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Lessons from Mitigation Projects in Cambodia

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Opening Doors for Development

Cambodia's Response to Climate Change

Sihanoukville, Cambodia

29 November 2016

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Why Nexus?

- 1.3 billion people don't have access to electricity and 748 million people lack access to improved drinking water
- Indoor air pollution from cooking with solid fuels is killing 4 million people a year, many of whom are women and children
- Development organizations and social enterprises have experience in projects that provide:
 - Functional & eco-friendly solutions
 - Clean energy / safe water to vulnerable populations
 - Long-term opportunities for local producers and distributors
- Finance to implement and scale up these projects is a barrier

Our members



ARTI, India
Appropriate Rural
Technology Institute



GERES, Global
Group for the
Environment, Renewable
Energy & Solidarity



Nazava,
Indonesia



TerraClear,
Laos



CCRD, Vietnam
The Center for Rural
Communities Research and
Development



HESTIAN

Hestian,
Africa



PMU, Vietnam
Biogas Program for
the Animal Husbandry
Sector of Vietnam



UCB, Africa



CEDAC, Cambodia
Centre d'Etudes et de
Développement Agricole
Cambodgien



Hydrologic,
Cambodia



S³IDF, US & India
Small Scale Sustainable
Infrastructure
Development Fund



VERC, Bangladesh
Village Education Resource
Centre



CRT/N, Nepal
Centre for Rural
Technologies



iDE, US



Samuchit,
India



Waste Enterprisers,
Ghana, Kenya



Eco-watch
International, China



IDEA, Sri Lanka
Integrated Development
Association



SNV, Global



YDD, Indonesia
Yayasan Dian Desa



GEI, China
Global Environment
Institute



Hivos, the
Netherlands &
Global



Sustaintech,
India

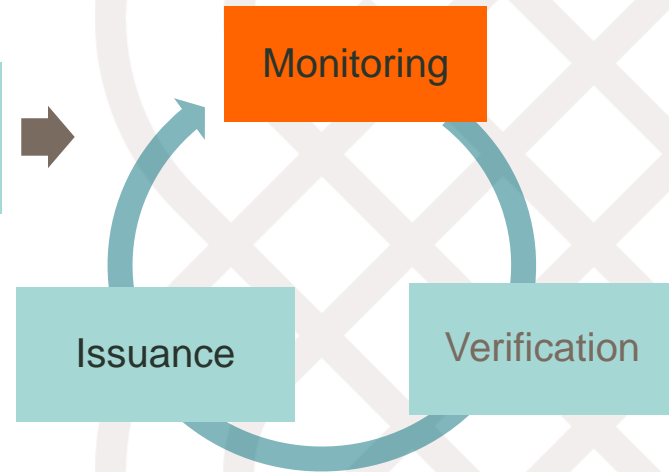
Nexus Supported Carbon Finance Programs in Cambodia

<u>Project Name</u>	<u>Organization</u>	<u>Technology</u>	<u>Carbon Standard</u>	<u>Annual tCO2 estimated</u>	<u>Nexus support</u>
Fuel-Wood Saving with Improved Cookstoves in Cambodia	GERES	Cookstove (New Lao Stove)	Voluntary Carbon Standard	250,000	Carbon Asset Management
Production and dissemination of Ceramic Water Purifiers by Hydrologic, in the Kingdom of Cambodia	Hydrologic Social Enterprise	Ceramic Water Filter	Gold Standard	130,000	Finance, Technical Assistance, Carbon Asset Management
Programme of Activities for Waste to Energy at Rice Mills in Cambodia	CEDAC	Rice husk power generation	CDM	51,000	Grant facilitation, technical assistance
Programme of Activities for Advanced Clean Cooking Solutions	SNV Others	Clean cook stoves; household biogas	Gold Standard	50-60,000	Finance, Technical Assistance, Carbon Asset Management

Hydrologic Social Enterprise



Cambodian social enterprise
Manufacturing and distributing ceramic water purifiers.



Nexus Assistance

- Revolving Fund, Technical Assistance, Carbon Asset Management

Status:

- 5th monitoring cycle
- *Issuance expected in February 2017, Expected VER – 140,000*

Cumulative Results:

- Up to 30/04/2015: 207,078 units cumulatively credited
- 325,516 VERs issued from 2010

Waste to energy using biomass Gasification PoA



- The PoA aims to support the application of gasification technology in rice milling facilities and other industrial sectors.
- Initially focus on Cambodia with potential to operate in Laos and Myanmar.

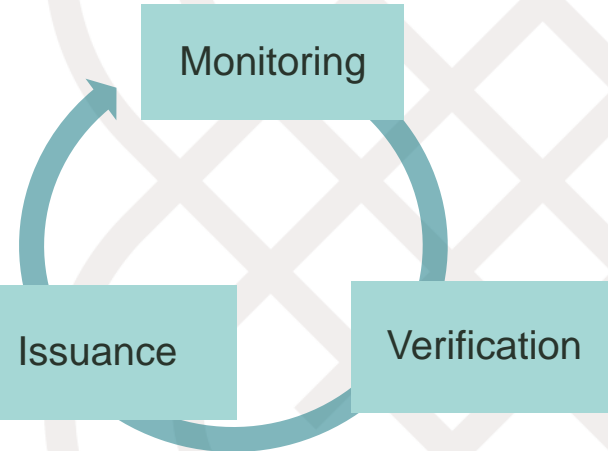
Feasibility Study



Project Design Documents



Validation & Registration



Nexus Assistance

- Finance, Technical Assistance, Carbon Asset Management

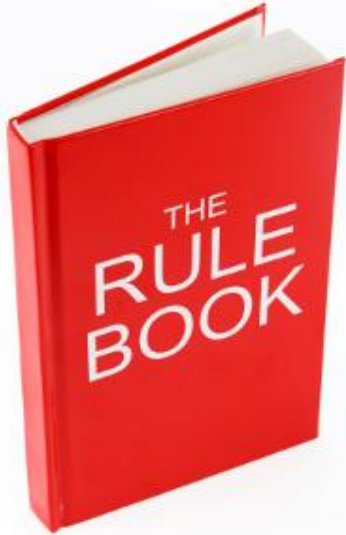
Status:

- CDM Registered in 2016
- *Pipeline of gasification projects dramatically reduced since 2016*
- *Considering diversification opportunities*

Cambodia specific lessons from mitigation projects

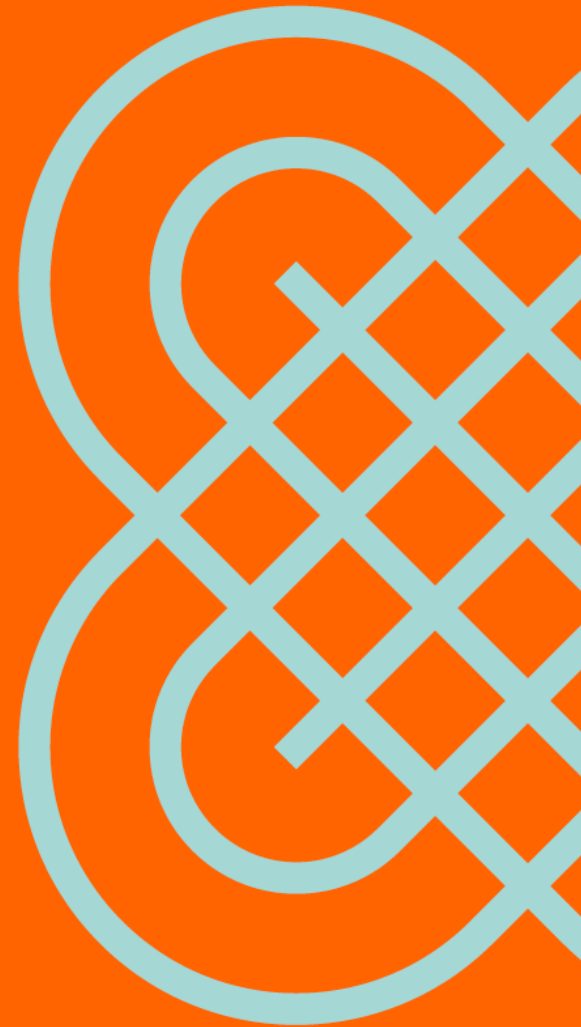
- Rapidly evolving market and policy framework, but slow process
- Technology/project specific interventions susceptible to failure due to market changes
- Data needs for carbon projects does not match national census data, increasing transaction costs – though very good in some cases
 - Examples: Household fuel use; water boiling practices; Household poverty indicators
- Carbon finance intended to be ‘additional’; successful programs have multiple revenue streams designed
- Easiest to engage with programs with 2-3 years of financial support

Global LDC lessons from CDM for LDCs



- Extensive rules have inhibited further development!
- Emissions in Least Developed Countries are already low
 - Conservative baselines with no suppressed demand is controversial / difficult to assess
- Complex methodologies for project types most relevant in LDC countries increase project development costs
- Additionality constraints
- Lack of transparency on clear pricing and/or solid market demand makes revenues uncertain
- Project-based system limiting as many LDC sectors are SMEs compared internationally
- Lack of regional support for development of market
- Monitoring of sustainable development impacts low, but good monetary rewards for projects which implement strong monitoring systems

Programme of Activities for
Advanced Clean Cooking Solutions



New activities to support new clean cooking technologies in Cambodia



Benefits of clean cooking technologies

Clean cooking projects can cut carbon and create livelihoods



- Burn less wood fuel and charcoal, protecting forests and reducing carbon emissions;



- Require fewer resources to cook, saving households money on fuel purchases;



- Create better air quality by burning cleaner and reducing smoke; and



- Create local production and distribution networks through training and quality control.

Activity reduces emissions

Emissions
reductions
(tCO₂e)

=



-



1 stove can reduce from 0.5 to 1 tonnes of CO₂e per year

Accelerating Clean Cooking Solutions Programme of Activities

Technical Details:

- Standard: Gold Standard
- Methodology: “Technologies and Practices to Displace Decentralized Thermal Energy Consumption



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Coordinate and Manage Carbon Certification for Projects in Cambodia, Laos and Vietnam



Partner Criteria

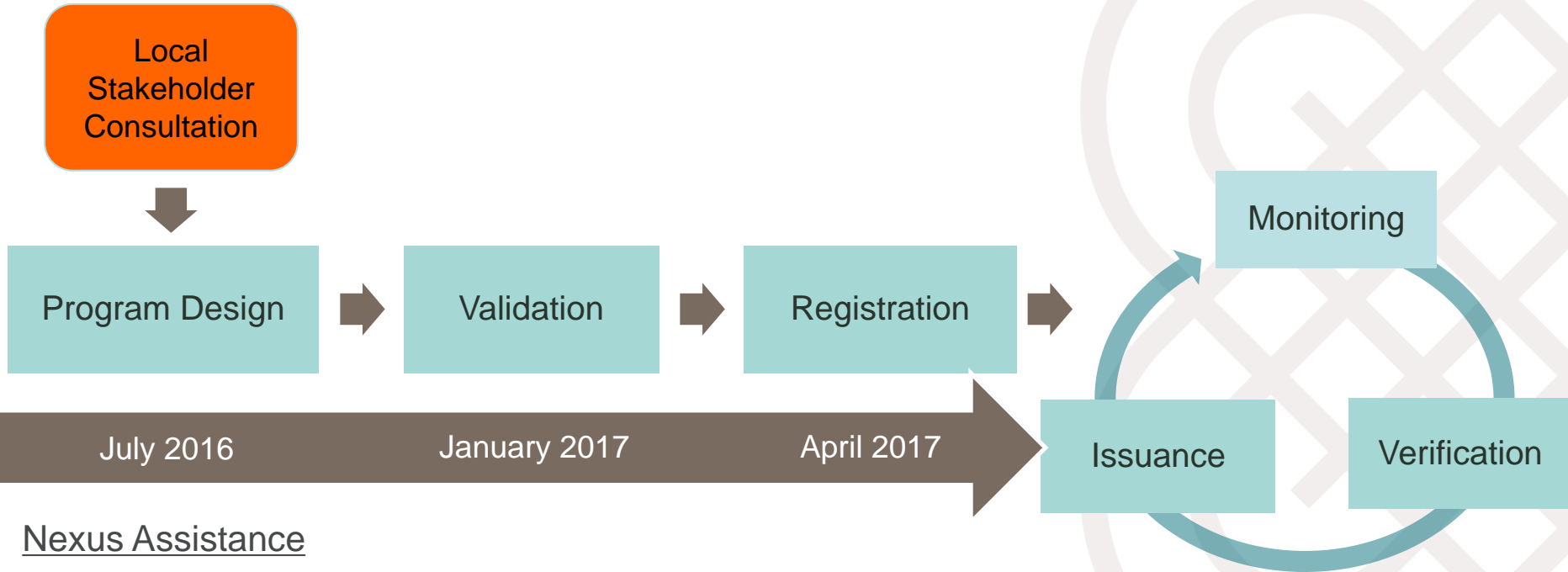
General Project Inclusion Criteria

- 1. Technology and/or practices that reduces or displaces greenhouse gas (GHG) emissions from the thermal energy consumption of households and non-domestic premises*
- 2. Project has a clear geographic scope and focus on the Greater Mekong Region (Cambodia, Lao, Vietnam, potentially others in the future)*
- 3. Useful energy output of less than 150kW per unit*
- 4. Projects must have clear ownership of emission reductions and communicate transfer of rights*
- 5. Projects must be able to demonstrate their economic, environmental and social impacts according to Gold Standard requirements and take into consideration the effects on men's and women's roles and gender equity*

Cambodia specific lessons applied to ACCS PoA

- Rapidly evolving market and policy framework, but slow process
 - Allows multiple countries and technologies at various prices
- Technology/project specific interventions susceptible to failure due to market changes
 - Allows for diverse household actions: biogas, cookstoves
- Data needs for carbon projects does not match national census data, increasing transaction costs – though very good in some cases
 - Applying new monitoring methods (technology) and using existing data
- Carbon finance intended to be ‘additional’; successful programs have multiple revenue streams designed
 - Supporting programs with other revenue streams
- Easiest to engage with programs with 2-3 years of financial support
 - Working with enterprises or long-term programs

Project Development Process and Nexus Support



Nexus Assistance

- Revolving Fund, Technical Assistance, Carbon Asset Management

Status:

- Project Design



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Thank you!

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