agricultural production by using the biogas production residue for an organic fertilizer.

In Cambodia SNV was using carbon finance to cover part of the costs of the program. Financing was also received through development funds from the Netherlands. The income from the offsets was used to provide subsidies for families that purchase a biodigester.

For those project developers who manage to sell their offsets in VCM it can be a good source of income. Revenue from VCM can be significant and for certified projects the funding can last for a relatively long time. Certified offsets from a project can be sold for 10 years, or two times 7 years if the certification is renewed after the first term. The revenue depends on the price of Verified Emission Reductions and the amount sold. The price of the offsets is usually closely linked to what certification the project has. For example, for SNV the total revenue has been 300.000€ (as of March 2011). GERES, which has been in the market for nine years, sells an average of 180.000 tons annually for a 10-year period for 10-15 USD per ton, implying an annual income of between 1,8 and 2,7 million USD. In both projects the storytelling appeal is high, and therefore the price of the carbon credit is comparably good.

6.7 Development assistance and pro-poor VCM projects

A common factor for the two Cambodia-based VCM projects is their original initiation with development assistance funding. For SNV’s gasifier project, both ODA funding and revenue from the VCM are still used at the same time. In general, revenue from the VCM has become a complimentary source for project funding: “ODA funding does not cover all project costs, you know, you have to have other source of funding as well. We use VCM finance to cover the gap.” (Interview March 2011) On the other hand, for projects which already sell significant amounts of carbon offsets in voluntary markets, the carbon finance gives project developers autonomy from donors and reduces dependence from ODA funding. Carbon finance income can also last for a longer time than the typical donor funding cycles admit. Therefore, from the project developer’s point of view carbon finance can increase the sense of ownership towards the project.

“One of the benefits of having carbon finance is the fact that that’s your money and you don’t have to go through all the bureaucratic accounting, budgeting and reporting that you have to for

donors. They sometimes say ‘you can have this money on the condition that you spend it on this’. You don’t have this stress of looking for funds, when as soon as that runs out in two years or whatever. You’ve got this that you more or less know, will be coming in every year for X amount of time, you know, fingers crossed, anything can go wrong still. (...) Provided that the organization in question has the right ideas, it is liberation from donor funding.” (Interview, February 2010)

VCM funding for certified projects lasts a maximum of 10 years (or two times seven years if the certification process is renewed) after which it cannot sell certified offsets from the same project. Therefore, to some extent the ownership of the recipient government (e.g. the Ministry of Energy in the respective country) is necessary to ensure the political-level sustainability of the program. Also other stakeholders need to be empowered, like the efficient stove producers’ and retailers’ association ICOPRODAC in GERES’ improved cook stove project. With such a project cycle a whole value-chain of producers might be able to join in on a sustainable basis:

“The lifetime of the project as a carbon finance project is only 10 years. We started in 2003, so after 2012 we can get no more carbon finance for it. But the idea is that by that stage we won’t need it because it will be a self-sustaining project. So the Producers’ Association will be taking care of everything, like quality control, monitoring, credit and saving - everything. So we (GERES) should theoretically be able to step away from the project by then [and to let Producer’s Association take care of it.” (Interview February 2010)

However, some interviewees emphasised that even though the VCM can be a good source of income for at least some project developers, carbon finance is risk funding because it is very dependent on global markets. For example in 2009, during the global economic crises, many companies stopped buying carbon offsets from the Voluntary Carbon Market. Also carbon credit prices easily fluctuate, and therefore it can be difficult to plan the project activities in longer perspective.

The question is how to include pro-poor criteria into the VCM projects in the least developed countries. Even the most rigid standards like the Gold Standard do not yet have pro-poor criteria for projects, and many development practitioners have criticised this approach. The result of the exclusion of pro-poor criteria from the certificates has led to the situation where the pro-poor impact of projects is rarely considered or monitored across the lifetime of a carbon project. Many respondents hoped that development assistance funding could in the future be used for the expensive certification phase for example in small scale renewable projects. In the first years of project development, carbon finance transaction costs are an additional burden to projects that aim at scaling up their operation.

“The main issue for pro-poor projects to scale-up, is the fact that they can’t cover their cash flow requirements in the first years. This situation has actually worsened by climate finance. If ODA could be used to provide soft loans to project in the first years, or a combination of grant and soft loan, this barrier could be alleviated.” (Email correspondence, January 2012)

Traditionally project developers have tackled this issue by negotiating down payments for the future sale of carbon credits. This approach is known as pre-finance. It leads to low carbon prices (up to 50% discount), and is not appropriate for pro-poor projects. Carbon prices under pre-finance agreements are often too low for pro-poor projects to reach financial profitability. The interviewees believed that the high risk profile of these projects also significantly reduces the number of investors ready to enter into pre-finance agreements because there is no track record of systematic delivery of projects. Carbon finance capacity-building organisation NEXUS suggested that regional incubators (either non-profit organisations or social ventures) should be established to provide technical assistance and capacity-building, and to assess the potential for carbon finance and other climate finance schemes available. This would help to support prices by creating demand for pro-carbon credits. The regional incubators would need grant funding in the early

stages, and this is where ODA funding could be used. Grants could be used in different ways, for example to cover project registration costs, provide capacity-building etc. (E-mail correspondence, March, 2012)

6.8 Hopes and Fears: The Future of the Voluntary Carbon Market?

The future for the compliance mechanisms is uncertain in the post-Kyoto era, but the interviewees saw the future of the VCM promising. However, the stagnation of the Over-the-counter voluntary market in 2009 due to global financial crises, the CDM by 40 % in 2010, and the closing down of Chicago Climate Exchange in 2010 indicated that the future would not be very bright. Currently the volume of carbon credits transacted in the voluntarily market represents only a fraction, less than a 0.1 per cent, of the global carbon markets. Still, the relevance of the voluntary carbon market may in the future be more important than its current size suggests. The private sector's share of the Voluntary Carbon Market has risen significantly since 2003. It increased sevenfold from 2006 to 2008, when it was worth 728 million dollars. This rapid increase was mainly due to increasing public awareness and corporate interest in climate change. However, due to financial crisis, the value declined by nearly 50 per cent in 2009. The prices of the credits dropped due to low demand caused by financial crisis and uncertainty. In 2010, when the world was slowly recovering from global financial crisis, the value of VCM was \$424 million, and the volume was 131.2 million tons CO₂e. This is 34% higher than in the previous year, which meant that when the economy stabilized, voluntary buyers restarted buying carbon offsets from the voluntary markets. (Peters-Stanley et al. 2011, 10)

There is an increasing interest in VCM, because it is seen as a useful way to finance experimentation and to enable further up-scaling of projects. However, as discussed above, a lot of uncertainties remain relating to its sensitivity to the changes in the global economy, as well as the consultant-driven, expensive and time consuming certification process. If new certificates are initiated constantly, it will be expensive and time consuming for organizations to apply for new certificates, and confusing for buyers to know which carbon offsets to buy. Despite the confusion created by the new standards, it is necessary that already existing standards such as the Gold Standard and the Voluntary Carbon Standard should be developed to include pro-poor criteria.

Despite the challenges, the vision of the non-profit carbon finance capacity development organisation Nexus is that the carbon market will be the biggest commodity market worldwide after 2020:

“Carbon credits will be traded more than oil! Everybody wants a share of the cake. And we want grassroots organisations, local development practitioners to have their share of the cake and make to make sure that their interests are protected in this environment.” (Interview February, 2011).

The next few years will show what the future of the voluntary carbon market will be. A key question is, if the markets are stable and mature enough to be able to control the damage of carbon cowboys and through certificates build a certain amount of trust in the Voluntary Carbon Market. The potential importance of the voluntary markets relates to the educational impact of carbon offsets and how we come to realise that all our actions have a carbon footprint. Broekhoff (2007, 5), for example believes that buying offsets can make people more aware of climate change which translates into positive actions in other areas of their lives. If climate worries continue to grow among the public, there is a huge potential for expanding the market towards individuals willing to do their share. According to one interviewee, the carbon finance is likely to grow, “as soon as the climate change problem is becoming more apparent in the West. If there will be more [climate change related] catastrophes and a clear linkage anthropogenic emissions, people will become more interested in climate change mitigation.” (Interview March 2011). Critics, on the other hand say that the voluntary market enables the continuation of the unsustainable consumption patterns in the industrialized countries, and that carbon finance will not change that.

7. EXPECTATIONS MEETING THE REALITY ON THE GROUND – TWO CASES OF REDD+ IN CAMBODIA

Try Thuon and Kamilla Karhunmaa

“We did not know clearly what is carbon credit initiated by project staff, but we did realize that we have been trained to protect forest and land where carbon can be sold. We do not know what is carbon look like. The expected benefit from this selling included money used for village road construction, develop forest fire routes in order to protect forest fires, while additional budget are expected to help vulnerable people in village such as widow, amputee persons.”

Villager in Mondulkiri

The forest carbon initiative REDD+ (reduced emissions from deforestation and forest degradation) is aimed at providing opportunities for developing countries like Cambodia to preserve their forests in return for carbon credits from key industrialized and developed countries. Forest carbon projects have been argued to combine livelihood benefits through carbon credits, monitoring labour tasks and non-timber forest product health, while sustaining key forest ecosystem functions, including climate mitigation, watershed management functions and biodiversity protection (Wunder 2008). Cambodia, together with its development and conservation partners, is attempting to build forest carbon projects, with clear verifiable emissions reductions in comparison to a business-as-usual scenario. The idea is to link up these initial pilot projects under national coordination later on (MAFF 2011). The structure of REDD+ as a forest and climate governance mechanism remains an area of contestation and heated debates both internationally and in Cambodia. The REDD+ framework is still in the making and debates circle around issues such as the sources of credit and local decision-making principles, the rights of indigenous communities and ensuring secure and long term access to forest resources. At the same time, however, on the ground preparation for forest carbon projects has already commenced with early financing and activities with communities, as well as the passing of national legislation in Cambodia. This chapter aims to review the evolution of forest management and current practices and expectations related to REDD+ projects in Cambodia. The chapter provides a brief review of two projects currently working with the Voluntary Carbon Markets (VCM) and the actors involved in these. The focus is particularly on the expectations and local perspectives from communities within the proposed REDD+ schemes.

Historically, Cambodia has had a larger forest cover than many of its neighbours in Southeast Asia. In the 1960s, the forest cover in the country was 73% of the total territory (180,035km²) but fell to 56.95% by 2010 (or 10,339,826 ha) (FA 2008, MAFF 2011). The Cambodian government has set a target of maintaining forest cover at 60% of the total land area. REDD+ is seen as one of the methods by which this target could be achieved. However, the forest area in Cambodia, and the communities adjacent and within it are, under severe pressure from various sides, such as economic land concessions (ELCs) and large-scale development projects. Another tension arises from local communities experiencing frustration at living in areas demarcated as forest protection zones, and having restrictions in their income-generating and livelihood activities within these zones.

The Cambodian REDD+ process began on the local level with two national pilot projects: Seima Biodiversity Conservation Area (SBCA) and Oddar Meanchey Community Forestry program (OM-REDD+). Cambodia's first REDD+ activities began in the Seima Biodiversity Conservation Area in 2008. The national coordination for all of Cambodia's REDD+ activities has only been built after these projects were

initiated. Current fears and tensions of local communities are the fear of encroachment, economic land concessions, illegal logging and military infringement. REDD+ in Cambodia is currently being imposed on to this challenging background. This chapter brings to the fore the tensions between conservation projects, increasing investments in economic land concessions and local livelihood effects. After presenting the REDD+ setup in Cambodia and the two pilot projects some comparisons and conclusions are drawn for development policy in the complex situation where conservation, livelihood and large-scale development needs meet.

7.1 Methods and overview on the research cases

The research carried out consisted of a literature review, key-informant interviews and fieldwork with focus group discussions in both REDD+ areas, in Oddar Meanchey and Seima Biodiversity Conservation area. The key documents included reports and policy papers from the World Conservation Society (WCS), Pact Cambodia, RECOFTC (the Centre for People and Forests), UNDP, Children's Development Association (CDA), Groupe Energies Renouvelables Environnement et Solidarités (GERES), and Forestry Officials from the Forestry Administration (REDD+ Focal persons). The key informant interviews were carried out with representatives from the same organizations. The site visits and focus group discussions with ethnic minority groups, community facilitators, and members of the forestry community were carried out during March and May 2011. In total, 6 focus group discussions (3 in Mondulhiri and 3 in Oddar Meanchey) and 10 key informant interviews were carried out.

The guiding questions of the fieldwork interviews were the relation and expectations of the local community towards the proposed REDD+ projects, the role of institutional arrangements at the village level as well as land tenure arrangements.

7.2 Historical overview of forests in Cambodia

Over the past three decades, the forest in Cambodia has been a scene of revolution, guerilla forces and intense political contestation. In the 1960s-1970s the forest remained a key area for political refugees and guerrilla forces. From the late 1970s to the late 1980s, during the civil war, forest remained a key zone of protection for the Khmer Rouge regime soldiers. The signing of the Paris Peace Accord in 1991 was a significant step for Cambodia and its forests. It also had impacts for economic policy: with the support of development institutions, such as the World Bank and the Asian Development Bank the country turned from an autarchic socialist state into an evolving market economy and from a single to a multi-party political system (Peou, 2000). These changes affected the forests and forest communities as well. From 1995-1999, the political contestations between the ruling parties and the Khmer Rouge Soldiers (who were often thought to be hiding on in the forests) led to favouring economic land concessions (ELCs) on forest land.

Logging was widespread and affected local livelihoods, for example, through the cutting of resin trees providing important income to communities. In the early 2000s, almost all logging concessions were seized due to high tax prices from the government. The 2003 Sub-Decree on Community Forest Management established a framework through which communities could apply for and manage community forests, especially in areas designated for production forestry. Figures (see Table 7.1 on forest cover in Cambodia vary and are disputed, but few would deny the fast deforestation taking place. Therefore REDD+ has been met with enthusiasm by groups worrying about the state of the Cambodian forest.

Table 7.1 Evolution of forest cover in Cambodia

Year	Total forest cover (ha)	Percentage	Change in forest cover (ha)
1965	13,227,100	73.04	-
1973/76	12,711,100	70.02	-516,000
1985/87	11,852,400	65.29	-1,374,700
1992/93	11,378,664	62.68	-1,848,436
1996/97	11,134,615	61.34	-2,092,485
1993 (JAFTA)	11,961,815	63.30	- 1,265,267
1992/93 (GTZ)	10,859,695	59.82	-
1996/97 (GTZ)	10,638,209	58.60	-221,488
2002 (FRM)	11,104,293	61.15	+ 244,598
FA (2006)	10,864,186	59.80	-240,107
MAFF (2010/2011) ¹⁹	10,339,826	56.94	-390,955

Sources: FA (2008) and MAFF (2011)

The Forest Law of 2002 defines all forests as belonging to the state of Cambodia. The forests are managed, however, through different public and private tenure systems. Cambodian forests, termed permanent forest estates can be divided into three categories: permanent forest reserves, private forests and protected areas (see Figure 7.1).

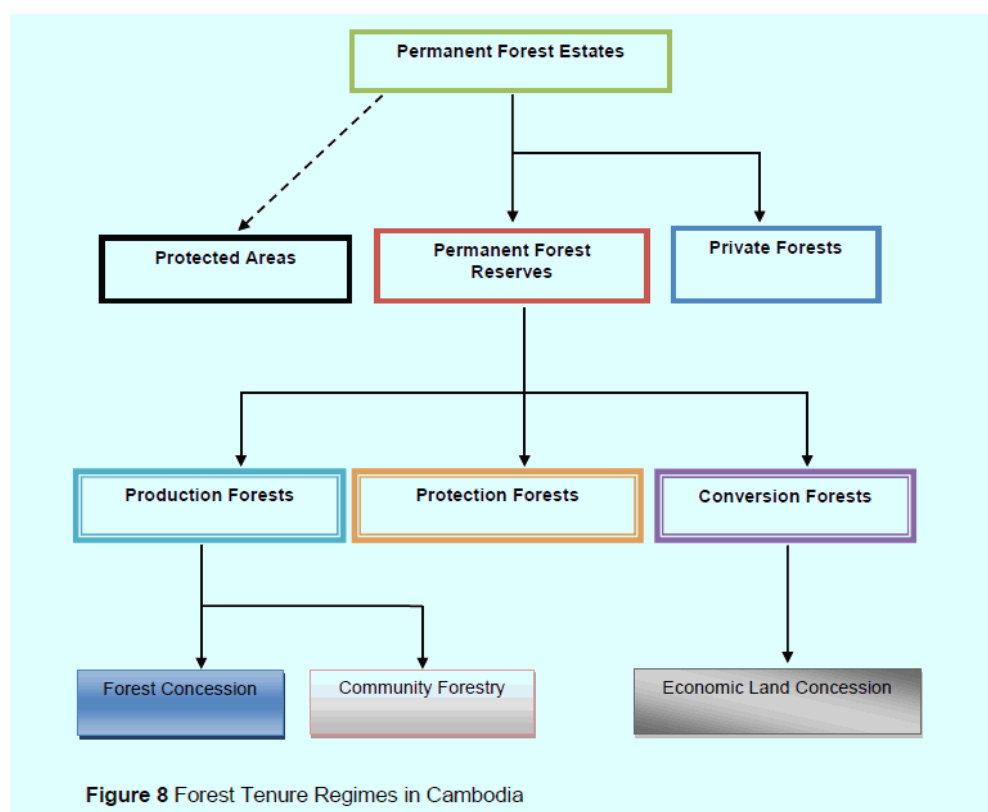


Figure 7.1 Forest Tenure Regimes in Cambodia (from Yeang 2010; 31)

¹⁹ By 2010, Forestry Administration has evaluated forest cover by using LANDSAT (USA) covering 104 areas in 13 provinces. As the result, the preliminary findings shows forest cover in Cambodia remain 10,339,826 ha equaling 56.94% (decreased 2.15% equals 390,955 ha).

Forests are the single most important sink of greenhouse gases (GHGs) in Cambodia. A recent study estimates that 2.96 Gt of carbon (or CO₂ equivalent) is stored in Cambodia's ecosystems, of which one third is stored in the country's evergreen forest (Leng et al. 2010). The forests in the Southwest of the country, where also the Seima Biodiversity Conservation Area is, are found to have particularly high carbon density. The different forest management arrangements have the following capacities for carbon storage:

- 30% of forest carbon stock is estimated to be in the Forestry Concessions [Production Forest, permanent Forest Reserve (PFR)] managed by the Forestry Administration.
- 26% in the Protected Areas managed by the Ministry of Environment.
- 12% under Conversion Forests also termed Economic Land Concessions owned by the land concession owners, and
- 19% in other Forests (private forests, or plantations) for which management responsibility is unclear²⁰.

Of the two case studies in the two selected REDD+ project sites, Oddar Meanchey REDD+ is a production forest under community forestry, while Seima Biodiversity Conservation Area REDD+ is titled as a protection forest. Both areas belong to the state, and fall under the jurisdiction of the Forestry Administration (FA) of the Ministry of Agriculture, Forestry and Fishery (MAFF).

The forest conservation context has been severely altered during the last few years. Firstly, the land investment boom during the last decade, especially since 2007, has had a significant impact in the rural areas (Barney 2010). Economic land concessions are blocks of land leased by the state to third parties (concessionaires) for the purpose of agro-industrial development. Agro-industrial plantations in economic land concessions (ELCs) include rubber, cassava, jathropa, cashew nuts, and other cash crops. ELCs can also be leased for mining purposes. According to Leng et al (2010) Cambodia now has over 160 economic land concessions, located mostly in the Northeast and Southwest regions, covering an area of 17770 km² (almost 10% of the total land area). In March 2011, more than 100,000 ha of mostly protected areas were granted to ELCs. Further, in mid-2011, more than 60,000 ha were also granted to ELCs in Mondulkiri province, mostly in Koh Nhiek district close to the Seima Biodiversity Conservation Area.

Rubber plantation is the most common form of ELCs. The Cambodian Prime Minister has shifted his position on the amount of rubber plantations from first declaring a roof at 100,000 ha and then increasing this to 300,000 ha, although independent monitoring reports suggest figures are higher than this²¹. The current value from rubber yields is estimated by MAFF (2011) to be over 3000 dollars/ton, which remains very high compared to income that could be attained through other plants or conservation activities. The price of rubber and its increased global demand explain why rubber is so popular both for large scale development and for contracted small-holders or for family scale farmers.

Critics often raise a number of issues related to the expansion of economic land concessions. These include the lack of studies on land suitability and availability in the communities, lack of investment in social and environmental impact assessment, the misleading or absence of consultation with local communities and the fact that the uncontrolled concession process creates conflicting and overlapping boundaries, where lands are given to two economic land concessions simultaneously (WFF 2009). ELCs are often justified by claiming employment benefits to local communities through, for example, work at plantations. In reality, however, employment often consists of migrant labour from outside. The land concession context differs greatly from other forest management arrangements also in terms of length of tenure. With ELCs, the government leases the land for 99 years. In comparison, in community forestry, communities sign a management agreement for the forest areas with the government for 15 years at a time.

²⁰ Cambodia REDD++ Roadmap, revised draft 27 September 2010, version 3.0. , pp. 12-13

²¹ sithi.org independent mapping

In Cambodia, REDD+ has been surmounted on a challenged context of insecure land tenure and increasing competition over land. Cambodia's first REDD+ project commenced in 2007, and evolved into the Oddar Meanchey REDD+ program in 2008. The second national pilot project, Seima Protection Forest in Mondulkiri, gained official sanction by the Royal Government of Cambodia (RGC) in 2008. The Forestry Administration has been assigned as the official seller of forest carbon credits generated from these projects and as the regulator of forest carbon trading. Further, the Forestry Administration has the responsibility of assessing national forest carbon stocks.

Cambodia was accepted into UN-REDD+ and the World Bank's Forest Carbon Partnership Facility (FCPF) in 2010, and Cambodia's REDD+ readiness roadmap was approved in early 2011. The preparation of the roadmap has received US\$6 million in support. Cambodia's REDD+ actors include AusAID (funding a National Carbon Accounting System), DANIDA, NZAid, DFID, Blue Moon Fund, and the Clinton Foundation. USAID Cambodia's new HARVEST²² program will also have activities supporting reduced emissions from land use.

Table 7.2 Overview of REDD+ provinces

Province	Oddar Meanchey	Mondulkiri
Population in 2008	185 443 ²³	60 811 ²⁴
Province area	6 158 km ²	14 288 km ²
Deforestation rate	2.1% ²⁵	0.5% ²⁶
Area dedicated to REDD+ activities	68 029 ha in Oddar Meanchey REDD+ project	187 00 ha in Seima Biodiversity Conservation Area

Examining REDD+ at the local, especially community, level allows for the comparison of two different REDD+ strategies in two very different settings and contexts. Oddar Meanchey province is located in the northwest of Cambodia, bordering Thailand. During the Cambodian Civil War, the area was used as a base by Khmer Rouge soldiers. The tensions from the civil war are still present in the area and encroachment by military families to occupy land is a serious threat to local communities. Mondulkiri province is located in the northeast of Cambodia, bordering Vietnam. It is one of the most sparsely populated provinces of Cambodia despite geographically being the largest province. The majority of the population of Mondulkiri consists of ethnic minorities, mainly Pnong.

The two Cambodian REDD+ pilot projects were at the time of research (May 2011) in the early stages of carbon verification. Oddar Meanchey REDD+ has submitted its project document for validation in 2009 for dual verification by the Voluntary Carbon Standard (VCS) and the Climate Community Biodiversity Alliance (CCBA). The VCS is a voluntary carbon market standard, which verifies climate change mitigation projects and accredits them with verified emissions reductions to sell on the voluntary carbon markets. The buyers of VERs include, for example, companies, individuals, and not-for-profit organizations. The CCBA standards are aimed at voluntary land-based climate change mitigation projects, which should deliver significant benefits for local communities and biodiversity conservation. The CCBA is deemed by many as the toughest standard for forestry and other land-based projects in the voluntary field. The CCBA is often sought in conjunction with other carbon market standards, such as the VCS.

²² A USAID initiative project on Helping Address Rural Vulnerabilities and Ecosystem Stability started from October 2010-2015 in Cambodia.

²³ Cambodia Census 2008

²⁴ Cambodia Census 2008

²⁵ Poffenberger et al 2009

²⁶ Ratanakoma 2009

7.3 The Community Forestry approach in Oddar Meanchey

The Oddar Meanchey REDD+ project was Cambodia's first national REDD+ pilot project. The community forestry approach was initiated in 2007, and the REDD+ component in 2008. The area is located in the northwest of the country, bordering Thailand. As the first REDD+ pilot project, there are a lot of expectations with regards to the project. OM-REDD+ is expected to set a precedent for REDD+ projects in Cambodia, in terms of, for example, benefit-sharing mechanisms. It will also be valuable for delivering lessons learnt in project implementation and capacity development. The project covers 13 community forestry (CF) groups and an area of 68 029 ha, which is around 31% of the province's total forest cover. There are 15 villages with a population of 24 951, who are expected to benefit from the REDD+ activities related to the community forestry model in Oddar Meanchey.

The idea of the community forestry model is to engage local stakeholders into forest protection, while also securing their access rights and livelihoods (Bradley 2012). In the legal tenure system of Cambodia, community forests are termed as production forests, where local communities sign a 15-year management agreement with the Cambodian government. In Oddar Meanchey, community forestry is managed through elected Community Forestry Membership Committees (CFMCs). The CF model in Oddar Meanchey has been supported by an international NGO, Pact, and local NGOs Children's Development Association and Monk's Community Forestry, together with the Forestry Administration.

Threats to forest area

The key challenges for the forest areas of Oddar Meanchey include economic land concessions (ELCs), ill-defined tenure systems and border conflicts. The area suffered from the military tensions between Cambodia and Thailand in 2011. Oddar Meanchey was an important location for the Khmer Rouge during the Cambodian civil war, and disputes between the military families and local communities are still relevant. Thus a source of conflict has been the encroachment into forest areas used by local communities by these military families, who wish to control access to resources in the area. The military families have since been ordered to villages outside of the community forestry project area.

During the fieldwork, several different economic land concessions were announced. At least nine mining exploration companies are proposing ELCs, of which most overlap geographically with the areas designated for community forestry. Additionally, eight more ELC companies are active in the provinces, with areas overlapping CF boundaries. Table 7.3 below identifies the ELCs in the region and Table 7.4 the mining concessions in the region. Overall, up to late 2012, there are 20 ELCs with 135,669 ha and five mining concessions covering 67,823 ha based on Open Development Forum data base 2013.

Table 7.3 ELCs in Oddar Meanchey

Name	Area (ha)	Contract signed	Purposes
Unknown	8 200	17.08.2012	Agro-Industrial
(Cambodia) Cane and Sugar Valley (t)	6 595	24.01.2008	Sugar plantation and construction processing factory
Angkor Sugar(t)	6 523	24.01.2008	Sugar plantation and construction processing factory
Best Royal (k) Co., Ltd	6 500	23.11.2011	Agro-Industrial and Rubber plantation
Crystal Agro Compan Limited (t)	8 000	17.07.2006	Cassava and agro-industry plantation
Data Rubber (Cambodia) Co., Ltd	7 700	14.06.2011	Agro-industrial
Data Rubber (Cambodia) Co., Ltd	7 700	06.06.2011	Agro-Industrial and Rubber plantation

Hout Mean Rita Co., Ltd	1 195	13.03.2012	Agro-Industrial and Rubber plantation
Hout Mean Rita Co., Ltd	3 000	11.08.2011	Agro-Industrial and Rubber plantation
Khun Sear Import Export Co., Ltd	8 200	06.07.2012	Agro-Industry and rubber plantation
Lon a grid thaek investment company	4 095	28.03.2012	Agro-Industrial and Rubber plantation
Nature Planation (K.H) Co., Ltd	9 020	04.11.2011	Agro-Industrial and Rubber plantation
Real Green Co., Ltd	8 000	09.06.2006	
River Sugar cane	6 618	24.01.2008	sugar plantation and construction processing factory
Samrong Rubber Industries Pte., Ltd	9 658	12.04.2006	Rubber and other trees plantation
Se Hong Plantation Company Limited	9 700	06.07.2012	Agro-Industry
Sok Samnang Development	1 865	13.03.2012	Agro-Industry and rubber plantation
Tay Ninh Siem Reap Aphivath Caouchouch Co., Ltd	7 600	23.11.2011	Agro-Industrial and Rubber plantation
Tomring Rubber Co., Ltd	7 750	06.06.2011	Agro-Industrial and Rubber plantation
Tomring Rubber (Cambodia) Co., Ltd	7 750	06.06.2011	Agro-Industrial and Rubber plantation
TOTAL	135 699		

Source: Open Development Forum database

Table 7.4 Mining concessions in Oddar Meanchey

Minings concessions	Area(ha)	Location
Angkor Wat Cement Ltd	3 150	Beng, Banteay Ampil
Cambodia Mineral Development Co., Ltd	11 700	Phnom Kambot in Pongro, Chong Kal Don Sok commune, Chgkai district
KD Power Group Co., Ltd	29 823	Trapeang Prasat district
Neoneer	8 750	Banteay Ampil district
Ratanak Stone (Cambodia) Development Co., Ltd	14 400	Trapeang Prasat district
TOTAL	67 823	

Source: Open Development Forum database

ELCs have been a source of conflict and tension within the community forestry area in Oddar Meanchey, as demonstrated in a focus group interview:

Growth Wealth Bright Co., Ltd who obtained license from provincial office with 10,000 ha has overlapped with CF areas of 1779 ha. In addition in 2001, there were land speculation from companies who come to persuade and hire local people to cut forest with \$200 ha (forest land cost \$100 and forest clearance cost \$100). They threatened that even you do not sell the land; they still take away the land as they got the silent approval from the government. The activities took place from early to January to 14 March 2011. It was estimated 200 to 300 ha had been cleared. The economic land overlaps with one village (Trapeang Kao Chas) and around 1,000 ha

of forest land. Some part of the forest land is under a logging concession and some part is under ELC which is around 2,000 ha. Villagers explained that first they cut forest²⁷ and then they take the land.

A particular problem relates to the unclear boundaries of the community forestry areas. Some land-use mapping has already been done. The aim is to map out what areas are used for different purposes, such as rice farming, agriculture, and forestry. Once these areas have been demarcated, the aim is to maintain the size of the areas as the same and to ensure community access to them. However, the concept of community forestry and its boundaries has not been fully understood, and community members have allowed outsiders to come into the community, cut forests and clear land. These practices have implied ownership of the land by outsiders. This is especially troublesome for the one of the 13 communities, which is located close to the border of Thailand.

A household survey conducted on the project site in late 2010 indicates that 88% of the population living within the project site is involved with farming, agricultural activities and NTFP collection (Blackburn, 2011). Under the OM-REDD+ scheme there is no restriction on the existing livelihood activities of the communities, such as timber collection and NTFP collection. Timber collection is, however, restricted to collecting household materials used for building, and it must be approved in advance by the respective Community Forestry Management Committee. Logging and clearance is restricted, as well as the commercial use of forest resources.

The 13 communities participating in community forestry in Oddar Meanchey are supposed to have legally-granted use and management rights in the project areas. While the forest remains state property, a 15-year co-management agreement is signed between the state and the forestry community. However, there have been significant challenges in practice with the land demarcations and ensuring the access and management rights in the community forestry areas in Oddar Meanchey. Although the CF areas have been mapped with geographical information system (GIS), it is difficult to delineate areas on the ground, unless they coincide with natural borders, such as rivers (Bradley 2012). In practice, it has been unclear where the specific CF borders lie.

The community forestry network developed in Oddar Meanchey has been the principal forum for dealing with the local land conflicts. The network consists of the different community forestry management committees (CFMCs) and is facilitated by a local NGO, CDA. The network has monthly meetings for the local community to share information and concerns. In addition, the network is able to raise these issues to the national level through the national Land Network and also share experiences from community forestry cases in other provinces. A major achievement of the network in Oddar Meanchey has been the filing of up to five legal cases against forest crime since 2007. These have included a complaint against local soldier violence, a complaint against a chief of a commune encouraging local people to sell land to outsiders, and a complaint against a local NGO confiscating logs from the village population.

Another successful complaint has been against companies²⁸ who received 30 000 ha of land, of which 2 874 ha overlapped with the current CF areas. Following a complaint to MAFF in 2008, communities have received back 1 207 ha, covering 16 villages and two communes were over 10 000 people are beneficiaries. However, problems still remain with the local authorities and chiefs of the different communes. The issues have related to the chiefs taking over land designated to community forestry for private purposes.

²⁷ Note: Under economic land concession, valuable forest will be cut and sell out by forestry administration based on inventory and agreement prices before starting to clear land for plantation. Some villagers might be confused on this process (the appearance of logging for domestic consumption or supply, but actually it is the process of economic land concession).

²⁸ Lyong Phat and Ratana Rokakam

Benefit Sharing

The benefits from REDD+ activities in Oddar Meanchey include benefits derived from securing forest livelihoods and tenure rights as well as monetary income obtained from selling carbon credits on the voluntary market. OM-REDD+ will be setting a precedent for how revenues from REDD+ are distributed. The Government Decision no. 699 of 2008 has set out the legal framework for the distribution of REDD+ revenues. It states that all revenues are to be channeled through the Technical Working Group on Forest and Environment of the MAFF. In the Oddar Meanchey REDD+ project at least 50% of the revenues acquired from selling carbon credits are to go directly to local communities through the community forestry management committees, whereas the other 50% will be managed by the TWG-F&E and shared with key development partners, such as Global Terra and PACT.

It yet remains unclear how the 50% of money administered by the TWG-F&E is to be spent, but suggestions include focusing on capacity building, forest management, local livelihood improvement, and expanding REDD+ to other areas. Additionally, the actual revenues will depend on how much the carbon credits sell for on the global voluntary carbon market. Due to the uncertainty of carbon credit prices on the global market, a reserve of 10-30% of the revenues is proposed to be set aside each year (Yeang 2010). This would serve as a buffer mechanism to compensate incomes in years that carbon credit revenues are not high.

The communities interviewed involved in the REDD+ activities were not expecting much in terms of revenues from carbon credits. The benefits of the project were viewed more in terms of better forest management practices. The first priority has been to secure land tenure by legalizing community forestry areas and securing collective land ownership and access rights. Secondly, communities aimed to stop illegal forest logging, and protect the land from ELC enclosure.

Challenges for REDD+

The communities have expressed that with increased funds from REDD+ they will be able to better patrol and monitor the forest areas themselves against illegal logging and clearing (Bradley 2012). At the same time, however, there are several issues that are out of their control of local communities, such as economic land concessions and issues arising from the border tensions between Cambodia and Thailand. Illegal logging and forest clearance seem to be aggravated by the fact that REDD+ as a concept is still quite unclear to several of the villagers participating in community forestry. This has led to ambiguities about the border of the area demarcated for community forestry, and villages allowing outsiders to cut forest and clear land in these areas. Another challenge will be defining tenure in an area with many potential sources of conflict, arising from the proximity and tensions related to the disputed Thai border.

7.4 The conservation approach of Seima Biodiversity Conservation Area

The Seima REDD+ project is based in the Seima Biodiversity Conservation Area (SBCA) in the north-east of Cambodia, bordering Vietnam. The area covers 295 451 ha in two provinces, Monduliri and Kratie, however, the larger part of the areas are in Monduliri. The core areas of Seima Biodiversity Conservation Area designated for the REDD+ pilot project covers only 180 000 ha. The Seima area gained conservation status by a government sub-decree in 2009, which designated it as Seima Protection Forest. The forest area is owned by the Royal Government of Cambodia and managed by the Forestry Administration together with the international NGO Wildlife Conservation Society (WCS). Previously, the area had been designated for a logging concession that failed due to the Malaysian logging company being unable to meet the government's royalty requests. The population living in the areas of and surrounding SBCA has evolved through migration in the late 1990s, and was especially impacted by the building of a road connecting Kratie to Monduliri province. The amount of villages in the SBCA has increased from 30 in 2006 to 43 in 2008, with a total population of 29 396 (FA/WCS 2008). A majority of the population belong to the Pnong ethnic minority, with small concentrations of Stieng, as well as Raong and Karol people.

The conservation area is separated into three zones: the core zone where villager economic activities are not allowed, the buffer zone where economic activities are allowed and the multi-purpose zone that is dedicated to local community activities. In the buffer zone, local communities are allowed to carry out customary practice and activities based on community based forest production (CBFP), which was initiated in 2009. No activities by local communities are allowed in the core zone that is dedicated only for scientific research. However, some villages are still located in the core zone, which is problematic.

The aim of CBFP in Seima is to go beyond the community forestry (CF) model and actively attempt to create alternative livelihoods for local communities. The CBFP model aims to promote social issues such as decentralized decision-making, customary use of forests and local tenure while at the same time taking into account the more commercial aspects of forestry, such as scale, volume and market preferences. For example, animal-raising in the buffer and multi-purpose zones has been introduced to decrease the pressure on hunting wildlife in the conservation area. This model of community based forest production is practiced in three villages within SBCA: O'Chra, Pu Kong and Pu Char, which are located in the district of Keo Seima.

Threats to forest area

The major current threats for the forest according to the local communities and project managers of the protection forest in SBCA are road construction, economic land concessions (ELCs) and increased deforestation. The road construction has facilitated illegal logging into the protected forest area. The road expansion towards the SBCA protected areas produces a serious threat to local livelihoods, especially resin tapping, in the area. As the village chief commented:

Illegal logging still continues, especially the luxury timber is still logged. Especially we want to protect the area around the resin trees. And we go there often so we can observe and inform if anything happens there. And people use telephone to announce if they see people coming to do illegal activities from the town.

Based on the interviews carried out with key informants, SBCA has also received several proposals for ELCs, particularly in the areas that have been proposed for community based forest production (covering approx. 12 000 ha). The proposed ELCs for the province of Mondulhiri are outlined in Table 7.4 and Table 7.5.

Table 7.5 List of ELCs in Mondulkiri province

No	Name of company	Area (ha)	Purpose*	Year allocated	Lease	District
1	Agro Forestry Research	7,000	Rubber plantation & forest	2008	70	Pech Chenda 0.9 and Keo Seima 0.1
2	D.T.C Group	4,000	Rubber plantation	2009	70	Pech Chenda
3	Huor Ling (Cambodia) International Insurance 1	2,000	Pine plantation	2010	70	Sen Monorom
4	Huor Ling (Cambodia) International Insurance 2	6,400	Pine plantation	2010	70	O Rang
5	Land and Developing (Cambodia)	7,000	Rubber plantation & forest	2008	70	Keo Seima 0.1 and Pech Chenda 0.9
6	Mondul Agri-Resource Co., Ltd	9,100	Rubber plantation	2009	70	Koh Nheak
7	Seang Long Green Land Investment (Cambodia) Co., Ltd	7,000	Rubber plantation & forest	2009	70	Keo Seima 0.8 and Pech Chenda 0.2
8	Unigreen Resource Co., Ltd	8,000	Rubber plantation	2009	70	Koh Nheak
9	Wuzhishan L.S Group	10,000	Pine plantation	2005	70	Sen Monorom 0.1 and O Rang 0.9
10	Holin Cambodia	777	Pine plantation	2008		Sen Monorom 0.5 and O Rang 0.5
11	Varanasy and Setheitola	2,705	Rubber plantation	2008		Pech Chenda
12	Dak Lak	5,108	Rubber plantation	2008		Pech Chenda
13	Muhibah masteron Cambodia JV co, LTD	7,837	Rubber plantation	2008		Keo Seima
14	Pacific Lotus	9,014	Rubber plantation	2011		Koh Nheak
15	Pacific Lotus	9,656	Rubber plantation	2011		Koh Nheak
16	Pacific Price	9,773	Rubber plantation	2011		Koh Nheak
17	Pacific Pill	9,614	Rubber plantation	2011		Koh Nheak
	SUB-TOTAL	114,984				
	IN THE PROTECTED AREAS					
1	Sovann Reachsei	6,525	Rubber plantation & forest	2010	70	Keo Seima
2	Villa Development CO, LTD	728	Rubber plantation	2011	70	Sen Monorom
3	Rithy Kiri Seima	5,000	Rubber plantation	2009		Keo Seima
4	Nam Lyr Eco Torism Co, LTD	1,060	Eco-torism	2010	90	O Rang
5	SETHIKULA Co, LTD.	4,273	Agro-plantation	2011	70	Pech Chenda 0.5, O Rang 0.5
6	Coviphama Co, Ltd.	5,345	Rubber plantation	2008		Pech Chenda 0.5, O Rang 0.5
	SUB-TOTAL	22,931				
	TOTAL	137,915				

Table 7.6 Mining concessions in Mondulhiri province

Name of Company	License date	Areas (ha)	Location District
Alex Corporation	16-Jul-10	6,600	Pechreada
Anqing (Cambodia) Invest Company LTD	22-Dec-08	21,600	Kaev Seima
Cambodia Hailand Mineral Company Limited	24-Nov-08	8,000	Kaev Seima
No Name	NA	20,709	Kaev Seima
Cambodia Yu Fung Corperation (group) LPT	13-Nov-11	10,300	Kaev Seima , Pechreada
General Gold Metal Group PLC	21-May-09	20,800	Pechreada
Gold Metal group Co.LTD	19-Jan-11	13,391	Pechreada
Liberty Mining International PTY LTD	15-Jul-10	6,200	Kaev Seima
Maxum Metal PTY LTD	16-Jul-10	28,640	Pechreada , Ou Reang
Maxum Metals PTY LTD	16-Jul-10	25,290	Pechreada, Ou Reang
P S M Global Trading Co.,LTD	16-Dec-09	19,100	Kaev Seima, Snoul
Zhong Xin Industries (Jinqu Mineral - Old Name)	4-Feb-10	3,600	Kaev Seima , Pechreada
Southern Gold (Cambodia) LTD	9-Dec-09	24,650	Kaev Seima
Southern Gold (Cambodia) LTD	9-Dec-09	24,400	Kaev Seima, Pechreada
Sumer Gold Investment PTY LTD	29-Jul-09	13,600	Pechreada
Z Takry Mining Joint Stok LTD	22-Dec-08	12,000	Kaev Seima
OZ Minerals (Cambodia) Limited	1-Apr-11	20,200	Kaev Seima , Pechreada
Poh Resource (Cambodia) LTD	23-Dec-11	25,200	Pechreada , Kaoh Nheaek
Poh Resource (Cambodia) LTD	23-Dec-11	25,200	Pechreada , Kaoh Nheaek
AZ Distribution	1-Apr-11	10,983	Ou Reang
CIIDG Erdos honjun Alumina	21-Feb-11	35,949	Ou Reang , Saen Monourom
Alumina (Cambodia Vietnam)Co.,LTD	23-Dec-09	123,838	Kaev Seima, Ou Reang, Saen Monourom
Total in Mondulhiri Province		488,789	
Grand Total (including a part of Snoul)		500,249	

Interest in ELCs has arisen especially from Vietnamese companies, due to the proximity of the area to the Vietnamese border. The proposed economic land concessions would have direct impacts on the livelihoods of local communities. Especially the proposed rubber plantations in the villages of O'Chra could decrease local incomes dependent on resin tapping, as rubber plantations overtake the areas with resin trees. The rhetorical promise of ELCs bringing employment benefits to the local populations at the moment seems unlikely, as the ELCs proposed by Vietnamese countries have expressed that they will bring their own labour to the area.

Proposed areas of 10 000 ha and 5 000 ha for ELCs are within the wildlife sanctuary areas, and have met strong local resistance. In addition, some of the ELCs have currently been progressing without official licensing permitting this. A representative of the project management of WCS argues that revenues from REDD+ could facilitate the fight against ELCs, by increasing the operative funds of the Forestry Administration. However, these funds would need to be in the domain of US\$1 million per annum, which can be challenging to achieve and very difficult to predict due to the uncertainty of the voluntary market for carbon credits. The project management and forestry administration have been active in opposing the proposed economic land concessions to the area, and have had some success. As the project administration described:

“I think FA [Forestry Administration] is going to win that battle. But next year there will be another battle, and the year after that, there will be another one... It is a big worry. We keep fighting, and the REDD+ revenues will help to shift the balance more towards [protection]. In some cases, that might make the difference. In some cases, we still won't win. Cause the REDD+ money is not always enough to compete with rubber, in some places. But sometimes it will help.”

Livelihoods

The most important source of local cash income has been resin tapping and non-timber forest product (NTFP) collection. The incomes per families for resin tapping have ranged from US\$299-377 per year, with a mean of US\$340 per year. Most of this income has been used to buy rice for the family. The forming of a cooperative in 2008-2009 has enabled the resin tappers to sell directly without having to deal with an intermediary. This has enabled the resin tappers themselves to raise prices, with average annual incomes from resin tapping now around US\$ 400-500. The cooperative has enabled local resin tappers to double their prices (from 30 000 riel per liter of resin up to 80 000 riel per liter).

The project management of SBCA has also been active in creating and promoting alternative livelihood activities for villagers in the buffer and multi-purpose zones. These include crop production (cashew nut, cassava), animal-raising, and community commercial logging. The community commercial logging is the first of its kind and would set a precedent. The idea is to provide better quality forest goods to local communities and increase their monetary incomes. However, the proposed area overlaps with the current area of resin trees, which might cause some problems.

Tenure

Donors, among them Finland, have supported the Cambodian land tenure reform. It has, however, been under heavy critique and not yet reached the most remote areas, such as Monduliri province. The area of SBCA is classified as property of the Royal Government of Cambodia, and the project management including the Forestry Administration and WCS have been working to complete formal tenure registration for the local communities. This would enable them to gain the economic benefits produced by any REDD+ activities. At least five villages²⁹ have applied for communal land ownership, and several more villages are in the process of applying. Andoung Kraloung became the first village in Cambodia to receive communal land registration in 2010. The area of 15 000 ha is to be divided by the 114 families so that each family could expect to have 5 ha for their own livelihood development, as is the common procedure in communal land registration. Areas are also to be officially demarcated as communal. While the communal land ownership of the area has been granted, the handing over of the certification has been postponed without explanation since mid-2010, and had not proceeded at the time of fieldwork (May-June 2011).

Interviewees identified the higher likelihood of achieving land ownership through communal, rather than individual applications. However, to get collective ownership, communities have to demonstrate themselves as a common ethnic group, with differentiated traditions, customs and language from the mainstream society. As many have already adapted to mainstream Khmer society, self-recognition as an ethnic minority might be challenging. The longer term benefits of collective ownership, which cannot be sold by an individual, might in some cases be overrun by the short term benefits of individual ownership.

²⁹ O'Chra, Pu Kong, and Sre Ampel in the buffer zone; Gati and Andoung Kraloung in the core zone

Benefit Sharing

The discussion over the benefit sharing system of SBCA incorporates several elements besides monetary benefits. REDD+ has the potential to formalize forest management practices, such as community based forest production and non-timber forest product collection, which create monetary benefits. Further, securing land tenure is also seen as an important benefit by the local community. As such, however, the benefits created by the REDD+ element in the project are unclear. Thus expectations at the village level related mainly to the benefits derived from the REDD+ activities. As the village chief said:

“The villagers acknowledge that there benefit [...] from forest conservation, but they could not see any carbon (like air, and cloud). And activities to improve livelihood, agricultural diversification, access to market and inputs. However, the villagers suggested that the immediate future is to speed up land titling as it takes too long now. Up to now, there is no final land titling for each family who expect to get 5ha/family. There are completed demarcation and but still wait for final IP land registration as the whole. And forest protection is also important. There was one group that came from Kratie, to clear land. And we noticed that and they went somewhere else. They wanted to cultivate cassava.”

With regards to the monetary benefits of REDD+ credits, WCS and FA staff have attempted to keep expectations low, due to the uncertainty of the global voluntary carbon market. REDD+ was explained to communities as forest conservation, with benefits derived from NTFP collection. The concept of carbon was unclear to most villagers, yet they understood the benefit of forest protection and how carbon could be sold:

“We did not know clearly what is carbon credit initiated by project staff [WCS/FA] but we did realized that we have been trained to protect forest and land where carbon can be sold. We do not know what carbon look like. The expected benefit from this selling included money used for village road construction, develop forest fire routes in order to protect [from] forest fires, while additional budget are expected to help vulnerable people in the village such as widow or amputated persons.”

Challenges for REDD+

Despite being the focus of conservation efforts, the area of Mondulkiri faces high land use pressures from both deforestation and land concessions, due to its proximity to Vietnam and its fertile lands. The previously sparsely populated province is facing increased population growth and migration, as well. Currently, at least three economic land concessions are being proposed in the area of SBCA. The FA and WCS staff have managed to stop one, and are in the process of negotiating to stop two. However, the inability to confidently guarantee REDD+ funds to the government decreases the leverage of the MAFF staff in opposing land concessions within the central administration. The economic value of rubber plantations is so high that forest conservation efforts have difficulty to compete with it. The situation has led to low expectations at the local level for any monetary income from REDD+ projects directly reaching local communities. As seen in the interviews, villagers are more concerned with securing land titles and speeding up the process of communal land registration. Equally relevant is the concern over the ability to secure incomes from community based forest products and non-timber forest product collection. The money from sold carbon credits generated by the REDD+ project has the potential to contribute to and hasten these processes.

7.5 Two cases of REDD+ in Cambodia: Conclusions

The first two national REDD+ pilot programs in Oddar Meanchey and Monduliri provinces will serve as important examples for Cambodia's and other countries' future REDD+ policies and projects. The verification of both projects for the voluntary carbon market by the Voluntary Carbon Standard and the Climate, Community and Biodiversity Alliance was anticipated eagerly by project staff during the fieldwork. Both projects are nationally significant, yet vary in their approaches to local livelihoods and forest protection. While OM-REDD+ is based on promoting community forestry in a production forest area, Seima REDD+ is focused on finding the balanced between zoning areas for land concessions, conservation and community forest practices.

Both areas face similar challenges, which have been met with different approaches. Based on the extensive fieldwork, the threat of economic land concessions arose as the most pressing concern of local communities in both Oddar Meanchey and the Seima Biodiversity Conservation Area. Both areas had been proposed for several economic land concessions, from diverse sectors such as mining and plantations, especially rubber plantations. The challenge for projects such as those in Oddar Meanchey and Seima lies in demonstrating that REDD+ can actually compete with the monetary gains attained from economic land concessions. This is a challenge for the Forestry Administration to demonstrate to the central government as well. A second task for both areas lies in restricting illegal logging, which has expanded to a great extent due the construction of roads into previously inaccessible areas. While road access has brought opportunities, such as increased access to markets, it has also increased commercial interest in the forest areas.

The fieldwork indicates that local communities in Oddar Meanchey and Monduliri REDD+ areas have similar priorities and expectations to some extent from the REDD+ activities. The actual revenue from selling carbon credits was not a priority or likely outcome for the majority of communities interviewed. Partially this can be attributed to project staff deliberately keeping expectations of carbon revenues low, due to the uncertainty of the voluntary carbon market. However, interviews indicate that the communities are much more concerned and interested in the side benefits that could be hastened by REDD+ contributions. The primary concern was securing land titles and tenure, thus permitting longer term livelihood security and planning possibilities for the local communities. While this process is under way in both Seima REDD+ and OM-REDD+, there have been severe delays in the issuance of land titles. Another concern, linked to establishing tenure rights, was securing livelihood activities. This concern is linked to the threat presented by economic land concessions, which could displace local forest-based livelihoods. The OM-REDD+ project provides alternatives for livelihoods through the community forestry model. The Seima Biodiversity Conservation Area project has attempted to delineate the areas where livelihood activities are allowed and provide alternatives, such as animal-raising, to activities that were previously carried out in the core zone, such as wildlife hunting. The two cases of REDD+ pilot projects in Cambodia demonstrate that these projects do not exist in isolation, but are essentially tied to social, economic and political realities at the local level, as well as influenced by global and regional processes. This research has highlighted the importance of REDD+ projects not only as mechanisms of climate mitigation that creates revenue through selling carbon credits, but as forest management practices. As such, the importance of land use planning and establishing tenure rights and access rise as the most significant factor for local communities. This enables communities to better plan their livelihoods in a longer timeframe. Thus also any funds arising from REDD+ are expected to be geared towards improving livelihoods and increasing land security and titling.

8. LAOS FORESTS AND THE ENTRANCE OF REDD+: CONTESTED SYNERGIES

Otto Bruun

"The holy grail of forest and development has talked about poverty reduction - that link is however yet to be demonstrated" (interview with World Bank representative 6/2011).

"... In the long term, sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual yield of timber, fibre, or energy from the forest, will generate the largest sustained mitigation benefit." (IPCC: 4th assessment review 2007)

In 1990–2000 land-use change, most notably due to tropical or subtropical deforestation represented roughly 20 per cent of global GHG emissions, in the first decade of this century this figure had been lowered to approximately 12%. The lower percentage is mainly due to the global growth of emissions from fossil fuels (Corbera and Schroeder 2011). While this is not the first time a worry about tropical forests in developing countries surfaces, the big contribution to climate change has led to an initiative for new large scale support through a seemingly simple idea known as REDD+. The novelty and purpose lies in giving financial and other incentives to protect carbon dense forest, improving forest carbon stocks and sustainable forest management, a framework is supported by governance reform. This is expected to tilt the balance in favour of forest conservation and thereby mitigate significant amount of global GHGs.

Forests are not, however, only a carbon stand. Figures from the World Bank estimate that globally 1.6 billion people “rely heavily” on forests for their livelihoods and over 2 billion people use forests for firewood and energy and over 60 % gain medical plants from the worlds’ forests (World Bank 2004 cited in Kanninen 2009). These are people that development policy would consider a target of its poverty reduction effort almost everywhere and who have a significant livelihood-based interest in the healthy state of the world’s forests.

While few fail to acknowledge the importance of forests for both environmental and livelihood-related reasons, forest development co-operation has historically had difficulties reaching sustainable results. Previous disappointments with industrial scale forestry and environmental concerns led in the 1980s to Tropical Forestry Action Plans (TFAPs) under the World Bank and in the 1990s development co-operation focused on integrating conservation and development projects. Despite the logic of synergies the livelihoods of the poorest and forest conservation were merged with mostly modest success (Brandon and Wells 2009). These disappointments form the background on the REDD+ initiative or Reduced Emissions from Deforestation and forest Degradation (the plus indicating forest conservation, sustainable forest management and the enhancement of carbon stocks). While there is nothing new in an initiative supporting both social and environmental goals the idea here includes novelty, as it aims to create “performance-based” mitigation, which pays forest users to protect an ecological service or global carbon sink, compared to a pre-established emissions baseline. It has been decided that the approach be leveraged by large-scale funding: and mitigation is a key target.

After being left out of treaties in the 1990s due to political sensitivity and national sovereignty reasons, forests resurfaced in the multilateral climate negotiations at the Montreal Conference of Parties in 2005. In the meeting in Bali 2007 a decision and plan to include forests in the UNFCCC agreements as a mitigation scheme was made. While there has since been a conviction that reducing carbon emissions from the forest and land use sectors might benefit many actors, several key issues have remained. Firstly, the environmental and social safeguards to be employed have been disputed. Developing countries have been unwilling to commit to any binding safeguards that go very far. These are required to make sure that the mitigation ef-

forts in the Reduction of Deforestation and Forests Degradation (under REDD+) or afforestation of currently non-forested areas (under the Clean Development Mechanism) do not lead to carbon conservation “land grabs”, loss of indigenous rights or a loss in biodiversity (e.g. through replacing natural forests with fast-growing tree plantations) (Schoneveld 2011). Chatter and Agrawal (2009) have pointed out that REDD+ implies added monetary benefits, which is problematic if previous rent-seeking behaviour by developing country state or other elites continue, which might potentially lead to a problematic slowing down of reform for best-practice community based forest management. Ideally REDD+ would lead to benefits foremost between biodiversity, climate mitigation, adaptation and community benefits (see Angelsen 2009) to reach national development policy targets and the Millennium Development Goals in a sustainable way.

No final decisions on REDD+ funding have been made, but readiness efforts of one or another kind are already on going in most tropical forest countries. For example in autumn 2011 the World Bank warned about a general collapse of the carbon market being eminent (Vidal 2011) while other actors still highlight the potential. The Durban COP 17 conference in 2012 established, that there will be a future for REDD+, provided that current disagreement can be overcome. The estimated annual funds needed to halve deforestation have been estimated at 17 to 33 billion USD, leading to claims that it is the fairest, quickest and cheapest source of emissions reduction. These figures were based on opportunity cost calculations, but this approach has since questioned, as the real costs are significantly higher (MacKinsey company 2010). Global analysts have already noted, that the costs will be significantly higher than first expected due to high technical requirements and the high costs of acquiring reliable carbon data. Carbon accounting is reported to dominate project developing costs and accurate methods are reported to be so costly, that present and future carbon market prices are feared to be too low to cover the cost. (The Munden Project 2011: 9)

The funding is to come from part of the 100 billion annual means of the Green Climate Fund that was decided on in the UNFCCC framework in 2009 and 2010, which was operationalized at COP17.³⁰ These figures can be compared to the financial flows (ODA and investments) annually in the forest sector in developing countries, which are estimated at the level of 12 to 24 billion USD per year. The annual forest sector ODA in 2007 was about 0.5 to 1.7 billion USD before the entrance of REDD+, representing about 0.5% to 1.5% of the total annual ODA (El Lakany et al., 2007: cited in Kanninen 2009). Plantation forestry dominates both public and private sector investment, thus reflecting the increasing importance of tropical fast-growing plantations in industrial forestry production, especially in Southeast Asia (see Angelsen & Kaimovitz 1999; Barney 2008) Both international and Finnish Ministry for Foreign Affairs experts doubt that there is little on this scale necessary to be expected without private (or innovative financing through new taxation of private actors) involved (interview with FORMIN staff 6/2011). There are actors, especially the state of California, driving the inclusion of forest carbon sinks into global offsetting arrangements (Schoneveld 2011), while these schemes remain criticized by Brazil and a number of other countries, who claim that they are inadequate with the present climate crises, as they do not reduce emissions but rather only shift them from the global North to the global South.

While these discussions remain and will continue REDD+ has already been established on a national and local scale facilitated by the World Bank, FAO and the UNDP. As long as no global registration procedures and funding have been agreed, credits from REDD+ projects with high standards are typically sold to the Voluntary Carbon Market, using the Voluntary Carbon Standard in parallel with the Climate, Community and Biodiversity Alliance (CCBA), which aims to ensure positive net impacts on different fronts in projects involving land-use change.

³⁰ About US 5.5 billion has already been committed by countries, of which a majority by Norway and Australia, as well as multilateral agencies to fund the preparation and implementation of REDD+ in developing countries.

This chapter looks at the entrance of REDD+ pilot projects, finance, governance reforms and forest carbon measurement projects in Lao PDR during 2008–2011. What approach are early REDD+ projects taking and what realities do they face? Especially, *what kind of expectations are present and for whom?* Further, *what type of framework is used in combining mitigation and development?* The chapter does this by focusing on the ownership and capacity building dimensions of the early REDD+ efforts. The chapter is structured as follows: after the preceding general introduction the dynamic of negotiating the global REDD+ into Laos is looked at. Following this the national level is looked at before moving on to the local level. The section concludes with a look at the rather diverse dimensions of Laos REDD+ preparations and discuss; what kind of issues might arise when trying to reach the twin targets of climate mitigation and poverty reduction simultaneously.

The material of this qualitative case-study chapter is based on interviews. Relevant actors in the REDD+ framework in Lao PDR were interviewed between March and July 2011. All in all 29 expert interviews with government staff at different ministerial provincial and district level actors, donor representatives, International NGOs and private sector were conducted by the team including Dr. Sithong Thongmanivong, Otto Bruun and field assistant Douangta Buaphavong. The target informants were selected on the basis of key high-level actors representing different sectors of society and early respondents were asked to direct us further within the vast network of different stakeholders. Additionally, province, district and village level visits to Khammuane (in the central part), Salavan (South) and Huaphan (North) provinces were made to sites that are or have been discussed as the sites of REDD+ activities to identify and compare how individual approaches or projects were proceeding. Interviews were conducted with an anonymity principle, although actors in individual cases may be traced down due to the need to bring out the institutional context where actors speak: these actors were aware of this condition. To complement the research material, newspaper articles, policy briefings and presentations of REDD+ at different fora in Laos and beyond between 2007–2011 were used. In terms of statistical evidence existing research, reports and the interviewees provide the basis. The target villages were selected on the basis of two criteria. Firstly, the target villages were selected based on suggestions of interesting or telling cases. Additionally, they were villages where no research to the knowledge of the research team had been conducted shortly before. In this report they serve as examples of the evolving REDD+ framework. Generalisations from individual cases or comments are made to illustrate the more general framework of interviews, which have been systematically analysed.

8.1 REDD+ entering the stage in Laos

Over 70 per cent of Lao PDR climate emissions have their origin in deforestation and forest degradation (Chokkalingam 2010). The climate mitigation agenda in Laos does not however stem from concerns within Laos, but rather from the international policy framework, and it is this potential funding that has awoken the broad interest within Laos.

However, in the forest sector targets are optimistically in line with the official policy to raise the forest cover from the present 40 per cent to 70 per cent of the land area by 2020 (GOL 2005). There is some optimism in the country among actors that REDD+ can bring enough momentum to turn the trend of fast and uncontrollable deforestation under control while bringing development benefits with it for people living in or near forest areas (MAF 2010).³¹ Forest conversion to agricultural needs and planting of fast-

³¹ Cerbu et al. (2011) review 79 REDD+ readiness activities and 100 REDD+ demonstration activities developed as of October 2009 and show an uneven distribution of activities across tropical countries. They highlight that the largest share of REDD readiness and demonstration activities were implemented in Indonesia and Brazil, which is in turn related to these countries' greatest forest-based emission reduction potential. Although LDCs are again surpassed, it

growing trees is very much an on-going issue with the recent investment boom in Lao PDR and there is thus some urgency in addressing what are usually defined as the drivers (or indirect and direct causing factors) of deforestation (Barney 2011; Anglesen 2009; Anglesen & Kaimovitz 1999).

The Lao forest administration has had limited possibility to participate in the negotiations in the UN-FCCC. With ODA funded support the forest administration and other stakeholders have participated in the COP meetings during the last few years. The participation has been considered highly useful for the strengthening of the capacity to understand and implement REDD+. As one participant from the forest administration states: (interview 5/2011):

“For Lao I think we are part of LDC group, G-77 with China, and then that’s all. We cannot participate in the forestry sector, we are only able a bit to focus on the REDD+ issues. Sometimes we try to go around a bit in the groups to look, for example the Rainforest Alliance.... We are not active there, and there are many meetings, and it is not possible to get a full picture of the conference, as there are so many meetings. [...] It is good to attend the conference, you are exposed to many things, when you attend the meeting [...] It takes years to build this capacity”

The capacity and commitment of some leading figures in the administration is strong, whereas the knowledge on REDD+ is only little by little being spreading out to the areas where activities will begin. Other areas of the country will only be included in later stages of the process. Managing the simultaneous capacity building, the governance process and all the pilots is however putting severe strains on the Lao PDR foreign-educated and comparably competent but rather thin (in terms of high-capacity staff) forest administration. (interview 4/2011).

REDD+ and the support pledged with it offers a possibility for the forest administration to find extended funding and political momentum nationally for reaching targets stipulated in the National forestry strategy 2020 (GoL 2005). These targets include raising forest cover, as argued by one forestry official: “this is an opportunity for us to finally reach our targets”. Similarly, the administration does not seem to have much of an option as most forest sector development assistance, traditionally important as a source of external funding in Lao PDR, has been realigned in line with or to support REDD+, see Figure 8.1 below (interview with Finnish Ministry for Foreign Affairs interview 6/2011; GOL 2010). The goal of climate change mitigation is thus present through the target to restore the nationally (and economically) important forests and the political ownership exists for some of the key targets and means. However, the concepts of forests as a carbon sink or the carbon market are unclear. As an academic researcher within the country argues: “we were once taught to identify valuable species for commercial forestry: now we should suddenly see the forest as a carbon stock. It is a big change” (interview 4/2011).

seems like Laos (and Cambodia) are considered an interesting site for REDD+ because of biodiversity co-benefits, while most of Africa might again be surpassed.

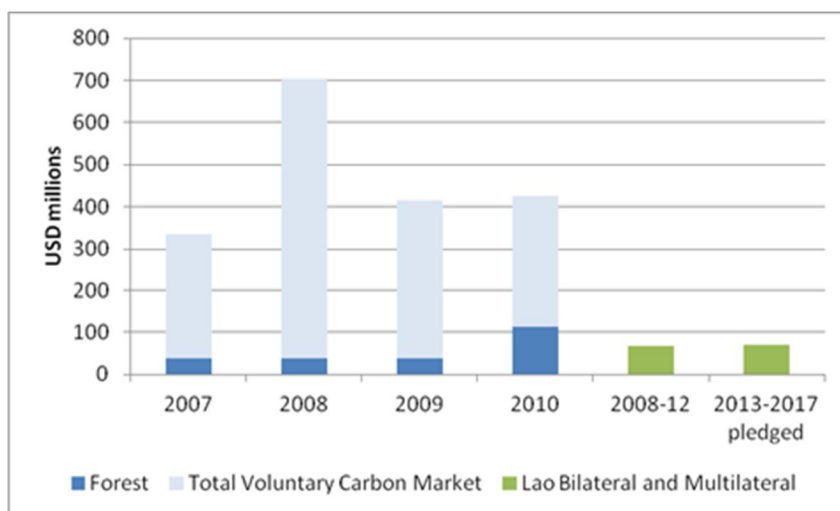


Figure 8.1 Source: SUFORD-project. Indicating the considerable amount of ODA-pledges that are currently forming the momentum around REDD+

The climate change office of the Water Resources and Environment Agency (WREA, in late 2011 included in a new large ministry for natural resources) argues that “if Laos mitigates part of its emissions through REDD+ and does adaptation as committed to in Kyoto protocol, also other countries should be able to do their part, we are a very poor country” (interview, WREA 4/2011). The following section looks at how REDD+ is being constructed from global to local.

REDD+ national institutions take shape

Worldwide national REDD+ efforts have been supported mainly via the World Bank and its Forest Carbon Partnership Facility or the FAO/UNDP coordinated UN-REDD. Thomson et. al (2011) describe how the United Nations REDD+ framework UN-REDD and the World Bank’s Forest Carbon Partnership Facility have been at the centre of supporting the activities and readiness of developing countries to REDD+. Finland has been financing this global effort with a combined over USD 14 million.

To tackle deforestation through REDD+ Lao PDR joined the World Bank co-ordinated Forest Carbon Partnership Facility (FCPF) early in 2009, and in 2010 it was selected as one of eight countries as a pilot in the Forest Investment project (FIP) with a pledged amount of 20-30 million dollars. Most of these funds are counted as ODA-eligible (interview with MAF). FIP funds will be leveraged with Multilateral Development Bank grants (involving Finnish funding), thus creating an additional effect. Whereas FCPF funds are building REDD+ readiness, FIP is supposed to support “*action in one form or another: measures going beyond readiness, real investments*” (interview with WB staff 5/2011). Though pilot projects have taken off later than in several other countries, for some frustratingly slow (interviews with administrator at Department of Forestry [DoF] 4/2011), pilot projects are being planned in at least four different locations by international development and conservation NGOs, and feasibility studies are being conducted by at least a dozen companies. (GOL 2010).

To the FCPF Lao PDR has submitted a Readiness Preparedness Proposal (R-PP) in October 2010, the single most important document of REDD+ governance in Lao PDR so far. The proposals have been submitted to the FCPF Facilities Management Team and are reviewed and approved by the Participants Committee that is comprised of 14 REDD Country Participants and 14 Donor Country and Carbon Fund participants (FCPF, 2010). Thus, any country’s framework for REDD+ implementation has to be validated multiple times by international organizations and their designated experts. (Thompson et. al 2011). Following critical comments from the Participants Committee, FCPF *country ownership* has been highlighted in Lao PDR. In 2010 the organisation of the co-ordinating Lao PDR REDD+ steering committee was reshuffled, removing foreign and International NGO staff and introducing key high-level staff from different sectors of administration, with all sectors considered relevant for forest carbon included either directly or indirectly,

such as mining and energy. Through FCPF USD 3,4 million has been pledged for building preparedness in Lao PDR, although the funds are still “disbursing” as of March 15 2012. A key early result is, that REDD+ has increased the national and international transparency of the Lao PDR forest sector, e.g. the Ministry for Foreign Affairs and World Bank supported SUFORD-project has assisted the Ministry in compiling an annual report on REDD+ in Lao PDR, which serves broadly assisting the aims of distributing general information on action in the Lao forest sector.

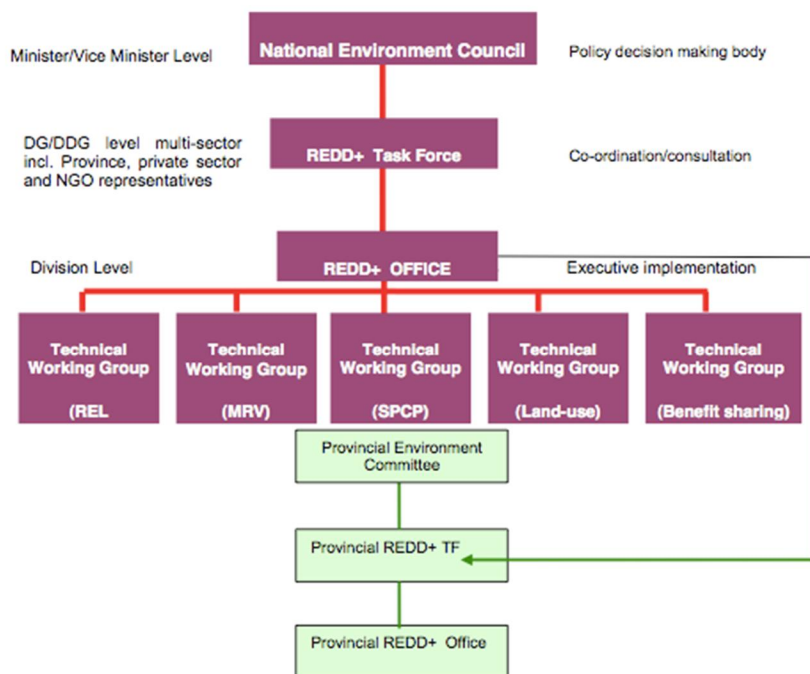


Figure 8.2 Institutional arrangements of REDD+ in Lao PDR

Considering the small size economy of the Lao PDR country co-ordination between donors is a feasible task. According to one project executive: “it is a major opportunity, which is as of yet not fully seized” (interview at REDD+ implementing agency 4/2011).” The role of the World Bank through FCPF has been strong in facilitating the process but also in assisting the government. However, the situation of the REDD+ setup is somewhat challenging as one informant argues (interview. 4/2011):

“We are now in the ‘let the thousand flowers boom’ phase. Government says yes to everything. Partners, schemes, private, public... There is a need for something more structured and rationalised.”³²

³² A number of pilot projects in Laos have been initiated. The main ones are connected to national protection areas. These involve projects by WWF in Sekong province in the South of the country, CLIPAD projects in two regions (Bolikhamxay and Huaphan provinces), of which we visited Huaphan. There is also a community forestry REDD+ project by JICA in Luang Prabang. Additionally the Finnish SUFORD program for Sustainable Production Forest Management is involved in REDD+ preparation, and might due to surprising convergence be the first project to generate actual credits (interview 2/2012: Suford project)

Box 8.1 Carbon cowboys and the difficulty of offset regulation

The concept of “carbon cowboys” gained public attention when in 2007 a hedge fund manager remarked in the *Financial Times*: “there are plenty of carbon cowboys out there, looking to make a quick buck” (Harvey, 2007). The term refers to individuals or organizations attempting to gain personal financial advantage of the swiftly growing carbon offset markets by creating or selling forward unsubstantiated carbon credits from the Clean Development Mechanism (CDM), REDD+ or Voluntary Carbon Markets. Within this field lie several opportunities and incentives, as identified by the Transparency International (TI) “Global Corruption Report: Climate Change” of 2011. The following examples refer to forest governance, yet they can also be partially extended to other fields of offsetting,

- approving projects that should not qualify for emissions reductions or do not fulfill additionality requirements
- overestimating climatic benefits by skewing data or analysis
- verifying fictitious projects, such as forests that do not exist
- being unable to secure permanence of carbon offsets

(TI, 2011; 335-338)

Most of these threats exist due to limitations in both the validation process as well as the current system of monitoring, reporting and verification (MRV). Validation and MRV are, to some extent, “gatekeepers” of carbon offsets; once offsetting projects have passed through the arduous verifications, they are legitimized and enter either the Kyoto Protocol compliance market or the Voluntary Carbon Market. Currently, the MRV system suffers from a lack of effective institutions, standardization and weak capacities. However, there are wide differences between the Kyoto compliance market and the various standards within the Voluntary Carbon Markets. For example, CDM regulation has been criticized to the extent that the legitimacy of CDM governance has become a factor of accurate auditing. In effect, auditing itself has become more of a policy goal than removing CO₂ from the atmosphere (Lovell & Liverman, 2010). Another governance concern is the small circle of people working around carbon offsets, leading to situations where those creating regulations and auditing end up conducting offset projects themselves. In addition, several people involved in the business of carbon offsetting (regulators, auditors, project developers) have personal financial motives to increase the amount of carbon offsets (Lohmann, 2010).

Despite evident problems, the consensus views validation and MRV as the key framework to ensuring market functions, and therefore the TI report recommends a few basic governance reforms in the carbon offset host countries. Firstly and most importantly, is the question of land tenure, and ensuring an effective legal framework of land rights in the designated carbon offset areas. This is bound to be the most politically charged and difficult of the governance reforms, and one can question whether sufficient reforms can be conducted under the scope of current carbon-offset programs. Secondly, the report hails the establishment of oversight and auditing mechanisms, with third party monitoring. Finally, all carbon offset projects must ensure compensation to communities, as well as having established their free prior informed consent (FPIC). The above governance reforms are by no means simple to institute, nor are they necessarily sufficient. A key question that remains unanswered is who has the liability for counterfeit credits once they have passed through validation and MRV? Will entities such as the CDM Executive Board, or Voluntary Carbon Market issuers, have the right to remove unsubstantiated credits from the market? Without such securities in place, it is difficult to establish long-term legitimacy for carbon offsets. Thus, regulation may be able to enhance processes of validation and MRV, however, “carbon cowboys” may not be completely eradicated. As the TI report concludes: “market actors who know how to ‘game the system’ are likely to make big profits while most others suffer substantial losses” (TI, 2011; 340).

The selection process is driven by donors or private groups, while the forest administration tries to maintain a right to veto any individual project. SUFORD project has been able to assist their Laotian partners also to exclude partners that are not serious and avoid projects driven by speculative or short sighted private interest in the carbon market, also known as carbon cowboys (see Box 8.1).

The private sector however, does express concern on the end market of carbon credits: and pose a question whether all the effort is really worth it. The private actors that have signalled an interest (see Table 8.1) in REDD+ projects include companies with different backgrounds and interests. At least one of them have demonstrably been part of cutting primary forest for eucalyptus plantations, as in the case of OJI Paper in central areas of the country (see Barney 2008)

Table 8.1 List of private sectors expressing interest in developing REDD+ project in Laos (table obtained from MAF 5/2011, and excludes actors considered “non-trustworthy”)

Private company name	Status
Acadia Investment Management	Submit feasibility study & MoU
Indochina Resort Group	Express interest with initial PIN
New Chip Xeng (Prime Cons. Con.,	Express interests, initial meeting with REDD TF
Oji Paper	Submit idea note
Green Planet JSC	Express interest
Vang Veuan trading export-import Co.,	Express interest in either REDD+ or CDM
Kyoto Energy Co.,	Express interest
Prime Invest Co., & Sinclair Knight Merz (Australia)	Express interest & idea note
Stora Enso (Finland)	Express interest, invitation from FIP

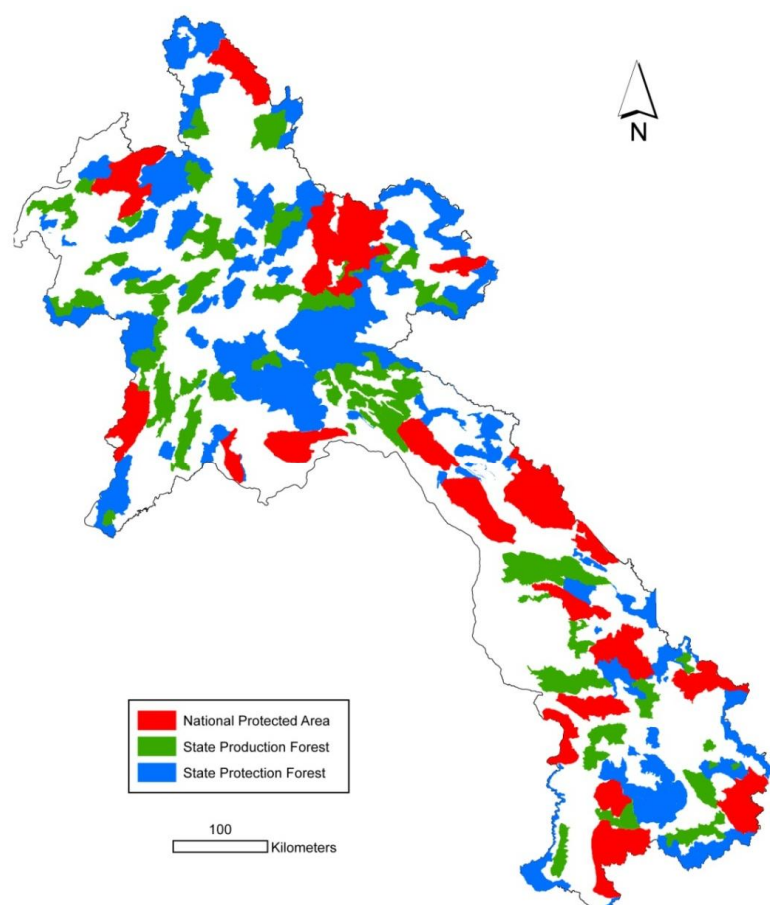


Figure 8.3 Forest Categories in Laos

Box 8.2 Types of Forest in Lao PDR

At the national level, the Forestry Law differentiates three main categories of State forests, which are all relevant for national REDD+, and all involve both forest in good and not-ideal health.

Protection forests, aimed at protecting watersheds and subdivided into total protection zones (all land uses prohibited) and controlled use zones (permanent agriculture, non-commercial logging and collection of forest products allowed),

Conservation forests and National Protected Areas (NPAs), aimed at preserving landscapes, ecosystems and biodiversity and subdivided into total protection zones (all land uses prohibited), controlled use zones (permanent agriculture, non-commercial logging and collection of forest products allowed), corridor zones (collection of forest products allowed) and buffer zones (non-commercial logging and collection of forest products allowed),
Production forests, aimed at developing sustainable forestry activities and subdivided into forest management areas (devoted to timber exploitation) and village use zones (permanent agriculture, non-commercial logging and collection of forest products allowed).

Of the forest area 13 % is protection forest, 33 % production forest, 35% areas designate as National protected areas and 19 % provincial and district protected areas. (Source: MAF) 2009).

In the general context the forest administration admits that it is difficult with so many projects entering and pending decisions at once:

“We don’t want to have small, small, small - many small ones - we want to have more bigger projects that feed into a broad process. The situation with the production forest [SUFORD project] and its programmatic approach to assisting in the management of all production forest areas is good, a big program that we are able to manage”.

It seems as though actors would agree that supporting the ownership of the recipient Lao forest sector could function by supporting a more programmatic approach instead of building on a project by project approach. In this sense the approach of SUFORD-project can be argued to be an efficient way of building administrative capacities across the board.

8.2 The three threats on Lao Forests

Current annual deforestation and forest degradation Lao PDR is estimated at 0,5-0,9% annually (GOL 2010). In our interviews actors involved in REDD+ named illegal logging, shifting cultivation agriculture, forest fires, mining, hydropower development, plantations, agricultural encroachment as the *main* reason for the fact that forest cover (with the national definition of over 20% canopy density, excluding fast-growing tree plantations) and quality is falling (MAF 2008). This points to the importance of what drivers of deforestation in the country are being targeted as part of REDD+.

While Laos, as party of existing international commitments to e.g. the biodiversity convention and under the Millennium Development Goals (addressing deforestation, biodiversity and climate mitigation under target 7), should stop deforestation and logging operations, deforestation continues and large forest areas are being degraded. Weak governance and capacities are argued to be particularly responsible for these developments (GOL 2010). From a statistical point of view, which is somewhat unreliable in a context such as Laos (see Hardcastle and Baird 2008) commercial concessions or the agricultural method of shifting cultivation (also denoted rotational cultivation, slash-and-burn cultivation) have been given main responsibility, with development and commercial schemes accounting for significant amounts as well. Illegal logging is, despite some commonly held beliefs, currently believed to cause rather forest degradation than deforestation: only the valuable species are taken out of the forest (interview with researchers: 5/2011). The below

statistic is from the Ministry of Agriculture and Forestry in Laos. In the statistics on deforestation drivers it is not currently considered to what extent shifting cultivation is causing emissions due to being displaced by other drivers from agricultural land, i.e. leakage of emissions and the indirect land use changes, which have become very important in analysing carbon accounting. Primary studies in Northern REDD+ pilot site indicate that emissions due to shifting cultivation are surprisingly low (personal communication 2/2012) and that project areas are thus being extended.

Table 8.2 Estimates of average yearly emissions of CO₂ from 2012-2020 using the baseline settings. Source: (R-PP, GOL 2010)

RESULTS WITH DEFAULT SETTINGS				
Est. emissions/sequestration of CO ₂ in Lao PDR (mil. tCO _{2eq})		RESULTS		
		Average annual area affected ('000ha)	Average annual emissions (mil.tCO _{2eq})	Percent of total emissions of CO ₂
Total annual emissions from C stock change in natural forest (2011-15)			-46.84	100.00%
Total annual emissions by shifting cultivation (2011-15)		57.3	-9.95	21.25%
Total annual emissions due to land clearance (2011-15)		67.2	-9.28	19.82%
of which:	Commercial concessions	34.2	-4.72	10.08%
of which:	Smallholder cash crops	14.7	-2.02	4.32%
of which:	Hydro-power	13.1	-1.81	3.87%
of which:	Mining	5.1	-0.70	1.50%
of which:	Infrastructure	0.2	-0.02	0.05%
Total annual emissions due to degradation (2011-15)		9,776.7	-23.34	49.83%
Total annual emissions net of sequestration plantations (2011-15)		67.2	-4.26	9.10%
Total annual net emissions (adjusted for sequestration)			-51.10	

From the table above, the official main reasons of current deforestation can be deduced. Firstly, deforestation that is caused by land clearance in projects furthering national development priorities such as hydropower but also a number of other causes identified in documents such as poverty reduction strategy paper (PRSP) and the national five-year development plan (GOL 2008; GOL 2005). The second reason relates to commercial development through economic land concessions, exemplified by a number of concessions for mines, agricultural or forestry plantation development, which to a certain extent are additional and new compared to targets set in development plans. And thirdly, it is possible to distinguish shifting cultivation or smallholder cash crops, which are often identified as poverty driven. These will be discussed one by one below.

National Development Priorities

The Ministry of Agriculture and forestry has developed a clear vision of development in the country, enticing: "The strategic direction for agriculture and forestry based development is to ensure a successful gradual transition from subsistence into commercial smallholder production." (MAF 2010) This vision is, however, overrun by other visions in an attempt to create fast economic growth through the utilization of the vast natural resources (land, water and forest) in the country, bringing export earnings. Building hydropower, promoting fast-growing tree plantations and developing the mining sector have been the key ingredients. Hydropower and the vision of Laos as the electricity-exporting "Battery of (Southeast) Asia" is probably the main political vision with 70 large-scale projects in the pipeline up to 2030, including eight on the contested Mekong mainstream.

A substantial amount of logging has been initiated and approved in recent years in reservoir areas of proposed hydroelectric dams (Baird 2010a). According to informants in the Lao forest administration and development projects the challenge of REDD+ will begin around 2018 or 2020 when the current and near-

future infrastructure development sites have been utilized for logging and the sector will be looking for new areas for large-scale logging (interview 4 and 5/2011).

Table 8.3 2006-2007 estimated government timber revenue by type of harvesting

Type of Harvesting	Harvesting Volume			Government Revenue	
	m ³	%	\$/m ³	Total (\$)	%
Clearing of infrastructure sites	532 444	82.0	88	46 855 072	82.1
Dead trees	63 032	9.7	88	5 546 816	9.7
Harvesting in Production Forest Areas total	54 214	8.3		4 679 752	8.2
Total	649 690	100.0		57 081 640	100.0

Source: MAF, 2007 as cited in Puustjarvi, 2007.

The national economic significance of logging revenue is still high, while only a part of it is accounted for in official statistics (Barney and Canby 2011). Timber, minerals and hydropower are Lao PDR's primary exports, accounting for two-thirds of total official export value. (GOL 2010).

In the interviews, the actors from the energy and mining sectors seem more interested in focusing on national priorities within their sectors than addressing deforestation in a pro-poor manner. The knowledge on REDD+ issues by representatives in the national Task Force was as of yet low, including of their own sectoral contribution. There is, what one researcher called, a tradition of "very strong sectoral distribution of work within Lao PDR natural resource management" (interview, Lao forest researcher 4/2011), which has caused and probably will cause difficulties for targeting some deforestation driver, even if a new integrative approach has been defined with the 2011 reform to link different ministries under a new Ministry of Natural Resources and the Environment.

A close reading of the Lao PDR Readiness Preparing Proposal for REDD+ reveals the potential conflict between REDD+ goals and existing priority policy goals for the land use sector, such as the commercialization of agriculture are acknowledged. The R-PP estimates that nearly half of the emissions from land use change in Lao PDR are highly dependent on decisions and actions from other sectors that require land for other purposes. The World Resources Institute (2010) has analysed the plan and argued it does not "Identify potential strategies for reconciling conflicts between competing land use priorities that go beyond raising awareness." A key question for the further process is: how will the REDD+ Task Force or the representative bodies reach out to include a broader representation of sectoral interests?

According to World Bank staff (interview 5/2011), the writing of the

"R-PP was galvanizing, in that they needed broader consultation than they've ever had... Many development initiatives require fellings of forest. The deforestation associated with infrastructure can be limited. The logging is seldom limited to the interdiction areas. These kind of trade-offs maybe can be avoided in the future, which would already be huge."

The national development priorities in the hydropower sector and REDD+ might be mutually supportive. This narrative was repeated time after time by forest administrators and academics explaining how the target for 70 per cent forest cover is compatible with the vision of Lao PDR as the Battery of Asia. This is related to the perceived function of forests serving a key hydrological service in the watershed areas and avoiding erosion (interview 5/2011):

"The main industry is the hydropower, and they really need the forest for the water management. [...]. I don't think it [forest conservation] hinders the national development. It could encourage it, the main industry of the nation. The long term for the energy supply. It goes back to the zoning of the land. 70 % if put in the right place could be enough to make place for the other [development] projects. The watershed areas are prioritized [for protection] in the forest law."

This is further reflected by the fact that the government has initiated a process around a prime ministerial decree stipulating that 1 per cent of all revenue from hydropower shall in the future be used to support sustainable forest management, although the application of this is being contested by hydropower companies. These funds would be far larger than the potential of REDD+, and a payment for ecosystem scheme is considered in key areas to pay forest users.

On a general level, the weak governance of forests has been a worry and will be in the near future, as the millions of REDD+ funding for building preparedness are coming in. There are concerns that the significant financial resources that could become available under REDD+ might exacerbate, rather than address, institutional and social factors that contribute to forest loss and degradation, such as elite capture of benefits and corrupt behaviour. Large scale plantation forestry development, which has developed very dramatically as of late, is looked at in more detail below.

The commercial tree plantation boom

In Asia, most of the tropical forests are under pressure of over-exploitation and conversion to plantations of oil palm and fast-growing timber for the pulp industry (Kanninen et al., 2007; Eliash, 2008). Understanding and addressing these external causes is according to most REDD+ researchers crucial to identifying appropriate incentives to curb deforestation (see Anglesen 2009).

Laos has experienced an investment boom in large scale plantation forestry and smallholder rubber since 2006, along with a number of other countries in the region (Hall et al. 2011). Even though the National Forestry program stipulated that 500.000 ha of land would be allocated for tree plantations, few thought that this would be realized in a matter of just a few years (Baird et al. 2009). Estimates announce 1,4 million ha are already under concessions, although some raise that estimate to 2-3 million ha when active and not yet implemented projects are taken into account (Barney 2010).

The problem of the investments is the limited capacity of the government to negotiate land deals that involves benefits for either the government or on local levels: land in Lao PDR has been reported as very cheap compared to elsewhere in the region (figures from 1 to 12 dollars/ha/year reported in Barney 2009). In several cases in the Southeastern and Northern parts during the field work of this project we met migrant workers from China (in the North) and Vietnam (in the South and East) that had come due to the work opportunities that the quickly expanding sector of fast-growing trees provided (cf. Barney 2008). A considerable indirect driver seems to be the quickly growing demand of Laos's quickly growing neighbours. For example, around 200.000 of fast growing eucalyptus plantations are in the process of being established for markets in China (see. Barney 2008).

Rubber (seconded by eucalyptus) is the most quickly expanding crop, with large-scale plantations in the central and southern parts and small-holder schemes in the northern part of the country: estimates put the area already above 500.000 ha of rubber monocultures (Barney 2010). They are driven by generally high resource prices, which cause opportunity costs that REDD+ has difficulties in competing with, since it only involves a promise of future income. An expert with one of the development organizations brings this bluntly in play (interview 3/2011):

“Currently the rubber price on the Singapore rubbers future exchange, it's called (TSR20) is \$5.50 a kilo of rubber, and that's rubber latex, and then you have being produced down in that area, like normal yield rubber, is 1350 kilos a year. If you do the simple maths that's over \$5500 per year per hectare. And I don't think REDD's going to be able to compete with that.”

These themes are developing a new dynamic in land development. However, the local benefit has been reported as limited and often there are impacts such as decreasing access to land by local villagers and there does not seem to be much unused quality land (see Hall. Et al. 2011) During the field visit to plantation areas by Lao Plantation Forest Limited (subsidiary of OJI Paper) in Khammuane province, Mahasay district the research team ran into an area where forest fires had occurred on all in all 279 ha of land in controlled areas five days in a row in April just before local new year's festivities. The area represented a larger area

than the company was able to plant during the whole year in the same district. The thin-peeled eucalyptus died as an effect of the burning. Equipment has been stolen from the company as well. The background to the conflict is clear to the villagers: “the company promised us work as we sign the documents. But it also plant in the forest and the work was only flowing for the first 2-3 years.”

At the same time as OJI is planting 50 000 ha it is also doing feasibility studies for REDD+ which would benefit villagers. The company hopes this would reduce the on-going land conflict, and enable villagers to get some additional benefit on a nearby area from REDD+ funding of the Japanese government. (interview with company staff 5/2011).

OJI has also previously been shown to cut down forests to establish its plantations in Laos, and has caused somewhat serious problems of access to land for local groups: causing some problems for local food security and forcing villagers to reintroduce patterns of encroaching shifting cultivation on marginal lands (Barney 2011). Our interviewees also emphasise this point: forest carbon projects without local support are destined to become a problem.

As there is increasing problems of overlapping land concessions and land conflict it would seem that donor presence on large geographical areas is a good solution. The problem of economic land concessions on areas of production forests under World Bank and Finland SUFORD project seem to be less common than in “donor-free areas”. As World Bank staff argues: “if difficult issues surface, when push comes to shove we have always in the end found a satisfactory solution” (interview 5/2011). This observation is supported by on the ground staff in different locations: the presence of donors or NGOs seems also to improve the knowledge of the rights possessed by local people, which provides them with additional agency.

Shifting cultivation and poverty-driven causes

Shifting cultivation is still approximately the agricultural practice for over 20 per cent of people in the rural areas in Laos: especially in higher altitudes where ethnic groups are prevalent. Shifting cultivation has been accounted almost half of all Laos land-use change related greenhouse gas emissions. In the history of forest governance in Laos (and elsewhere) the practice has been considered environmentally problematic, it has been seen as a backward practice with no future: but the statements about the practice and its consequences do not match very well with empirical research (Ducortieaux et al. 2005; Lestrelin 2010). Most of our informants argue that as part of REDD+ rotational shifting cultivation (or slash-and-burn, a more derogatory term) can be “contained” or stopped by the creation of alternative livelihoods: whereas a single environmental group depicted the practice as possibly a zero-carbon lifestyle if the cycle of 15-20 years is considered. This is however not what current REDD+ baselines and measurement practices are measuring, as the time perspective is much shorter.

As interest in land investment and land concession has risen, the fact that what is defined as degraded land is often a rotational cultivation fallow. (Dwyer 2007; Lestrelin 2011). Both paddy farming and shifting cultivation patterns have been reported to be disrupted due to impacts from economic land concessions (Barney 2010; GoL 2005; Baird 2010b; Kenney-Lazar 2010; Dwyer 2011).

All forest land in Laos is principally owned by the government. In the Readiness Preparation Proposal for REDD+ the Lao PDR government acknowledges that the existing tenure situation poses some difficulties for REDD+, since groups that do not hold legal title may not be able to benefit from REDD+ revenues or there may be multiple stakeholder groups with overlapping claims to land. As the value of land rises also due to REDD+, the interest for land and benefit capture might rise (Chattre & Agrawal 2009). However, the R-PP does not elaborate further on how these conflicts could be resolved. This lack of clarity is reiterated in most of the interviews conducted.

Without significant efforts towards enhanced local participation and clear social and governance safeguards, the role of local communities may indeed be restricted to at best forest patrolling, inventory and restoration activities, with few or no direct benefits derived from REDD+, while additional farming limitations are imposed (Chokkalingam 2010). The frustration experienced in certain villages with conservation schemes in the northern areas of the country is a key concern.

Village-level land use planning has long represented the cornerstone of the land management system and, in principle, a key step toward the recognition of customary rights to use land and natural resources. It is pursued by agreeing on village boundaries and land delineation for different land-use purposes (paddy, forest etc.) (Vandergeest 2003; Fujita and Phanvilay 2008). Historically however, the authority of the local administration has long been subordinated to the national objectives of eradicating shifting cultivation and preserving forest resources. Thus, there has been a tendency from the part of district planners to discount local claims and thereby design plans favouring forest conservation over agricultural land uses (Ducourtieux et al. 2005; Lestrelin 2010).

This adds to the fact that degradation of natural resources including deforestation has had a negative impact on the livelihoods of poor, as the World Bank reports that over 80 per cent of the population is engaged in subsistence agriculture, non-timber forest product collection and fisheries and are, thus, directly dependent on the natural resource base and the non-timber forest products from forests (Foppes & Ketphanh 2004; GOL 2009). Widespread soil erosion resulting from the loss of forest cover, especially in the uplands, and shorter fallow periods in rotational swiddens has led to declining agricultural productivity (Fujita and Phanvilay 2008). One cause to this is increasing land scarcity and other deforestation drivers. This links the sustainability of shifting cultivation firmly with other land use management: especially small-holder commercial planting and plantation development.

The German GIZ and World Conservation Society CLIPAD project is a novel projects based on the protection of two national park areas. It is supposed to be the first area where things start running. The case study here concentrated on three villages (Houaytin, Khone Gnoua, and Phiengdy) in Viengthong District, Huapanh Province adjacent to the Nam Et Phu Loei National Park. The park is already controlling access into the park. A shortage of rice was present during 3-6 months of the year. The villagers of Houaytin had gathered a proposal to increase their paddy land by arguing, "we can go back to our old village from which we were moved because of project before". The park manager response refers to the rule of the conservation that cultivation of land in the park is not promoted and should be restricted. The villagers that currently engage in short-fallow upland shifting cultivation have thus been imposed new land-use restrictions. In another area in the same National Park Khone Gnoua villagers claimed that they need 10 years rotation in their shifting cultivation to secure rice production, now that has been reduced to 5. In addition, villagers have the right to collect NTFPs in their production forest which was allocated to them in 2010 but these resources are long since depleted. The villagers find plans of carbon income possibilities as "strange" and "non-understandable", and trust is limited as the park has under previous projects usually limited their possibilities for income generation. In all three villages visited, villagers used to work with the conservation area staff for patrolling, sharing information about wildlife conservation and hunting restriction: a principle that was "respected by all" villagers, as they told us. Both villagers and park staff hunt on the borders of the park. Villagers sign conservation agreements for guaranteed benefits, but these agreements also rather logically pose significant land-use constraints.

The WCS/Clipad project is being carefully and ambitiously planned: with income generation and options for carbon mitigation within the project researched and considerable effort to ensure a meaningful process of Free, Prior and Informed Consent by villagers (see Box 8.3). A contrast to the JICA community REDD+ project in Louang Prabang exists, where a frustration with villagers was already surfacing. According to the project manager the "villagers just don't understand" that shifting cultivation is problematic. The carbon sink value and capacity building for the project has also proved a challenging activity. When the project tried to do capacity building on forest carbon sinks it proved to be wholly impossible: villagers did not grasp what was going on when they were explained about carbon in the trees that can be sold for money (interview 4/2011).

Box 8.3 Free, Prior and Informed Consent

Free, Prior and Informed Consent (FPIC) is a promising initiative for securing local ownership of development projects. Its origins lie in respecting rights of indigenous communities in e.g. the UN Declaration on Rights of Indigenous Peoples and the ILO-convention 169: both non-legally binding but normatively strong ways of asserting indigenous rights.

While indigenous rights over land areas are not a new idea, the concept has gained momentum through the increase of REDD+ projects with the need to secure the rights of forest peoples at stake when forest carbon becomes valued. FPIC is tied to questions about land rights and tenure, and thus paramount especially in REDD+ projects and VCM projects with forest and land-use components. A report by RECOFTC, the Center for People and Forests, and German aid agency, GIZ outlines FPIC as “the establishment of conditions under which people exercise their fundamental right to negotiate the terms of externally imposed policies, programs, and activities that directly affect their livelihoods or wellbeing, and to give or withhold their consent to them” (Anderson et al. 2011; 15). As such, it is important to understand FPIC as a process – consultations do not end with communities signing agreements with yes or no answers to proposed projects. Rather, FPIC allows communities to negotiate with external developers about the conditions of forest and land use projects. At times, this can lead to communities agreeing upon projects with specific terms. On occasion, communities may decline, but this does not have to be a final decision. FPIC draws on the three interrelated terms – free, prior and informed – to stress the importance of both processes and outcomes. Specifically FPIC refers to forest right holders’ rights to freely consent (or not) to a project, with consideration prior to the initiation of project activities, and having the broader community informed in local languages. These three key themes should be carried along throughout the whole project consultation period. While promising, FPIC is still a relatively new concept. Further, the approach is yet unknown to most communities and therefore its communication needs both consideration and trial.

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8.3 Governance choices

Most projects on-going on the field already, including WCS/Clipad, JICA and WWF try to envisage alternative livelihoods, and have a soft approach to the issue of eradicating shifting cultivation. In spite of this, they echo the idea that shifting cultivation cannot be sustainable: and must be addressed through stabilisation, resettlement, capacity building, awareness raising and alternative livelihoods. The same goes for a number of planned private projects.

Addressing inter alia indigenous communities and their shifting cultivation has a long-standing history in development in Lao PDR (see et al. Ducortieux 2005; Lestrelin 2010) leading to everything from violent forced resettlement to approaches highlighting “alternative livelihoods”. The uplands populations have been the subject of “stabilization” requirements for a long time. The issue of ethnic minorities, who are cultivators in the Lao uplands where shifting cultivation is prevalent, is difficult due to political reasons in Laos. According to official policy all Lao are equal and no ethnic groups exist. No official consultations with “indigenous” groups in Lao PDR has as of yet been held, but a Dedicated fund for local communities and Indigenous Peoples under FIP has been put forward. The REDD+ Advance Negotiating Text has been called ‘ground-breaking’ for including references to the rights of indigenous peoples, and local communities.

Actors in project implementing agencies and government refer to these issues as anything from “stopping the slash and burn to the benefits of settling down and reducing rotational swidden cultivation.” Rather surprisingly, all current pilot cases are on-going in areas where shifting cultivation is considered to be highly problematic, especially around national parks. Lestrelin (2011) has shown that the discourses around shifting cultivation are strong and largely accepted – although many of the beliefs of environmental destruction due to shifting cultivation are misguided: some biodiversity is even improved by the cycle of fire, cultivation and fallow.

From the perspective of reaching the target of development policies, this issue raises some questions. Is it possible for ODA-funded actors to unproblematically agree that the farming practices of the poorest groups in Lao PDR should be limited, as these groups might be poor exactly because their farming practices have been seen as backward and difficult to develop for a long time? (see Ducortieux 2005 et al.; Lestrelin 2010). As a lot of the encroaching swidden cultivation is caused by indirect drivers considered at least equally meaningful as causes of deforestation it is a further problematisation. Additionally, the groups engaged in shifting cultivation are most often not claiming the net benefits but rather from time to time the net negative consequences of plantations, hydropower and mines development as well.

The technical focus of co-operation in REDD+ on the ground almost seems to hide these issues under a carpet in contrast to highlighting them and making them matters of debate. Addressing other drivers thus becomes dis-emphasised both in official documents and the actual on-going projects. The governance choices however highlight that currently shifting cultivation is a key part of the early projects that have aimed for “low-hanging fruit”, while also politically convenient for the Lao PDR government.

8.4 Conclusion

A framework distinguishing different interest in relation to forest use has been presented. Participatory Forest Management (PFM), under which common property resource management is formalised with meaningful delegation of decision-making power from the state to the communities using the forest resources, has been shown to be an effective policy instrument for reversing forest degradation and also enhancing carbon stocks (Chhatre and Agrawal, 2009) To Chhatre and Agrawal (2009) “larger forest size and greater rule-making autonomy at the local level are statistically associated with high carbon storage and livelihood benefits while differences in ownership of communal forest are associated with trade-offs between livelihood benefits and carbon storage.”

In Lao PDR the first communal land titles ever were announced in October 2011 (interview 2011) and were shared to communities in February 2012. The scale of this should be understood by how many of these titles need to be rolled out for there to be significant results. Several of our interviewees also claimed that through REDD+ it is possible to push tenure agenda: not as it is often being discussed, by securing rights of ethnic groups per se, but rather creating village forestry - access to tenure for also ethnic groups. This shows how donors sometimes should and also do secure ownership of other groups that might be set against state interests. For example, Phelps et al. (2010, pp. 312–313) note that the institutional requirements of REDD+ present the real possibility of recentralization of forest management that could under-

mine local participation in project design and management, arguing that “Communities may participate in collecting forest-specific data, but carbon accounting, a major REDD+ component, will require centralized management with billions of dollars at stake. Governments could justify recentralization by portraying themselves as more capable and reliable than local communities at protecting national interest.” As of now this does not seem to be a justified fear, but in many areas the roles of international NGOs and donor-funded projects have actually increased with the entrance of REDD+ and some technical modules.

In Laos the weak governance and limited capacities for monitoring, law enforcement and extension has currently fuelled fears for large displacing land concessions: and that is certainly the context where also REDD+ project developers need to situate their projects. These conflicts played out also during the time of fieldwork in this research project. The global discussions launched around REDD+ has put special emphasis on issues around accountability, transparency and open conflict resolution. However, as the global structure after Durban does not enforce strong environmental and social safeguards, these need to be ensured by other means. The key issue to understand is if the situation of conflicting relations between state and communities could turn to one of mutual accountability through REDD+, but current approaches are actually targeting poor communities, while the governments’ policies continue the path of deforestation with its policies and the admission of new economic land concessions.

To date, the limited space of the civil society has hardly contributed to improve the situation. However, something might be changing. After 2005 several non-for-profit organizations in the fields of rural development and environmental governance have emerged (including Lao Biodiversity Association, Community Development and Environment Association). These have sometimes strong ties within ministries and other government bodies and have gained influence over the past few years. After issuing the Prime Minister Decree No. 115 on associations in 2009, the groups are officially recognized as local NGOs. There are also a growing number of other civil society organizations. 50 local NGOs were listed by the Lao Non-Profit Associations network in 2010. Some have become key partners for both governmental and international development agencies and contribute to national networks of discussions and influence on land and forest governance (e.g. ‘Land Issues’). While these organizations are not grassroots initiatives, they have definitely contributed to bringing local land issues to the national agenda and prompted changes in land and forestry regulation – e.g. emphasis on secured land tenure and introduction of collective land titling in land allocation processes at the village level (Sipaseuth and Hunt 2009).

While some of the fifty local NGOs officially registered involve members from ethnic minorities, none of these organisations is dealing specifically with indigenous rights and self-governance. In fact, the public debate over indigenous issues appears virtually non-existent. Ensuring equity and other multiple benefits (e.g. poverty reduction, political representation) will require a serious role for this emerging civil society. Without such a wide range of governance reforms, REDD+ will, at best as some of our interviewees argue, not change much in the landscape. Most likely in this situation, considering the significant flows of capital and the emergence of new actors and interests associated with REDD+, it will create additional institutional complexity and ambiguities, aggravated socioeconomic inequalities, and further marginalisation of forest-dependent populations. The problems noted with village development clusters might be relevant here, as shortcomings are linked to limited resources and capacity, unclear mandates, limited political representation and the persistence of a top-down political culture (interview with forest researcher 5/2011).

The ideas presented here are in line with those presented for the local level around the concept Free, Prior and Informed Consent (see Box 8.3), which has been proposed as a safeguard in indigenous rights and become especially relevant as indigenous communities have to worry about being displaced due to the carbon values they live amongst. In Laos this process is seen as key, and also some conservationist express frustration with the general framework: “the private sector can go in and get a signature and take the land for development. Are we really supposed to sit around and wait for consent to emerge while the forest is being destroyed?” (interview 5/2011).

The need for checks and balances are even more important because of some of the existing problems with non-serious or speculative carbon projects. All this has made serious companies rather vary about entering the field, also as the UNFCCC has been unable to produce a viable and reliable market.

To sum up, forests are, a source of multiple benefits: but only if the targets and interests of poor and local communities are safeguarded. However, there is currently a governance focus on shifting cultivation stabilization, which raises questions of food security and access to land for uplands communities. Nonetheless, there might be potential win-wins. Adaptation and resilience can be seen to belong to the virtues of forest communities in Southeast Asia historically (Scott 2009). However, at the moment the governance framework is not focusing on REDD+ for adaptation (Interviews March-May 2011). While conducting climate mitigation it is important that also issues such as access to resources and food security effects become evaluated. Early measurements are focused on carbon mitigation, but on this point this research has been conducted too early to draw longstanding conclusions.

With regard to capacities, the Lao Forest sector is now in front of a daunting task to control both elaborate systems of measurement, verification and reporting. Luckily, it is supported in this task. The SUFORD-project with its large scale “thousands of hours” of capacity building seems to have gone through a relevant experience producing some tangible results in reaching forest certification in considerable areas of production forest in Lao PDR: and simultaneously building further capacity for capacity building. The large-scale activities of the SUFORD project have been indispensable especially regarding local administrative capacity, if thinking on rolling out activities to further provinces.

Regarding ownership donors run across the issue of conflicting ownership at the local and national level. Understanding ownership this way requires a difficult balancing game: but the pro-poor commitments in the Millennium Development Goals require donors to commit to participation of civil society and the rights of local communities to a considerable degree. The demands for ownership are deep and broad in REDD+ in line with Busan Declaration requirements for democratic ownership. Local communities and their lives and resources become entangled in global climate governance. Similarly, the ownership framework works in parallel with needs to establish and follow international best practice on transparency and safeguards.

Regarding the combination of mitigation and poverty reduction REDD+ holds a lot of potential but for this to be realised the interventions should carefully adopt the lessons learned of previous forest support but also critical governance studies. In order not to repeat the forest policy history of aiming to stabilise shifting cultivation with mediocre results there is a need to address other drivers as well.

REDD+ is a multifaceted approach. This text has only attempted to bring some glimpses of the wealth of information. However, the chapter underlines the need to assert ownership at the heart of mitigation efforts, if it is to succeed.

9. CONCLUSIONS

“The reduction of poverty and reaching the UN Millennium Development Goals by emphasizing needs and ownership of the partner countries are the most important targets for development policy”

Ministry for Foreign Affairs of Finland, www.formin.fi accessed 21.11.2011

This book has sought to trace trends in the relation between official development assistance and climate mitigation in its multiple forms in Laos and Cambodia. Whereas climate change can be defined as *the* global policy problem of the 21st century, the ideas of development assistance have a longer history. As such, multilateral climate governance goals have been imposed on previous patterns and trends of development assistance – especially in the least developed countries. It is clear that development can no longer be thought of without reference to climate change. The development paradigm needs change to respond to the climate crisis. Several donors have already started integrating climate objectives into development cooperation agendas. While significant, this trend also brings into the fore new dilemmas. An important step has been the attempt to steer support away from activities and processes that aggravate climate change (e.g. the building of energy infrastructure based on fossil fuels) or increase the vulnerability of people to the impacts of climate change. Similarly efforts have been directed to support and enhance the resilience of targeted groups. The main dilemma related to the integration of development and climate objectives emerges when development finance is used for projects and initiatives that are mitigation-oriented, especially in the least developed countries.

The analysis in this book has discussed four climate mitigation initiatives in Laos and Cambodia. Chapter 2 introduced the context of international climate policies and the key questions for the least developed countries. A significant source of tension has been the definition of “new and additional” funds to assist developing countries in mitigating and adapting to climate change. Developing countries have been concerned that integrating climate change objectives, especially with regards to mitigation, into official development assistance (ODA) may imply a diversion of resources from one target group, country or region to another. The tension is heightened by the fact that a majority of internationally disbursed funds have tended to focus on mitigation – at the cost of adaptation and REDD+ activities by volume. Chapter 3 highlights these questions in the context of climate-oriented development assistance of Finland in the years 2007–2011. Through a textual analysis of the key development policy texts of Finland, it is argued that storylines of multiple synergies in climate and development may divert the attention away from the important issues facing developing countries specifically.

Moving into the case studies, Chapter 4 introduced the Finnish ODA-financed Energy and Environment Programme (EEP), which seems suitable to the LDC context due to reasonable administrative demands. However, some dimensions of the project such as the short time-frame, the emphasis on mitigation, and the approach that favours Nordic actors in implementation, invite questions about the sustainability of this scheme. Chapter 5 analysed the Clean Development Mechanism under the Kyoto Protocol in Cambodia. The case finds the problems of meaningfully integrating sustainable development in projects where climate mitigation and the offset logic of carbon markets is the priority. The focus of chapter 6 on voluntary markets was specifically on renewable energy projects and their certification. The chapter finds that projects often employ a strategy where financing from voluntary markets, official development assistance and other sources is used interchangeably. The seventh chapter of the book looked at two REDD+ pilot cases in Cambodia that faced similar challenges in terms of large-scale agro-industrial plantations and illegal logging, yet employed different strategies. In both cases, the possible future funds from REDD+ were seen as an opportunity to hasten important local processes like tenure security and livelihood development, yet insufficient to fully address the key threats posed to the forest areas. Chapter 8 looked at the governance of REDD+ in Laos and argues that the effort is focusing on deforestation caused by the rural

poor while other deforestation drivers are still somewhat outside of its scope. REDD+ does seem to be in line with national development priorities and the environmental targets of Laos, but pays considerably less attention to rural livelihoods.

Through the analysis of these four different climate change mitigation initiatives it has been attempted to disentangle the complex and often messy links between development assistance and climate change mitigation. This final chapter draws together conclusions from the cases. The mechanisms are discussed from the perspective of delivering multiple benefits in climate mitigation and poverty reduction. Analysing the links between these perspectives is a useful way of understanding the constraints and possibilities of integrating new targets into development assistance. However, at the same time it must be remembered that the climate mitigation initiatives presented differ greatly in scope, extent and implementation. REDD+ focuses on forests and land-use, the voluntary market on energy and forests, CDM has a regulated multi-sectoral approach and the EEP focuses on energy through small-scale initiatives and capacity building projects. Making comparisons between these is thus bound to be challenging and generalizing. The aim is to raise issues and questions that should be further considered when integrating climate mitigation and development not only in Laos and Cambodia, but in the least carbon emitting countries more generally.

The promise of multiple benefits

The possibility to reach multiple benefits has been the promise through which the integration of climate mitigation into development cooperation has been legitimised. This is seen in most of the project documents, certification standards or plans reviewed relating to the different mitigation initiatives. The assessment and evaluation of development benefits has been generally weak in all of the studied mechanisms (EEP, REDD+, CDM and VCM) with perhaps the EEP as the most structured approach despite its weaknesses, with REDD+ in Lao PDR and Cambodia only on a rocky path of solving benefit-sharing disputes. The weak development framework does not however mean that development benefits could not be reached: the fuel-efficient stoves are a good example of a sustainable development project with tangible benefits through voluntary carbon markets (see chapter 6). However, in renewable energy only the Gold Standard and in forest carbon the CCBA (Climate, Community and Biodiversity Alliance) have some structured sustainable development requirements, while other standards still do not. Several voluntary market projects rely on narratives and stories of synergies in mitigation and poverty alleviation to guide and persuade investors and boutique shoppers.

The concept of multiple benefits requires the explicit understanding of trade-offs in climate mitigation and development as well. Large-scale CDM projects have had development trade-off effects, as is argued in Chapter 5. There are some indications that REDD+ could join this pattern unless participation and guarantees for local communities and civil society are considerably improved from present patterns (see chapter 8; cf. Lestrelin et al. 2011). The EEP and small-scale voluntary certified renewable energy projects do not pose dangers of trade-offs to a large extent, mainly due to their smaller scale and impact.

Laos and Cambodia (along with other least developing countries) rely on ODA specifically for poverty alleviation. If more aid is channelled towards climate change mitigation projects there is a risk of diverting funds from poverty reduction and this goes for all the mechanisms involved when ODA is implicated. If REDD+ is successful it might be an exception in the long term, but benefit sharing in Laos and Cambodia will only occur years from the present time. The issue of “new and additional” (see Box 2.1) is not only a normative commitment of equity, but also fundamentally a question of addressing responsibility (i.e. the polluter pays principle) for climate change. The carbon market and its offset logic is not a quick path to development for LDCs. The CDM is a case in point, where CDMs have thus far only seen 1,1% of projects in the pipeline located in LDCs. As there are a lot of institutional capacities devoted to managing, supporting and assisting these projects and their institutional setup, the institutional trade-offs for administratively complex projects should also be considered. This refers to how trained capacities are used in projects that are not creating results. How many projects, funds and approaches are manageable and possible to regulate in the current LDC framework with regards to climate change, forests and energy?

Compared to the CDM, emissions reductions from the EEP, VCM and (at the moment) REDD+ do not function as offsets on a compliance market (i.e. these initiatives are not transferring emissions). This means these projects have some environmental benefits the CDM lack: the emissions reductions are additional to targets set in Kyoto, whereas CDM projects in practice only transfer the actions for emissions reductions from one place to another. Emissions reductions from the voluntary market, while offsets, are additional to targets set in the Kyoto Protocol.

The target of the scheme also has effects for its outcomes, as seen with the CDM. For most of the CDM project developers, maximisation of CERs has been the main motivation, which has overshadowed the other half of the twin objective, sustainable development. With currently only emissions reductions being measured and valued in the market, measurable mitigated carbon will steer projects in the future as well, be it REDD+, CDM or the voluntary markets. The ODA-funded EEP is “softer” in this regard, also targeting groups outside of large-scale emissions reduction potential. In this regard, the limited mitigation potential of the least developed countries should imply that public funds are in a key role for delivering sustainable development rather than flexibility for a compliance market.

At a minimum, the results highlight the need for enforcement of basic but thorough social and environmental impact assessments, an issue that has not always been considered in CDM projects in Lao PDR and Cambodia. This is important regarding future REDD+ projects as well. Some REDD+ pilot projects around the world are promising, others have demonstrated the risks and difficulties of integrating different targets as land-use is politically contested, leading to displacement of poor communities (de Schutter 2011). As of yet there is no clearly defined way to address the issue of the potential of national development priorities creating considerable social and environmental trade-offs. This is a difficult issue, but one requiring a clear strategy from donors engaging in REDD+.

The importance of assessments is also highlighted, if the principle of *free, prior, informed consent* (FPIC) (see Box 8.2) is acknowledged in projects affecting local communities. The process of FPIC has gained new momentum via REDD+, and considering multiple benefits and avoiding trade-offs, this process should continue, and it is also meaningful when done in parallel with social and environmental impact assessments. At the local level, some projects combining different initiatives, such as fuel-efficient cook-stoves and community forestry, present possibilities for synergies and win-wins in terms of poverty alleviation and climate change mitigation. However, in the CDM and the voluntary markets, but especially in REDD+ there is still a need to solve who carries the risk of investment in the mechanisms and how benefits and risks will be fairly distributed among project communities and developers.

Currently the use of ODA in mitigation projects has not been justified by clearly outlined and evaluated development benefits. Neither is its development impact assessed in terms of real expectations, based on proved evidence, research and evaluations. The trade-offs, which almost always exist, involved in projects need more analysis and attention. This is especially the case on land-use intensive or water-related projects, which are often problematic in terms of the social outcomes for the poorest. The multiple benefits and their political dynamics still need to take the lessons learnt from the past more seriously both on energy and forests in a local context.

Capacity building

Weak institutional capacities are generally argued to be a key obstacle for taking advantage of the possibilities for finance through, for example, CDM, REDD+ and the voluntary carbon market. The lack of capacities the least carbon emitting countries begin from the capacity to participate in UNFCCC negotiations and goes all the way down to the village level capacities in changing behaviour represented as harmful for e.g. forests. In this comparison, both the limits to capacity and capacity building possibilities are highlighted. There is also, however, reason to critically ask about the mechanisms observed: what capacity is required, how many capacitated staff are required and what is being legitimized and transferred when subjects defined as “low-capacity” gain training.

Cambodia and Lao PDR currently have limited or no capacity of directing the agenda in multilateral fora and this crucially affects the situations in these countries. While the capacity to participate in UNFCCC negotiations has been supported, this support clearly needs to be broadened to be meaningful. This concerns the formulation of rules around CDM, REDD+, and different funds that are supporting the implementation of these mechanisms. The lighter format of the EEP makes it easier for LDC actors to participate in.

Capacities are currently supported with ODA in all of the mechanisms discussed through multilateral or bilateral finance. Within the climate mitigation framework, capacities are addressed mostly by supporting administrative tasks for the recipient country. The CDM has attempted to ease registration and project procedures specifically for LDCs and ODA funds have been used to develop LDC capacities for project development. REDD+ involves capacity development throughout implementation and will entail huge amounts of capacity building as it evolves into a national co-ordinated set-up in the target countries. However, the only mechanism in line with the LDC context is the EEP. Even in the EEP all selected projects include partners from the global North, but the process has less heavy requirements for applying or putting up a project compared with the other mechanisms. The EEP is also supporting projects which are building more general rather than specific capacities for the energy sector.

For the government administrations, CDM and REDD+ also seem to strain resources through the complex project cycles they present. A more sectoral program-approach and governance support could in some instances be more in line with the appreciation of thin capacities in the country administrations, than by supporting a project-by-project approach. The CDM has already attempted to increase LDC participation by abolishing registration fees for LDCs and introducing programmatic CDM (or PoA), which bundles together several small-scale emissions reduction projects that expected more significant sustainability benefits.

Regarding capacity in Laos and Cambodia we find that the Finnish SUFORD project in the forest sector discussed in chapter 8 is an interesting example of somewhat successful large-scale capacity building. It involves a whole branch of administration in sustainable community forestry practices, which at best benefits all forest users (state, province, district, village). In comparison, the capacity building for carbon markets is sometimes highly specific, and does not support large-scale human or institutional capacities for meaningful participation in development efforts. SUFORD, in its basic approach, also demonstrates how capacities are based on the local level: not brought in as a consultancy-based approach. However, the difference between the carbon market might be compared through the REDD+ preparedness work under SUFORD, which has a much more technical character, importing to some extent exclusively Finnish technology and expertise for complex measurement activities (see chapter 8). REDD+ funds are in this case intended for capacity building, readiness preparation and MRV. Some of these funds should already be given to support community involvement in, for example, carbon measurement and the processes in general to create capacities at all levels, e.g. through the process of FPIC.

Few projects consider it, but looking at the use of ODA for general capacities some priorities could be set-up. In Laos and Cambodia the issue of conducting Social and Environmental Impact Assessment analyses is one example that would ensure some amount of transparency. It could also ensure social and environmental sustainability of a huge number of projects including those trying to produce carbon credits. The example of CDM and forestry projects shows that these standards and their enforcement should be strengthened with good effects to be produced also outside of a narrow sectoral or mitigation framework.

With regards to capacity building it is essential to evaluate and re-think which projects are truly necessary: not all capacity development has impacts and the commitment to actual activities and their realistic proceedings should be more important than fashion waves in climate finance. Strengthening the social and environmental impact assessment (SEIA) capacity and requirements and involving local communities could have longer term effects. Supporting and developing SEIA capacities should be a base requirement, since at the moment the lack of SEIA capacities significantly affects the ability to monitor potential harmful social and environmental impacts. This is a key issue in all mechanisms, but particularly in larger projects such as regional or national REDD+ schemes and CDM.

Ownership

Ownership was adopted as a principle to guide donor-recipient relations in aid in the Paris Declaration of 2005 and has since been reinforced in Accra and Busan. In the case of Laos and Cambodia, and probably a majority of the 48 countries in the least developed countries group, the target of national climate change mitigation measures does not carry priority. Adaptation measures carry a significantly higher legitimacy due to the vulnerability of LDCs to climate change. Given this it is surprising that a majority of funding in the least developing countries in Southeast Asia is oriented for mitigation. This is a key observation regarding the mechanisms studied. Key in this regard is the ownership of the climate governance agenda (see Ostrom et al. 2002). In negotiating the mechanisms CDM came up very surprisingly in Kyoto (Newell & Patterson 2010), REDD+ has had some kind of entitlement during the process, whereas the voluntary carbon markets are wholly, and the EEP is for its initiation, outside of the understanding or influence of Laos and Cambodia in their content or agenda. A lack of ownership can be seen on a more fundamental level towards climate mitigation targets. The multilateral climate mitigation agenda has been initiated by industrialised countries, while the CDM beneficiaries have been strong developing countries such as the BASIC-group (Brazil, South Africa, India, China). To address this issue participation of climate governance goals of LDCs at UNFCCC have been supported but it is a long and slow process.

The ownership of CDM processes can be argued to be low especially for the LDCs. CDM processes are complex, highly technical and long-winded. It has been difficult for LDCs to keep track on the highly complex and technical CDM related processes and to try and influence them due to problems of limited resources and capacities. Improvements have been made to encourage CDM projects in LDCs but still challenges remain. A more profound issue is that the objective of providing flexibility for industrialised countries may be challenging to own for the least emitting and most climate change affected countries, to which most LDCs belong. This again stresses the importance of the mechanisms to produce benefits for sustainable development and technology transfer that the LDCs would appreciate. So far successes in this front have been limited resulting also in challenges to create ownership in LDCs. The EEP is relatively light on technical requirements in comparison with the CDM, and thus local inputs can be better facilitated. The target of providing access to renewable energy in rural areas can carry significant ownership locally. However, this would require increased support for local inputs. To guarantee stronger ownership of the EEP the donors need to clearly enunciate how and when the program is continued. This would enable beneficiary owners to plan and place their own assets (human, financial etc.) into use, and have clearer incentives to participate in and determine processes and outcomes in the EEP. Finally, REDD+ is often described as the project with most LDC ownership. It should be remembered, however, that REDD+ was the initiative of some, not all, tropical forest countries. The ownership of the results of REDD+ can be high if countries and localities are able to establish appropriate benefit-sharing systems. However, ownership is still weak in terms of processes, which are dominated by complex monitoring, reporting and verification (MRV). Although not met with great enthusiasm among donors generally (Fry 2011), community measurement processes will be interesting in this regard as they have found to distribute some benefits, and create ownership and capacities.

All mitigation initiatives should attempt to create and secure some benefits at the local level through, for example, employment or taxation. The ownership of processes and decisions could be increased by employing more national experts, involving governments, communities and civil society. The question remains whether the three levels (international, national, local) of good ownership required for successful projects is something that, for example, the energy sector could learn from: e.g. for the creation of sustainable energy strategies that have a legitimate basis.

Towards democratic ownership, improved capacities and multiple benefits

The concept of ownership at its most promising combines two strands of legitimacy: legitimacy of results and legitimacy of process in a transformative path towards sustainable, meaningful and accountable development (see. Bäckstrand 2011). These discussions are significant not only when climate change is integrated

into development assistance, but also in the finance of climate projects in developed and developing countries in general. A vast majority of all donor and recipient countries are committed not only to the principles of the UNFCCC, such as “common but differentiated responsibilities” but also to the ownership agenda.

Extending the ownership principle to incorporate *democratic ownership* could be a step further in realizing the principle of ownership. The Paris Declaration focused narrowly on country ownership and it was often seen as ‘ownership by government officials in dialogue with donor officials’. Assistance has not seen the realization of ownership in practice, as development workers have still seen recipients as unreliable and in need of their guiding hand (cf. Koskenranta 2008). In addition, the Paris Declaration failed to take account and address issues of inclusion, gender equality and human rights. Most importantly, and also in relation to climate finance, accountability for sustainable development outcomes for poor and vulnerable people were overlooked. To fulfil these promises, there is a need for more structured democratic ownership, which refers to concrete structures of participation and decision making for relevant anchoring of key community decisions. Democratic ownership also places people at the centre of aid and development. It is not only about government official participation, but rather, democratic ownership centres the legitimacy of development priorities and processes on the rights of people. This is something that the developing countries will also need to show commitment to (RoA2011). With regards to development and climate change this means asking what kind of development projects are suitable and how the communities affected should be evolved. *Free, prior and informed consent* might form the backbone for more structured ideas of participation, representation and legitimacy at the local level with regards to development projects involving public or private, national or foreign investment. These kinds of ideals have guided community natural resource management before, and their ambition has been high. However, the present climate challenge should in the first place lead to a re-evaluation of resilient ways of life. For communities relying on access to natural resources and land, a highly common situation in rural areas in least developed countries, democratic ownership of projects that alter the use of, for example, land and water are of paramount importance. This is not a question of only a procedural commitment to an abstract value (democracy) but also a prerequisite for sustainable development and an important safeguard against socially or environmentally bad results. On national scales improving the possibilities of civil society to work and participate towards development will inevitably lead to a stronger ownership of development targets: implying less conflict, better capacity building results and the possibilities for authentic pro-poor and sustainable development benefits through sound development plans. Development outcomes will be sustainable when processes are inclusive of all actors.

9.1 The future of mitigation in the developing countries

The research for this volume was carried out in late 2010 – 2011. As such, it offers a glimpse into the state of four specific climate mitigation initiatives at a time when international climate policy was undergoing and also expecting great changes. Carbon markets have responded to the global economic downturn and been performing disappointingly since 2008, leading Reuters to argue that carbon has “been the worst-performing commodity in the world”³³. At the moment there are commitments and initiatives that aim to secure the continuation for carbon markets. In the case of compliance market, for example, the Durban agreement did support the continuation for the Kyoto Protocol, although several key countries (Canada, Japan) did not sign up for the second commitment period. There are also several new market-based mechanisms on the table. Still uncertainties on the future of post-2012 carbon markets prevail, especially with regards to the CDM and its historically low CER prices. This is particularly significant for the LDCs, which are, with due reason, wary about investing in costly mitigation mechanisms and capacity building if these carry no future value. While it is apparent that the World Bank and the carbon finance experts acknowledge

³³ reuters.com, accessed 14.10.2011

the uncertainty affecting the future of carbon markets, it appears that the development community and the United Nations has only got its machinery supporting mitigation projects running and is enthusiastically building carbon projects in the global South. The question of financial sustainability and the distribution of risks are real. Further there is also a more generic worry about the carbon market: is it an avenue for long-term, predictable and sustainable financing or is it more of a risk, which could end up as even worse than fluctuating prices in other contexts. Policy circles are acutely aware of the market uncertainties, which in calculations are argued to be based on among other issues healthy economic growth in the EU area. If the financial market crisis turns into a long-term recession the viability of present initiatives is an open question. In the least developing country context these issues need to be taken very seriously in development assistance if capacity building is directed, as is already happening, towards climate mitigation.

The larger question is where the carbon markets are driving us. What kind of development does it really try to envision? Are the capacity building measures supported really relevant for fostering sustainable livelihoods and development in Laos and Cambodia? Is the expert-driven measuring and control of carbon cycles really the first way forward for countries and their assistance where a majority of people live below the poverty line?

With regards to the future of climate policies, the position of least developed countries is the most extreme. They have most to lose due to a failure of reducing emissions, and simultaneously they have the most to lose if short-sighted climate investments with negative social impacts are carried out. Most trends, however, are based and focus on how decisions in the carbon market evolves, e.g. how the global market actors and the wealthy and powerful governments of the world are able to agree on either regulations or form voluntary commitments that lead to positive outcomes. The least developed countries and their inhabitants with the most to lose, have little or no say in the future of their own fate.

Looking at the future of climate policies and carbon markets from the perspective of pro-poor and sustainable development benefits, capacities and ownership in the least developed countries, two scenarios emerge: inclusive low-carbon pathways and exclusive low-carbon pathways. With exclusive low-carbon pathways, development is carried out by a limited number of technically skilled experts from the developed world, with little interest about local context and suitable technology: local capacities are supported mainly to administrate these transformations. In contrast, inclusive low-carbon pathways take as its starting point the democratic ownership of people and communities, and their will to reach environmental and social multiple benefits. The transformations are led by an appreciation of existing resilient capacities with technology, expertise and development assistance motivated by demand.

A key normative question is to what extent the target of development and modernization is held completely intact, and the level of regulation, incentives and technological change are altered. Regarding present forms of development co-operation, integrating development assistance with climate change mitigation is not without its problems. Focusing on multiple positive outcomes and synergies is often characteristic for policy, as it is necessary to construct consensus and unify disparate perspectives (cf. Hall et al. 2011). However, overly consensual and optimistic storylines of synergies and multiple benefits easily result in situations where the politics are taken out of decision-making. Simultaneously the need to make difficult choices gets obscured. In order to create space for open communication and critical discussion the possible trade-offs and contradictions between the objectives should be more explicitly addressed. Focusing on multiple benefits renders ecological distribution conflicts almost invisible and at the same time undermines the importance of access and communal rights.

Internationally, attention gets diverted away from the responsibilities of industrialised countries to expectations for actions in developing countries. The commensuration of different greenhouse gases as well as commensuration of energy and land use sector required by the carbon market easily obscures the scale of reforms and changes required in the fossil fuel based economies and societies (cf. Lohmann 2008 and 2010). The current focus on highly-skilled expert knowledge and technology presents the developed countries as the ones with the solutions for the problems caused by climate change. This omits expertise and knowledge in the current low carbon economies of developing countries. It also leaves little space for understanding the “uncharted landscape” of development developing countries may have to navigate through

(Gupta 2009; 210): "promoting transfers of existing technologies and practices in the West may be less beneficial than designing more appropriate technologies and practices that fit better with the conditions of the developing world".

Gupta (2009: 211) offers a valuable perspective in her summary about the future of development and development co-operation, which is worth citing at length:

"If we are to address climate change, climate change needs to be mainstreamed into development processes. Such mainstreaming is not easy in the developing world nor in the developed world where it challenges existing consumption and production processes and lifestyles: nor is it easy to integrate into existing global trade and investment processes."

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