

Making Carbon Markets Work for the Poor in Vietnam



FINAL REPORT

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List of Acronyms

A/R	Afforestation/Reforestation
CCBS	Climate, Community and Biodiversity Standards
CER	Carbon Emissions Reductions
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
DEFRA	Department for Food and Rural Affairs
DFID	Department for International Development
DOE	Designated Operational Entity
DNA	Designated National Authority
ERPA	Emission Reductions Purchase Agreement
EU	European Union
GS	Gold Standard
ICROA	International Carbon Reduction and Offset Alliance
IIED	International Institute for Environment and Development
IoE	Institute of Energy
JI	Joint Implementation
KP	Kyoto Protocol
LMDG	Like Minded Donor Group
LOA	Letters of Approval
MOIT	Ministry of Industry and Trade
MONRE	Ministry of Natural Resource and Environment
NGO	Non Governmental Organisation
NTP RCC	National Target Programme to Respond to Climate Change
ODI	Overseas Development Institute
PAC	Practical Action Consulting
PDD	Project Design Document
REDD	Reducing Emissions from Deforestation and Forest Degradation
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCM	Voluntary Carbon Market
VCS	Voluntary Carbon Standard
VER	Voluntary Emissions Reductions
VER+	Voluntary Emissions Reductions Plus

Executive Summary

There are two carbon markets that can potentially benefit the poor in Vietnam, the UN's Clean Development Mechanism (CDM) and the voluntary carbon market (VCM).

The CDM has yet to gain real traction in Vietnam or deliver poverty reduction

The poor in Vietnam could in theory benefit from the CDM. However, the CDM has limited traction in the country (of the 85 Vietnamese projects that have entered the CDM pipeline only 5 have been formally registered) and projects have encountered a number of obstacles. None of the registered CDM projects in Vietnam appear to have direct benefits for the poor and only one of the 85 in the pipeline has direct poverty reduction benefits. This reflects a global context in which to date, more generally, the CDM has delivered few benefits for the poor.

Voluntary markets present an opportunity for poverty reduction in Vietnam

In theory, the VCM represent an alternative source of funding for poverty reduction in Vietnam and this has been the focus of this study. Although this report looks mainly at the VCM, there are many features common to the compliance (CDM) market, so it is also covered to some extent.

At present, there is no functioning VCM within Vietnam and awareness of it amongst key stakeholders is extremely limited. However, there is considerable interest from potential international buyers for voluntary carbon offsets (or Voluntary Emissions Reductions, VERs) generated within Vietnam. These include international companies that have operations in Vietnam, brokers or aggregators and buyers for carbon funds. Vietnam is attractive because, in general, buyers are now looking to diversify their portfolio to reduce dependence on VERs generated in China, India and Latin America (the main suppliers of carbon offsets to date). Vietnam has an added marketable benefit of being perceived as a stable country, similar to its Asian neighbours already operating effectively within the market. It may be that profitable projects from other countries in the region can be successfully transferred to the Vietnamese context and quickly validated as VER generating projects. New or ongoing projects will be most suitable for entry into the VCM given buyers' preference for vintages no older than two years.

Opportunities for generating VERs through poverty reduction projects exist in a number of sectors including small-scale hydro power, wind power projects including wind-powered water pumps, biogas digesters, improved cookstoves, solar water heaters and possibly forestry.

Potential VCM funding for poverty reduction is, however, uncertain and unstable

It is impossible at this point in time to quantify the scale of funding for poverty reduction that can be derived from the VCM. This is because the VCM is in its nascent stages of development and represents a fickle and unreliable income stream that fluctuates significantly with the economy.

The current financial crisis has had a significant impact on carbon credit prices with fluctuations in the VCM more volatile than in the CDM. Demand for VERs has plummeted, although demand for carbon offsets from the compliance market (Certified Emissions Reductions, CERs) has been sustained as demand still outstrips supply. Price and demand variability exposes marginal projects, with a higher carbon to investment ratio, to significant financial risk and could deter small-scale project developers from engaging with the VCM altogether.

Acquiring VER accreditation will be imperative for project developers

Voluntary projects need to acquire some form of recognised voluntary market accreditation if they are to maximise their chances of finding a buyer. VER accreditation standards are recognised worldwide but involve complex, lengthy and costly registration and verification processes that are similar to and in some cases more complex than procedures for CDM projects. NGOs/agencies working on sustainability issues in Vietnam are yet to be convinced that the carbon market offers sufficient returns to warrant the investment required in both time and resources.

Overall, there is a strong buyer preference for renewable energy projects because the positive human impacts are easily understood and saleable. End-users generally want to purchase credits from projects that produce clearly identifiable social and environmental co-benefits. Small to medium scale community-based projects are thus most suited to the VCM. As such, there is significant potential for energy efficiency, small scale methane and forestry project developers to sell VERs with careful project planning and marketing efforts to promote the wide range of additional benefits to local communities. Forestry remains a controversial sector given the associations made in Vietnam between the CDM and fast-growing forest plantations with ecological and socio-economic disadvantages and risks. New “Reduced Emissions from Deforestation” (REDD) schemes may provide a better entry point for the forestry sector, promoting forest protection and sustainable forest management. However, REDD approaches are still being designed in Vietnam so full VCM engagement will be some way off.

VCM projects will encounter many of the same obstacles that are being faced by CDM projects

The process of acquiring voluntary market accreditation will face many of the obstacles encountered by CDM projects. In particular, in order to acquire voluntary carbon accreditation projects must, like CDM projects, be able to demonstrate their additionality, i.e. a project must show that carbon emissions have been reduced as a direct result of project activities and that project activities would not have been possible without additional funding from the VCM.

In Vietnam one of the key reasons why so many projects have yet to acquire registration with the CDM Executive Board is that project developers have been unable to reliably quantify emission reductions and demonstrate their additionality. There are some national issues specific to Vietnam that make it difficult for project developers to effectively quantify carbon reductions and demonstrate additionality including lack of commonly accepted carbon benchmarks (in particular for the

national power grid) and national investment rules that appear to complicate the demonstration of financial additionality.

VCM projects also face additional obstacles

VCM projects find it harder to secure upfront finance than CDM projects because project income streams are far more risky (i.e. buyers only commit to projects for one year and prices). Furthermore, demand in the VCM is more volatile and sensitive to the economic situation. Therefore in many cases the CDM can offer higher prices for emission reductions than the VCM.

Donors can have a role in helping to overcome these obstacles and support the development of the VCM in Vietnam

Many of the constraints to full VCM development reflect the operating environment in Vietnam and will require Government commitment to address. However, donors can have a role in catalysing change and facilitating market development in Vietnam. Specific recommendations include: (i) establishment of information and market focal points, (ii) awareness raising and technical capacity building initiatives, (iii) exemplar pilot projects in each of the four sub-sectors, (iv) development of nationally approved financial and carbon benchmarks, (v) establishment of a funding mechanism for the initial phases of project development, (vi) formation of Working Groups to discuss structural barriers. The Action Plan that accompanies this report sets out in more detail recommendations for action by all market actors.

But the distinction between the voluntary and compliance markets is blurred

It is important to note that if effective measures to support market development are implemented, it may become more beneficial for some poverty reduction projects to choose to derive income from the CDM instead of the VCM.

The VCM is likely to remain a more attractive option for very small scale poverty reduction initiatives for which the transaction costs of the CDM are prohibitive. The type of projects that can be funded in the VCM can cover a wider range of technologies and methodologies than CDM, including land use and forest-related projects. Whilst verification and validation costs in the CDM are only slightly higher than those associated with certain standards in the VCM (e.g. gold standard) the timelines are likely to be much longer given the need for host country approval and validation and verification to be approved through the CDM board. Small scale projects relates to very small scale initiatives (saving several hundred to several thousand tonnes of CO₂e p.a.) taken forward by NGOs who may be able to attract charitable donations to fund offsets. It is however important to note that this type of approach will be patchy and sporadic.

For many projects, however, the CDM may be a more viable option. This is because:

- Acquiring VER accreditation can be almost as resource intensive (in terms of time and money) as acquiring CDM accreditation
- The CDM offers significantly higher prices than the VER market
- Demand for CERs is significantly higher than demand for VERs

- Demand for CERs is more sustainable and reliable than demand for VERs
- The CDM has been improved in recent years in a number of ways that makes it more workable for poverty reduction projects. In particular, the introduction of new aggregation methodologies, will help smaller community based projects access CDM and harness poverty reduction co-benefits.

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1. Introduction

In September 2008, the Like Minded Donor Group (LMDG) in Hanoi commissioned a consortium led by Practical Action Consulting in association with CarbonAided, Forum for the Future, The Eco Consulting Group and the Institute of Energy in Vietnam with the overall objective of facilitating the development of VCMs for tradable carbon emissions reductions in Vietnam, as a complement to the existing markets under the CDM. This involved investigating the status and potential of the VCM in Vietnam, identifying key barriers to development, making specific recommendations on how the VCM could provide wider social and environmental benefits and producing an Action Plan aimed at stimulating the development of this market. The study focuses on four specific sectors:

- Smaller scale renewable energy projects
- Small-scale methane
- Community Energy Efficiency projects in industrial sectors important to the poor
- Forestry sector interventions

The study follows on from initial work carried out by Forum for the Future on the global VCM in 2008 (Forum for the Future, 2008). The consortium undertook initial desk research and interviewed international and national experts in this field. In November 2008, the consortium held a workshop in Hanoi bringing together the Government of Vietnam, carbon credit buyers and potential sellers in order to create a forum for discussion around the opportunities and issues presented by the VCM in Vietnam.

There are many similarities between the CDM and the VCM. In particular, the leading VCM accreditation standards have similar approval criteria and process to the CDM. Consequently this report includes a review of the status of the CDM in Vietnam to understand how far lessons learned so far are relevant to the development of a VCM in Vietnam.

The Terms of Reference are included in Appendix 1 and the Study Approach is detailed in Appendix 2. The Action Plan is a separate, stand-alone document.

2. Overview of Clean Development Mechanism

2.1. Status of CDM in Vietnam

There are two carbon markets that can potentially benefit the poor in Vietnam, the CDM and the VCM.

Vietnam became a signatory party to the United Nations Framework Convention on Climate Change (UNFCCC) in 1994, and ratified the Kyoto-Protocol in 2002. The National Strategy Study on CDM (GoV, 2004) sets out a vision and action plan for Vietnam to participate in global compliance markets, includes a portfolio of possible projects and stresses the importance of awareness raising and capacity building on methodologies, project assessment and monitoring. Potential sub-sectors for CDM projects are identified as:

- Energy efficiency, conservation and saving
- Fuel switching
- Methane recovery and utilization from waste disposal sites and coal mining
- Application of renewable energy
- Associated gas recovery and utilization
- Afforestation and reforestation

In March 2003, the Government of Vietnam assigned the International Cooperation Department of the Ministry of Natural Resources and Environment (MONROE) as the Designated National Authority (DNA)¹ responsible for implementing the Kyoto Protocol. In May 2008, the Department of Meteorology, Hydrology and Climate Change of MONRE took over as DNA and assumed the following functions and responsibilities:

- Development of regulations, guidelines and criteria on CDM implementation;
- Evaluation of CDM projects;
- Preparation of CDM potential projects for finalization by the CDM National Executive and Consultative Board
- Submission of the Project Idea Note/Project Design
- Document (PIN/PDD) to issue a formal letter of endorsement or approval;
- Dissemination of available CDM information for public access;
- Management and coordination of the CDM business and investment in Vietnam

The Department of Meteorology, Hydrology and Climate Change also serves as a National Focal Agency for managing and coordinating the implementation of all climate change related activities under UNFCCC and Kyoto Protocol in Vietnam.

¹ The Designated National Authority (DNA) is the body granted responsibility to authorize and approve participation in CDM projects.

Established in 2003, the role of the CDM National Executive and Consultative Board (CNECB) was to consult with the DNA on policies related to development, implementation and management of CDM activities in the country, and make recommendations on guidance and evaluation for CDM projects. In 2007, The Vietnam National Steering Committee for UNFCCC and the Kyoto Protocol replaced the CNECB.

The Vietnam Environment Protection fund is responsible for registration of certified CERs; supervision and management of CERs granted by the CDM Executive Board to CDM projects in Vietnam; and collection of fees from CERs being sold.

There are no local Designated Operating Entities (DOEs)² in Vietnam. There are some consultants working with Vietnamese organisations that are involved with validating CDM projects, but these projects are ultimately being evaluated by foreign DOEs.

Over the past 7 years the Government of Vietnam has implemented the necessary laws, policies and administrative infrastructure to enable Vietnamese entities to participate in the CDM. It has also introduced investment incentives for CDM projects. The CDM has yet to gain real traction in Vietnam, however, and of 85 CDM projects in the pipeline only 5 have been successfully registered with the CDM Executive Board and only one of the 85 projects in the pipeline appears to have strong poverty reduction benefits (the “Cao Phong Reforestation Project” which is focused on rural poor people areas in the northwest of Vietnam).

This section provides an overview of the status of the CDM in Vietnam. Whilst this report focuses on the VCM, we start with an overview of the status of the CDM as there are many similarities between the approval procedures for CDM and voluntary projects and lessons learned from the development of CDM projects in the country will also have a bearing on the development of voluntary projects.

2.2. Legal context

The Government of Vietnam has published a number of documents, in particular Directive 35 (October 2005), Decision 130 (August 2007) and Circular 58 (July 2008) that deal with the implementation of CDM projects in Vietnam. These documents direct MONRE to work with other government agencies to help to develop CDM projects and also set out a number of exemptions for CDM projects. In particular, a number of Articles in Decision 130 note the availability of tax exemptions (Articles 12 and 13), land-use levy and rent exemptions (Article 14), and state investment in and price support for CDM projects (Articles 15 and 16). Circular 58 contains more detail on the implementation of Decision 130 in particular with respect to price support and also the sales tax on CERs (ranging from 1.2%-2% depending on the project type).

² Designated Operational Entity (DOE), an independent auditor assigned to evaluate whether a potential project meets all the eligibility requirements of a particular Accreditation Standard

As there is no VCM in Vietnam at present, these laws are specific to CDM projects and it is difficult to anticipate how they might be applied to future VCM projects.

CDM projects are also subject to general investment registration and business registration rules in Vietnam. The Investment Law (Law No.59/2005/QH11) sets out the main provisions relating to investment certificates. These provisions are different for domestic and foreign investment projects and vary according to the scale of the project. All foreign investment projects are required to have an investment certificate under Article 46 of the Investment Law (domestic investment projects under VND 15 billion are exempt providing the project falls outside the list of conditional investment domains). This investment certificate also operates as a business registration certificate if the foreign investor is investing in Vietnam for the first time. Foreign and domestic investment projects that are required to have an investment certificate are required to provide a range of information about the project in the certificate application including the objectives, scale and location of the investment. Foreign investment projects are also required to report on the financial capability of the investor and the legal arrangements that have been put in place (for example the joint venture contract in the case of a project delivered through a joint venture company). These general investment rules would also apply to VCM projects.

2.3. Procedures

Foreign investors wanting to invest in CDM projects in Vietnam must follow the steps:

1. Carry out a project independently or identify a national investor in Vietnam and sign an agreement.
2. Apply for necessary investment approvals from the government under the terms of Investment Law
3. Establish the Project Development Document (PDD)³ and submit this to the Designated National Authority (MONROE) for to receive a Letter of Approval.
4. Submit the PDD to a DOE for validation
5. Apply for the projects to be registered with the UN CDM Executive Board .
6. Monitor emission reductions on an annual basis and have these verified by a DOE
7. Submit a request for the issuance of the CERs to the UN CDM Executive Board

³ A Project Design Document is a project description that typically contains a baseline study, monitoring plan, stakeholders' comments and details on ecological, socio-economic and development effects. The document serves as the basis for a project evaluation by a Designated Operational Entity (DOE), an independent auditor assigned to evaluate whether a potential project meets all the eligibility requirements of a particular Accreditation Standard.

8. When projects are issued with Carbon Emissions Reductions (CERs), project developers must report to MONRE at least 15 days before receiving the CER revenues.
9. Register the CER with the Vietnam Environment Protection Fund.
10. Pay CER selling fees to the Vietnam Environment Protection Fund before selling or transferring any CERs outside of Vietnam.

There are currently around 85 CDM projects "in the pipeline" - these have received Letters of Approval (LOA) from MONRE (the first stage in the process). Of these projects 5 have been registered with CDM Executive Board, 62 are in the process of being validated by a DOE and one has been rejected by the UNDOE. The role of the UN CDM Executive Board is to review the documents, formally register projects if appropriate and issue CERs.

3. The Global Voluntary Carbon Marketplace

3.1. Buyers

Globally there is an active VCM, with buyers from across Asia, North America, Europe and Australasia purchasing credits generated primarily by projects in Asia (39%), North America, Europe and Russia.

Some commentators predict that the value from the global VER market could reach €2bn by 2012, so demand could be significant (Ecosystem Marketplace, 2008). This forecast was based on market growth projections and prices produced by commentators prior to the economic crash last year. The latest Ecosystem Marketplace “State of the Voluntary Carbon Market” report states “the voluntary carbon markets transacted an estimated 123 million tonnes of carbon credits valued at US\$705million (€500 million) in 2008, up from 65 million tonnes of credits valued at \$331 million in 2007”. To reach €2bn the value of the market would need to quadruple - this is in line with recent growth trends. Despite the economic downturn, the value of sales on the VCM more than doubled in 2008 rising from US\$335.3 to US\$704.8 million worldwide (Ecosystem Marketplace, 2009). Nevertheless, it is still too early to tell whether the VCM will in fact expand to reach this scale by 2012.

Much depends not only on economic recovery (price per credit and demand) but also on the type of carbon controls that will be implemented in the US (the most significant source of VER demand) in the future.

In the short to medium term, demand for VERs generated in Vietnam is expected to come from international buyers in the developed world. Among the international buyers expressing interest in purchasing VERS from Vietnam, several groups can be distinguished:

- i. International companies that have operations in Vietnam, such as British Petroleum.
- ii. Brokers or aggregators who want to diversify their portfolio to reduce dependence on carbon offsets generated in China, India and Latin America (the main suppliers of carbon offsets to date). For example Bunge, Tricorona and First Climate.
- iii. Carbon funds and buyers looking at maximising the returns on investment or buying standard offsets without specific preferences for the country or region of origin or type/ technology of a project. Such buyers will look at carbon offset projects from Vietnam if they are of ‘good quality’, and by this they mean that a respected means of accreditation has been awarded. These buyers account for the highest demand globally and their focus is on project quality.

Vietnam is a market of interest to these VER buyers for a number of reasons:

- Voluntary buyers have an overall preference for developing country projects, and many want to find projects hosted in countries other than China, India and

Brazil. Vietnam is considered an underexploited resource in terms of the carbon market.

- Vietnam is seen as a politically stable country.
- Some developers believe that given the similarity of the cultural approach, there is potential to replicate projects that have been successful in China in Vietnam.

3.2. VER Accreditation Standards

The table below provides an overview of existing Voluntary Emissions Reductions Accreditation Standards.

Accreditation	Description
Voluntary Carbon Standard (VCS)	A preferred standard among voluntary purchasers with the highest demand at 29%; established in 2007; popular with investment buyers. Accreditation requirements seen as overly complicated.
Gold Standard (GS)	A preferred standard with good demand at 9%; popular with investment buyers. Appropriate only for renewable energy and energy efficiency projects. Accreditation requirements seen as overly complicated e.g. a stakeholder consultation report must be submitted before a Project Design Document can be developed. Accredited offsets generally attract higher prices
Clean Development Mechanism (CDM)	Popular; with JI accounts for 16% of voluntary purchases. Accreditation requirements seen as overly complicated.
Joint Implementation (JI)	Popular; with CDM accounts for 16% of voluntary purchases. Accreditation requirements seen as overly complicated.
Climate, Community and Biodiversity Standard (CCBS)	With Plan Vivo, the most valued standard for forestry projects. Should be used by commercial projects unless choosing an emerging Social Carbon Standard. Only gives assurance on social aspects of the projects. (The carbon sequestration aspect should be certified preferably using the VCS.)
Plan Vivo	With CCBS, the most valued standard for forestry projects. Very convenient and less expensive than other standards for projects developed by NGOs. As with the Social Carbon Standard, covers both social and carbon aspects. Issues its own type of tradable certificates.
Social Carbon Standard	As with Plan Vivo, covers both social and carbon aspects.

Voluntary Emissions Reductions (VER+) Plus	Key standards for voluntary carbon offsets 9% share in the global market in 2007
Chicago Climate Exchange	Key standards for voluntary carbon offsets 7% share in the global market in 2007
Proprietary Standards	More popular among retirement buyers.

Up to now, the main problem with the two preferred VER Standards- VCS and GS- has been that the requirements are as high and the processes as complex as in the case of CDM. In addition financial rewards for voluntary offsets, other than in small quantities, are smaller and more prone to economic fluctuations.

3.3. Buyer Preferences

The information sources reviewed for this analysis revealed a number of preferences from buyers. These are described below and provide an overview of aspects should help project developers in Vietnam ensure that their projects attract the interest of buyers and a source of funding from the carbon market.

3.3.1. Sectors

Voluntary offset buyers mostly have a preference for “simple” projects that stakeholders can easily understand, such as renewable energy, energy efficiency and forestry sector projects. This is because many buyers are trying to derive public relations/ brand benefits from their offset purchases (or in the case of traders will be buying offsets for the future onward sale to retirement PR driven buyers) and would therefore like the social and environmental benefits of projects to be immediately recognisable by customers and other stakeholders who may only have very limited knowledge of the underlying issues.

Buyers have strongest demand for **small scale renewable energy projects**. These projects accounted for 31% of the volume on the global VER market in 2007 (New Carbon Finance, 2008). Interviewed companies said that offsets from renewable energy projects constituted the majority (from 80%) of all of their VER offsets.

Small scale energy efficiency projects are the second preferred option according to the buyers interviewed (e.g. a project that installs efficient cooking stoves or energy efficient brick kilns). On the global market energy efficiency projects accounted for 18% of the volume in 2007 (New Carbon Finance, 2008). Prospects for such projects should increase in a year’s time or so, once existing methodologies are improved, larger scale methodologies are adopted and more projects with a programmatic approach are tested in the CDM.

Projects that involve **methane capture from manure, wastewater or landfills** have medium demand, accounting for 16% of the total purchases in the global market. A

barrier encountered by methane project developers in the VCM has been that these projects require more detailed explanation to potential buyers (customers of companies who buy voluntary offsets for branding or corporate social responsibility purposes). However, as more of these projects are developed – especially those involving improving practices of manure management coupled with the use of captured biogas – rising public awareness is likely to increase demand. Buyers are beginning to realise that small scale methane projects can generate positive social and environmental impacts, from better hygiene to a shift from expensive and damaging chemical fertilisers to higher quality biodigested slurry.

Opinions on **forestry projects** differ widely among buyers and negative public perception and press coverage of forestry projects is a problem. However, this is one of the few project categories where VER buyers are prepared to commit to buy offsets for relatively long-periods of time (5-10 years). Currently the safest option is to develop projects that avoid deforestation and that are implemented together with local communities. These projects should be accredited to the VCS in conjunction with CCBS in order to provide assurance of sustainable land and forestry management techniques, and a high quality of social and environmental co-benefits (CCBS) alongside transparent verification of credible carbon reduction (VCS). Reforestation and afforestation projects are still considered to be controversial, especially in the case of commercial plantations.

3.3.2. Co-benefits

Voluntary offset buyers are primarily concerned with ensuring projects have positive social impacts or “co-benefits”. For many buyers, health benefits and poverty reduction are especially important because projects which bring these benefits to local communities enjoy the highest demand and can attract the highest prices. The workshop held in Hanoi revealed that what from a local Vietnamese perspective is perceived as an economic benefit, by an international buyer will be perceived as a social benefit in the case of small scale community-based projects, which shows that essentially this aspect is important from both sides of the carbon market. Good project planning is essential for maximising social benefits and thus financial reward from the carbon market.

Interviews showed that companies that consider environmental and social co-benefits key criteria for the choice of VERs mostly examine the projects themselves to seek out the stories behind them. These human stories emphasise the social co-benefits of a project and thus make the credits generated more appealing to buyers. As social impacts are important many buyers also look at the reputation and track record of the offset seller or project developer as well as the intended impacts of the project (see also section 3.3.4 below). Stakeholder consultations and involvement of local people at the project planning stages are key for minimising this buyer concern of reputation risk.

3.3.3. Additionality

Another key criterion among buyers in the VCM is project additionality, i.e. a project must show that carbon emissions have been reduced as a direct result of project activities. In order to minimise concerns and risks related to additionality, project developers are required to understand accreditation standard guidelines for establishing a baseline and for demonstrating additionality once the project is up and running. This will involve planning for relevant data collection pre-intervention and robust monitoring and evaluation mechanisms.

3.3.4. Suppliers

Due to prevailing buyer concern with reputational risk, most buyers prefer VER suppliers with a track record of good quality carbon offset projects. For this reason, many buyers tend to engage with an international carbon market project developer or an intermediary. Therefore buyers increasingly scrutinise the financial stability of offset developers or providers and their ability to bear the VER delivery risk i.e. if a project does not generate sufficient carbon emissions reductions to secure the required amount of VERs, in many cases the supplier would need to deliver the difference in VERs from another project or buy them on a market.

Projects in Vietnam that are initiated by NGOs, communities, individuals or companies without a track record would in many cases need to find an intermediary – most likely a specialised company that sources offsets and can offer guaranteed credit delivery to buyers. This entails costs but would improve a seller's access to a wider range of buyers. Once the project developer had gained experience and reputation, intermediary services could be reduced.

The international buyers that attended the workshop in Hanoi were clear that although they recognised that Vietnamese entities would lack experience and a track record, they would still be happy to buy offsets from good quality projects.

3.3.5. Credit delivery

Normally buyers prefer purchasing credits from 'vintages' of 1 or 2 year(s) from the year in which the customer wants to offset. For example, if in 2009 a buyer is looking for credits to offset its emissions generated in 2008, the most preferred option will be credits that were generated in 2008 or 2007. Older credits would be purchased at a high discount. It is clear therefore that effort be concentrated on obtaining accreditation for projects that started operations within this timeframe.

Some interviewed international buyers indicated that they do/can commit to buying offsets that will be created at a future date. Similar trends are reported by the global VCM reports. Mostly the commitment can be given for credits up to 2012. An exception is forestry projects, where buyers can commit to a 5-10 year future period. Payment is however, generally, not made until the offsets have been created and delivered. This can create an up-front funding issue for project developers wanting to obtain accreditation but lacking the resources to do so. Intermediaries can help

project developers to find investors to provide support to meet initial costs. Such help will however generally only be available once a project has reached a firm “proof of concept” stage and it can take significant time and resources for this milestone to be reached.

3.3.6. Prices

Interviewed companies were generally reluctant to give carbon credit price information. Three buyers indicated an average price of 6 USD per tonne as a typical price for a VER. Other indications ranged from €3 to €15. Market intelligence reports were previously suggesting average VER prices of €17 for Gold Standard VER (in a range of €5-34), €8 for VCS (€2.5-15 range), €5 for VER+, and lower prices for offsets in Chicago Climate Exchange. The recent economic crisis has, however, caused demand for VERs of all types to decline significantly. Voluntary prices have in addition crashed to a range of €1-6/ VER. Prices for Gold Standard projects appear to remain at around €14-18/ VER. It is not clear how long price and demand will remain depressed.

4. The National Voluntary Carbon Marketplace

The VCM remains undeveloped in Vietnam and as such awareness of interviewees was found to be very limited. There are currently no examples of projects generating VERs although developers interviewed at the workshop in Hanoi indicated an intention to do so in the future, including the Vietnam Forestry Technology Association, SNV, Hanoi Urban Environment Company Ltd, RCEE Energy and Environment Joint Stock Company (contact details available in Appendix 3).

In addition, there is virtually no existing local demand for VERs. Two international companies, with local Vietnamese operations and with a focus on the CDM, have expressed some interest in buying locally generated VERs.

The sub-sector analysis below sets out the potential for specific sectors with a high development impact to provide credits for the VCM in Vietnam.

4.1. *Sub-sector Analysis*

4.1.1. Renewable Energy

In its National Energy Strategy (GoV, December 2007), the Government of Vietnam sets out plans for 100% of households to be electrified by grid extension and local power generation from sources such as diesel and renewable energy. In March 2008 there were around 885,000 households and 4 million people still unserved by the rural electrification program. Plans are to continue with grid extension to generate productive use of electricity and thereby stimulate employment generation. There is therefore great potential for solar PV, pico and micro hydro and community wind (hybrid) systems to be established to help achieve the Government's plans and at the same time generate credits for sale on the VCM. Numerous project developers, for example the Hydro Power Centre, are aiming to develop small scale renewable energy projects, but for the hydro sector in general only the larger projects (>1 MW) are being considered at present.

Projects that are currently running and will be continued for some years (such as wind power projects) will be able to generate both historic (up to two years old, see section 3.2.5) and future credits for VERs.

Potential projects for VCM include:

- A number of small-scale hydro power projects that have been delayed in achieving registration through the CDM process. These projects could register for VCM to get access to additional finance. Small hydro power projects generate multiple environmental and social co-benefits attractive to buyers (clean energy, access to energy for primary and secondary users, including schools, clinics.)
- Several wind power projects have already been approved by provincial authorities and could be potential projects for generating VERs. These

include Binh Thuan, Binh Dinh and Ninh Thuan provinces in the South Central Coast Region of Vietnam.

- In addition to electricity generation, wind can also be used for water pumping which allows for irrigation and can avoid the use of diesel pumps. Wind-powered water pumps projects could be developed along coastal flat zones. The scale of carbon savings generated, along with the important co-benefits water pumping can bring to communities would be suitable for VERs.

Entities that could be involving in selling VERs include:

- Domestic entities (such as Medium Enterprises and State-Owned Enterprises) with the financial capability or foreign investors financing renewable energy projects. The Joint-Stock Company of Renewable Energy of Vietnam has planned to build a wind power plant with a capacity of 120MW (30MW in the first period of instalment and 90MW in the second). 20 wind power stations with a capacity of 1.5MW each are being installed in the Tuy Phong commune of Binh Thuan province.
- Medium Enterprises investing in small size renewable energy projects in rural village electrification programs which could be aggregated into the VCM projects. Urban Environmental Companies in cities such as Ha Noi, Da Nang, Hai Phong and Ho Chi Minh have planned to build landfill gas sites for electricity generation. Small Hydro Power Stations (under 10MW) have also been installed in about a hundred sites in Northern and Central Regions of Vietnam.

A key issue affecting access of renewable energy projects to the VCM will be the lifespan of the project and the credits generated, especially if the project is in a location that might be electrified using the grid in the near future. However, provided that the project is able to achieve financial payback within 10 years this issue may be avoided. In addition, a high percentage of renewable energy projects are funded with development cooperation funds, so there will be a need to demonstrate clear additionality. Whether VCM will make an indent here will depend on the ability to integrate many small renewable energy sites into single VER projects (there are quite a few examples of these types of activities in the CDM at present including the Baghepalli, Hassan and Kolar biogas projects which each involve the deployment of 10,000 individual household bio-digesters) and the speed at which programmatic CDM will mature.

4.1.2. Small Scale Methane

Within the small scale methane sector, project developers interviewed were aware of the principles and functions of carbon markets. Methane gas recovery (landfill gas) has huge potential to be successfully validated and generate large numbers of carbon credits for sale on the VCM given that methane is 21 times more potent than CO₂ with regards to the global warming effect. Some landfill gas projects have recognised this potential and are currently in the process of trying to secure CDM

credits. These include landfill gas recovery and utilization projects in Da Nang, Ho Chi Minh City and Hai Phong. However, given the scale and nature of landfill gas recovery projects (commercial, no-community involvement, few tangible direct co-benefits), their applicability to the VCM is minimal.

The Vietnam Biogas Support Programme, funded by the Government of the Netherlands and implemented by Vietnam Ministry of Agriculture and Rural Development (MARD) with technical assistance from SNV, focuses mainly on small-scale pig farmers. The program recently celebrated the installation of 50,000 biogas digesters in 25 provinces of Vietnam and there are plans to scale up to 140,000 units. Due to the number of units and combined total CO₂ savings generated, this program could qualify for programmatic CDM. It has already experimented with VCM. This was a unique case in which a Dutch pop group bought the CO₂ reductions of some biogas installations to compensate for its tour. The emission reductions of the biogas installations were calculated based on conservative assumptions on the effects and substitution of fossil fuels and fuelwood. This process was not verified through any VER standards organisation and was a direct initiative and transaction between the two parties.

Ultimately, MARD intends to obtain accreditation for CDM, but the program has huge potential for accessing finance through the VCM. The question of additionality could be raised against the program because it has received ODA financing (see section 5.10), but the programme would continue to qualify for VER accreditation as long as it could demonstrate that additional biodigester systems could be deployed using the VCM funding.

The following entities could be involving in selling VERs generated by small scale methane projects:

- Investors (such as International Organizations and Provincial Environmental Companies) in landfill gas projects in cities of Vietnam which are large enough to meet the transaction requirements.
- International Organisations, State Organisations and NGOs currently managing and investing in biogas programmes. The Netherlands has already sponsored a Biogas program and Govap Landfill gas for power generation in Ho Chi Minh City project and could potentially be interested in purchasing future carbon credits on the VCM.

Many small scale methane projects are being run from previous implementation periods, so would be suitable for VERs where they can demonstrate additionality. Cities in Vietnam that are implementing or have plans to build power generation plants using methane gas from landfill will also be eligible for VERs. Small scale methane projects can produce a range of co-benefits such as job creation for the local people, income generation from saving energy, reducing air pollution and protecting the health for inhabitants living around the project's site.

Due to the small scale of the majority of biogas projects, aggregation will be vital for securing access to VCM funds and to mitigate against high validation and verification costs.

4.1.3. Community Energy Efficiency

There appear to be no projects currently operating within the CDM in the community energy efficiency sector in Vietnam and project developers possess little, if any, knowledge of carbon markets. A few attempts have been made to access the CDM and the UNDP plans to initiate a ceramic and bricks project next year to target CDM funds. Notwithstanding, the potential in rural industries for energy efficiency and CO₂ reduction is huge.

The Government's National Program on Energy Efficiency and Conservation was initiated in 2005 and will run until 2015. This program gives priority to developing energy efficiency and conservation laws which will serve as an important legal basis for future energy efficiency and conservation project development. The Program will also initiate activities such as promotion of energy efficiency use in industry, buildings and households. The program has attracted participation from social organizations such as Vietnam Women's Union, Vietnam Farmer Union, Thermal Technical Association, Electricity Association and Energy Efficiency Centers, Energy Efficiency Service Organizations at many localities nationwide. Business and community awareness of energy efficiency has been built through the introduction of energy saving devices such as T8 fluorescent lamp, compact lamps, solar water heaters and industrial inverters. Some projects with high social involvement have been carried out successfully such as a household energy conservation and efficiency campaign led by Vietnam Women Union, Vietnam Farmers' Union and provincial Women Unions throughout twelve provinces and cities.

A project to promote energy conservation in small and medium scale enterprises (PECSME) is being implemented with funding from the Global and Environment Facility, Government agencies and the business sector. Implementing partners include the Ministry of Science and Technology, private businesses, Hanoi University of Technology, Vietnam Women Union, and Energy Conservation Centres of Hai Phong, HCMC, and Da Nang. The five key SME sectors being addressed in the project are brick, ceramics, textiles, paper and food processing. To date, more than 100 projects under PECSME have been completed and would all be suitable for the VCM. It must be investigated, however, whether GEF funded projects will fall foul of rules concerning projects financed with ODA (see section 5.10).

Improved cooking stoves

Much has been achieved in the promotion and dissemination of improved cooking stoves, frequently involving the Women's Union as a partner. Improved cook stove projects reduce indoor air pollution, thereby improving the health of (most notably) women and children. The burden of fuel wood gathering and fire attendance is also reduced for women and children. This can lead to an increase in household productivity where freed-up time is used for additional income generating activities. Children may also benefit from more time to undertake educational activities. Given the size and goals of the stove activities, project developers have already decided that such projects are not suitable for CDM. However, with 10 million rural and 3

million urban households in Vietnam, energy efficient cook stove projects possess great potential for securing financing through the VCM.

Energy saving lamps

Energy saving lamps have been introduced in Vietnam under a number of different schemes, including the ambitious Vietnam Energy Efficiency Public Lighting Project. The Asian Development Bank is planning to implement a large scale Compact Fluorescent Lights (CFL) program using CDM funds to help reduce costs to customers. Given the scale of these projects, and that CDM is soon to be operating in this area, it is unlikely that the VCM will be an appropriate mechanism for accessing additional financing in this area.

Solar water heaters

Solar water heaters as energy saving devices could be attractive to small rural industries as well as social service providers such as rural schools, nurseries and health centres. With 5 million households in urban areas, cheap solar water heaters to replace electric water heaters have a large potential market. Solar water heaters could thus generate considerable co-benefits for local communities and operate at a big enough size to attract VCM financing.

Several potential sellers of VERs have been identified:

- Medium-sized enterprises (workforce ranging from 50 to 300 people and registered capital under 10 billion VND) in the ceramic and brick sector that have the financial capability for investment in energy efficiency projects. When CERs are not large enough to be viable under the CDM, the VCM could provide an alternative route. However, transaction costs would probably be too high under VCM unless activities were bundled together into larger projects.
- Investors in programs or projects such as improved cook stoves or energy saving lamps who want to obtain VERs for their budget offset. Potential investors include International Organizations, Government Offices and NGOs.
- Small and Medium Enterprises (SMEs) Associations (the NGOs that work for the benefit of SMEs), could be work together to aggregate projects with small VERs.

Energy efficiency projects that have been implemented in the past and have produced savings ranging in size from 5,000 to 50,000t CO₂^e include brick and ceramic, energy saving lamps, and improved cook stoves. Given that these projects have already produced carbon savings, they may be suitable for VERs if these credits are harnessed in time for them to be appealing to buyers. Current projects being implemented will continue for some years and could therefore generate future vintages also appealing to buyers.

Although VCM money could be mobilised to provide funding for community-based energy efficiency schemes, it may be difficult to engage with the VCM through this sector given that energy efficiency efforts are led by Government agencies operating

through centrally steered directives. If any financing from carbon credits is sought, it is likely that the CDM will be the main channel.

4.1.4. Forestry

An established carbon market does not yet exist in the Vietnamese forest sector. While most of the projects identified for CDM have focused on the reduction of industrial emissions, options for establishing up to 200,000 ha of additional forests have likewise been explored (MONRE, 2004). However, large-scale application of forest-based CDM measures has not come to fruition.

In 1997/1998 the Government of Vietnam embarked on the so-called “Five Million Hectare Reforestation Programme” (5MHRP), scheduled to run until 2010. The Programme combines reforestation with rural employment, poverty alleviation, and community development in Vietnam’s highland areas and could be eligible to generate significant VERs if the required baselines and impacts could be assessed in time for credits to remain appealing to buyers, i.e. by 2012.

The National Forestry Strategy (NFS; 2006-2020) represents a cross-cutting commitment to forest sector development and sets out the sector’s contribution to downstream-processing industries, and services (including both environmental services as well as socio-economic functions – e.g. employment, livelihood security, household income etc.). Furthermore, the NFS repeatedly makes reference to the forest sector’s significance for climate change mitigation, based on the carbon sequestration potential of forest resources. As such, the Strategy could serve as an implementation tool to support the development of forestry projects for both the CDM and VCM.

The Forestry Sector Support Partnership is focused on supporting the implementation of the NFS and also coordinates the Trust Fund for Forests (TFF)⁴. Even though specific activities related to carbon marketing or promoting the potential for carbon-sequestration are not yet represented within the TFF portfolio⁵, the fund nevertheless promotes innovative financing instruments for forest sector development and may in the future gain relevance as a support tool to explore & promote carbon marketing opportunities.

Potential sellers of VERs include:

- State forest enterprises and communities are the most likely potential future sellers of carbon credits.

Potential buyers include:

- Vietnamese companies wanting to engage in (plantation) forestry for both commercial reasons as social and environmental reasons (income generation and employment and CO2 savings and reducing air pollution).

⁴ http://www.vietnamforestry.org.vn/list_news.aspx?ncid=84

⁵ FSSP Coordination Office/TFF Management Unit (2008): Trust Fund for Forests – annual report 1 January to 31 December 2007. Ministry of Agriculture and Rural Development, Hanoi.

- Commercial interest of national players to invest in this area.
- Commercial enterprises involved from Japan and elsewhere.

Forest sector development in Vietnam is essentially government driven and orchestrated through large-scale programmes, and may therefore have limited potential accreditation through the VCM. However, if the CDM maturation time continues to lengthen, VCM could have a big impact in this sector where past credits can be captured within the required timeframe.

Linking VCM interventions with sustainable forest management and pro-poor rural development suggests application of the VCS. The principal comparative advantage of VCM compared to CDM is that it does not exclude protection and sustainable management of existing forests.

It may be expected that the recent decision by the Forest Carbon Partnership Facility Steering Group to include Vietnam among the first 14 countries selected under the REDD Readiness Mechanism will add momentum to the overall development of a forest based carbon market, and will in turn prove beneficial also in respect of CDM and VCM instruments. Nevertheless, any benefits for carbon markets in Vietnam will take time to come through.

All offset standards make the distinction between the two main types of forestry projects;

- Reduced Deforestation and Degradation (REDD) - projects that prevent emissions through conservation of existing forests (i.e. avoided deforestation),
- Afforestation and reforestation - projects that develop new capacity for carbon storage by planting trees.

Both types have a number of attributes that make the development of forestry projects challenging and complex;

- Complexity of baseline calculations – the amount of carbon sequestered depends upon a number of factors including tree age, growth rate, local climate, and soil quality.
- Permanence - there is no guarantee that the trees will remain protected from illegal logging or burning or avoid destruction through natural events such as fire, pests, or disease, so the sequestered carbon could be released at a later stage.
- Leakage - forest protection activities may act to displace deforestation activities to other areas;
- Complexity of forest land rights.

Whilst recent Climate Community and Biodiversity Alliance (CCBA) and VCS guidance has addressed these issues, the methodological approach of the standards vary and it can still be difficult for projects to rigorously demonstrate additionality and permanence in practice.

5. Barriers to development of the VCM

The workshop held in Hanoi and interviews carried out highlight that the key barriers to address in developing the VCM are legal and structural and related to information provision rather than lack of technical understanding or development of technology. In general, Vietnam has a technically literate population, with a high level of technical capacity and high levels of education.

5.1. Restricted awareness

Awareness of project developers about opportunities to obtain additional finance from the VCM is limited and as such there is no demand to drive the development of the VCM in Vietnam. Given that the CDM process is more widely understood, it tends to be the preferred option. A lack of knowledge of the carbon market within local and national government also serves as a barrier to the development of the VCM. This is reflected in the limited mainstreaming of carbon market issues into ongoing sectoral policy-making and reform agendas in Vietnam, particularly in the forest sector.

5.2. Insufficient access to information

Due to the lack of focal point or national centre for VCM information in Vietnamese, it is very difficult for project developers to obtain information on potential projects, potential international buyers and carbon markets more generally. Furthermore, understanding complex technical documents on the VCM requires a good understanding of English, as well as the technical language itself. Lack of local language guidance material restricts the development of a vibrant carbon market, and can increase the risk of non-delivery as projects misinterpret complex guidance during translation. Where this is an issue, projects tend to become concentrated in the hands of a small number of developers with foreign language skills. Where a buyer is identified, insufficient access to information results in delay to agreeing contractual terms, since local project entities find it difficult to determine appropriate prices or terms based on the informal information they can access.

5.3. Lack of expertise

There has been a shortage of competent CDM experts in Vietnam. This is having an impact on the development of the CDM market and is likely to also to impact the development of the VCM. Many local project developers have limited and often unsuccessful experience with the CDM and no experience with VCM procedures such as validation, registration or verification. During interviews, some concerns were expressed by local project developers regarding the concentration of knowledge in a small number of consultants in the South East Asian region, and the way in which this may distort the market. Lack of expertise regarding 'new' technologies is also an issue. The operation of transferred technologies by untrained

individuals from different sectors can significantly contribute to the risk of project failure.

NGOs and local entrepreneurs often have experience of applying for funding for development projects, providing projects with many of the skills required to access carbon finance. However there are significant differences between development funds and the carbon market, in terms of approach and information required. The Vietnam workshop highlighted that developers require support to reframe proposals from a focus on the environmental or social issues to be addressed, to an assessment of the specific project activities proposed and how they will deliver emissions reduction, and provide co-benefits.

5.4. Lack of consolidated baseline data

A carbon baseline depicts the GHG emissions that would have arisen in the absence of a CDM or voluntary offset project activity and is the starting point for calculating GHG savings. One of the major barriers preventing renewable energy, energy efficiency and small scale methane projects from gaining VCM accreditation in Vietnam from successful validation will be the absence of a consolidated baseline for the national power grid, due to the unavailability of an official data source. Baseline calculations are mainly based on data contained within the Power Development Master Plan. As the plan is frequently adjusted in accordance with the development trends of the Vietnamese power industry, various versions of the document exist. This has resulted in different project developers using different sets of baseline emission figures and has caused confusion for DOEs. Furthermore, the data in the Master Plan is a projection and not a record of current figures. DOEs are therefore showing reluctance to accept baselines proposed by project developers. CDM projects have had difficulty in acquiring third-party validation because of a lack of defensible data for carbon baselines and the same may occur for projects attempting to access the VCM.

5.5. Project planning and monitoring

Project verification and implementation pose significant risks to small scale project developers wanting to access the VCM. Up-front investments have to be made into gathering baseline data. Verifying and monitoring projects to sufficient standards also incurs additional time and funds. Within the CDM in Vietnam, the costs of developing project documentation, registration, validation and monitoring can be as high as \$100 000 to \$200 000 per project. Although the cost of these processes may be slightly lower within the VCM (with a VCM approach cost savings can be made for registration and issuance, however costs associated with PDD development, validation and verification will not be much lower than in the CDM), the financial gains of the VCM are also less. The experience of the Vietnam interviews suggests NGOs/agencies working on sustainability issues in Vietnam are yet to be convinced that the carbon market offers sufficient returns to warrant the investment required in both time and resources.

There is a conflict between the VER market between large scale projects which deliver VERs cheaply and easily compared to small scale projects which tend to involve multi stakeholders, local consultation processes, capacity building and longer timescales for implementation but which can deliver more direct local benefits, particularly pro poor benefits, if implemented well. Smaller scale projects with clear social benefits will however have a much better chance of finding a voluntary buyer and commanding a higher VER price than large scale projects. The problem is to be able to facilitate these small scale projects in such a way that developers are willing to undertake them while sustainability benefits are not compromised. With this in mind consideration needs to be given to the need to bundle or use programmatic VER to reduce costs. The issue of aggregation is addressed in the conclusions to this report.

5.6. Seed funding

Ability to arrange long term funding is a key issue faced by project developers. Credits developed for the compliance market or to recognised standards in the VCM only gain value once credits are issued, which can take 2-3 years after the start of project development activities and so income is generally tied to delivery cycles. It is extremely challenging to identify sources of upfront funding for VCM projects as income streams are highly risky. Project developers interviewed were pursuing a mix of financing models in order to be able to meet up-front project development costs. The ability to manage a mix of public and commercial funding streams is considered crucial to the development of projects but requires a combination of project management and business acumen, which may be lacking in smaller projects. Care also needs to be taken when using donor funds as this may prevent projects from acquiring VER accreditation. Some forward-funding of projects is currently available in the market and ICROA, the international alliance of leading carbon reduction and offset organisations, has developed specific principles to support this when:

- “project implementation requires a binding and creditworthy long-term contract for the sale of the carbon offsets, and only short term purchase contracts are available in the market; and
- the project lacks access to the initial capital needed to implement the project, regardless of otherwise adequate returns from carbon offsets sales over time.”

5.7. Challenges in the Validation Process

5.7.1. Lack of local DOEs

There is a global shortage of accredited entities to carry out project validation and verification in line with recognised standards. This acts to delay the point at which carbon financing can come on-stream for a project, and to drive up project costs through the need to import expertise from outside of the project region. There are no

DOEs in Vietnam which means the process of validation and registration is outsourced and significantly slowed.

Unless additional entities are accredited to validate carbon market projects, or entities are established within Vietnam, similar obstacles are likely to arise for project developers wanting to gain validation for the VCM. Recently, the VCS started a temporary validator accreditation programme whereby additional auditors who are not busy with CDM projects are accredited to carry out validation for the VCS. This should increase availability of validators and eventually reduce the price of services.

5.7.2. Additionality

The ease with which a project can demonstrate additionality will influence the speed with which it is validated and registered as a VCM or CDM project. In Vietnam, investment rules prevent commercial and NGO activities from acquiring licenses to operate unless project proponents can demonstrate that their businesses will be financially viable (see 2.1.2 and 5.9). This early stage formal demonstration of the financial viability of project activities (often without showing an income stream from carbon credits) makes it very difficult for projects to demonstrate that they are not “business-as-usual” activities when they are being assessed by a validator. Consequently, Vietnamese investment rules present a real obstacle to the development of both the CDM and VCM in Vietnam. Where a project supplies electricity to the grid then there is a compounding factor. Validators frequently require evidence that an income stream from CERs or VERs was considered at the time of developing a business plan for a proposed project activity. Vietnamese CDM project developers do not incorporate this income in their business plans as they fear that if they were to do so then electricity tariffs would be reduced to take account of this income stream.

5.7.3. Registration

Currently the VCM market has no global registry for VERs and projects and many local and international brokers hold their own registry. This can affect investor confidence where proper tracking to avoid double selling and double counting with CERs is not possible. It would be useful therefore if investors were required to use one of the established registries available round the world⁶ or consideration could be given to a national register within Vietnam. There is no registry for CDM CERs in Vietnam at the moment and there could be concurrent establishment and linking of the registries.

⁶ Including the Bank of New York Global Registry and Custody Service, TÜV SÜD BlueRegistry, California Climate Action Registry’s Climate Action Reserve, Chicago Climate Exchange Registry, Retailer registries such as Carbon Neutral Company, Globe Carbon registry (Canada) Gold Standard Registry and TZ1 Registry

5.8. Institutional structures

This is an issue for the compliance market, and may therefore impact the size of credits flowing to the VCM in advance of certification. Where the host country DNA does not function effectively it can inadvertently prevent project development. For example, where DNA meetings are only held bi-annually the resultant registration or certification delay may render a project financially infeasible. In Vietnam the evidence from interviews suggests that project approval takes significantly longer than the timelines specified in MONROE regulations, with PDD approval taking from 3 to 6 months. It is understood that this delay is due to the workload of the members of the Vietnam National Steering Committee and DNA, who additionally hold a number of other ministerial positions.

In some developing countries, low-level corruption may locally be considered a cost of doing business. For small-scale carbon projects that are only profitable at the margins, this can prevent project development. In the compliance market there is zero tolerance for corruption with the CDM reserving the right to revoke previously issued credits where inappropriate facilitation payments are proven to have taken place. Interviewees reported an increase in requests for payments in affected areas once a project was known to have attracted carbon financing. In Vietnam the involvement of both the National People's Committee and the Local People's Committee may compound the likelihood of this issue, although no specific evidence of this was found.

5.9. Licensing

The Investment Law (Law No.59/2005/QH11) clarifies that different rules apply to foreign investment projects than national. For foreign investment projects there is no exemption from needing an investment certificate for projects under VND15bn and more information. Information is also required on the financial capability of the investor and their local contractual arrangements e.g. joint venture, business cooperation contract etc. (see Articles 45 and 46 for details). There is no indication in the documentation reviewed that different rules apply to NGOs compared to commercial investors.

The Investment Law seems to suggest that the investment certificate process is reasonably straight forward for obtaining an investment certificate even for foreign investment projects. For example Article 50 notes that the investment certificate obtained by foreign investors investing in Vietnam for the first time also operates as a business registration certificate. The position is somewhat different for domestic investment projects as they are able to get an exemption from needing an investment certificate (if they are below VND15 billion and are not on the list of conditional investments) and their business registration seems to be dealt with under the Enterprise Law. Similarly, Article 46 notes that there is a 15 day time limit for provincial level state agencies to grant investment certificates to foreign investment projects providing the agency has received complete and valid investment

registration documents. The time limit is longer (up to 45 days) if the project is above VND 300 billion (about £10million) or is on the list of conditional investment projects. However, it seems that most VCM offset projects would be smaller than this limit and not on the list of conditional investments. No time limit is mentioned with respect to issuing investment certificates for domestic investment projects but there also seems to be no discretion to decline such a certificate under this Article where it has been requested.

The information requirements set out in the Investment Law for obtaining an investment certificate do not seem unusually onerous (for large projects at least). It seems that practical issues rather than strict legal provisions could be the main barrier on the licensing side, including:

1. VCM is not mentioned in existing legal documents. This will cause difficulties to the licensing authority unless MONRE proposes to revise and add some articles in the related legal documents
2. Because the VCM is a new concept in Vietnam, the licensing authority will be unfamiliar with carbon offset project business models and may therefore be reluctant to grant a license.

5.10. Restrictions for Using ODA

The Government of Vietnam Circular 58/2008/TTLT-BTC-BTN&MT decrees that where a project has been established using Overseas Development Assistance (ODA) funds, any CERs generated are the property of the State. Investors in CDM projects are therefore obliged to deposit all money collected from selling these CERs into the Vietnam Environment Protection Fund (VEPF) after deducting sale costs. This creates a conflict with the requirement to demonstrate additionality.

Strictly speaking projects funded by Official Development Assistance (ODA) are not eligible to be registered under the CDM:

“Emphasizing that public funding for clean development mechanism projects from Parties in Annex I is not to result in the diversion of official development assistance and is to be separate from and not counted towards the financial obligations of Parties included in Annex I (17/CP.7, preamble).”⁷

ODA is defined as follows:

“Flows of official financing administered with the promotion of the economic development and welfare of developing countries as the main objective, and which are concessional in character with a grant element of at least 25 percent (using a fixed 10 percent rate of discount). By convention, ODA flows comprise contributions of donor government agencies, at all levels, to developing countries (“bilateral ODA”)

⁷ CDM Rulebook <http://cdmrulebook.org/Page/home>

and to multilateral institutions. ODA receipts comprise disbursements by bilateral donors and multilateral institutions.”⁸

There are, however, many grey areas surrounding whether or not projects can be viewed as being funded by ODA. According to the United Nations Development Programme:

“The treatment of ODA under the CDM continues to be a relatively grey area and one subject to some confusion and misinterpretation. The Marrakech Accords state that: ‘Public funding for clean development mechanism projects from parties in Annex 1 is not to result in the diversion of official development assistance and is to be separate from and not counted towards the financial obligations of Parties included in Annex 1.’ What constitutes a diversion of ODA funds is not specified, leaving considerable room for interpretation.” (UNDP, May 2006).

Clearly if ODA is used for financing actual activities that lie within a CDM project boundary e.g. investment costs, maintenance, monitoring and administration costs then a project may not be eligible to be registered. If however, ODA is used to fund capacity building activities that have led to a CDM project activity (e.g. general capacity building, project design, feasibility assessment, a pilot/ proof of concept phase) or activities that remove project accreditation obstacles (e.g. PDD development/ methodology development) the issue is less clear cut. The UNDP argues that ODA has a role to play in the CDM where it can be used for capacity building or to kick start new areas of the CDM.

The Gold Standard allows ODA to be used to fund certain carbon due diligence tasks for Gold Standard CDM projects (development of project design documents and development of new methodologies). The Gold Standard does not have any restrictions on the use of ODA to fund VER projects provided that they are additional in all other ways. The Voluntary Carbon Standard does not have any rules about ODA. In practice, project developers should not view this as a green light for the use of ODA as it has been found that when trying to acquire validation/ verification for VCS projects from independent auditors, in cases where rules do not exist/ or are unclear, independent auditors who are concerned about reputation and risk tend, as a default, to revert to the most stringent rules available, which are those relating to CDM projects.

If ODA funded activities are to be eligible for registration within the CDM / voluntary accreditation standards then the Government of Vietnam circular 58/2008/TTLT-BTC-BTN&MT raises the above issues.

⁸ OECD Glossary of Statistical Terms <http://stats.oecd.org/glossary/>

6. Conclusions and Recommendations

6.1. Conclusions

The study has found that there is no existing VCM in Vietnam but that opportunities exist for poverty reduction projects to derive a source of funding from the international VCMs. It is however impossible at this point in time to quantify the scale of the opportunity as VCMs are in their nascent stages of development and represent a fickle and unreliable income stream that fluctuates significantly with the economy and voluntary sales and prices have declined significantly since the economic crash.

Opportunities for voluntary poverty reduction projects exist in a number of sectors including small-scale hydro power, wind power projects including wind-powered water pumps, biogas digesters, improved cookstoves, solar water heaters and possibly forestry.

If poverty reduction projects are to maximise their chances of deriving funding from the VCM they will need to acquire some form of recognised VCM accreditation. Leading standards for voluntary projects include The Gold Standard and the Voluntary Carbon Standard.

The process of acquiring VCM accreditation will in all likelihood mean that VCM projects will encounter many of the same obstacles being experienced by CDM projects in Vietnam. Recommendations for how these obstacles can be addressed and how the VCM can be developed in Vietnam are provided below and in the Action Plan.

It is important to note that if obstacles to CDM project development can be overcome it may be more beneficial for some poverty reduction projects to choose to derive income from the CDM instead of the VCM. This is for a number of reasons: First this will provide projects with a more sustainable and reliable source of funding – the CDM market is currently significantly undersupplied with CERs and demand will exist at least through to 2020. Conversely the VCM has crashed in the economic climate, is highly volatile and is oversupplied with VERs. Second the CDM has been improved in recent years (and continues to be improved) to enhance its support for projects with real poverty reduction and sustainable development benefits. In particular, methodologies have been introduced that enable relatively small scale poverty reduction projects, such as household biogas projects, and cookstove projects to be accredited as CDM projects. Thirdly, the various negotiating parties deciding upon the future of the CDM after 2012 all appear to share one common view that the CDM has failed to deliver poverty reduction benefits to date. This must be a real feature of the CDM going forward and strong incentives have been put in place to support poverty reduction projects in the CDM – such as the unrestricted use of CERs from least developed countries in the EU Emissions Trading Scheme – currently the biggest source of demand for CERs in the world. Finally the VCM does not really provide a “soft option” for projects in comparison with the CDM. Concern about the quality of offsets in the VCM has led to a tightening of controls of voluntary projects

which means that project are subject to a voluntary accreditation procedure that mirrors the UN processes and means that VER projects face similar transaction costs.

Interventions to support the development of the VCM in Vietnam are required from two perspectives. First to address legal and structural barriers to the development of the carbon market in Vietnam, and second to deliver enabling activities to develop awareness, facilitate new projects, and develop relationships with the international carbon market. The following section sets out a number of recommendations for potential interventions, many of which are equally applicable to the CDM in Vietnam.

The Action Plan which accompanies this report sets out priorities for implementing these recommendations, identifies the appropriate roles for different stakeholders and proposes a timeline for implementation. References to the Action Plan are included below.

6.2. Recommendations

6.2.1. Additionality Problem

a) Licensing Rules

It is recommended that a working group be formed to discuss these issues with the GoV, National Target Programme to Respond to Climate Change (NTPCC), MONRE, Ministry of Trade and Investment (MOIT) with the aims of:

- exploring ways to relax licensing rules for CDM/VER projects
- considering clear and transparent rules for exemption of small scale projects and programmes of activities
- ensuring that they are aware of these issues
- providing investors with some sort of assurance that electricity or other project sources of income will not be reduced to take account of CER income

b) Assurance of electricity supply pricing

The working group to be formed for discussing licensing rules could also discuss these issue regarding electricity pricing with the GoV NTP-RCC, NTP-PR, MONRE, MOIT teams with the aim of providing investors with some assurance that electricity or other project sources of income will not be reduced to take account of CER income

[Action Plan 2.1]

6.2.2. National Baseline

It is recommended that the following baselines be developed:

- A carbon baseline for the electricity sector as a whole and marginal electricity generation (this will be important for renewable projects and energy efficiency projects).
- Key baseline determinants for other key sectors should also be determined e.g. for biogas and cook stove projects, which appear to have significant potential in Vietnam it will be important to establish the baseline % of non-renewable biomass for Vietnam, what fuels will be displaced by the biogas/ cookstoves; how manure would be managed in the absence of the bio-digesters.

[Action Plan 2.2]

6.2.3. Capacity Building

It is recommended that Donors (bilaterals) and multilateral such as UNDP with comparative advantage and the Vietnamese Government initiatives under NTP-RCC and NTP-PR, TNA updates, DNA for CDM and national focal point design and deliver training to:

- Develop/promote pro-poor development-rich projects with training and capacity development to the communities.
- Build institutional capacity and knowledge in the carbon market for CERs and VERs in Vietnam's Government and associated institutions along with the state banking sector

[Action Plan 2.4, 4.1, 4.2.2 and 4.2.4]

6.2.4. Project Support

There is a need for the provision of technical and financial support from inception through to VER delivery for at least one pilot VER project in each of the target sectors through a Technical Assistance Fund.

[Action Plan 3.1]

In each of the sub-sectors, a set of initial screening criteria can be developed that will enable a quick assessment of potential CDM/ VCM projects to prevent potential developers from wasting resource/ making mistakes on unviable activities

[Action Plan 4.2.4]

In addition the following actions are recommended for each of the sectors:

- Forestry:
 - Harmonize and mainstream forest-related carbon marketing
 - Promote availability of forest-ecological and socio-economic data and information

- Integrate forest-related carbon marketing with sustainable forest management (SFM) extant rural development and PES policies and frameworks.
- Strengthen the outreach and impact of pro-poor, forest-related carbon-sequestration and marketing initiatives
- Strengthen forest governance in support of climate change mitigation efforts, including pro-poor carbon marketing
- Establish the impact REDD projects would have on availability of VCM projects

[Action Plan 3.3]

- Energy efficiency:
 - Explore the possibility of a cookstoves project under VCM
 - Explore application of other technologies of interest e.g. heat pumps for fruit drying etc

[Action Plan 3.4]

- Renewable energy:
 - Explore potential for projects in areas unlikely to be grid connected within 15 years
 - Explore the potential for renewable energy in light of recent studies on possible climate impacts and the implications for resource availability

[Action Plan 3.5]

- Small scale methane:
 - Explore the potential for small scale methane especially biogas in Vietnam

[Action Plan 3.6]

6.2.5. Aggregation techniques

As stated in sections 4 and 5.5 of the report it will be important to establish ways in which small scale project activities can be aggregated to reduce transaction costs while not compromising sustainability benefits. Aggregation of projects through methodology development and education and the use of microfinance are possible ways forward.

[Action Plan 3.2]

6.2.6. VER Market Development

A trade association of communities sharing knowledge and best-practice and operating as a market focal point can help to foster links between project developers and buyers operating in the national and international markets. Activities could include:

- Training and materials
- Technical assistance
- Standard setting for the market
- Interface with in country government ministries and other organisations
- Regular market network meetings on issues
- Awareness raising activities
- Establish a web site and chat room
- Hosting carbon expos/ matchmaking events
- Attending international carbon market forums/conferences to promote Vietnam and build relationships
- Develop and maintain links with buyers in key markers

[Action Plan 4.1 and 4.2.4]

6.2.7. Information provision

An information focal point to provide information on who is who, what is required, what is the process, how to engage, who can help, where is training to be found would assist potential Vietnamese sellers, brokers, buyers, intermediaries, banks, Government, NGO's to understand and engage with the VCM.

[Action Plan 4.2.4]

There are a number of useful background sources of information on developing carbon offset projects but unfortunately most of the information is not available in Vietnamese. Translating guidance material into Vietnamese will help significantly.

[Action Plan 4.2.1]

6.2.8. New financing models

Upfront funding is required to help potential developers to create the concrete project ideas as payment for offsets is generally on delivery. Appropriate mechanisms could be considered in more detail the light of the UNFCCC EGTT report on new financing models.

[Action Plan 4.2.3]

6.2.9. Registry facilities

To ensure integrity and avoid double counting of VERs, it is recommended that an immediate link to an established registry for registration of all Vietnamese VERs be formed or a national registry for VERs and requirement for use of VER registration considered. Project developers should be required to use appropriate standards and supported to access standards through information provision and training.

[Action Plan 4.3]

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Plan Vivo, <http://www.planvivo.org/>

Appendix 1 – Client Terms of Reference

Making carbon markets work for the poor in Vietnam

TOR for a consultancy assignment financed by the Like Minded Donor Group (LMDG) innovation fund

Objective: To facilitate the development of voluntary markets for tradable carbon emissions reductions in Vietnam, as a complement to the existing markets under the “Clean Development Mechanism” (CDM). Voluntary Emissions Reduction (VER) trading will provide a market-based mechanism to reduce carbon emissions while providing social and development benefits through the generation of additional revenues for Vietnamese enterprises.

The recipient

This work will be produced for the Like Minded Donor Group (LMDG) in Hanoi who are jointly financing the work. The LMDG will be represented by a working group comprising representatives of DFID (UK), Ireland, the Netherlands, Finland and Norway. DFID will take a lead role in terms of communication with the consultants and contracting issues.

Background and Context

The Stern review⁹ describes climate change as the “greatest and widest ranging market failure ever seen”. Dangerous climate change, if unchecked, could result in the destruction of livelihoods for hundreds of millions of people, mainly in developing countries, as a result of rising sea levels, flooding, drought and other extreme weather events. The scale and urgency of the challenge means we must engage the resources and expertise of the private sector in order to achieve the technical and financial solutions required. A large-scale shift towards low carbon development will only result from compelling commercial, political and social incentives. Compelling commercial incentives will be primarily based on carbon markets and a more realistic price for carbon¹⁰. The most urgent priority is to reduce direct and indirect supply chain carbon emissions. But effective carbon markets offering good quality “offsets” will provide a direct and possibly more cost-effective way to reduce carbon emissions for those entities wishing to become “carbon neutral”.

Carbon prices are influenced and set through a combination of legislation, taxes and effective carbon markets. There are two types of carbon markets. First, compliance markets based on agreements on emissions caps under the Kyoto Protocol. Second, voluntary markets servicing growing private demand for carbon offsets outside the compliance framework. Carbon markets have grown rapidly from US\$10 billion in 2005 to an estimated US\$30 billion in 2006. Around \$25 billion was accounted for by the World’s largest carbon market, the EU Emissions Trading Scheme (EU ETS). In order to meet emissions caps, the EU ETS allows purchases of Certified Emissions Reductions (CERs) or “carbon credits” from developing countries under the Clean Development Mechanism (CDM). These CDM projects accounted for around \$5 billion in 2006. However, despite aspirations to reinforce sustainable development strategies in developing countries, the development impacts of the CDM have been disappointing. The CDM process has been criticised for being too bureaucratic, too costly and too slow moving. The majority of CER purchases have been concentrated amongst large-scale industrial “clean-up” projects

⁹ The Stern review of the economics of climate change, www.hm-treasury.gov.uk

¹⁰ The risk adjusted social price of carbon dioxide emission is estimated to be \$85/tonne in the Stern review relative to the current (8 April) market price of \$37/tonne.

in India and China. Low income countries and smaller enterprises have not been able to access the CDM easily. And areas with high revenue potential and development impact – such as avoided deforestation – have been excluded until recently. The emerging voluntary markets – which grew to \$100 million in 2006¹¹ – are more accommodating of smaller projects and of forestry – based credits.

In Vietnam in 1994 (last inventory date) GHG emissions were estimated at around 104 million tonnes CO₂e. The main sources of Vietnam's GHG emissions are agriculture (50%), energy production (25%) and deforestation/land use change (18%). However, by 2020 it is estimated that energy generation will account for around 80% of emissions, with much of the increase from coal-fired electricity generation. Reformed energy policies, cleaning up coal-fired power stations, improving energy efficiency (which is very low by regional standards) and increased investment in cleaner energy, will therefore be a pre-requisite for transition to a low carbon economy. Vietnam's Initial National Communication (INC) to UNFCCC also identified the reduction of forest loss as the most cost-effective opportunity for carbon mitigation but as yet incentives are not in place. In Vietnam at the end of 2007 there were 14 CDM projects at the "validation" stage or beyond, relative to a global total of 2,781 CDM projects. Over 60% of the 10.7 million CERs from Vietnam's CDM projects come from a single project – the Rang Dong oil-fired waste gas recovery project¹². The other Vietnamese CDM projects are hydro power or methane related. Little is known about the state of the voluntary market in Vietnam.

The development of a market for tradable Voluntary Emissions Reductions (VERs) in Vietnam will introduce a healthy competitive element that will stimulate wider interest in low carbon development and provide incentives to invest in low carbon technologies. The growth of voluntary markets will enable broader participation in carbon emission reduction activities – drawing in farmers, small scale producers and enterprises. Greater diversity in the scale and scope of carbon reducing projects that can be supported may result in a stronger development impact. Finally, the development of carbon market infrastructure – including trading standards, access to registries, measurement, monitoring and verification practices, media scrutiny and external involvement – will all have wider positive spill-over effects that will benefit carbon market development in general whether official or voluntary.

The proposed intervention is consistent with LMDG priorities in the area of climate change. In addition, substantial financial sources are likely to come into this sector and Aid Effectiveness principles can help ensure that the funds are used more effectively to achieve sustainable development outcomes.

Outlook and Development Potential

In the medium term, as consensus builds around the imperative of low carbon development, we can expect to see continuing growth in demand for tradable emissions reductions in both the compliance and voluntary markets. For Vietnam, supply side constraints have limited the participation of Vietnamese enterprises in these markets, although we are now seeing more attention focused on the CDM process. However, the voluntary market remains relatively neglected and may have higher potential for positive development impacts on poorer people such as farmers and employees of small-scale enterprises.

Problem statement: voluntary carbon markets remain relatively undeveloped in Vietnam. This means: (a) fewer options for achieving carbon emissions reductions

¹¹ State of the Voluntary markets 2007

¹² Data from TFS Green carbon brokerage

and (b) fewer opportunities for Vietnamese enterprises to gain additional revenues from participation in carbon markets.

Proposed Approach:

The consultancy will produce a Voluntary Carbon Markets Action Plan aimed at increasing the participation of Vietnamese enterprises in global voluntary carbon markets. This approach is complementary to efforts supporting the development of the CDM in Vietnam. Given the paucity of good data on the state of the voluntary carbon markets, the first step is stocktaking and analysis of the status of voluntary carbon markets in Vietnam. This analysis will examine demand and supply side factors, the types of emissions reductions instruments and methodologies that are in use, the main patterns of GHG emissions by sector and consequent potential for emissions reductions. The stocktaking will include analysis of specific sectors with high development impact including:

- Smaller scale renewable energy projects – including hydro power, wind power, solar energy, - especially in remote and/or off grid areas
- Small-scale Methane (e.g. Bio Gas)
- Community Energy Efficiency projects in industrial sectors important to the poor. Examples include industrial processes employing large numbers of low-skilled workers; craft villages (e.g. the ceramics industry in Bat Trang)
- Forestry sector interventions i.e. from Afforestation/Reforestation (A/R) and from Reducing Emissions from Deforestation and Forest Degradation (REDD).

Following data analysis and a consultation process to look at political and other feasibility issues, an action plan for the development of voluntary carbon markets will be drawn up. Prioritisation will be made for work in each of the sectors described above. The prioritisation should include specific recommendations on the tasks to be undertaken, including proposed roles and priority actions for the main stakeholders.

Part of the action plan will include recommendations for external assistance. This external assistance would focus on the “public good” aspects of market development e.g. helping define trading standards, monitoring and verification practices, measurement methodologies, information provision etc. It may also include time-bound catalytic interventions which are designed to build rather than distort markets. Examples include competitive matching grant schemes such as “Challenge Funds” to offset the upfront transactions costs of developing path breaking and catalytic ways of generating carbon emissions reduction projects.

Methodology:

The consultancy will use the following information sources to formulate the action plan:

- Published reports on voluntary carbon markets.
- Market research based on secondary data
- Interviews with leading market players in the established voluntary carbon markets to clarify and quantify demand and supply factors, main market requirements, preferred transaction instruments etc.
- Structured discussions, including a workshop, with potential buyers and sellers of carbon emissions reductions in Vietnam.
- Interviews with Government and other agencies that have or may have oversight responsibilities.

Particular attention will be paid to the following questions in the Vietnamese context:

- What are the actions required in the four sectors that best combine carbon emission reduction with development impact?
- What are the preliminary estimates of market growth in the four sectors?
- Are there potentially problematic carbon ownership issues in the four sectors? How will we know that carbon revenues will go to poor people? Will carbon markets create unexpected incentives e.g. revenue-seeking by state forest enterprises in forestry at the expense of ethnic minority groups?
- What are the restrictions in Vietnam for using ODA for promoting carbon projects?
- Are there innovations around aggregation that will enable market access by large numbers of small producers?
- What are the “public good” areas that best justify the use of external public finance? e.g. developing technical capacity, overcoming initial transactions costs, methodology development; the setting of credible trading and market standards etc.
- How can we best leverage work that has gone before in the development of voluntary markets e.g. the evolution of robust standards for VERs (e.g. Voluntary Carbon Standard, Gold Standard, Virtual CDM, Plan Vivo etc).
- What are the best existing offset products that we should be importing to the Vietnam context? What features are most attractive to buyers?
- Can the market be segmented to stimulate innovation? Can different products cater for different appetites for risk or different mixes of carbon offsetting and development impact
- Are there new models of risk sharing between buyers and sellers that are more favourable to sellers? can these be developed and tested?
- How can Vietnam develop robust monitoring and reporting systems for emissions reductions in the most cost effective way?
- What are the best ways to engage international firms, especially through work on the local (Vietnamese) parts of their global supply chains and international carbon footprint.
- what are the oversight and enforcement mechanisms needed to ensure a pipeline of high quality carbon offsets that are:
 - Measurable - using recognised tools against a credible baseline
 - Permanent –with reversibility safeguards
 - Additional – over and above “business as usual”
 - Verifiable - monitoring conducted by an independent third party entity
 - Unique –recorded on publicly accessible registries to avoid double counting

Deliverables: The consultancy will deliver the following outputs

1. Inception report on demand and supply factors in the voluntary carbon market by the end of October 2008
2. Workshop with market players such as potential buyers and sellers to elicit stakeholder opinions by the end of October 2008.
3. Final report containing (i) current market status including demand and supply analysis (ii) action plan for market development in the four sectors (iii) recommendations for external assistance by the end of December 2008

The required qualifications

The consultants will have knowledge and expertise in the following areas:

- Carbon Trading, carbon market instruments, financing practices and the types of transactions in the voluntary markets
- Policy Research in the field of Sustainable Development.
- The legal and institutional environment in Vietnam in relation to carbon market development.

- Existing and potential carbon market players in Vietnam.
- Event organisation.

We expect bidders to form consortia to bring together the required expertise. This is likely to include (at a minimum):

- at least 15 person days of international consultant/carbon market trader inputs in Europe and/or USA/Australia in order to conduct interviews to cover the demand and supply factors in the international voluntary carbon markets that are relevant for Vietnam.
- at least 25 person days of international consultant inputs at least partly spent in Vietnam to interview stakeholders, assess local market conditions, participate in the proposed workshop and draft the action plan
- A Vietnamese consultant team will be required for local market assessments in the four proposed subsectors and in organising the stakeholder workshop

DFID co-ordination:

The consultants will report to the private sector development and livelihoods advisers in the DFID Vietnam office.

Appendix 2 – Study Approach

The assignment had three main phases leading to the submission of a final report. The initial phase focused on stocktaking and analysis of international voluntary carbon markets and the existing/potential national carbon market in Vietnam through desk research and structured interviews. This included:

- Review of the latest reports on the voluntary carbon markets, including *Forging a Frontier*, *State of the Voluntary Carbon Market 2008* (Various), *Making the Voluntary Carbon Market Work for the Poor* (Forum for the Future);
- Continuous review of relevant news articles in the specialised carbon news portals (e.g. Point Carbon, New Carbon Finance, CarbonYatra);
- Review of rules of the various Voluntary and Clean Development Mechanism accreditation standards;

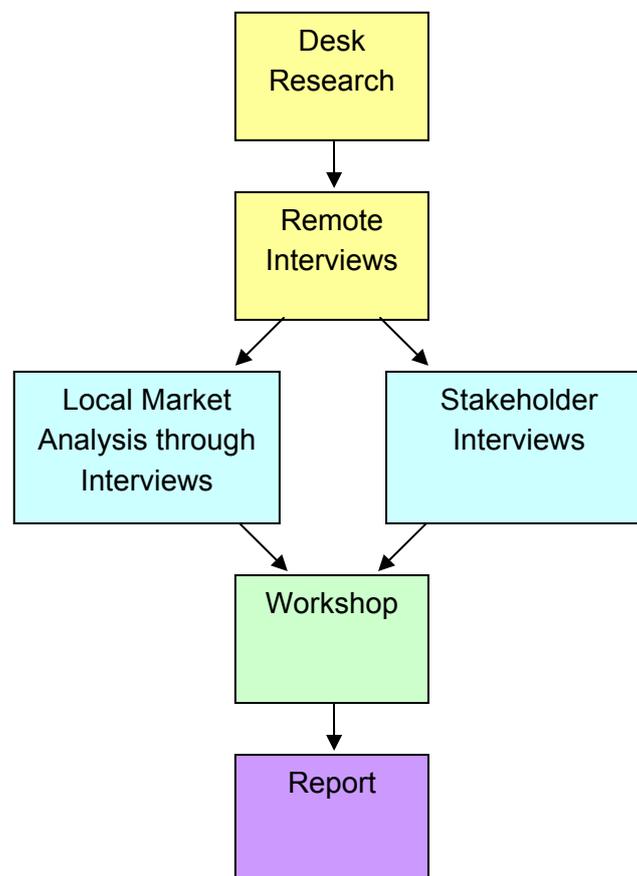


Figure 1. The Work Plan

Interviews were undertaken remotely over a number of weeks. The detailed analysis of responses helped to develop conclusions which fed into the following phases. These included:

- Interviews with international buyers in the global voluntary carbon market. As nearly 80% of VER purchases are by businesses – either for offsetting their

own emissions, or for investment or resale; interviews focused on buyers from the business sector. Although 28 current and potential international buyers were approached, not all buyers agreed to participate. The interviews were carried out with five large retirement buyers (i.e. businesses that purchase VERs to offset emissions of their own operations and/or products offered), two investment buyers and three businesses that combine both features. The interviews captured the views of some of the largest investment and mixed buyers, as well as a representative sample of retirement buyers from non-carbon related businesses: Together, these buyers represent around 27% of the over-the-counter voluntary offset market in 2007¹³. Additionally, interviews were carried out with some CDM buyers who are looking at the voluntary market to see whether/when to enter into it. with a couple of standard setters and a government body which is looking at possibilities to start purchasing offsets;

- Interviews with potential buyers, CDM project developers and other entities in Vietnam [need input here] carried out in Vietnam in the beginning of November, in order to understand current situation and prospects for VER demand in Vietnam;

The analysis of the demand side looked at these voluntary markets from two perspectives:

- Existence of, and prospects for, developing regional demand in Vietnam and surrounding countries, among companies such as airlines, tourism companies, hotels, or main industry sectors that export to industrialised countries;
- Trends in the global market and preferences of international buyers, to inform the study on aspects that are most attractive to buyers and likely to be in high demand.

The second phase comprised analysis of the local markets in Vietnam, with particular reference to the four identified sub sectors (renewable energy, energy efficiency, methane and forestry) was then undertaken through face-to-face and phone interviews in Hanoi.

The data and information from the first two phases formed the basis for the agenda of the key local event in this study – the workshop in Hanoi – which formed the third phase of the assignment. The workshop was a great success with over 80 attendees from a range of local and international stakeholders involved in the carbon market in Vietnam.

Two members of the PAC consortium, Myfanwy Price-Jones (CarbonAided) and Winfried Rijssenbeek (Practical Action Consulting), travelled to Vietnam to work with the Institute of Energy (IoE) to prepare for and facilitate the workshop that took place on 5th November. Before the workshop, Myfanwy flew to Singapore to interview Asian

¹³ According to New Carbon Finance, over-the-counter voluntary offset market in 2007 totalled 42 Mt CO₂e

buyers and Winfried worked for a week alongside the IoE to conduct interviews with local stakeholders, undertake a policy review and conduct field visits to project developers. This enabled key stakeholders to be actively engaged in the assignment and rallied to the workshop. To maximise the benefit of the workshop the LMDG were involved in selection and invitation of attendees as well as having the opportunity to feed into the agenda for the day.

Crucially the workshop provided an opportunity for validation of the study findings and the testing of hypotheses around actions required to stimulate the VCM in Vietnam. It also created a forum for buyers, sellers and other key stakeholder from the four sub-sectors to come together to discuss the opportunities and issues presented by the voluntary carbon market in Vietnam.

Finally, the analysis and follow up from this work was written up into this final report. The key actions recommended to stimulate the VCM have been summarised in a separate report (“Action plan”) that accompanies this detailed report.

Appendix 3 – Workshop Overview and Participants List

The workshop took place in Hanoi on 5th November 2008 when a cross section of key stakeholders gathered to participate in the study and assist the Consortium team in validating current knowledge and crafting recommendations for future VCM development. The workshop involved international and local buyers and sellers of carbon credits, intermediaries, cross departmental government officials, policy makers, project developers and key stakeholders across the four key sub-sectors of the focus in the study. The event format included presentations from international and regional buyers outlining their requirements from the Vietnam carbon market, working groups to undertake market mapping exercises in the four sub sectors, discussions of the shortfalls and blockages in local seller markets and the status of the compliance market in Vietnam followed by a participatory summary session to ensure all of the learning from the day was captured. The workshop was split into two simultaneous streams: (1) a “sellers” stream aimed at assisting potential project developers to understand project development issues and (2) a “buyers” stream aimed at providing potential project developers with an understanding of buyer requirements and needs. Myfanwy Price- Jones of Carbon Aided led the buyers stream and Winfried Rijssenbeek of PAC led the sellers stream.

The workshop attracted a high number of attendants (> 80 persons), a demonstration of the interest in this emerging topic in Vietnam and the confidence that a workshop could provide a useful learning, discussion and networking opportunity. In the working sessions there was active participation from the Vietnamese parties: many questions were raised and ideas were shared on how certain constraints could be reduced. Networking between buyers and project developers initiated in the workshop will facilitate future working relationships. The workshop participants tended to support the research findings set out in the Inception Report submitted in November 2008. Additional outcomes of the workshop with regards to local barriers to the development of the VCM in Vietnam have been integrated into this report.

Organisation	Name and Contact Details	Classification	Type of Actor	Sector
Vietnam- UNDP	Chương trình Phát triển Liên Hợp Quốc UNDP Country Director in Vietnam- Ms. Setsuko Yamazaki Mr. Koos Neefjes- Policy Advisor Climate Change T: 04 3 942 1495 (ext 289) koos.neefjes@undp.org	International	Donor	
World Bank	Mrs.Pham Nguyet Anh T: 04 9346600 ext. 234 nnguyen5@worldbank.org	International	Donor	
Hydrology and Climate Change Administration	Mr. Hoàng Mạnh Hòa Ms. Nguyễn Văn Anh	National	Government	
Ministry of Industry and Trade	Nguyễn Tuấn Phong Trần Hồng Nguyên T: 04 825.8311	National	Government	
Ministry of Industry and Trade Department of Science and Technology	Nguyễn Thị Lâm Giang GiangNTL@moit.gov.vn T: 04 8253831	National	Government	
Vietnam Women's Union	Điện thoại T: 04 9713436	National	Seller	Energy Efficiency
Vinacomin	Mr. Nam T: 04 5180141	National	Government	
Natural Energy Technology and Development Joint Stock Company	Mr. Nguyen Duy Truong Tel: 04 2730828/2110909 neid@jatrophavn.com	National	Seller	
Institute of Industry Strategy and Policy	Bà Lê Hồng Hải Phong Nang Luong T: 04 9.343924	National	Intermediary	
Thienhien.net Newspaper	Mr. Tran Hai T: 04 556-4001 bbt@nature.org.vn	National	Public Media	
Promoting Energy Conservation in Small and Medium Scale Enterprises	Tran Minh Khoa T: 04 8215514 Email:vie01g41.vn@undp.org	Regional	Donor	

Organisation	Name and Contact Details	Classification	Type of Actor	Sector
RCEE Energy and Environment Join Stock Company	Le Thi Bao Ngoc Director, The Carbon Centre T: 04 32752407 ngoc.le@rcee.org.vn	Local	Intermediary	Renewable Energy
Vietnam Institute of Energy	Phạm Khánh Toàn, Nguyễn Đức Cường, Nguyễn Minh Bảo, Nguyễn Quốc Khánh, Nguyễn Văn Thông, Nguyễn Ngọc Hưng Phạm Minh Hòa, Đinh Thị Thanh Lan, Nguyễn Hoàng Anh T:04-35743279 hhuong.bpo@gmail.com tuannguyen.icd@gmail.com	National	Intermediary	Renewable Energy
Hanoi Urban Environment Company Ltd	Nguyễn Thị Hoàng Lan T:04 37473302	Local	Seller	Land fill gas
Pacific Environment Corporation (PAN)	Nguyễn Thị Phương Hải TP Môi trường T: 04-98418743 cocomo@fpt.vn	Local	Intermediary	Small scale methane
Netherlands Development Organization (SNV)	Felix ter Heegde T:04-3 8463791	International	Donor	
Research Center for Climate Change and Sustainable Development	Mr. Nguyen Mong Cuong, Director and Mr. Ngo Tien Giang, Climate Change Project Assistant, T: 04-38341208	Local	Intermediary	Forestry
Research Center for Forest Ecology and Environment, Ministry of Agriculture and Rural Development	Nguyễn Thị Hải (Presenter) T:04-37550801 phuong.vt@rcfee.org.vn	Local	Intermediary	Forestry
Vietnam Forestry Technology Association	Hoang xuan Ty T:04-37840076 hoangxuanty@gmail.com	Local	Intermediary	Forestry
Institute of Hydro	Mr. Trịnh Tùng Bách	National	Intermediary	Renewable

Organisation	Name and Contact Details	Classification	Type of Actor	Sector
Power and Renewable Energy	T: 0983 391 905 Nguyen Thanh Tung, trung phong HTQT Nguyen Khanh Thuan			Energy
Vietnam Biogas Center - VUSTA	Nguyễn Quang Khải Nguyễn Gia Lượng T: 0915 079 484 khaitruc@vnn.vn	Local	Seller	Small scale methane
Clean Energy Joint Stock Company	Nguyễn Văn Bản T: 0912102297 ce-jsc@hn.vnn.vn	Local	Intermediary	
Population, Environment and Development Centre (PED)	Do Duc Khoi, Chairman of Management Board and Director T: 04 38724509 ped@vusta.vn ; khoi.ped@vusta.vn	Local	Seller	Energy Efficiency
Swiss Agency for Development and Cooperation	Hoàng My Lan T: +84439346627 Hanoi@sdc.net	International	Donor	
Vietnam Green Building Council	Jalel Sager, Executive T: 04 291 3730	National	Intermediary	
Institute of Ecological Economy (Eco-Eco)	Nguyen Sy Linh, Mr T: 844-8574400 ecoeco@hn.vnn.vn	National	Intermediary	
Vietnam Administration of Seas and Islands, MONRE	Tran Phuong Dong	National	Intermediary	
COCOMO Corporation	Nguyen thi Phuong Hai T:04-9841-843/4 phuonghai@cocomo-vn.com	National	Seller	
The World Agro Forestry Centre ICRAF Vietnam	Hoang Minh Ha Pham Thu Thuy	International	Donor	
Oxfam Great Britain	Le Kim Dung, Programme Coordinator, Advocacy and Communication T: 04-945 4362; ext. 141 lkdung@oxfam.org.uk	International	Donor	
Tricorona - Carbon	Moe Moe Oo, Vice President	International	Buyer	

Organisation	Name and Contact Details	Classification	Type of Actor	Sector
Asset Management	T: +46 8 506 885 52 moe@tricornase.se			
Relief & Disaster Mitigation Coordinator World Vision Vietnam	Le Van Duong T: 04-9439920	National	Donor	
Danish Embassy	Mr. Simon Nikolaj Fklund Tel: 04 3823 1888	International	Donor	
Center for Development Assistance (CDA)	Ms. Bui Thi Thu Huong, Deputy Director T: 04-773-0802 cda.vngo@gmail.com	National	Intermediary	
Helvetas Vietnam	Daniel Valenghi, Country Director T: 04 43 843 1750	National	Donor	
Tien Phong Daily	Hoang Quoc Dzung, Chief Editor, Science Section and Executive Deputy President, Vietnam Forum of Environmental Journalists hgdung60@yahoo.com T: 04 7628933	National	Public Media	
Rural Newspaper Báo Nông thôn	Ms Le Huyen	Local	Public Media	
British Petroleum	Phạm Thị Hải Anh	International	Seller	
First Climate GmbH	Mr Colin Steley, SE Asia Project Manager T: 04 6258 3508 colin.steley@firstclimate.com	International	Buyer	
People News Online	Le Hong Van T: 8 289 432	National	Public Media	
Vietnam Belgium Dairy Project, Ministry of Agriculture and Rural Development	Lien Terryn, Project Assistant, Belgian Technical Cooperation T: 043734 42 78	Local	Seller	Biogas
Vietnam Industry Journal	Hoang Quoc Do Bo Cong Thuong T: 0903208308 DoHQ@moit.gov.vn	National	Government	

Organisation	Name and Contact Details	Classification	Type of Actor	Sector
Hung Viet Consultant JSC	Nguyen Tuan Duong duongnt@hungviet.com.vn	Local	Seller	