

# Carbon Finance and community development

## Learning from CDCF

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4 March 2010



## Toolkit development

- Learning from CDCF experiences in several countries
- Written by:
  - SouthSouthNorth (SSN)
  - International Institute for Environment and Development
- Supported by:
  - World Bank

## Purpose of toolkit

- To enable users to identify opportunities for developing carbon finance projects while pursuing community development, and vice versa

## Distinguishing CDCF from typical CDM projects

- **Extending benefits of carbon finance to the poorest countries and poor communities**
- **Focus on small projects**
  - 40,000 – 1 million tCOe
  - Opportunities for bundling
- **Measurable community benefits in addition to Kyoto-compliant emission reductions**



## Benefit characterisation

### • Direct benefits

- Nature of technology meeting existing needs of communities e.g. small scale biogas stoves, solar home systems

### • Indirect benefits

- Additional community benefit plan drawn up in consultation with communities to meet their own needs
- Benefit plan needs not be related to emission reductions
- Benefit plan financed through premium paid by CDCF on emission reductions

### • Benefit assurance

- Community benefits questionnaire
- Benefit monitoring plan

## Target audiences of toolkit

- **Communities**

- Directly and through local leaders, CBOs etc

- **Local government**

- **Aid agencies**

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# What community development carbon finance projects could look like

## CDCF Case Studies

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## Fal-G Brick Plants: India



- Replace burnt clay bricks with fly-ash bricks
- Demand from growing housing and urbanization
- Fly ash bricks: waste product from thermal power plants
- No use of energy – GHGs avoided
- Project bundles 200 small units



### Community benefits

- Insurance
- Non-seasonal work
- Improved air quality
- Top-soil protection
- Benefits budget:
  - \$42,000/year



# Municipal Waste Compost Project: Uganda



- Recovery of organic matter from municipal waste for humus
- Avoids methane emissions and supports organic agriculture
- CDM Program of Activities
- Facilities sustained by selling compost and emission reductions

## Project bundle:

- 9 Municipalities:
  - Lira, Soroti, Mbale, Mukono, Jinja, Fort Portal, Kasese, Mbarara, Kabake

## Uganda:

- Rapid urbanization
- Solid waste management major environmental concern
- 80% of waste is organic
- Current management practices contaminate ground and surface water near landfills

## Community benefits

- Targets communities around each plant
- School construction
- Latrine pits
- Health centres
- Roads
- Water etc

## Biogas program: Nepal

- Fuelwood and dung common energy sources in rural areas
  - Deforestation, erosion
- Treatment of animal and human waste and production of organic fertiliser
- Program aim: commercially viable, market-oriented industry
- Target: 162,000 small-sized biogas plants
- CDCF revenue reduces dependency
  - Government and donor subsidies



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### Community benefits

#### • Health

- Latrines
- Pollution reduction

#### • Agricultural yields

#### • Employment

#### • Timesaving

#### • Improved energy access

# Solar Home Systems: Bangladesh (GRAMEEN)



- Provision of solar electricity to rural households off grid supply
- Target: 199,000 solar home systems by 2015
- Reduces GHG emissions
  - Displaces kerosene for lighting
  - Displaces diesel for off-grid electricity generation
- Model: Micro-financing by Grameen
- 3 year free operation & maint. services



## Community benefits

- Direct
- Household lighting
- Reduced energy expenditure
- Employment
- Rural economic activity
- Access to modern technology

## Bagasse Cogeneration: Skeldon, Guyana

### • Use of bagasse to generate electricity for internal sugar factory use

- Surplus for export to national grid
- Bagasse by-product of sugar factory

### • Emission reduction sources:

- Displacement of electricity from diesel generators operated by national utility
- Internal use of clean energy by factory

### • Centrality of sugar industry:

- Most important traditional sector product
- Export revenue (23%), employment (10%), GDP (16%)



### Community benefits

- Direct and additional to project
- \$454,000

### • Regional electricity service

### • Jobs created in sugar industry

- Expanded mill capacity

### • Stakeholder coordination

### • Support to community centre, hospital, maintenance of amenities

## KenGen projects bundle: Kenya

- Increasing power demand in Kenya
- Recent severe droughts reducing power generation
- Increasing capacity of existing Geothermal Power and hydro plants
- Displaces electricity from fossil fuel-powered plants



### Project bundle

- **Olkaria Geothermal Power Plant**
  - 650,000 tCOe reduction by 2014
- **Kiambere Hydropower Station**
  - 162,720 tCOe reduction by 2014
- **Tana Power Station**
  - 170,160 tCOe reduction by 2014

### Community benefits

- Health services & facilities
- Water supply
- Schools
- **Benefits budget**
  - Olkaria: \$225,000
  - Kiambere: \$215,000
  - Tana: \$226,000