## Easy access of Carbon Credits for Agriculture projects Will it become reality?



Shalin Shah - Honorary Joint Secretary National Council for Climate Change, Sustainable Development & Public Leadership (NCCSD)

# Mitigation of Global Warming

#### **Kyoto Protocol**

- Amendment to the UNFCCC outlined in 1997 in Kyoto, Japan
- Commitment for 38 developed countries to reduce GHG emissions by 5.2% relative to 1990 levels
- It must be achieved by 2008 2012 first commitment period
- Developed countries bound with targets Annex I countries Such as: UK, Europe, Australia etc.
- Developing countries no targets non annex I countries Such as: India; Pakistan; China; Thailand; Malaysia; Mexico; Brazil etc.

## **Clean Development Mechanism**

'Flexibility Mechanisms' of Kyoto Protocol

### **Clean Development Mechanism**

(Achieving part of reduction obligations of developed countries through projects in developing countries that reduce GHG emissions) It is defined under Article 12 of the Kyoto Protocol

### **Emission Trading**

(Trading of emission allowances between developed countries)

### Joint implementation

(Transferring emission allowances between developed nations, linked to specific emission reduction projects)

# **Clean Development Mechanism**

Purposes of CDM - two primary goals

Developed countries can reduce emissions anywhere in the world

They can count these reductions towards their own targets CDM allows developed countries to generate CC (Certified Emission Reductions, CERs) in developing countries <u>Advantages for developed</u> <u>countries</u>:

relatively low-cost & politically acceptable

Advantages for developing countries:

> inward investment, environmental & technology benefits

# **Clean Development Mechanism**

Qualification for CDM Project

- Five major criteria
  - a) GHG reduction real and measurable
  - b) Contribution to the sustainable development of the host country
  - c) No "diversion" of official development assistance
  - d) Demonstration of Additionality
  - e) Project after 2 August 2008 Inform UNFCCC within Six months

# CDM – Cancun outcome

### Issue - Continuation of CDM Post 2012

### Progress / Decisions -

new post-2012 scheme, despite on-going uncertainty over the future of the Kyoto Protocol

### Remarks

Cancun conference decided that next year (at the next Climate Change Conference in South Africa) one or more new market based mechanism will be established.



Any such new mechanism will maintain and build upon existing mechanisms, including those established under the Kyoto Protocol (like CDM)

## Per Capita CO<sub>2</sub> Emissions



#### Source: EIA 2008

#### **TOP 20 Emitters of the World**

	Country	Total Emissions (MMtCO2)	Per Capita Emissions (Tons/Capita)
1.	China	6534	4.91
2.	United States	5833	19.18
3.	Russia	1729	12.29
4.	India	1495	1.31
5.	Japan	1214	9.54
6.	Germany	829	10.06
7.	Canada	574	17.27
8.	United Kingdom	572	9.38
9.	Korea, South	542	11.21
10.	Iran	511	7.76
11.	Saudi Arabia	466	16.56
12.	Italy	455	7.82
13.	South Africa	451	9.25
14.	Mexico	445	4.04
15.	Australia	437	20.82
16.	Indonesia	434	1.83
17.	Brazil	428	2.18
18.	France	415	6.48
19.	Spain	359	8.86
20.	Ukraine	350	7.61

Source: EIA 2008

# CDM Experience so far

- Employment generation is very low. Contractors engage outsiders who are not unified and cannot raise their voice against injustice, locals hardly get any employment.
- Pollution has increased (air, water and soil) affecting surrounding agricultural lands and drinking water quality
- Access to basic services for the locals has not been achieved
- Food producing lands have been converted to energy plantations and communities are losing access to livelihood sources

# CDM Experience so far

- Due to decreased access to fuel wood from commons, community is forced to buy costlier fuel for cooking
- There are very few cases of actual technology transfer
- Most of the CDMs are being implemented by private companies and in these projects almost entire benefits accrue to the companies while communities are even farther marginalized through decreased access to livelihood sources and a polluted impoverished environment.

Since the CDM projects do not address life and livelihood issues of the marginalized then there is little meaning in having 'sustainable development' as its core objective.

United Nations Framework Convention on Climate Change

CLEAN DEVELOPMENT MECHANISM

# CDM METHODOLOGY BOOKLET

Information including EB 56 November 2010

UNFCCC

# Types of CDM Projects

### Small Scale CDM Projects

> Small-scale projects can use simplified procedures.

> The following types of projects are considered small-scale.

- ✓ Renewable energy projects: up to <u>15MW</u> capacity
- $\checkmark$  Energy efficiency projects: up to <u>60 GWh/yr</u> reduction in energy consumption
- $\checkmark$  Other projects: up to <u>60 KtCO<sub>2</sub> equivalent (60,000 CER)</u> emission reduction
  - o CH<sub>4</sub> recovery in wastewater treatment
  - o Switching fossil fuels
  - o Landfill CH<sub>4</sub> recovery

### Programmatic CDM offers new Opportunities

#### Regular CDM

- Single site, stand-alone projects
- 'Carbon upgrades'

#### **Bundled CDM**

- Bundling several projects under a single PDD
- All projects must be identified *ex ante*, and must start at the same time

#### **Programmatic CDM**

- Addresses the 'long tail' of small units
- Permits sector-wide transition to low-carbon economy
- Particular relevance to Africa



# **CDM & Agriculture Sector**

# Why to consider Agriculture

- > Agriculture is known for GHG emission contribution
- > It can become potential sink for GHG emissions
- > Agriculture is prime important sector of the country
- > Agriculture is most vulnerable to climate change
- Agriculture is not uniform
- Small holder occupies high percentage in global agriculture and production of food consumed by developing countries BUT their interests are not adequately guarded

# Climate Change & Agriculture

- Climate Change is Reality
- Impacts observed on
  - > Water reousrces
  - > Crops
  - > Livestocks
  - > Livelihoods
- > Started resulting in to migration
- > Climate Smart technologies as a solution
  - > GM Crops
  - > No Tillage
  - ➢ Biochar
  - > Nutrient management for livestocks
  - Many more

# Climate Smart Technologies -Opportunity or Threat ?

- Protected by patents,
- Expensive,
- Increasing dependence,
- Destroying biodiversity, natural cycles and resilience,
- Delinking from local resources and skills,
- Narrowing farmers' choices
- These solutions are benefiting only the few agro multi-nationals

## CDMs: co-benefits?

- CDMs difficult for smallholders to access:
- When survival is in question, will they participate in mitigation action?
- Too technical and expensive for individuals
- Potential for replacement of food crops
- Benefits under conditions of land tenure?
- Increased value of land for C sequestration can further enhance land grabs (....benefits large players)
  Emphasis on mitigation can shift the burden of GHG reduction to developing countries

## CDM Projects in Agriculture Sector

**Improved manure management** 

**Reduced enteric fermentation** 

Improved/reduced chemical agri-inputs use (fertilizers, pesticides, herbicides, etc.)

Reduced machinery use (and/or lower fossil fuel intensity of conservation agriculture practices)

Agronomic planning (selection of seeds and species with low chemical agri-inputs demand and water requirements)

**Energy from dedicated crops** 

Energy from agricultural residues, animal waste, and other on-farm organic waste

Water management (water saving from improved water retention, reduced evaporation, ect.)

Improved irrigation techniques/technologies (i.e. drip and sprayer irrigation)

Improved water management in rice cultivation

### Simplified methodologies

#### Aspect 1: Technology/measure:

What would be specific examples for new sustainable technologies, management practice etc. (avail)able to reduce GHG emissions (e.g. reduced mechanization, low-tillage practices, or use of lighter machinery)?

#### **Aspect 2: Baselines**

Could you think of clear, logical and quantifiable procedures for the identification of *baseline emissions*, i.e. the scenario for GHG emissions in absence of the proposed activity/project?

#### Aspect 3: Monitoring plan

What would be simple, straight-forward monitoring measures /plans/indicators to verify GHG reductions throughout the life time of each respective activity/project?

#### Aspect 4: Project boundary

What is your idea of reasonable project boundaries (e.g. the physical, geographical boundaries of the agricultural field, including machinery used on the field but maybe excluding machinery used for processing or transportation) for quantifying GHG emission reductions?

#### Aspect 5: Leakage

Does the project/activity (indirectly) cause an increase in GHG emissions outside its project boundaries?

## Present status of CDM

- More than 5,000 projects registered in close to 90 developing countries
- Reduced 1 billion tons of greenhouse gases since 2001
- Generated more than \$215 billion in investments for the developing world
- Projects are blooming in developing countries many becomes feasible only with CDM benefits
- Europe's economy slow down since last two years and they need less CERs under their quota
- Carbon credits have collapsed since 2010 from 14 Euros to less than 1 euro per ton today
- Current demand crisis is the greatest menace to the CDM – report of the CDM Policy Dialogue, Sept'12

## Present scenario at COP18

- World is waiting for better deal
- 7 areas where progress is needed
  - Transparency, Finance, Pre 2020, Equity, Durban Platform, Carbon markets & Rules for Kyoto 2
- Second phase of Kyoto Protocol?
  - Who will agree and who will not picture is still dark
  - Emission reduction targets what scope will be available
  - Other flexible mechanisms what & when
- If no targets no demand no supply
  - No motivation for voluntary emission reduction
  - No financial assistance , No technology & knowledge transfer and ultimately No Sustainable Development
  - If big has a issue how small will survive

### Let's make the world a better place to live in



### **Shalin Shah**

### Environmental Engineer Email: <u>shalinshah65@gmail.com</u> Mobile: **+919879203702**

