

Kyoto Protocol

CDM & JI

Regulations/Project Cycles & DNA Structures

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Introduction

- CDM and JI – The Kyoto offer
 - Design and evolution
 - Project development cycle
 - Steps and associated bodies
 - DNA roles and institutional models
- The development of the Global Carbon Marketplace
- Setting the stage
 - The Pakistan experience
 - Turkey's unique situation

The International Response to the Climate Challenge

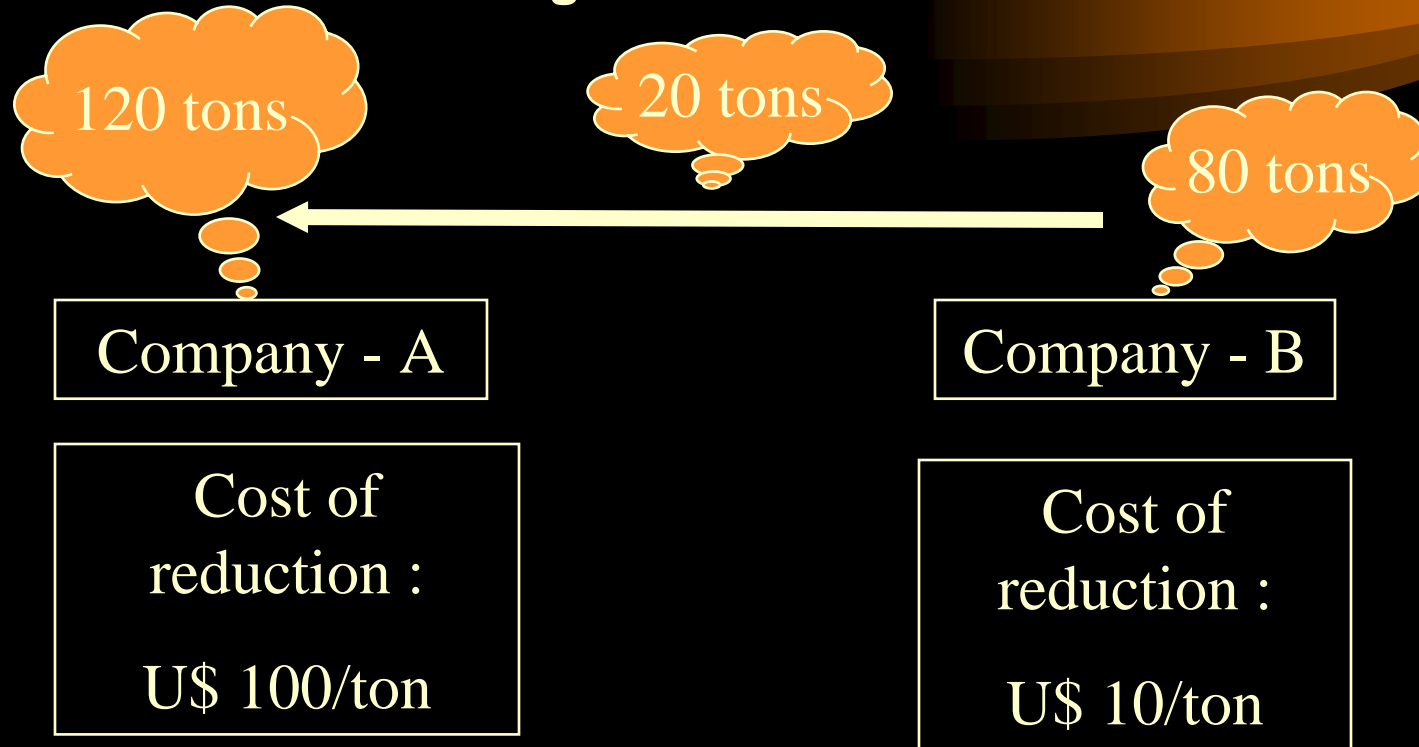
- Climate Change Convention'92 ... recognized it as a high priority area and established principles :
 - Act based on reasonable scientific evidence and *Precautionary Principle*...don't risk waiting for perfect science.
 - Recognize the *Right of future generations* as well as right of *Sustainable Development* of the South. Both *Equity* issues !
 - Implementation based on "*Common but Differentiated responsibility*" and "*Polluter Pays*" principle
- Kyoto Protocol'97 ...agenda and vision for action:
 - Legally binding *emission targets* on North.....5.2% by 2012
 - *No targets* on developing countries
 - Introduce *MBI's* for allowing cost effective compliance

The Market Incentive

- 40 Annex-1 countries subjected to legally binding emission targets.....2008/12
- Costs of abatement or reduction of emissions :
 - **Developed Countries** : U\$ 50-100/ton
 - **Developing Countries** : U\$ 1-10/ton
- Reductions much cheaper in developing countries
- Due to un-localized nature of CO₂...it did not matter for environment where reduction occurs
- So a strong market incentive present!!

Emissions Trading Concept

Emissions Target : 100 tons of Emissions



Concept had been refined through US (Sox) and AIJ

Kyoto Protocol Mechanisms

- Kyoto Protocol introduced 3 trading instruments or flexibility mechanisms :
 - Emissions Trading ---- Between developed countries
 - Joint Implementation--Between developed countries
 - CDM---Between developed and developing country
(Clean Development Mechanism)
- All emanate from the basic emissions trading concept
- **Delivery mechanism of the “Kyoto Promise”**
 - Shift to low-carbon economy by extending opportunity for least cost abatement.

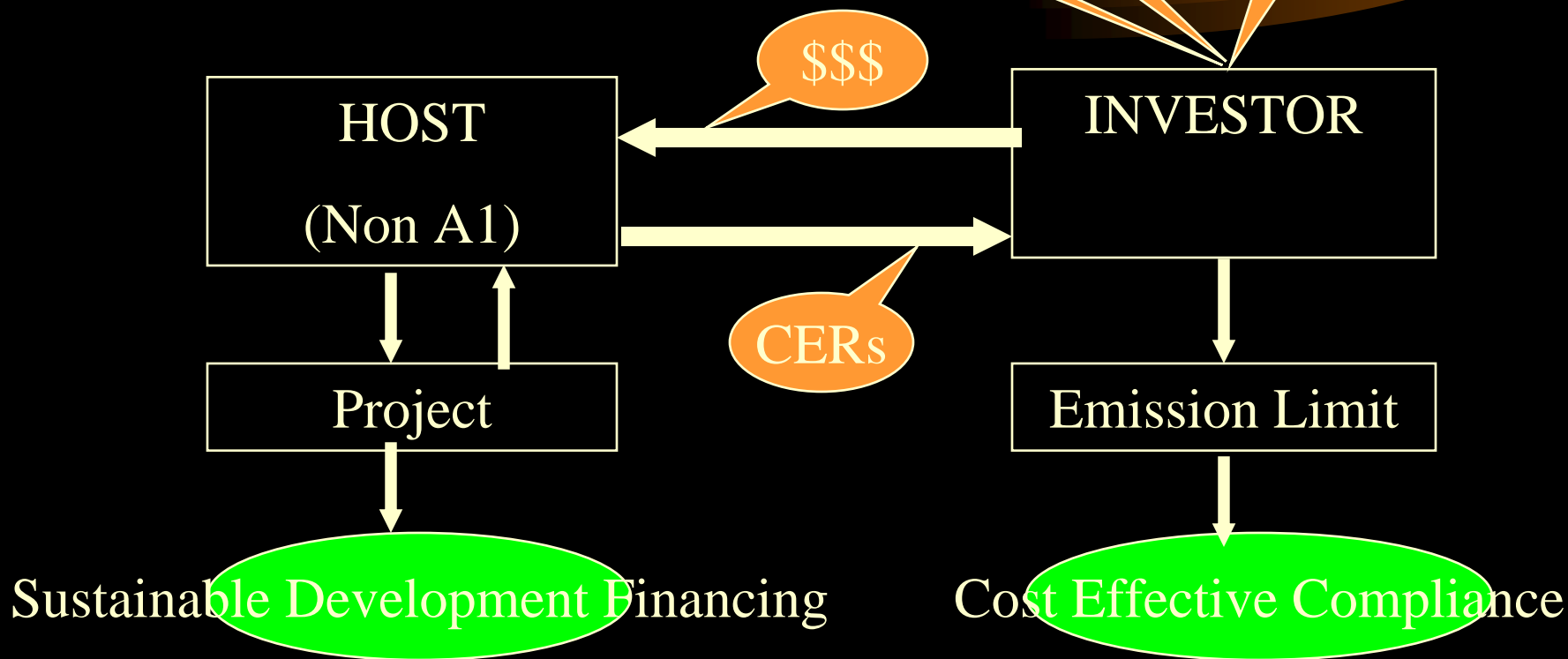
Multilateral
(ML Agency-WB
Financer/Buyer)

Unilateral
(Host Govt –
Financer/Buyer)

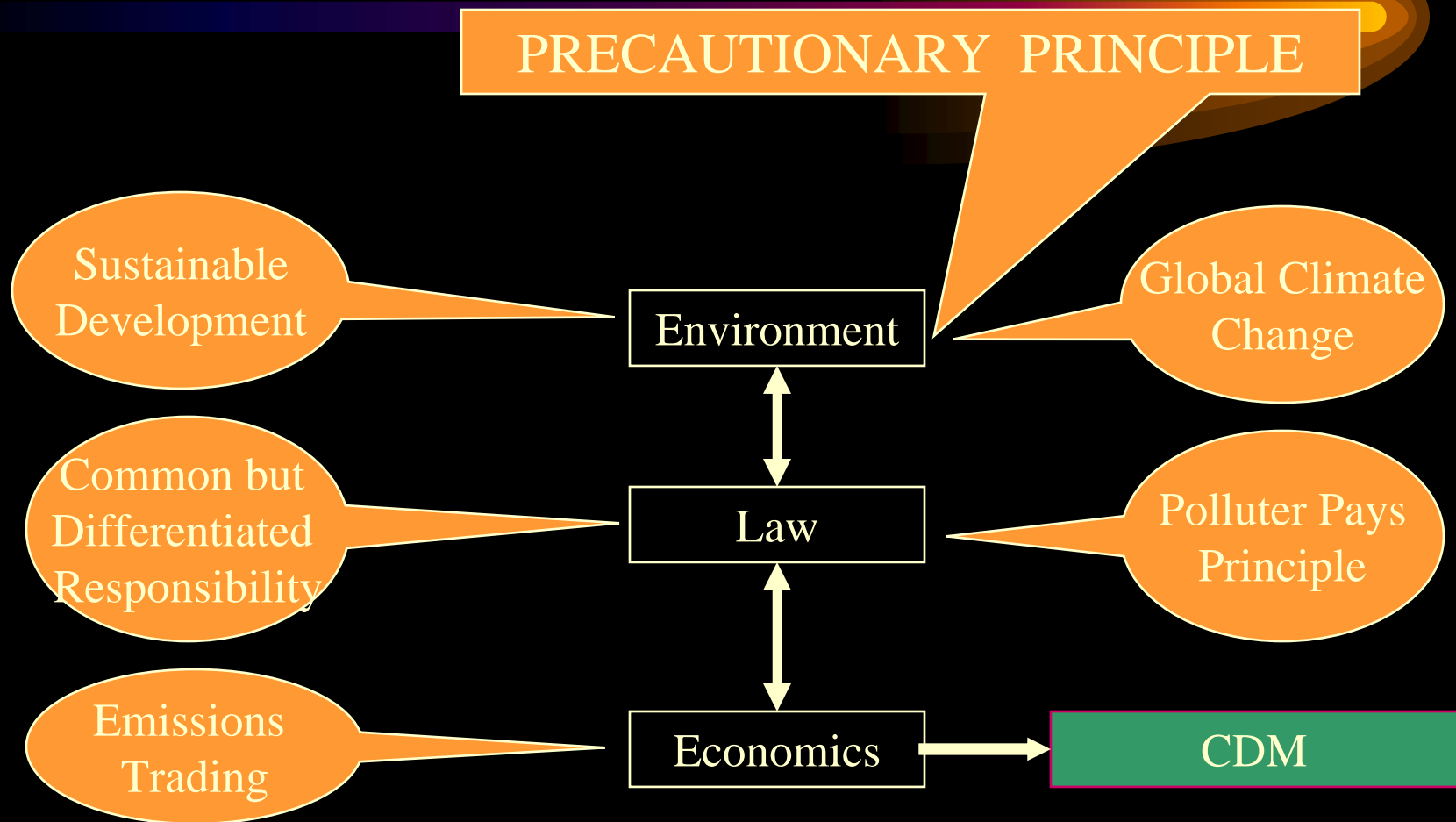
Bilateral
(Another Govt –
Financer/Buyer)

EM Compliance

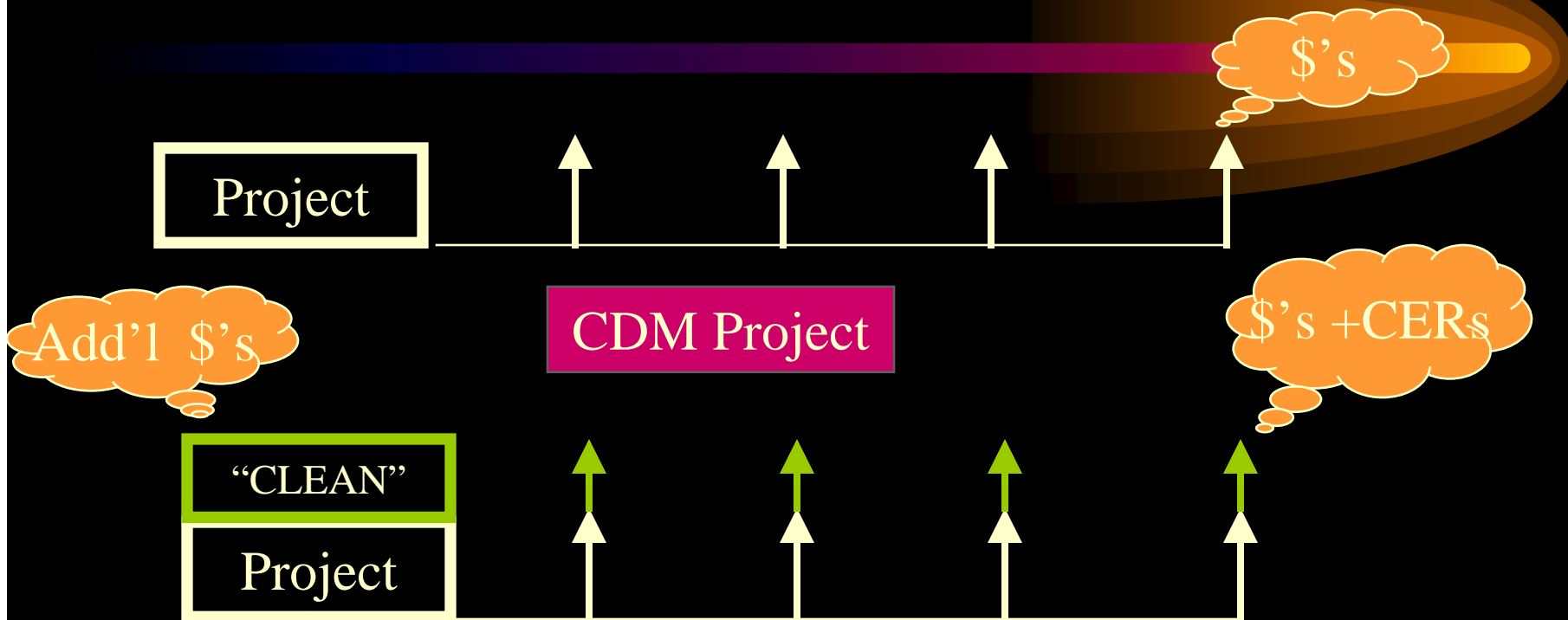
Flow Chart



Key Principles Guiding CDM



CDM ~ Project Dynamics



Additional Financing through monetizing CERs allows “carbon friendly” projects to overcome “hurdle” rates and financial/non-financial barriers

CDM – The Kyoto “offer”

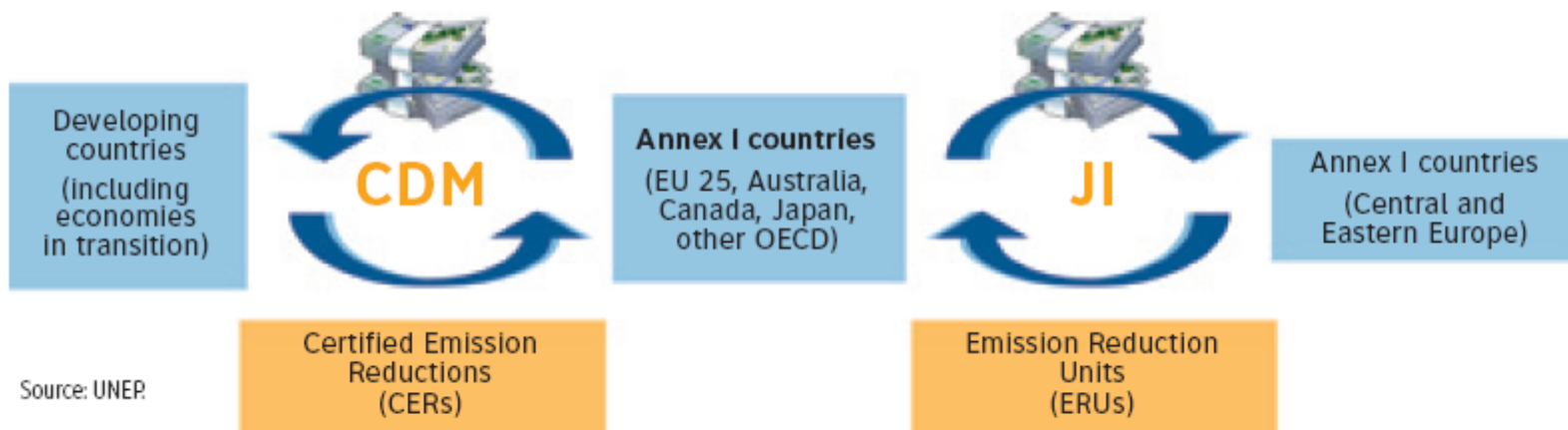
- Capitalize an “unvalued” commodity..... CER
- “Additional” financing for local SD priorities
- Instrument for “appropriate” Tech. Transfer
- Linkage with local environmental issues – (air pollution, deforestation)
- Potential of “Catalyzing” of large FDI flows
- Financial viability ~ Carbon financing can increase project IRRs between 0.5 to 15% (WB)

CDM & Joint Implementation

- The Underlying Concept

- Underlying concept of “credit emissions trading” is the same
- Difference in Geographic scope and terminologies

The project mechanisms: the CDM and JI



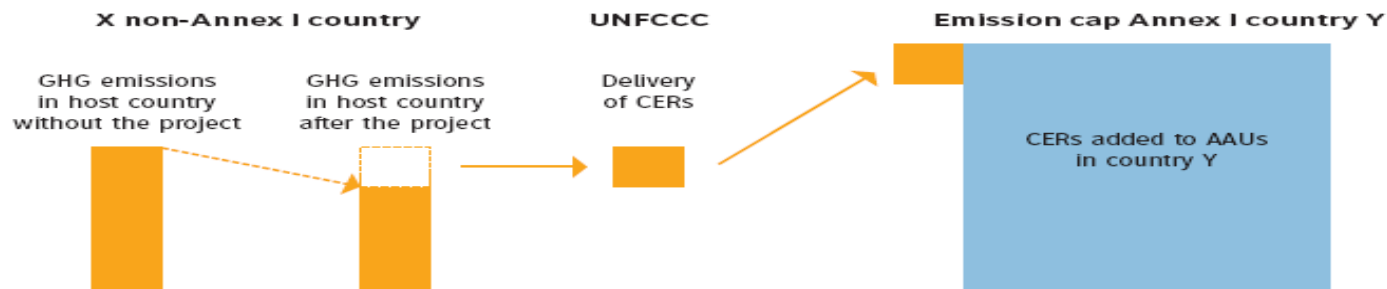
Although the two project mechanisms are similar, they differ in their geographical scope. The CDM concerns developing countries, including economies in transition, while JI concerns the industrialized (Annex I) countries.

CDM & Joint Implementation – The Currency

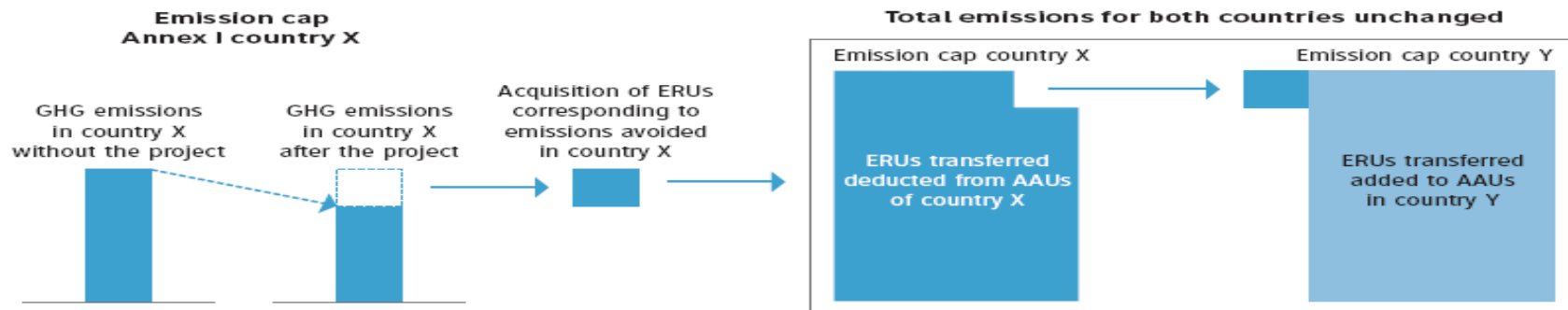
Certified Emission Reductions (CERs) & Emission Reduction Units (ERUs)

How the trade in emission quotas and credits works under the CDM and JI

1 - CDM (X is a non-Annex I country, Y is an Annex I country)



2 - JI (both X and Y are Annex I countries)



Source: IGES, Institute for Global Environment Strategies.

Note: AAUs are allocated only to those Annex I countries which have committed to emission cuts.

CDM & Joint Implementation – Participation eligibility

- Participation eligibility under CDM relatively simple
 - Host country has to be **Non-Annex 1** and ratified the KP
 - DNA has to be set up
- Eligibility for JI participation
 - Both countries need to be **Annex 1 with Emission Target**
 - Can be **Track-1 or Track-2** Joint Implementation depending upon certain country conditions having been met.
 - DFP needs to be notified

CDM & Joint Implementation – Participation eligibility

Eligibility requirements issuance, transfer and acquisition of ERUs

	TRACK 1	TRACK 2
1. Party to the Kyoto Protocol	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2. Assigned amount calculated	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3. National registry for tracking the assigned amount	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4. National system for estimating emissions/removals	<input checked="" type="checkbox"/>	
5. Submission of most recent required emissions inventory	<input checked="" type="checkbox"/>	
6. Accurate accounting of assigned amount and submission of information	<input checked="" type="checkbox"/>	

Track-1 is fairly simple to implement - Host country driven with differing requirements

Track-2 requires mandatory third party verification process (AIE/JISC involved) and is very similar to CDM

CDM & JI (Track 2) – Project Cycles

- Quite similar as both project based / credit trading
- However structural terminologies differ

Comparative structure of the JI Track 2 and CDM mechanisms

JI Track 2	CDM
JI Supervisory Committee	CDM Executive Board
Accredited Independent Entity - AIE	Designated Operational Entity - DOE
Designated Focal Point - DFP	Designated National Authority - DNA
Determination report from an AIE	Validation report from a DOE
Review by the Supervisory Committee if required	Registration by the CDM Executive Board
ERU conversion and transfer by host country	CER issuance by the CDM Executive Board

CDM/JI project cycle

– Understanding the Jargon !

- Executive authority for implementing trading system
 - Executive Board (EB)/Joint Implementation Supervisory Committee (JISC) or DFP for Track1
- UN approved project ‘auditors’
 - Operational entities (OE)/ Accredited Implementing Agencies -
- National focal point for project approval
 - Designated National Authority (DNA)/Designated Focal Point (DFP)

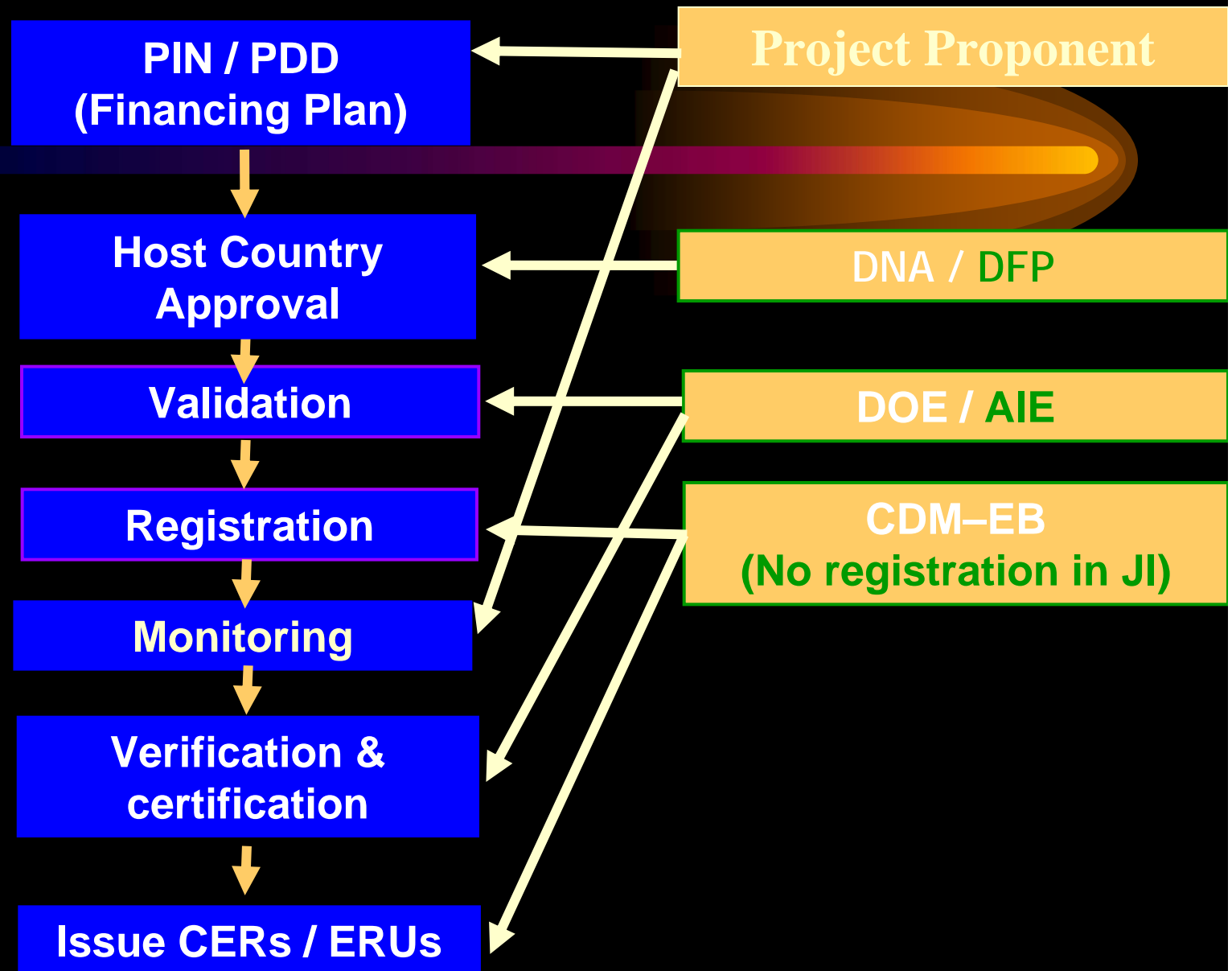
CDM/JI project cycle

– Understanding the Jargon !

- **Other terminologies:**

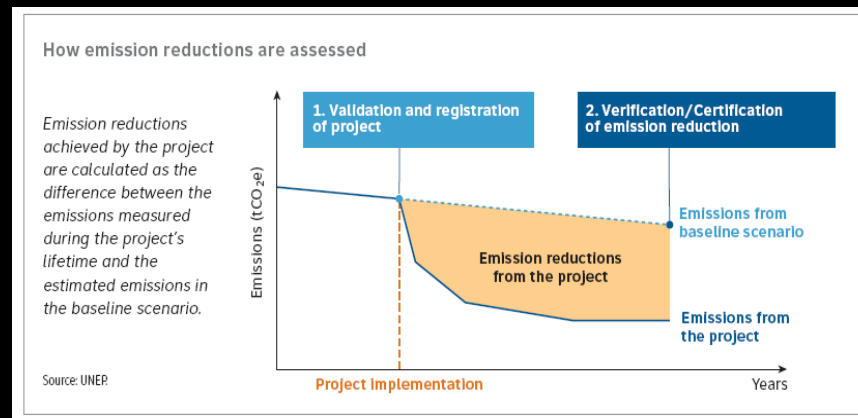
- Host country Letter of Approval by:
 - DNA stating that project in line with SD
 - DFP stating host is ready to deduct ERUs from AAUs
- Project Design Document
- Validation
 - Independent evaluation of a project by a DOE or AIE
- Registration
 - Acceptance of PDD by the EB
- Verification/Determination
 - Periodic independent review and ex post determination by the DOE/AIE of the monitored reductions
- Certification
 - the written assurance by the DOE/AIE required for issuance of CERs by the CDM Executive Board or transfer of ERUs

CDM/JI Project Cycle



CDM & Joint Implementation – Project Participation eligibility

- Establish emissions “additionality”
 - Project should reduce emissions relative to an established baseline (No project scenario)



- Meet other criteria
 - Host Country approval
 - Environmental
 - Local laws and regulation

CDM & Joint Implementation – Project Participation eligibility

- PIN / PDD are the two determining documents
 - PIN is an optional initial feasibility
 - PDD is a mandatory requirement with a UNFCCC standardized format :
 - General description of Project and context
 - Baseline and Monitoring Methodology used and emissions avoided
 - Project duration / Crediting period
 - Environmental Impacts
 - Stakeholder comments

The role of the DNA / DFP

- **Regulatory role**
 - CDM "Host Country" approval as per (mandatory):
 - Sustainable Development criteria/guidelines
 - **Explicitly** - Issue (LoA) Letter of Approval stating that project approved as per Article 12 of KP/project is voluntary/project meets SD criteria
 - JI Letter of Approval stating that the Host Country is willing to deduct the ERUs from it's AAUs
- **Promotional / Marketing role (optional):**
 - Facilitation and guidance to investors
 - Scoping out project opportunities
 - Marketing to potential investors/carbon funds
 - Tracking and recording development of CDM/JI projects

DNA Role



- The DNA is NOT:
 - Responsible for developing projects
 - Approving baseline methodologies
 - Liable for any action of project sponsors

Some basic DNA models

- **Model 1**= Existing Government Department / Ministry
 - Cost efficient
 - Can cause departmental issues
- **Model 2**= National Committee: Govt + NGO + Private
 - Coordination advantage
- **Model 3**= Out-sourced: (NGO, Private)
 - Can be a good model if a mature and developed governance system
- **Model 4**- New Department
 - Focussed expertise and very efficient
 - Costly

Can also combine the above basic models

Financing the DNA ?

- **Apply fixed charges** for each approved project (Germany, Ghana, Morocco)
- **Carbon “credit tax”** for approved project (China – varies with type of project)
- **Self budgetary finances or donor assistance**
 - **Start without any levy**
 - Keep DNA setup costs minimal / Existing structures
 - Impose levy/charges only when process is mature and developed
 - Expand DNA at that stage into an expert CDM cell

The Evolving Market

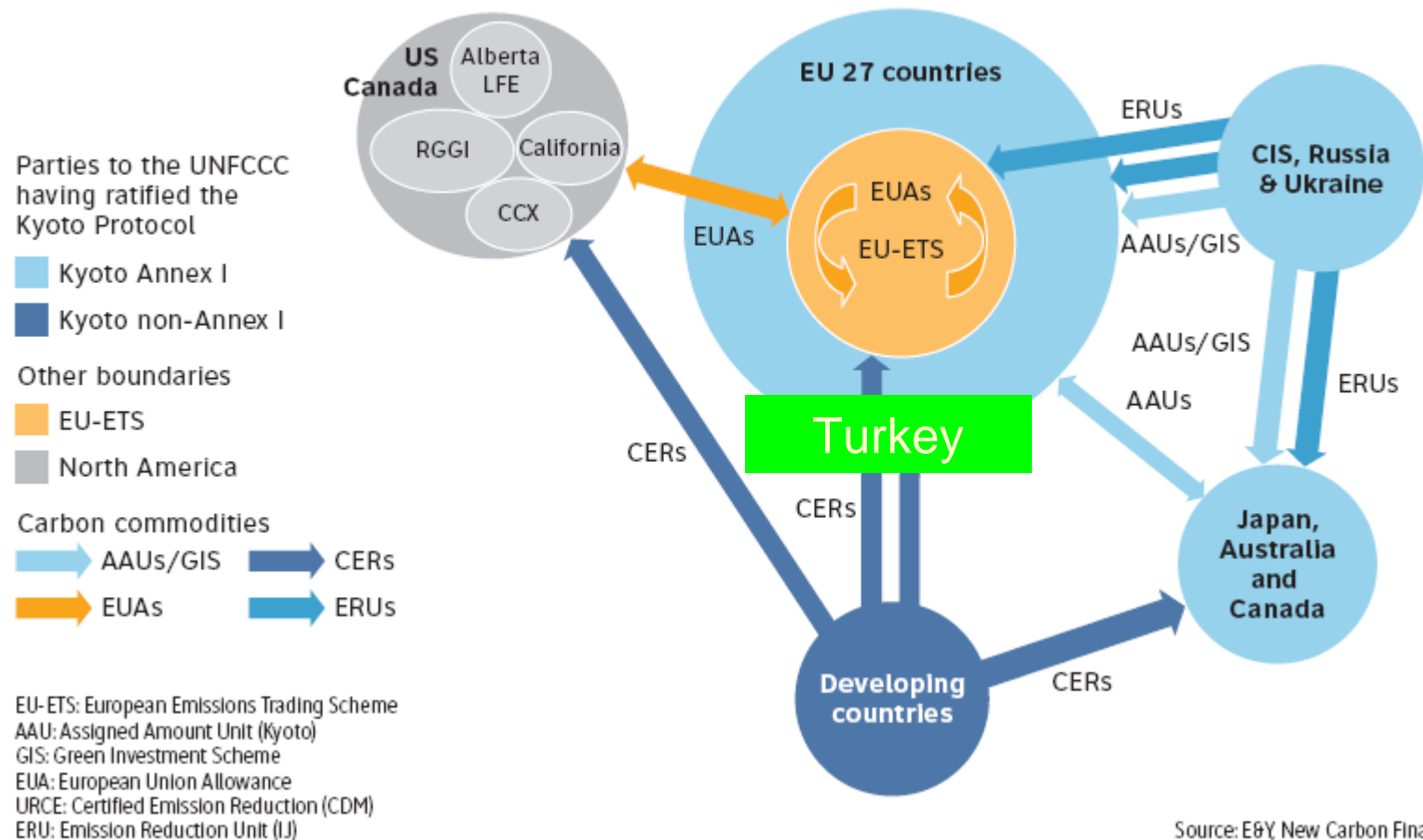
- Global Market of **U\$ 1 Trillion** projected – not a pipe dream !
 - Explosive growth in the carbon market - \$10 billion in 2005 to **\$ 80 billion** in 2008 – WB estimates
 - CDM mirrors this growth – 470 projects in 2005 to more than **3000** in 2008
 - CER prices range from **Euro 8-15** but projected to go to **Euro 35 by 2020** (Point Carbon)
- Forecasted to become the **World's largest commodity market** (US Futures trading commission SEC)

The Credit Trading Market

- Who is selling the Carbon Credits ?
 - China, India and Brazil account for more than 80% of the CER sales
 - Russia and Ukraine account for 75% of JI ERUs
- Which Carbon Credits are in demand ?
 - CDM CERs account for almost 95% of the market (Almost 58% in primary and 42% in secondary markets)
 - Voluntary market is only 1% of the global marketplace
 - Maximum projects in renewables (Hydro, Wind, Landfill gas)
- Who is buying the Carbon Credits ?
 - Multilateral Funds (WB, UNDP, ADB, IFC)
 - Country tenders (All of EU, Japan, Australia)
 - Some developing country Funds (Morocco, Egypt)
 - Banks (HSBC, Deutsche Bank, UBS, EIB)
 - Traders (Natsource, Morgan Stanley, Ecosecurities, Asia carbon)
 - Energy Utilities (TransAlta, EDF, BP)

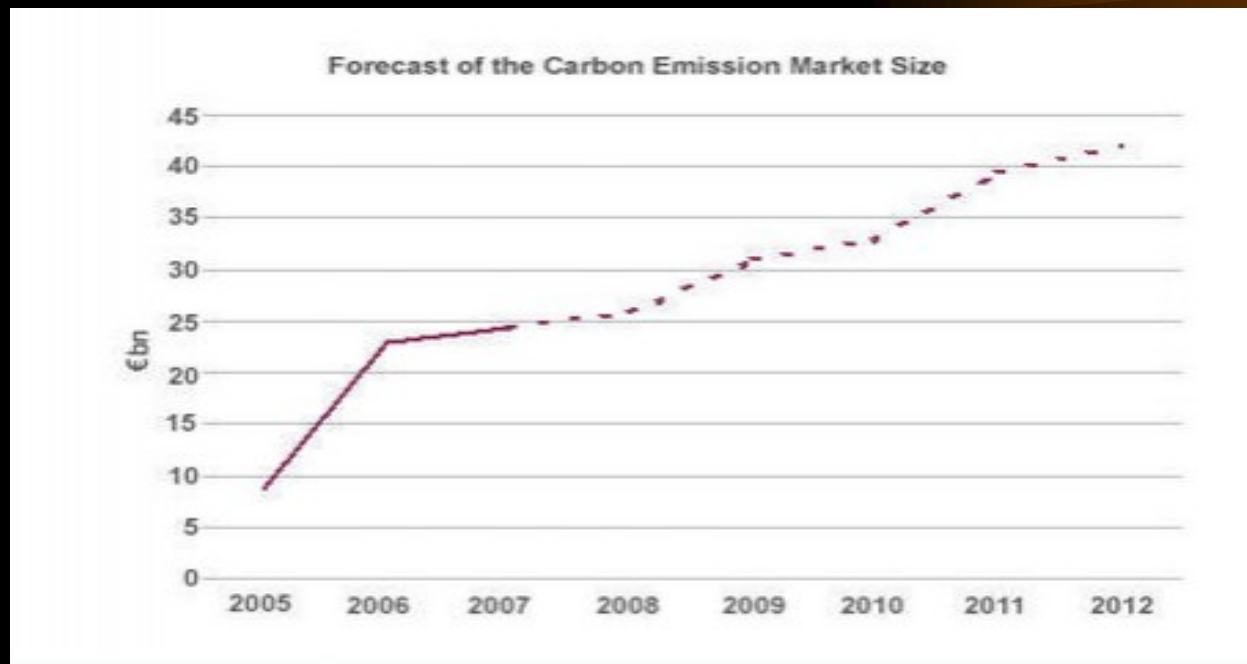
The Evolving Carbon Marketplace

The project mechanisms and the international carbon market



A role in the Future ?

A Trillion Dollar Global Market ?



Challenge – positioning Turkey to capture its share from the market

Setting the Stage in Pakistan

- Kyoto Protocol – ratified in 2004
- Policy & Institutional Framework
 - Prime Minister's Task Force
 - Raise the profile / Inter-Ministerial linkages
 - CDM Cell and DNA
 - Technical Capacity !
 - CDM Strategy
 - Host country approval with clarity & transparency
 - Awareness Raising & Marketing
 - Domestically and Internationally
 - Public and private sector

The Response

- Private Sector

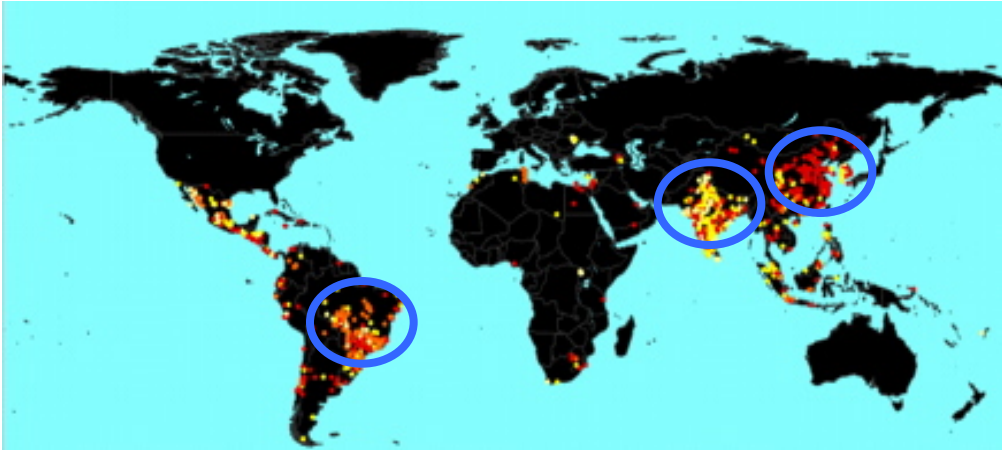
- First project – **wake up call !**
 - Rs 3 billion vs Rs 3 billion national budget / 1 bn tC/annum
- Pipeline developing fast
 - **40 “Trail Blazer”** projects - **10 Host Country Approvals** already
 - **Diversity** (Fertilizer, Textiles, Small Hydro, Wind, Waste)
 - More than **4 Million CT/annum** credits in pipeline
- Ancillary support structures mushrooming

- Public Sector

- Huge **latent opportunities** - carbon capitalization challenge
- **“Motivation”** for internalization low
 - private sector involvement required
- Rs 12 bn. Mega forestry initiative budgeted in Pakistan

Turkey's unique situation

- Annex-1 but NOT eligible for JI as no emissions limit (AAUs)
- Similarly NOT eligible for CDM as not NA-1
- Can participate in Voluntary Markets OR as a CDM investor
 - Opportunity of a **Turkish Carbon Fund** needs to be scoped out
 - Provide learning as well as accumulate bankable credits
- Limited scope currently but **positioning for future opportunities**
 - Learning by Doing from **Voluntary Markets**
 - Caution against losing out on valuable carbon asset cheaply !
 - JI requires a limit to be accepted – risky w cost to the growing economy
 - Target **possible CDM participation over JI** through negotiations
 - Develop a clear, transparent and effective national project approval process with necessary supportive capacity (anticipatory DNA)
 - Evolve a Pro-active approach by identifying priority CDM investment sectors and globally marketing the opportunities
 - Negotiate for fungibility of existing Voluntary credits ?



The Barriers:

- International market distortions
 - Skewed geographic development under CDM.
 - First mover advantage – deeply enshrined and now acting as “barrier to new entrants” (Almost 80% projects in 3 Countries)
 - CDM – Clean Development **Monopoly** !
 - **Certainty window** is closing – post 2012 political signals not clear as yet
 - Evolving CDM
 - Geographical distribution to be corrected
 - Programmatic approach

Looking ahead :

- “Good luck” when opportunity meets preparation



PREPARATION

“By failing to prepare you are preparing to fail.”
Benjamin Franklin