

World Economic Forum

Green Growth Action Alliance (G2A2)

in collaboration with the New Vision for Agriculture Initiative

Financing Climate Smart Agriculture in Vietnam


February 2013

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The Context of Financing Green Growth

- Rapid growth in emerging economies is putting pressure on finite resources
- Climate change is amplifying pressures on the food, water, energy nexus and negatively affecting economic productivity
- Governments understand the challenges and want to pursue resource efficient growth through investing in clean energy, agriculture, transport and water infrastructure
- This creates an opportunity for the private sector: HSBC estimates \$10 trillion in low carbon infrastructure investment by 2020
- But private investors are reluctant to invest due to perceived and actual risks; as a result, the cost of finance is high and the industry is not reaching scale
- Simultaneously fiscal austerity is constraining public and donor funding, increasing the need for private investment in green growth infrastructure



A new investment model is needed, one that recognises governments' interest in resource efficient low-carbon growth, and that involves private sector leadership

The Green Growth Action Alliance has a clear set of goals that focus on delivering greater private funding for green infrastructure



- In Los Cabos, President Calderon welcomed the establishment of the Green Growth Action Alliance (G2A2)...
- ...and agreed to serve as its honorary chair

G2A2 goals

- 1 Unlock private finance flows for green infrastructure, and track global progress
- 2 Design and launch new financing mechanisms at the country level through member-led working groups
- 3 Enable a pipeline of transformational, bankable, scaled and replicable deals
- 4 Shape - through action - the green growth policy agenda

A multi-stakeholder coalition - each Member brings unique assets and resources

Founding members

Members include more than 50 companies, public and private financial institutions and research organisations

<u>Members</u>		
<p>Accenture Alcatel-Lucent Applied Materials Barclays Capital Bank of America Merrill Lynch Black Sea Trade and Development Bank (BSTDB) Climate Polity Initiative Deutsche Bank Group Eskom Holdings European Bank for Reconstruction and Development (EBRD) European Investment Bank (EIB) FEMSA GDF Suez Global Green Growth Forum (3GF) Global Green Growth Institute (GGGI) Hanwha Group HSBC Iberdrola Infosys</p>	<p>Inter-American Development Bank (IDB) McKinsey & Company Japan International Cooperation Agency (JICA) KfW Bankengruppe Morgan Stanley Nacional Financiera SNC (NAFIN) Novozymes Organisation for Economic Co-operation and Development (OECD) Overseas Private Investment Corporation (OPIC) Private Sector Center for Sustainable Development Studies (CESPEDES) Samsung Electronics Company Siemens Standard & Poor's Suntech power Suzlon Energy Swiss Reinsurance Company United Nations Environment Programme Finance Initiative (UNEP FI)</p>	<p>Trina Solar United Nations Foundation Vestas Wind Systems Wal-Mart Stores Welspun Energy World Bank Group World Resources Institute (WRI) World Trade Organization (WTO) Yara International Zurich Insurance Group</p> <p><u>Observers</u></p> <p>Alstom Mexichem Schneider Electric</p>

Green Growth Action Alliance work in Vietnam: helping to implement a bold Green Growth strategy with a strong agriculture component

Vietnam has developed an ambitious Green Growth strategy, which aims to ***‘restructure the economy in order to increase economic efficiency and competitiveness, reduce greenhouse gas emissions, and effectively respond to climate change impacts’***:

- **By 2020, GDP per capita to double**, energy consumption to be reduced by 2.5-3%/year, **GHG intensity to be reduced by 10-15%** compared to 2010
- **By 2030, Vietnam to achieve Middle Income Status**, total GHG emissions reduced with 2-3% / year

“We need a structural adjustment in the sector, we need new ways of farming and we need to ensure these new approaches are low-carbon”

Minister of Agriculture Cao Duc Phat, Davos 2012



- **At the Forum’s Annual Meeting in Davos, Minister of Agriculture Cao Duc Phat welcomed support from the Forum**
- **...recognising the value of focusing on financing green growth solutions: ‘mobilization and diversification of financial sources in carrying out solutions of GGE reduction in the agriculture and rural sector’**

In addition, there is a strong interest from public and private sectors to support this direction:

Jose Graziano da Silva, FAO: ***“Transformations are needed in both commercial and subsistence agricultural systems in order to increase production and achieve food security, whilst at the same time lowering the GHG emissions”***

Rashad Kaldany, IFC: ***“Innovative financing schemes are required”***

Andrew Steer, World Bank: ***“We need to move to a more radical collaboration. We need to do everything as IOs, governments, and private sector, to help government think through and deliver on their strategies for green growth”***

Deutsche Bank: ***“From an investor’s perspective, the challenge of feeding and fuelling the world is far-reaching, requiring sound governmental policies, education and training of practitioners, and the massive strategic deployment of capital”***

Mitigation opportunities in Vietnam

Research from MARD, MoNRE, IFAD, IFPRI and others point at a number of possibilities to mitigate carbon emissions in the agriculture sector: targeting crops and practices

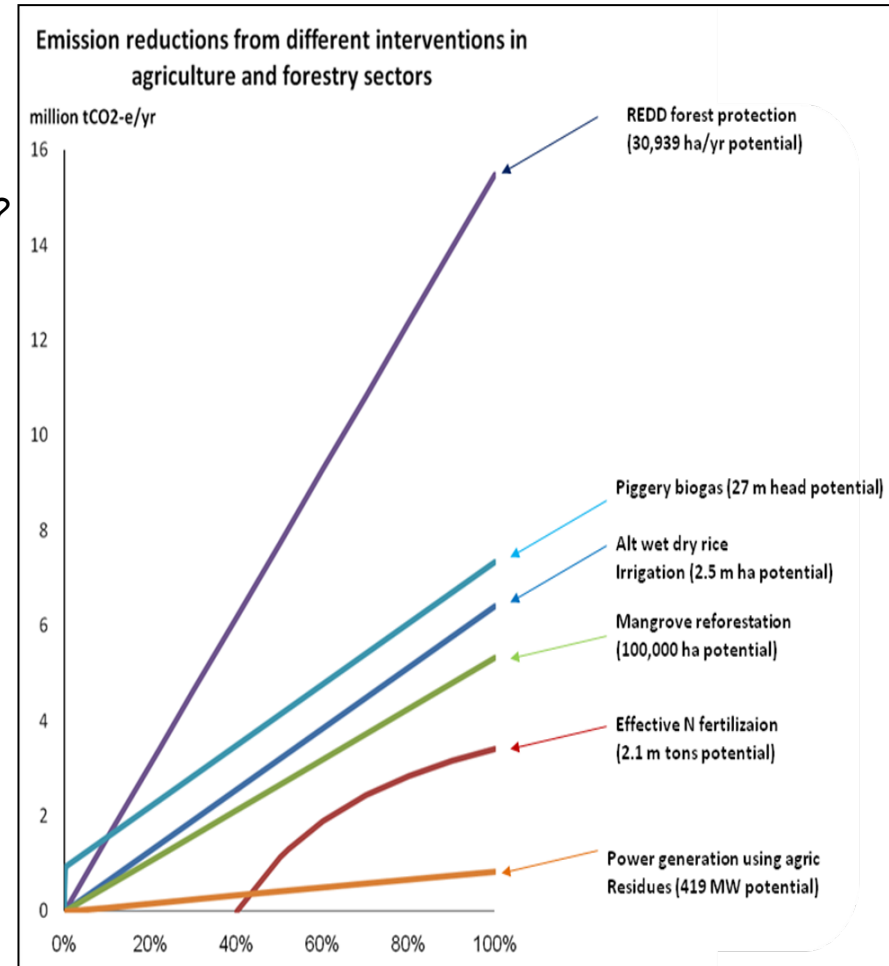
When aggregating results we can identify:

- *What is the low-hanging fruit?*
- *What can be achieved at relatively little cost?*
- *What can be learned from activities already underway?*

Table 3: Emission Reduction Potential by crop and mitigation option	Emission Reduction Potential	Mitigation Option
Rice	81.2	AWD or NUE*
Peanut	na	na
Soybean	8.6	NUE
Maize	10.4	NUE
Cassava	4.3	NUE
Sugarcane	8.0	NUE

AWD: Alternative Wetting and Drying

N-use Efficient Variety (NUE) = 25% increase efficiency uptake C/N



National-level Crop Mitigation Potential for key Food Crops in Vietnam, IFAD & IFPRI Partnership Program - Climate Mitigation Activity, 2012

Vietnam, Greenhouse gas mitigation, agriculture and forestry sectors, WB Carbon Finance Assist and MoNRE, 2012

A need for private sector engagement to finance Green Growth in Vietnam

Effectively meeting these ambitious objectives will require significant resources:

- **There is insufficient funding available from public sources:** currently about 130 million USD (22 million USD from state budget, and about 106 million USD is ‘to be mobilized from ODA’)
- **Estimates suggest the costs of implementing the Climate Action Plan,** which would allow the Agriculture sector to comply with Green Growth strategy **are 3,5 billion USD¹**

While the precise figures are not known, experts confirm that with the appropriate tools the opportunity space exists to scale investment from the private sector to implement solutions that will deliver impact.

To effectively mobilise finance in ‘greening’ the agriculture sector, a smart mix of public and private financing mechanisms is required.

G2A2 serves as the platform to help the government of Vietnam attract leadership and financing from the private sector to kick start green growth through its Climate Smart Agriculture Working Group over the next year. This working group will also collaborate with the New Vision for Agriculture initiative.

¹; According to estimations by MARD. This total number breaks down to 70% for infrastructure such as hydraulic works, 8% for improvement of rural infrastructure, 12,5 % to agriculture, forestry and fisheries combined. This corresponds with the geographic focus on delta's and coastal regions, and on mitigation investments.

Barriers to scale private investment for low carbon agriculture

To date a series of initial consultations have raised several barriers that merit further discussion and exploration. While not exhaustive, these barriers can be grouped into three broad categories: policy, market and finance:

Policy

- Uncertainty surrounding the current institutional and regulatory frameworks for private sector investment (for example related to microfinance or risk sharing facilities)
- Possible imbalances between green growth objectives and incentives for the sector to drive productivity
- Land issues (i.e., regulations regarding land allocation that make diversification of crops more difficult; lack of proper documentation to prove ownership for farmers)
- Relatively few incentives to promote the competitiveness of other crops over rice
- Difficulty monitoring and measuring actual CO₂ benefits / potential environmental impact; limited track record for land based carbon sequestration
- Lack of complementary incentives throughout the entirety of the value chain for the adoption of low carbon practices

Barriers to scale private investment for low carbon agriculture (cont'd)

To date a series of initial consultations have raised several barriers that merit further discussion and exploration. While not exhaustive, these barriers can be grouped into three broad categories: policy, market and finance:

Market

- A very fragmented market: millions of farmers with an average farm size of below 4 acres
- Difficulty scaling the size of farms, due to absence of successful aggregating models or structures
- Relatively low costs of energy and water do not encourage conservation
- Level playing field: subsidised energy prices outcompete cleaner biomass based alternatives
- Domestic targets for output / crops currently limiting flexibility to scale businesses or allow foreign investment

Barriers to scale private investment for low carbon agriculture (cont'd)

To date a series of initial consultations have raised several barriers that merit further discussion and exploration. While not exhaustive, these barriers can be grouped into three broad categories: policy, market and finance:

Finance

- Currently commercial lending is more interested in the trader and commodity financing
- Discrepancy between need and availability of capital: challenge for small-scale farmers to access working capital throughout the season
- Absence of finance mechanisms with an acceptable risk profile for domestic banks to lend to farmers
- Lack of capacity for risk analysis
- Lack of track record in asset and collateral management practices
- Other macroeconomic conditions (i.e. inflation, interest rates, regulations that limit the capacity of local banks to grow and lend in accordance with demand)

Climate Smart Agriculture ('CSA')

The FAO defines CSA as agriculture that “*sustainably increases productivity, resilience (**adaptation**), reduces / removes greenhouse gases (**mitigation**) while enhancing the achievement of **national food security and development goals.**”*

CSA context in Vietnam

According to a 2009 study, the Vietnamese Ministry of Natural Resources and Environment (MoNRE) published the country's official climate change scenario that highlighted the following issues:

- Likely increase in rainfall variability, leading to an increased frequency, duration and intensity of floods and droughts;
- Sea level rises, resulting in saltwater intrusion and flooding

Relevant suggested interventions for agriculture, forestry, and infrastructure were identified in key sectors:

- Agriculture: Switching of sowing dates, switching to drought tolerant crops, adoption of salinity tolerant varieties of rice, adoption of new crop varieties for other crops, rice-fish rotations
- Forestry: Facilitating mangrove migration, adoption of more drought-resistant plantation species and silvicultural methods, improvements in pest and disease management
- Infrastructure: Expansion and upgrade of irrigation infrastructure to promote better water management (especially in the rice sector)

At the same time, the Government of Vietnam is promoting a 13.5% growth in average crop yields and extension of the national irrigated area by ca. 688,000 ha – roughly half for rice and the remainder split between coffee and maize.

Financing Options: A Primer

The following options can be used alone or in combination, for example grants can help to provide a guarantee for a bond, or provide a first loss tranche for debt or equity investors.

Category	Sub-category ^{1,2}	Description of applicability to CSA	Suitability to suggested interventions (listed on slide 4)	Potential partners
Grants	Overseas Development Assistance (ODA)	<ul style="list-style-type: none"> Risk-capital to leverage debt / equity (including guarantees) Funding of non-commercial activities (e.g. research, provision of technical assistance) 	<ul style="list-style-type: none"> All (A-E) 	GIZ, JICA, DANIDA, SNV, IFAD, FAO
	Private grants & philanthropy			Rockefeller Foundation
Equity	Private equity	<ul style="list-style-type: none"> Direct investment in potentially profitable activities, e.g. forestry, renewable energy 	<ul style="list-style-type: none"> A. Agroforestry Partnership Fund D. Renewable energy 	Bunge, World Bank, IDH, SNV (subsidized equity)
	Public equity (stocks)	<ul style="list-style-type: none"> 'Green' listings e.g. FTSE4Good Raising money on stock exchange through listed vehicle 	N/A	N/A
Debt	Bonds (can be corporate / government)	<ul style="list-style-type: none"> Infrastructure bonds Green bonds Pay for performance contracts ('Social bonds', 'Results Based Financing') 	<ul style="list-style-type: none"> All (A-E) 	IFC, GCP, BoAML, Nestle
	Microfinance	<ul style="list-style-type: none"> Direct loans to individuals linked to specific activities 	<ul style="list-style-type: none"> A. Agroforestry B. Warehouse receipts 	IFC, IFAD
	Local bank finance incl. commodity collateralized financing	<ul style="list-style-type: none"> Improved credit availability & TA can help free up credit so farmer can efficiently improve productivity 	<ul style="list-style-type: none"> B. Warehouse receipt financing E. Improved bank lending capability 	IFC, Rabobank, Nestle

1) Note – excludes use of carbon credits, although this can be a product that could be collateralized

2) These categories do not cover all types of financing, only those relevant to this initiative

CSA opportunities in Vietnam

Category	Mitigation opportunity	Additional CSA impact	Possible financing solutions*
Forestry	REDD, mangrove reforestation	Forests can increase resilience. Mangroves are important for adaptation (coastal protection).	<ul style="list-style-type: none"> • Agroforestry Partnership Fund (APF) • Bond for tree-crop rejuvenation (coffee) – <i>Could be combined with APF</i> • Commodity Collateralized Financing: Warehouse Receipt Financing for smallholders in coffee production, using PPPs • Improved local bank lending approaches to free up capital for land managers
Energy	Piggery biogas	Reduces government reliance on hydro and fossil fuels (resilience)	<ul style="list-style-type: none"> • Case by case basis, subject to energy prices
Infrastructure	AWD Irrigation	Improved irrigation improves resilience, can help increase production	<ul style="list-style-type: none"> • Bond for irrigation • Other private / public investment vehicles for 'green infrastructure'
Improved practices & species	Effective N fertilization	Can increase efficiency of production	<ul style="list-style-type: none"> • Improved local bank lending approaches to free up capital for land managers, e.g. to invest in drip irrigation, improved practices • Debt / equity linked specifically to certified sustainable production (e.g. organic)
Energy	Power generation from agricultural residues	Reduces government reliance on hydro and fossil fuels (resilience)	<ul style="list-style-type: none"> • Private equity investment in renewable energy

* Note – excludes use of carbon credits

Overview of CSA metrics (1/2)















It is important that initiatives have a clear link to CSA, and that this is reflected in the metrics developed and monitored. It is expected that each initiative will monitor a set of general and initiative-specific metrics (the latter developed by each group).

General Metrics to monitor: All initiatives <i>These could include some of the following</i>	
Adaptation (resilience), food security & development	<ul style="list-style-type: none"> • Average family incomes & savings • Food staples – average price and access, Nutritional status of households • Health indicators (e.g. average hospital visits) • Gender indicators (e.g. average age of first pregnancy, girls in school) • Local biodiversity • Water quality and flow • Energy price and access • Alignment with national development goals
Mitigation	<ul style="list-style-type: none"> • Net GHG impacts (sequestration, emissions, leakage) • Permanence • Additionality

Specific metrics (examples) – to be defined by each Group <i>These could include some of the following</i>	
Adaptation (resilience), food security & development	<ul style="list-style-type: none"> • Credit availability and cost • Infrastructure availability and cost • Tree cover increases • Percentage of local species in the landscape • Alignment with regional / local development goals
Mitigation	<ul style="list-style-type: none"> • Sequestration, GHG emissions, leakage • Permanence • Additionality

Overview of CSA metrics (2/2)

Although it is difficult to assess the impact of each potential intervention at this early stage in the process, we have tried to gauge the type and scale of impact on some of the metrics outlined on the previous page. For each of the proposals that will be presented, we have used this legend:

General CSA metrics	Potential scale of impact 			
	Zero	Low	Medium	High
Adaptation / resilience – Social indicators (e.g. incomes & savings)				
Adaptation / resilience – Biophysical indicators (e.g. biodiversity, water)				
Food security indicators (e.g. local access to staples, nutritional status, food prices, etc.)				
GHG mitigation (net CO₂e)				

CSA opportunities in Vietnam: Options & metrics (1/2)

Five (5) opportunities are being considered for further development, these are described on the following slides. The table below summarizes the concepts and consolidates some of the possible metrics for success.

Opportunity	Targets	Financing types*	Potential success metrics	Potential partners	How opportunity addresses existing obstacle?
A. Agroforestry Partnership Fund (APF)	Coffee plant rejuvenation	<ul style="list-style-type: none"> Bonds (hard) Private equity 	<ul style="list-style-type: none"> Hectares planted / rejuvenated Hectares protected Commitments (US\$) No. of farmers enrolled Additional private funds invested Tons of CO₂e 	IDH, Forest Finance, Nestle, FAO, IFAD, SNV, ECOM	<i>Investment in planting of perennials is capital intensive, and results take > 3 yrs to achieve. The APF could result in long-term, dedicated capital, for example enabling private investment in improved production by providing a first loss tranche for producers & investors.</i>
	Mangrove reforestation	<ul style="list-style-type: none"> Bonds (soft, if tied to a product, could be 'hard bond') 			
	Conservation (REDD)				
	Agroforestry producers: Facilitating access to value-chain finance for sustainable producers	<ul style="list-style-type: none"> First loss tranche / guarantee facility (donor funds with PE) 			
B. CCF: Warehouse receipt financing / risk sharing PPP	Credit to smallholders (coffee sector)	<ul style="list-style-type: none"> Microfinance Bonds (hard) 	<ul style="list-style-type: none"> Commitments (US\$) Establishment of program No. of warehouses No. of participants Volume (tons) traded 	IFC, Nestle, IDH, Bayer, IFAD, SNV	<i>Farmers need more access to credit, and support in order to fully convert to improved on-farm practices. A CCF mechanism would help free up capital for smallholders, this could be complemented by technical help.</i>
	Improved infrastructure (warehouses)	<ul style="list-style-type: none"> Bonds (hard) Private equity 			
	Improved farm practices	<ul style="list-style-type: none"> Bonds (soft) 			

* Assume that grants / philanthropy / ODA is applicable to all. "Hard" bonds refer to instances where there is a return on investment, "soft" bonds refer to where the return is in all or partially in the form of social / environmental impacts

CSA opportunities in Vietnam: Options & metrics (2/2)

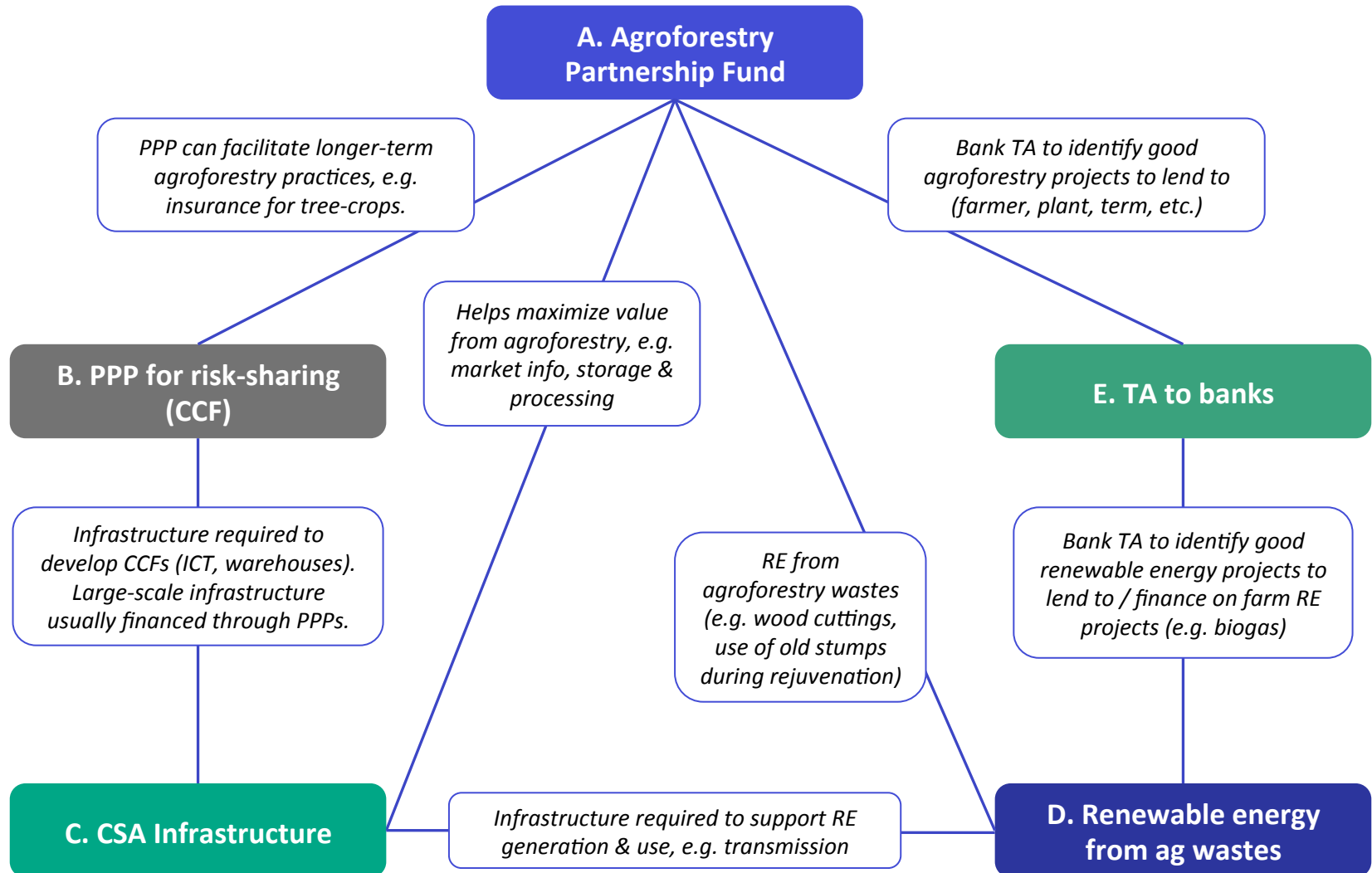
Five (5) opportunities are being considered for further development, these are described on the following slides. The table below summarizes the concepts and consolidates some of the possible metrics for success.

Opportunity	Targets	Financing types*	Potential success metrics	Potential partners	How opportunity addresses existing obstacle?
C. CSA Infrastructure	AWD Irrigation. Could also be a financing solution to part of the CCF issue (e.g. warehouses)	<ul style="list-style-type: none"> Bonds (hard) Vehicles for private / public investment in infrastructure 	<ul style="list-style-type: none"> Commitments (US\$) Rice fields impacted (ha) Value of increased yields to farmers US\$) 	IFC, EDF, Climate Bonds Initiative, BoAML	<i>Significant funds need to be committed to infrastructure underpinning green growth. CSA infrastructure bonds would help raise appropriate, sizeable funds.</i>
D. Renewable energy from ag wastes	Private investment in renewable energy using ag wastes	<ul style="list-style-type: none"> Private equity 	<ul style="list-style-type: none"> Installed capacity (MW / kW) Generation (MWh / kWh) Tons of CO₂e Local energy availability & price 	SNV, Bayer, Bunge FS, EDF	<i>Significant energy from ag waste opportunity exists, private investment could be leveraged by appropriate policies, which would reduce hydro and fuel oil dependence.</i>
E. Improved local bank financing	More lending to rural sector by local banks – tied to sustainable production	Grants (perhaps also bonds / other debt instruments)	<ul style="list-style-type: none"> Financing by local banks to agri (US\$) Sustainability metrics 	Rabo, IFC, IFAD, SNV	<i>Local banks need capacity building to be able to identify & lend to agri producers</i>

* Assume that grants / philanthropy / ODA is applicable to all. "Hard" bonds refer to instances where there is a return on investment, "soft" bonds refer to where the return is in all or partially in the form of social / environmental impacts

CSA options interconnectedness

It is recognized that many aspects of the five proposals are linked. This diagram indicates some of the linkages that might exist.



CSA opportunities in Vietnam: Process & participants

The envisaged specific process to develop each idea, and specific participants, are summarized for each of the opportunities in the following slides. The general process and participants are described below.

	Process steps	Participants	Timing
1	Secure specific group buy-in (organizations and individuals), including lead organization	Wide group of potentially interested groups. Led by WEF.	November & December 2012
2	Assess and agree scope, formulate specific ideas, development plan for each group	Specific groups. Led by agreed lead.	February 2013
3	Investigation of options, initial reporting to wider group, including MARD	Specific groups. Coordinated by WEF with leads.	February 2013
4	Refinement, decision on way forward: Will there be uptake, by whom, further development & implementation plan (Viet Nam workshop*)	Specific groups. Led by agreed leads.	March 2013
5	Post Davos follow-up and planning for next steps, in preparation for 2013 East Asia Summit	Specific groups. Coordinated by WEF.	February - March 2013
6	Next steps as agreed by specific group	Specific groups. Coordinated by WEF.	March 2013 onwards

* Planning for a day-long working meeting in March to further progress the proposals. The exact date will be confirmed in February.

A. APF: Possible scope (1/4)

'Agroforestry is a collective name for land-use systems and technologies, where woody perennials (trees, shrubs, palms, bamboos, etc.) are deliberately used on the same land management unit as agricultural crops and/or animals, either in some form of spatial arrangement or temporal sequence. In agroforestry systems there are both ecological and economical interactions between the different components'. (ICRAF, 1993)

Options exist with respect to possible scope of the APF, i.e. it can be broad or general: 4 suggestions include:

1. Coffee Plant Rejuvenation

- Old coffee plants means that productivity is not optimized, plants are more vulnerable.
- Plants > 30 years of age less productive.
- Many producers cannot afford to rejuvenate plants / introduce better hybrid because of ca. 3 year opportunity cost.
- Impacting foreign exchange earnings, business.

Opportunities

- Gov't intends to increase coffee production.
- Coffee task force identified this as an issue.
- Linked to a traded commodity.
- Improved new hybrids exist.

Questions

- Impact on smallholders?
- Climate change impact on coffee?

2. Mangrove Rehabilitation

- Important to protect Vietnam's coastal zones from erosion.
- Significant carbon store.
- Important for aquaculture systems, e.g. shrimp farming (requirement for more integrated aquaculture in mangrove areas and possibilities for habitat banking under certification schemes).
- Requires protection, re-planting, and monitoring.

Opportunities

- MARD Project on Mangrove Forest Restoration & Development (2008-2015);
- Several donor & NGO projects;
- Aquaculture is a major sector.

Questions

- Champions: IDH shrimp program
- Financial viability: Local land bank

A. APF: Possible scope (2/4)

Options exist with respect to possible scope of the APF, i.e. it can be broad or general:

3. Non-Mangrove REDD	4. Small scale agroforestry producers
<ul style="list-style-type: none"> • Vietnam's forest area is increasing but many areas are still degraded. • Many forests are not under proper management, reported lack of investment. • Biodiversity at risk. • Risk to indigenous groups relying on forests for their livelihoods. 	<ul style="list-style-type: none"> • Difficult for small-scale producers to get credit from banks / MFIs. • Intermediaries / traders provide credit at high interest rates, erode value. • Banks wary of lending to farmers due to risks & lack of acceptable collateral. • Only local buyers can purchase directly from farmers, even if they promote best practice & certification, they face difficulties in expanding due to opportunistic traders.
<p>Opportunities</p> <ul style="list-style-type: none"> • UN-REDD country, FAO and UNDP piloting innovative programs; • REDD-readiness supported by World Bank 	<p>Opportunities</p> <ul style="list-style-type: none"> • Ecom supply chain work • NVA coffee task force • Legislative changes underway to facilitate lending to producers (e.g. Rabobank program)?
<p>Questions</p> <ul style="list-style-type: none"> • Authority probably lies with MoNRE, champions? 	<p>Questions</p> <ul style="list-style-type: none"> • Possible first loss tranche to leverage investment in improved production?

Note: There is some overlap between the ideas. Are there commonalities in requirements for a financing instrument that could be combined in an APF (e.g. a first loss tranche / risk capital provided by a multilateral agency combined with other forms of financing instruments?)

A. APF: Partners & steps (3/4)

Leads: Forest Finance (Confirmed)

Potential participants	
For-profit	Not-for-profit
<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • Forest Finance • Nestlé • BoAML • Ecom • Vietin Bank 	<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • FAO • IFC • World Bank • IFAD & DFID • IDH • SNV • UNDP
<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • Mars • Unilever • Local banks 	<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • WWF • CARE • GIZ

Potential scale of impact
<p>Possible specific additional success metrics</p> <ul style="list-style-type: none"> • Hectares planted / rejuvenated • Hectares protected

Envisaged steps		
Step	Questions	Output
Determine scope	<i>Should the fund target all potential aspects / selection?</i>	Assessment of opportunities. Agreement on selected sector(s) & justification.
Establish funding modalities	<i>What are funding requirements? How should the fund be capitalized (grants / debt / equity / selection)?</i>	Assessment of & agreement on appropriate funding mix options.
Management & governance	<i>Who should manage the fund? How should decisions taken about allocations? What independent governance criteria should be established? Other stakeholders to involve?</i>	Description of management and governance issues and options. Agreement on appropriate structures. List of other important stakeholders & consultation strategy.
Strategy, incl. ownership & timing	<i>Should this continue? If so, how? What is the timing & steps for full implementation?</i>	Decision if should go forward & how (strategy)
Monitoring	<i>How should the initiative monitor & report success if & when its established?</i>	Regular updates

A. APF: Further reading (4/4)

Selected references for further reading:

21/Aug/12: “Coffee bushes need new life”. From: <http://vietnamnews.vn/vnanet.vn/Agriculture/229052/coffee-bushes-need-new-life.html>

24/May/12: “Vietnam 2012 Coffee Annual”. From: http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Coffee%20Annual_Hanoi_Vietnam_5-24-2012.pdf

March 2011: “The Potential for Mangrove Carbon Projects in Vietnam”. From: http://www.snvworld.org/sites/www.snvworld.org/files/publications/mangrove_report_0.pdf

24/Apr/2012: “Vietnam’s mangrove trees threatened by rising tide of deforestation.” From: <http://www.guardian.co.uk/society/2012/apr/24/vietnam-mangrove-deforestation-climate-change>

UN-REDD Programme, Vietnam: <http://www.un-redd.org/UNREDDProgramme/CountryActions/VietNam/tabid/1025/language/en-US/Default.aspx>

World Bank Forest Carbon Partnership Facility (FCPF), Vietnam: <http://www.forestcarbonpartnership.org/fcp/VN>

B. Risk sharing PPP / CCF: Overview (1/5)

Overview of Warehouse Receipt Financing

Commodities, for which there is a relatively liquid market (e.g. coffee, cocoa), can be used as collateral to finance production and distribution. Vietnamese farmers find it difficult to obtain credit to invest in production. Banks find it difficult to lend to farmers, as transaction costs are high and there are no standards for grading products to estimate their value. A public private partnership (PPP) that facilitates collateralization of sustainably produced agricultural products, e.g. through a Warehouse Receipt Financing (WRF) mechanism, could be one way to overcome this.

WRF is a form of structured commodity finance, other types include export receivables-backed finance, and pre-payment financing. Introducing a risk sharing PPP, with focus on a WRF system, could help to overcome barriers to sustainable intensification:

- Smallholders access to credit: This undermines their ability to invest in their farm. Smallholders need short-term (seasonal) credit, e.g. to buy inputs. If there is a commonly accepted grading system, warehouses can issue information on the volumes and grades of coffee stored, which can be used by banks as a form of collateral.
- Price transparency and market exposure: Warehouses can be a central point for displaying market prices, providing the farmer with information. The warehouse can also reduce transaction costs for buyers and sellers as it is a central market point. Farmers may also be encouraged to pursue higher-grade products (e.g. organics) if they see higher prices and demand.
- Reduced wastage: Proper storage facilities mean that losses are reduced.
- Development of standard grades and measures: Warehouse operators will be required to grade the produce (which will then result in an estimate of value), lowering the informational transaction costs for lenders, buyers and sellers.
- Farm management information: As a central point, the warehouse can be a source of information about improved production techniques, new products (e.g. fertilizers, herbicides), including on CSA practices and support programs.

Requirements

- Commonly accepted standards for key commodities (e.g. coffee, cocoa)
- Quality warehouses and supporting infrastructure (ICT, roads, etc.)
- Supportive legal & operational framework
- May require commodity exchange (grades & prices)
- Production of a readily traded & liquid commodity. Note - may be better for non-perishables, crops that are not key for domestic food security
- Insurance systems for warehouses & operators, performance guarantees

Roles to be fulfilled:

- Warehouse operators
- Producers
- Commodity buyers
- Input providers
- Insurers / re-insurers
- Government / legislators
- Banks / lenders
- Independent auditors

B. Risk sharing PPP / CCF: Possible scope (2/5)

Options exist with respect to possible scope of the solution(s), one approach may be to look at the issue in terms of short vs. long term finance needs, pre vs. post-harvest finance needs (note this could fit within APF)

The CCF idea was originally two separate ideas:

- Public Private Partnership across the coffee value chain to leverage improved on-farm management, including improved pesticide and fertilizer application;
- Warehouse Receipt Financing (WRF) system to improve farmers access to credit

The main purpose was to find ways to provide more, and more appropriate, credit to farmers in the coffee value chain, linked to improved production (including GHG mitigation and adaptation).

Alternative scoping questions include:

- Sector – limited to coffee?
- Farmer aggregation
- Use of standards to increase value (e.g. organic, fair trade)
- Options for guaranteed off-take? (volume and / or price)

Short term finance

- Required primarily pre-harvest (fertilizer & other inputs)
- Also required post-harvest, especially if the prices are poor and farmers strapped for cash
- Small farmers in rural areas, especially with no formal books, may find it hard to get affordable credit.
- Linkages to proper application (minimizes costs and ensures max yields per input)

Opportunities

- Coffee task force
- Crop input companies have successful farmer training programs (e.g. Bayer in India)

Questions

- How to manage risk of pre vs. post-harvest finance?
- Quality of infrastructure to manage transaction costs?
- Linkage to environmental impact?

Long term finance

- Farmers lack funds for long-term rejuvenation and optimal management, e.g. plan rejuvenation.
- Meeting farmer opportunity costs while new trees are planted.
- Access to improved varieties
- Access to extension and support services to prevent diseases, improve crop management practices (e.g. pruning)

Opportunities

- Coffee task force
- Vietnamese government supporting coffee sector

Questions

- May be better as part of APF?
- How to handle commodity price risk in the long term?
- Linkage to environmental impact?

B. Risk sharing PPP / CCF: Possible partnership (3/5)

Government-level

Develops & approves: Standards (incl. environmental), participants (e.g. who can act as warehouse operator), framework legislation on use of receipts as credit, incentives

Establish relevant bodies: E.g. Certifiers, exchanges. Bring in financiers (e.g. bank WB & IFAD are funding through)

Government support to further funding proposal (e.g. guarantees, subsidies / tax incentives). NB. May also require additional funding to pay for new institutions.

Support to new funding – money is raised into acceptable structure with proper governance. Official partnerships.

On-the-ground

Assess farmers financing needs (e.g. IFC study), local participant consultations (local banks, farmers & farmer groups / coops, off-takers (e.g. Nestle), trainers, warehouse operators, others – e.g. IDH)

Help with program implementation (identification, training, initial soft financing – could partially be from IFC / IDH / IFAD with some other soft funding). Preparation for implementation of the WRF system.

Detailed cost plan and information on where monies could come from (soft & hard mix), funding proposals for different components.

Full on-the ground implementation. Could potentially be rolled out primarily to farmers & farmer groups that Nestlé / IDH / Bayer / IFAD are already working with.

Monitoring & reporting at the central and field levels.

B. Risk sharing PPP / CCF: Partners and steps (4/5)

Leads: Nestlé Vietnam (Confirmed)

Potential participants	
For-profit	Not-for-profit
<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • Nestlé • Bayer CropScience • BoAML 	<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • IFC • IFAD • IDH, SNV
<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • Vietnamese stock exchanges • Cooperatives • Local banks • Auditing companies • Insurance & re-insurance companies • Local MFIs 	<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • NGOs dealing with farmers in Vietnam e.g. NEAC • Local standard setting agencies • Export agencies

Potential scale of impact
<p>Possible specific additional success metrics</p> <ul style="list-style-type: none"> • Development of standards & legislation • Warehouses established • Value of credit provided

Envisaged steps		
Step	Questions	Output
Determine scope	<i>Should the target be coffee producers only? What are the key features to address?</i>	Assessment of opportunities. Agreement on selected option(s) & justification.
Establish funding modalities	<i>What are funding requirements? What mix of funding is appropriate?</i>	Assessment of & agreement on appropriate funding mix options.
Management & governance	<i>Who should manage the facility? How should decisions taken? What independent governance criteria should be established? Other stakeholders to involve?</i>	Description of management and governance issues and options. Agreement on appropriate structures. List of other important stakeholders & consultation strategy.
Strategy, incl. ownership & timing	<i>Should this continue? If so, how? What is the timing & steps for full implementation?</i>	Decision if should go forward & how (strategy)
Monitoring	<i>How should the initiative monitor & report success if & when its established?</i>	Regular updates

B. Risk sharing PPP / CCF: Further reading (5/5)

Selected references for further reading:

UNESCAP overview: “Structured trade and commodity financing”. From:

http://www.unescap.org/tid/publication/tipub2374_chap4.pdf

08/Mar/09: “Expanding post-harvest finance through warehouse receipts and related instruments”. From:

<http://www.agriskmanagementforum.org/sites/agriskmanagementforum.org/files/Documents/Post%20Harvest%20Finance%20Warehouse%20Receipts.pdf>

“Cream of the crop: the use of grain warehouse receipt in agricultural finance” workshop summary. From

http://www.eastagri.org/meetings/docs/meeting72/Workshop_Summary.pdf

“Review of warehouse receipt financing system and inventory credit initiatives in Eastern & Southern Africa”, by UNCTAD / All ACP Agricultural Commodities Programme (AAACP). From:

http://www.ruralfinance.org/fileadmin/templates/rflc/documents/Review_of_Warehouse_pdf.pdf

“ICT to enhance warehouse receipt systems and commodity exchanges in Africa”, by USAID. From:

<http://microlinks.kdid.org/sites/microlinks/files/resource/files/FACETWRSCExv2.pdf>

“Warehouse receipt financing: lessons from Ethiopia”, by Mamo Mihretu, IFC. From:

<http://www.agrifinfacility.org/sites/agrifinfacility.org/files/25%20-%203.29%20-%20Plenary%204%20-%20IFC%20-%20Mihretu.pdf>

“Opening up access to finance through warehouse receipt systems”, by Michael Andrade, HDFC Bank India. From:

<http://www.agrifinfacility.org/sites/agrifinfacility.org/files/23%20-%203.29%20-%20Plenary%204%20-%20HDFC%20Bank%20-%20Opening%20Up%20-%20Andrade.pdf>

C. CSA Infrastructure: Overview (1/4)

Note that this section has focused historically on the use of bonds to finance CSA infrastructure. However, we also aim to investigate other forms of public and private financing.

Overview of bonds

A 'bond' is when an investor lends the borrower money for an agreed period, over which the capital and pre-agreed interest is paid back. They are considered as "fixed income" investments in that there are regular payments, and are also classified as "debt", which means that they are perceived to have less risk and variability when compared to other investments. The borrower can be a government or a corporation, they are commonly used by entities such as municipalities, governments, states and companies. The interest rate on the bond is determined by the duration of the period the money is lent for and over which the payment is made, and how risky the market thinks the borrower is (credit quality). There are many different forms of bonds. Bonds can be differentiated based on how long before the payback occurs ("maturity"). Other classifications relate to who the issuer is, which impacts the terms. Government and municipal bonds tend to be less risky since they don't tend to go bankrupt that often, and yields are lower. "Corporate bonds" tend to provide slightly higher yields because of the higher risk. In all cases, credit quality is important, and determines the interest and other terms that the borrower has to provide. Corporate bonds can also be convertible (i.e. where bonds can be converted into equity) or callable (which allows a company to redeem it before the bond matures), for example. There are also "zero coupon bonds" where you buy the right to receive a fixed amount at agreed point in the future, without intermediary repayments.

There are two separate payments to be made by the borrower: the principal and the interest. Some bonds require that interest is paid over time, others that payment is returned in a single instalment. For example, the European Investment Bank (EIB) has issued a bond where the money is held for 5 years before it can be redeemed, with the fixed amount plus an amount linked to the performance of an index, in this case the FTSE4Good Environmental Leaders Europe 40 index, a minimum 5% return to investors was guaranteed.

Bonds can be sold to the public (e.g. any member of the public can buy bonds as part of their investment portfolio), and, or, to institutional investors such as investment funds, insurance companies, banks, etc.

The "Green bonds" market is relatively mature, with the World Bank, IFC, Asian Development Banks (ADB), and Governments having issued such bonds to fund energy efficiency and renewable energy projects globally. Big companies have also used bonds to fund similar issues. "Social bonds", also called "pay-for-performance contracts" are also becoming popular, in particular for governments to leverage funding for social goods that have a long term impact on government finances. Other entities are exploring bonds that have a measurable environmental impact as a return (e.g. measured in tons of CO₂e, or hectares of primary rainforest saved), rather than a financial return.

C. CSA Infrastructure: Possible scope (2/4)

Options exist with respect to possible scope, structure, and the form of return(s) of the bond(s) – or indeed with any other vehicle to finance infrastructure. The Government of Vietnam (MARD) has already shown interest in the use of bonds to fund an adaptation and increased productivity measure (development of an irrigation system across the Mekong delta).

Other country examples:

India – NABARD Rural Bonds

Asia – Issuance by the ADB of \$339m worth of clean energy bonds (renewable energy & energy efficiency) across Asia, arranged by Nomura.

IFC – Raised \$500m for climate-friendly investments in emerging markets through bonds in April 2012. This was for energy efficiency and renewable energy, it was arranged and distributed by JP Morgan.

Commercial bond ('hard')

- Need for funds to finance projects that would actually generate a return over the long term (e.g. increase productivity, increase export earnings, reduce weather risk)
- Significant experience with green bonds internationally

Opportunities

- Gov't is already seeking to raise a bond for irrigation infrastructure
- Other infrastructure investment requirements that are climate smart (e.g. warehouses)

Questions

- Vietnamese government risk?
- Who would buy the bond (locals / internationals)?

"Soft bond"

- Many investments have a significant and measurable social and environmental impacts – e.g. primary forest saved
- Philanthropy increasingly focused on "payment for performance"

Opportunities

- Potentially many implementing partners on the ground (e.g. WWF, EDF, IDH)

Questions

- Who would finance this if its philanthropic?
- Monitoring framework?

C. CSA Infrastructure: Partners & steps (3/4)

Lead: To Be Confirmed

Potential participants	
For-profit	Not-for-profit
<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • BoAML • Climate Bonds Initiative 	<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • EDF • IFC • World Bank • EcoAgriculture Partners
<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • Standard Chartered / HSBC • Local banks • Nomura • SEB 	<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • EIB • Local municipalities • Climate Bonds.net

Potential scale of impact
Possible specific additional success metrics
<ul style="list-style-type: none"> • Financial commitments to CSA infrastructure spending (USD) • Infrastructure actually built

Envisaged steps		
Step	Questions	Output
Determine scope	<i>What aspects should the bond focus on (sectors)? What types of returns (soft vs. hard)? Which markets (local / foreign)?</i>	Assessment of opportunities. Agreement on selected sector(s) & justification.
Establish funding modalities	<i>How should the bond funds be distributed? Should they be combined with other funding sources?</i>	Assessment of & agreement on appropriate funding mix options.
Management & governance	<i>Who should manage the distribution of monies? How should decisions taken about allocations? What independent governance criteria should be established? Other stakeholders to involve?</i>	Description of management and governance issues and options. Agreement on appropriate structures. List of other important stakeholders & consultation strategy.
Strategy, incl. ownership & timing	<i>Should this continue? If so, how? What is the timing & steps for full implementation?</i>	Decision if should go forward & how (strategy)
Monitoring	<i>How should the initiative monitor & report success if & when its established?</i>	Regular updates

C. CSA Infrastructure: Further reading (4/4)

Selected references for further reading:

“Bonds and climate change: The state of the market in 2012”, by the Climate Bonds Initiative & HSBC. From:
http://climatebonds.net/wp-content/uploads/2012/05/CB-HSBC_Final_30May12-Single.pdf

<http://climatebonds.net>

“A new tool for scaling impact: How social impact bonds can mobilize private capital to advance social good”. From:
<http://www.socialfinance.org.uk/resources/social-finance/new-tool-scaling-impact-how-social-impact-bonds-can-mobilize-private-capita>

<http://english.thesaigontimes.vn/Home/business/financial-markets/24567/>

<http://www.investopedia.com/articles/bonds/07/green-bonds.asp#axzz2Ar7cbveJ>

http://www.bondbuyer.com/issues/121_174/new-york-and-massachusetts-are-exploring-social-impact-bonds-1043748-1.html

D. Renewable energy from ag wastes: Possible scope (1/3)

A biomass to energy project would avoid rice husk burning.

The working group could explore regulatory framework and develop plans to use rice husks for fuel, what additional revenue it would bring to farmer, the business case for commercial partners.

Particular issues might be:

- Power price
- Transport of husk & distribution of energy (transmission lines)
- Ability to sell energy to the grid
- Availability of renewable energy credits from the government
- Potential carbon credit revenues to subsidize energy production
- Impacts on security of supply (to the country and the business)
- Existing uses of any ag residues (for example, rice husk might already be used in the building industry)

Options exist with respect to possible scope of tackling agricultural wastes in Vietnam, e.g. it could be categorized as:

Agricultural wastes (solids)

- Significant wastes exist, in particular from the rice milling sector
- Vietnam relies heavily on hydro for its generation

Opportunities

- There may be a significant quantities of agricultural wastes available (from husk)

Questions

- Existing uses?
- Power pricing in Vietnam?
- Impact on costs & risk of supply?

Waste from piggeries (biogas)

- Agricultural wastes from methane (especially piggeries) is a significant issue
- Vietnam relies heavily on hydro for its generation

Opportunities

- National biogas program


Questions

- Economics to capture, given grid prices & availability?

D. Renewable energy from ag wastes: Partners & steps (2/3)

Lead: SNV (To Be Confirmed)

Potential participants	
For profit	Not-for-profit
<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • SNV • Bayer • Bunge 	<p><i>Already in discussion:</i></p> <ul style="list-style-type: none"> • IFC • World Bank • EcoAgriculture Partners • EDF • Munden Project
<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • Local rice milling companies • KfW 	<p><i>Yet to be engaged:</i></p> <ul style="list-style-type: none"> • Rice miller industry associations • SNV

Potential scale of impact

<p>Possible specific additional success metrics</p> <ul style="list-style-type: none"> • New energy capacity built (kW / MW) • Energy displaced from the grid • Impact on local energy access & price

Envisaged steps		
Step	Questions	Output
Determine scope	<i>Should this be focused only on rice husks wastes? Should be extended to methane? Region specific?</i>	Assessment of opportunities. Agreement on selected sector(s) & justification.
Establish funding modalities	<i>What are funding requirements? What types of funds are needed? (grants / debt / equity / selection)? Policy changes?</i>	Assessment of & agreement on appropriate funding mix options. Shortlist of necessary policy changes.
Management & governance	<i>Who are the key stakeholders? How should they be managed? What is the management of the financing organization?</i>	Description of management and governance issues and options. Agreement on appropriate structures. List of other important stakeholders & consultation strategy.
Strategy, incl. ownership & timing	<i>Should this continue? If so, how? What is the timing & steps for implementation?</i>	Decision if should go forward & how (strategy)
Monitoring	<i>How should the initiative monitor & report success if & when its established?</i>	Regular updates

D. Renewable energy from ag wastes: Further reading (3/3)

Selected references for further reading:

Jan 2004: “Environmental assessment of electricity production from rice husk: A case study in Thailand”. From: <http://www.cogen3.net/doc/countryinfo/thailand/EnvironmentalAssessmentElectricityProduction.pdf>

Nov 2009: “Vietnam and World Bank Group see rice husk biomass as a clean energy source”. From: <http://www.ifc.org/ifcext/mekongpsdf.nsf/Content/PR-87>

Mar 2012: “Rice husks feeding Vietnam’s energy production needs”. From: <http://www.greenprospectsasia.com/content/rice-husks-feeding-vietnam’s-energy-production-needs>

Jan 2010: “Rice husks may fuel Mekong Delta”. From: <http://www.vnnnews.net/rice-husks-may-fuel-mekong-delta>

Overview of Thanh Hoa Rice Husk Power Project. From: http://cd4cdm.org/Asia/Manila%20Forum/12_Hanh.pdf

E. Improved local bank finance: Overview (1/3)

Introduction:

Local banks are reluctant to lend to rural development sectors, including agriculture. Agriculture (and forestry) are not well understood by local banks, and most are unwilling to expand their product offerings to suit rural clients, particularly smaller-scale agricultural producers. Development institutions, e.g. World Bank and IFAD, are trying to resolve this by providing guarantees and credit lines to local banks, however it is likely that a continuation and scale-up of this dedicated effort is required to develop the appropriate structures and technical capacity of local banks to lend to these under-served sectors.

The Government of Vietnam has demonstrated a strong interest in promoting sustainable agriculture, as was made clear in the recently published Agricultural Restructuring Plan. This “sustainable agriculture” plan refers, essentially, to CSA concepts, e.g. it explicitly mentions the need for food security, economic development, poverty reduction, protection of biodiversity, prevention of natural resource degradation and water pollution.

Historically, the Government has provided some subsidized lending to the agricultural sector, e.g. subsidized credit lines for specific activities such as fish farming. However, there is a general recognition and desire to bring in more private – sustainable – financing. Vietnamese law makers are also considering an amendment to the Law on Cooperatives: it is hoped that this will make it easier for cooperatives to get credit. Vietnamese banks have, in general, had little exposure to rural (in particular smallholder) agricultural lending, it may therefore be necessary to assist them with developing the technical capacity to increase lending to this sector, in particular to sustainable production activities, which may have higher premiums (e.g. Organic) or better long-term risk profiles (maintenance of fertility & more diversification).

Summary of challenges facing local banks wishing to lend to Vietnamese agriculture (focus on smallholders):

- Identification of smallholders, particularly higher-performing borrowers, i.e. there are high transaction costs
- Risk assessment of borrowers: There may be a lack of credit history in rural areas, and there are high transaction costs involved in assessing individual farmers
- Opportunity cost of capital – Non-smallholder agricultural sectors may look more appealing because of the volumes and amounts required (e.g. urban real estate, trade finance for large agricultural exporters)
- Lack farmer collateral, including the characteristics of the collateral (e.g. banks may have trouble repossessing land in the case of non-payment)
- Poor integration of market information & market infrastructure – this makes it difficult to value products, and, farmers in more remote areas with less access are more disadvantaged (e.g. less access to mobile phone banking). Lack of awareness of how to get higher prices, e.g. for certified products, better preserved products.
- Other local banking situation – Financial crisis with local banks having portfolios of non-performing loans, concerns about lack of transparency and level of cross-ownership within the banking sector. Both are issues being addressed by the Government.

E. Improved local bank finance: Possible scope (2/3)

This proposal may consider combining both top-down and bottom-up approaches. However, ultimate proof of concept will be at the farm-level. The considerations at each of these levels might include the following:

Farm level ('bottom')

- Suggest selecting one or more specific regions to focus on initially – for example, coffee or rice growing region.
- Consider local institutional setting, e.g. how many cooperatives, reputation, skills, extension / other agricultural support.
- Consider local socio-economic situation, e.g. average earnings of farmers groups, fluctuations, financing needs, possible collateral, the extent to which financing needs are met and how.
- Consultation within the value chain – e.g. to identify better performing farmers and commodities where there could be significant financial value-add from more sustainable production (e.g. certification, savings on fertilizer use through more efficient application).
- Possibly develop 'scorecard' and other methods to relatively quickly & cheaply assess cooperatives / farmers financial and environmental performance. This could be developed and tested with a selection of appropriate local banks.
- Feed lessons – learned into national decision making processes and to the banking sector.

Central government and wider banking community ('top')

- Consider impact of issues linked to wider banking sector
- Consider impact of legislation related to cooperatives, lending, collateral, exports, food health & safety standards, etc.
- Consider long-term Government targets, e.g. likely that there will be increased urbanization and a move away from an agriculture-based economy – how to achieve this sustainably

Note that the focus should perhaps be on developing the agricultural lending capacity of a few well-positioned, interested banks rather than all local banks.

Improved bank finance

- Rural sector, in particular agriculture, is under-banked (credit & savings facilities)
- Infrastructure to improve efficiencies is not well-developed
- Credit screening processes and client identification and management is not well developed
- Significant donor interest in overcoming this

Opportunities

- Role of technology (ICT)
- Competition in the local banking sector (esp. away from urban real estate)
- New cooperatives regulation
- [Leverage existing Rabo work]

Questions

- How to get banks interested?
- Integrating environmental criteria?
- Long term dedication by banks?


E. Improved local bank finance: Possible scope (3/3)

Lead: To Be Confirmed

Potential participants	
For-profit	Not-for-profit
<i>Already in discussion:</i> <ul style="list-style-type: none"> • Rabobank • Nestlé 	<i>Already in discussion:</i> <ul style="list-style-type: none"> • IFC • World Bank • EcoAgriculture Partners • IDH • SNV • IFAD
<i>Yet to be engaged:</i> <ul style="list-style-type: none"> • Local banks & credit unions • Cooperatives 	<i>Yet to be engaged:</i> <ul style="list-style-type: none"> • Credit cooperatives • Rural banks (government supported)

Envisaged steps		
Step	Questions	Output
Determine scope	<i>Should this be focused only on specific commodities / geographical regions initially? Which banks?</i>	Assessment of opportunities. Agreement on selected sector(s) & justification.
Establish funding modalities	<i>What are funding requirements? What types of funds are needed? (grants / debt / equity / selection)? Policy changes? TA?</i>	Assessment of & agreement on appropriate funding mix options, TA requirements and policy changes.
Management & governance	<i>Who are the key stakeholders? How should they be managed? What is the management of the initiative?</i>	Description of management and governance issues and options. Agreement on appropriate structures. List of other important stakeholders & consultation strategy.
Strategy, incl. ownership & timing	<i>Should this continue? If so, how? What is the timing & steps for implementation?</i>	Decision if should go forward & how (strategy)
Monitoring	<i>How should the initiative monitor & report success if & when its established?</i>	Regular updates

Potential scale of impact



Possible specific additional success metrics

- Sustainability metrics integrated in banks' lending processes
- Number of rural clients lent to by banks involved in the program
- Local cost of capital
- Credit deployed (USD)

India: solutions to finance solar power at scale



- India's 2009 National Solar Mission aims to deploy 20+GW of solar power by 2020
- In 2011, finance was not flowing at the scale needed
- The G2A2 identified the bottlenecks and designed innovative financing structures that are now supporting greater private investment

Examples of financing solutions

Asian Development Bank Partial Credit Guarantee

- With UK government support, ADB established a new £150m Partial Credit Guarantee facility for India's solar sector
- Assuming a conservative leverage ratio, £900m in additional private sector finance for solar projects in India can now be sourced

Renewable Energy Certificate Financing Facility

- In partnership with the UK government's Capital Markets Climate Initiative, stakeholders supported development of a financing facility to guarantee that RECs could be sold at a fixed price, thereby supporting a project finance market for solar
- The concept that has now been approved for funding for £50 million by UK government
- Detailed structuring and selection of an implementing agency has started

Kenya: De-risking private finance for renewable energy



- Kenya's 'Vision 2030' will transform the country by dramatically increasing power generation, with a majority coming from renewables
- Implementing the Vision 2030 energy goals will require up to US\$45 billion in investment by 2030
- The G2A2 has been invited by the Prime Minister of Kenya to support the achievement of its clean energy goals by unlocking private financing flows

Examples of financing solutions

Developing a geothermal insurance product

- Geothermal energy is a promising and low-cost means to meet Kenya's growing demand for reliable, clean power
- Given the risks associated with exploration, the G2A2 is developing a new insurance product to mitigate early-stage project risks that could be offered by private actors with a minimum of donor support
- A new contractual structure is being advanced with insurers and underwriters for delivery in 2013

Designing a policy risk insurance mechanism for SMEs

- Policy certainty is a key requirement for investors, who may want insurance against potential instability during the investment and payback period
- The interests of policy makers and the investor or insurer must be aligned to avoid high capital charges for renewable energy projects. A Policy Risk Insurance Mechanism (PRIM) is being developed to encourage private sector investors in small/medium-scale clean energy projects
- This solution is being advanced by G2A2 partner UNEP FI for delivery in 2013

Cross-sector partnership to scale-up Energy Access

- Globally, USD 16 billion a year already being spent to meet energy services in mini-grid and devices market. There is a substantial opportunity for a cross sector partnership among energy, ICT and retail industries to tap into the global and Kenyan markets
- Work is being advanced with interested partners to look at the possibility of forming a consortium for Kenya for energy provision through mini-grids and work with public and private sector to improve incentives for the private sector to invest in renewable energy access.