

# Opportunities for Carbon trading in Biofuel Sector

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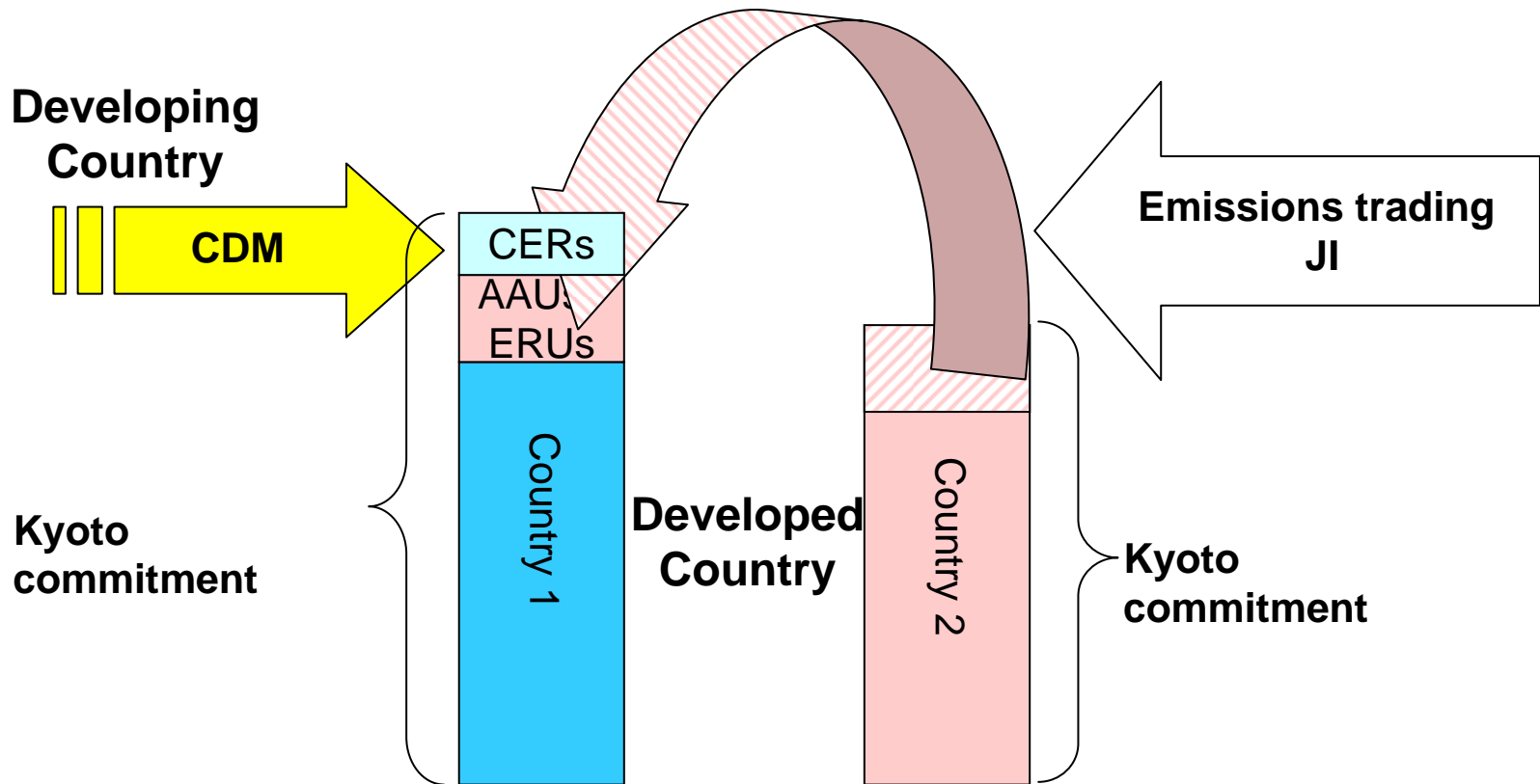
**Bureau of Energy Efficiency**

## Kyoto Protocol (KP)

# to the United Nations Framework Convention on Climate Change

- Formulated in 1997 & Came in to force on 16 February 2005
- Ratified by 153 countries accounting for 61.6% of Annex I (Industrialised) countries 1990 emission level
  - Major non-participants: USA and Australia
- KP “Commits **Industrialised countries** to **reduce** their **GHG** emissions by, on average, 5.2% below 1990 levels in 2008-12”
  - Individual, quantified emission targets for each industrialized country
  - Six greenhouse gases covered: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFC/PFC, SF<sub>6</sub>
- “Flexibility mechanisms” for **financing emission reductions abroad**:
  - Clean Development Mechanism (CDM)
  - Joint Implementation (JI)
  - International Emissions Trading

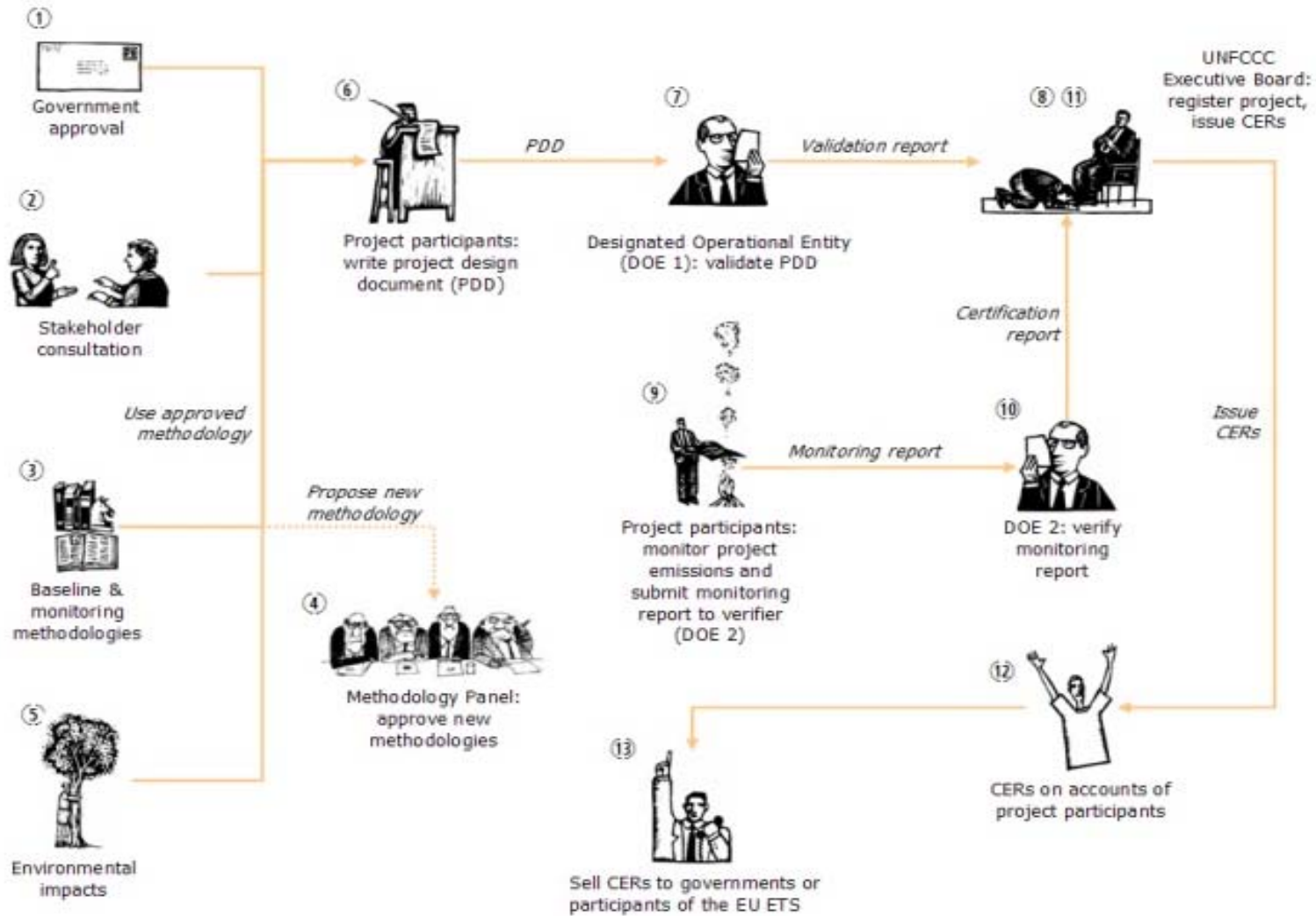
# Carbon Trading



**Global Carbon Market**- 415 - 1250 MTCO<sub>2</sub>/ yr

**CDM** - 150 MTCO<sub>2</sub>/ yr worth 750 - 1500 million Euro  
w.r.t current prices of 5-10 Euro/t CO<sub>2</sub>

# CDM Process

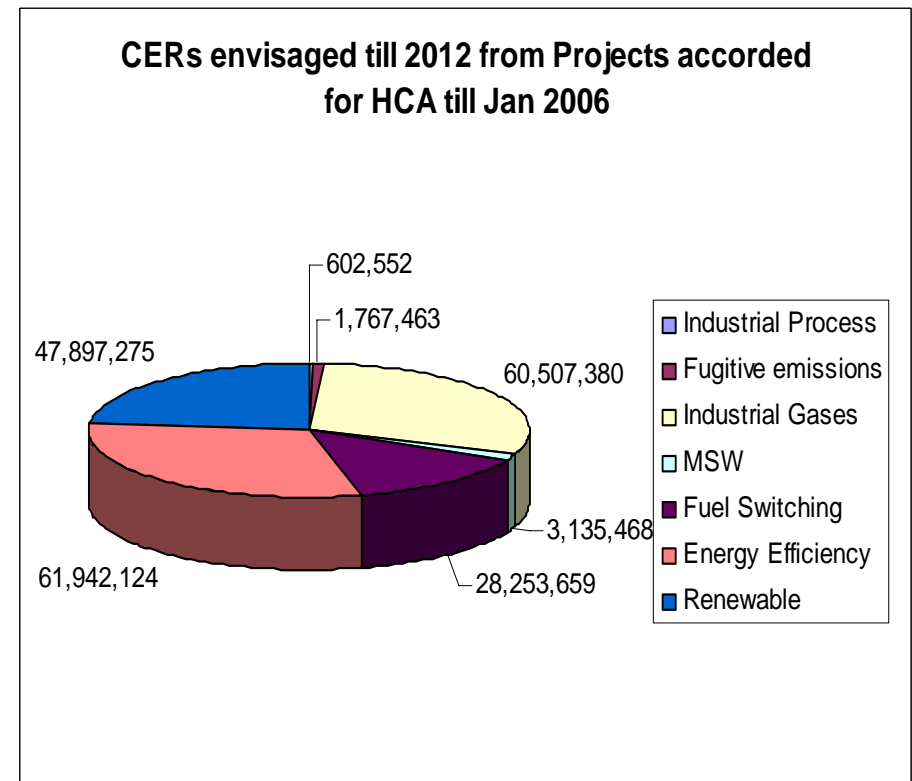
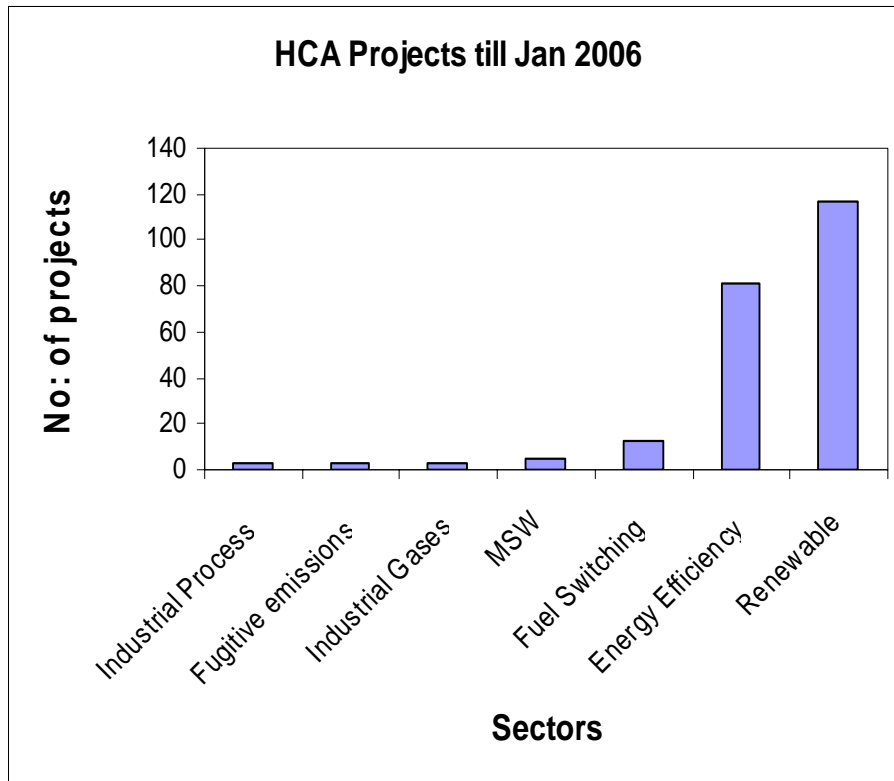


<http://www.carbonmetrics.com/cdmprojects.html>

# CDM in India

- India Signed Kyoto Protocol in December, 1997 & ratified in August, 2002
- Established DNA in December 2003
- Effective institutional framework is established with proactive DNA which issues Host Country Approval in 60 days of the project submission
- Active participation of the private sector
- India has consolidated its position among non-Annex-I Countries in CDM implementation

# Status of HCA India CDM Projects (Jan 06)



# CDM Opportunities in Bio –Fuel Sector

# Bio Fuel & CDM

## General Classification of Bio- Fuels

- Cultivated Energy Crops
- Residual Biomass (Thermo Chemical Energy Conversion)

## Scope of CDM

- Carbon Sequestration through biofuel crops plantation
- Reduction of GHG displacing the conventional fossil fuel

# Technicalities of CDM in Bio Fuel Sector

- Preparation of Project Design Document (PDD)
- Methodologies for bio fuel sector
- Scope 1 : AR-AM0001 Reforestation of degraded land
- Scope 2 : Biodiesel
  - 30 TPD Biodiesel Project in Andhra Pradesh, India
  - Sunflower Methyl-Ester Biodiesel Project in Thailand
  - Palm Methyl Ester - Biodiesel Fuel (PME-BDF) production and use for transportation in Thailand

# Benefits of CDM in Bio Fuel Sector

- Environmental Benefits
  - Clean fuels & reduced GHG emissions
  - Increased cultivation activities
  - Local Ecology is improved
- Socio Economic Benefits
  - Income to the local community
  - Increased employment opportunities
  - Poverty Alleviation
  - Good opportunity for the nation's Energy Security

# Challenges for CDM in Bio Fuel Sector

- Methodology not available
- Double counting issue has to be considered
- High Transaction Cost for Monitoring & Verification of emission reductions
- More dedicated capacity building needed for creating awareness

# GTZ CDM – India Initiatives for carbon trading in Bio Fuel Sector

- Sponsored PDD development & Validation for the project “Bio Diesel Project, Andhra Pradesh by Zenith Corporate Services”
- Technical assistance to develop Bio- Diesel methodology
- Facilitated Technology Transfer, Grant for 1st Bio –Diesel refinery in Nalconda, AP
- Provided financial support to promote & publicize bio diesel utilization in transport sector
- Providing FREE consulting services to interested stakeholders
- Facilitate equal platform for small, medium and large seller

# Thank you for your attention

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