



EnDev Project Sustainability Assessment Framework

Working draft

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Agenda

- Overview of RENEW IS-Academy
- Project sustainability considerations
- Development of Sustainability Assessment Framework
- Using the framework
- Your input requested

RENEW Overview

- IS-Academies are collaborative research projects between DGIS and Dutch research institutions
- RENEW is one of the latest IS-Academies, promoting sustainable energy access at the Base of the Pyramid in East Africa
- Project partners:
 - DGIS
 - IVM - Institute for Environmental Studies, Vrije Universiteit Amsterdam
 - ECN - Energy Research Centre of the Netherlands, Unit Policy Studies
- 3 PhD researchers, 6 - 8 MSc students per year
 - Enterprises: business model design
 - Households: household decision making for energy transitions
 - Institutions: enabling environment for RETs
- Countries of field work: Rwanda and Kenya, 2011 – 2014

Research directions

Theme 1: Business model design

- How do sustainable energy entrepreneurs use inclusive business strategies in developing business models at the Base of the Pyramid (BoP)?
 - Strategy matrix for BoP enterprises targeting off-grid cooking and lighting markets

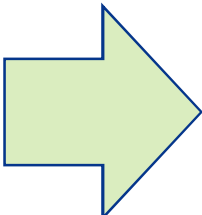
Theme 2: Household decision processes

- How and in what direction does the household-decision making process steer the energy transition in a sub-Saharan African context?
 - Household model of decision making for energy transitions

Theme 3: Innovation systems

- What is the nature of the technological innovation system (TIS) which allows the large scale diffusion of RETs in developing country contexts?
 - Identification of critical TIS features supporting RET transitions

Sustainability considerations

- Benefits accrue at a desired level to a target group for a long term following the withdrawal of project support
- Challenges in defining and measuring sustainability
 - Time frame
 - Target group
 - Desired level of benefits
- Factors related to sustainability of EnDev project activities, enterprises
 - User demand and suitability
 - Social and gender considerations
 - Design and use of subsidies
 - Scalability
 - Human and institutional capacity
 - Enterprise design and business planning
 - Consumer behavior
 - Enabling environment

Development of Sustainability Assessment Framework

- Key question:
What is the *likelihood* that the benefits of an EnDev project activity will be sustained following the withdrawal of project support?
- Three perspectives on considerations for sustainability
 - Consumer, Enterprise, EE sections
 - Construction of sub-sections, indicators and example questions
 - Indicators and levels of importance to be discussed later today
- Flexibility for range of EnDev activities
 - Cooking energy services
 - Off-grid, mini-grid, and grid extension electrification
 - Households and social institutions

Development of Sustainability Assessment Framework

- Sections

Section	Sub-section	Indicator	Weighting
SECTION 1: ENTERPRISE DESIGN AND BUSINESS PLANNING			
SECTION 2: CONSUMER BEHAVIOR			
SECTION 3: ENABLING ENVIRONMENT			
PROJECT SUSTAINABILITY SCORE			
		Enterprise design and business planning	
		Consumer behavior	
		Enabling environment	
		TOTAL	

Development of Sustainability Assessment Framework

- Sub-sections

Section	Sub-section	Indicator
SECTION 1: ENTERPRISE DESIGN AND BUSINESS PLANNING		
	ED1	Market information
	ED2	Sales, Marketing, and Post-Sales activities
	ED3	Financial management of project enterprises
	ED4	Human resources available for project enterprises
	ED5	Operations of project enterprises
SECTION 2: CONSUMER BEHAVIOR		
	CB1	Household Capacity
	CB2	Social Environment
	CB3	Consumer awareness
	CB4	Access to consumer goods, markets, and services
SECTION 3: ENABLING ENVIRONMENT		
	EE1	Policies and regulations
	EE2	Local agencies and actors

Development of Sustainability Assessment Framework

- Indicators

Section	Sub-section	Indicator	Weighting
SECTION 1: ENTERPRISE DESIGN AND BUSINESS PLANNING			
	ED1	Market information	
	ED1.1	Consumer information available for entrepreneurs is increased	
	ED1.2	Product usability information available for entrepreneurs is increased	
	ED1.3	Level of regulatory knowledge held by project entrepreneurs is increased	
	ED2	Sales, Marketing, and Post-Sales activities	
	ED2.1	Sales and post-sales activities established are supportive of sustained product use	
	ED2.2	Payment and finance mechanisms established are supportive of sustained product use	
	ED2.3	Marketing activities are appropriate for raising consumer awareness	
	ED3	Financial management of project enterprises	
	ED3.1	Scalability of the project enterprises is financially feasible	
	ED3.2	The design and implementation of subsidies used is supportive of market development	
	ED4	Human resources available for project enterprises	
	ED4.1	Managerial and technical capacity of human resources is prioritized in project enterprises	
	ED4.2	Ownership of project enterprises is transferred to local entrepreneurs	
	ED5	Operations of project enterprises	
	ED5.1	Monitoring and quality control	
	ED5.2	Establishment of a distribution network	

Using the framework - 1

- Indicator and measurement item

Sub-section	Indicator	Weighting	Measurement Item
ED3.2	The design and implementation of subsidies used is supportive of market development		
ED4	Human resources available for project enterprises		
ED4.1	Managerial and technical capacity of human resources is prioritized in project enterprises		Project activity emphasizes managerial and technical skills
ED4.2	Ownership of project enterprises is transferred to local entrepreneurs		Ownership is transferred to local entrepreneurs

Using the framework - 2

- Example questions and assessment : 0/low/medium/high

Example questions	Observations and findings	Indicator score	Weighted factor	Final indicator score
1. How many trainings were received by members of project enterprises in a given year? 2. Is there a mechanism for employee performance assessment and feedback? 3. Have the project enterprises developed training materials? 4. Are there formal training procedures and structures?				

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SECTION 1: ENTERPRISE DESIGN AND BUSINESS PLANNING			
SECTION 2: CONSUMER BEHAVIOR			
SECTION 3: ENABLING ENVIRONMENT			
PROJECT SUSTAINABILITY SCORE			
Enterprise design and business planning			
Consumer behavior			
Enabling environment			
TOTAL			



Further development..

- Descriptive explanations of each indicator to be included within the framework
- Example questions to be streamlined through field testing

Input requested during working groups

- Three requests for input based on project experience
 - Importance of indicators, Relevance for technology, Relevance for geography
- Importance of indicators:
 - Can indicators be classified as low/medium/high levels of importance, in terms of contribution to project sustainability?
- Relevance to a given technology:
 - Does the importance of an indicator depend on technology?
 - Are certain indicators universally important, regardless of technology?
- Relevance to a given geography:
 - Does the importance of an indicator depend on geography?
 - Are certain indicators universally important, regardless of geography?

Thanks
