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Presentation by

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and

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On

Scaling up Inclusive and Sustainable Development through Green Finance in India

* India on the World Map

10th largest Economy in the World by Nominal GDP

4th largest Economy by Purchasing Power Parity

Ranked 168th for GDP per capita with \$3.900

2nd largest in Population (1,220,800,359)

One of the major economies of G-20 & member of BRICS

**GDP Composition
12% Agriculture, 25% Industry & 63% Services**

4th largest importer of coal & crude oil

6th largest producer & consumer of electricity & oil products

3rd largest Road network

4th largest Rail network

141st Per-capita-income basis by nominal GDP

130th GDP (PPP)

**2nd in labour force
486.6 million**

30% population below poverty line

**Foreign reserves around
498.4 million**

**136th HDI rank with
0.545 score**

Largest Democracy of the World

Universal Franchise

* Economic Development Pathways



Per Capita CO₂ Consumption

Economic Development & Growth

Standard of Living

Higher consumption of fossil fuel

Higher greenhouse gas emission

Projection - India 3rd largest developed country by 2030

If there are limits on CO₂ emissions, it can limit economic growth

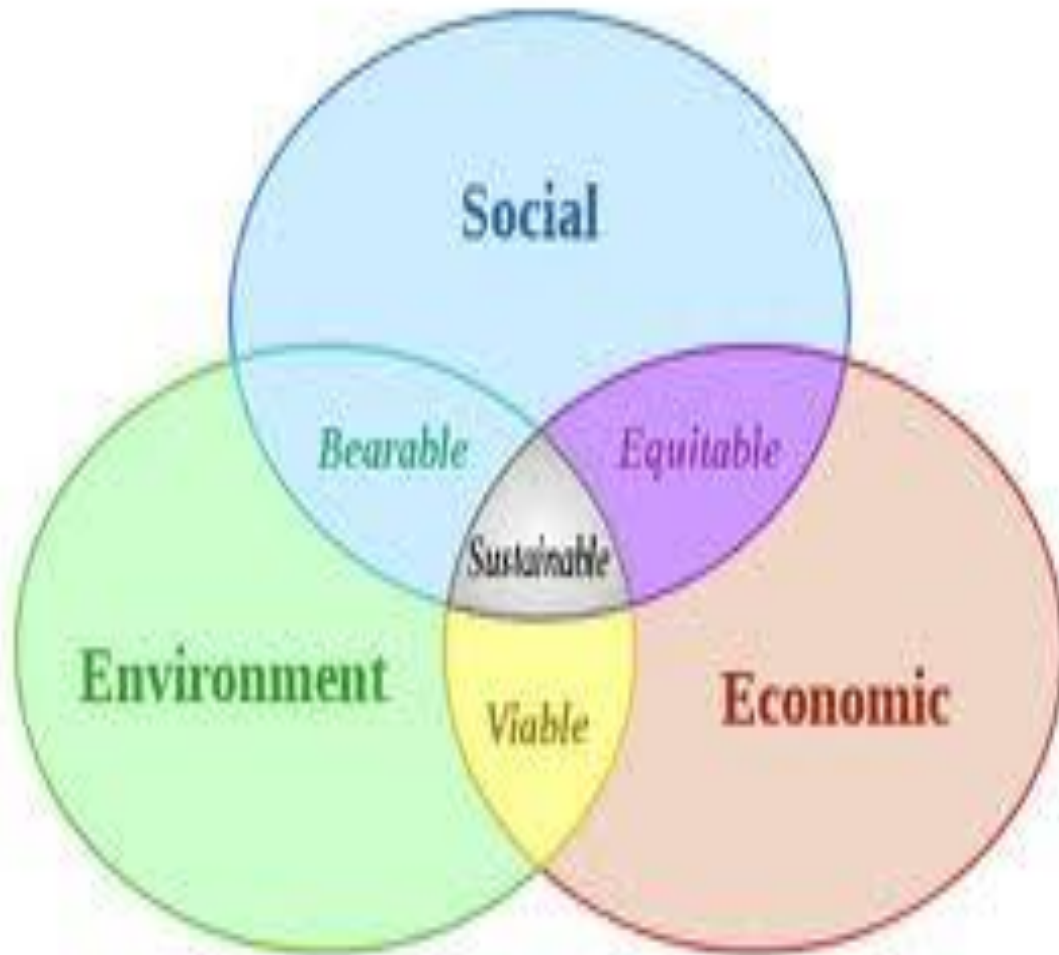
Challenge: Find low-carbon growth strategies for sustainable development

* Carbon Emissions worldwide (data from EIA)

Rank	Country	Total Emissions (Million Metric Tons of CO2)	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



* Sustainable Development



Sustainable development is a process of economic activities which leaves the environmental quality level intact with the policy directives corresponding to this notion being the maximization of the net benefits of economic development for the present and future generations, subject to maintaining the services and quality of natural resources over time.

* Inclusive Growth amidst challenges

1 India achieved rapid economic growth of 8-9% in last two decades

8 The issue of uneven distribution of energy consumption also needs to be sorted out

7 India needs to uplift 40% people to the acceptable level of economic & social well-being

2 In spite of hindrances of oil & Global Economic Crisis



6 Therefore, highly vulnerable to climate change

3 But, India is still home to largest no. of hungry & deprived people in the world

4 Food supply is a critical issue faced by India despite efforts by the government

5 Majority of population depends on climate sensitive factors for livelihood

* India's initiative in Climate change

* A shift to low carbon infrastructure growth would necessarily have to be progressive and will need a mix of enabling factors—spanning the right policy environment, technology and process innovation, human and institutional capacity, markets and regulatory frameworks, and more importantly, access to dedicated finance directed towards low carbon growth initiatives.

* National Action Plan on Climate Change (2008)



* Mitigation Adaptation Tradeoff

Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.

1

Climate change mitigation encompasses the actions being taken, and those that have been proposed, to limit the magnitude and/or rate of long-term global warming induced climate change. Climate change mitigation generally involves reductions in human (anthropogenic) emissions of greenhouse gases (GHGs).

2

Mitigative capacity is shaped by two important factors; one average abatement costs (or mitigation cost, high costs means low mitigation potential) and two, ability to pay as approximated by GDP per capita

3

Mitigation activities tend to have more private sector participation, as they offer stronger incentives through established business models. Adaptation, on the other hand, is often a public good and needs to be provided through public sector accounts.

4

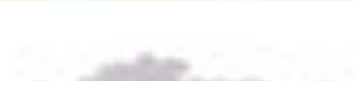
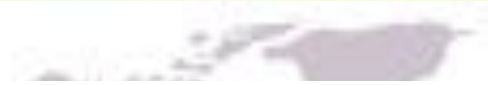
Considering the relative contributions of public and private players, the question of **TRADE OFF** between adaptation and mitigation is critical

5

* Green Finance

- * It is a core part of low carbon green growth as it connects the financial framework, environmental improvement and the economic growth. Green Finance is a market based investing or lending program that factors environmental impact into risk assessment, or utilizes environmental incentives to drive business decisions.
- * In general green finance is future oriented, which pursues economic growth, environment protection and industries' financial developments. The green finance further is seen from two angles, that is finance for adaptation and for mitigation for climate changes. According to the World Economic Forum's Green Investment Report 2013, total investment in climate-change mitigation and adaptation in 2011 were estimated at US\$ 268 billion from the private sector and US\$ 96 billion from the public sector (US\$ 364 in total, of which US\$ 14 billion was for adaptation).
- * In its initial note, the UNFCCC (UNFCCC, 1992) had clearly stated that *the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, but the per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs.*

* Sources and Mechanisms for Green Finance



SOURCES & INTERMEDIARIES (*)

ANNUAL FLOWS OF DIRECT CLIMATE FINANCE

(2010 / 2011, USD BILLION)

PUBLIC	Government budgets (5%)	16.0 - 22.6
	Development Finance Institutions* (21%)	76.8
	▪ Climate Funds* (<1%)	1.5
	Sub-total public (26%)	92.7 - 99.3
PRIVATE	Corporate actors (21%)	69.3 - 80.5
	Institutional investors (<1%)	> 0.6
	Project developers (34%)	115.0 - 129.3
	Households (9%)	32.3
	Commercial financial institutions* (10%)	30.7 - 40.4
	Venture capital, private equity & infrastructure funds* (1%)	2.4
	Sub-total private (74%)	250.3 - 285.5
TOTAL		Total
	▪ Sub-total sources (68%)	343.0 - 384.8
	▪ Sub-total intermediaries (32%)	233.2 - 265.3
		109.9 - 119.6

* Role of SIDBI

Promoting Energy Efficiency



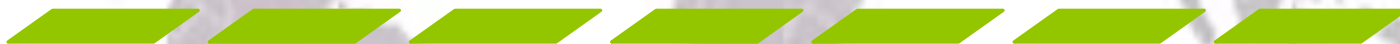
Promoting Cleaner Production Measures



Green Loan Scheme



Programmatic Clean Development Mechanism Project:



WB-GEF Project - Financing Energy Efficiency in MSMEs



Support for Green Energy



* Challenges and Opportunities in SD through Green Finance

- * Capacity building for the local level plans & decision making bodies' needs implementation of programs of restructuring them.
- * Estimates suggest that it will cost US\$130 billion simply to ensure that all Indian households enjoy access to electricity by 2030 - a cost that would rise if this power were to come from clean fuel sources.
- * The international agencies need to ensure financial flows for building such infrastructure required for emission reduction.
- * This requires promotion of CDM implementation in PSUs, Central and States/UT govt./Municipalities through introduction of various instruments of Carbon financing and planning and investment for Urban mass transport.

*Prescriptions

Climate Change mitigation and inclusive growth issues should be addressed simultaneously.

Equity is a prerequisite for an effective climate agreement.

Despite its costlier nature, it will prove to be an INVESTMENT for future generations and sustainable development.

* Illustrations

Ecosan : Best Ecological Sanitation

EU's Pilot Project at Badlapur,
Thane, Maharashtra

Production of bio-gas from human
waste from college and recycled
water reused for fruit farming and
floriculture

Karnataka Wind Power Carbon
Finance Project, India with Spain
Clean Development Mechanism
(CDM) project

178,917 Certified Emission
Reductions (CERs) generated
10,500 MW of
renewable wind energy by 2012

**Delhi Metro Rail Corporation
(DMRC)**

Installation of Low Green House
Gases (GHG) emitting rolling stock
cars in metro system with Japan

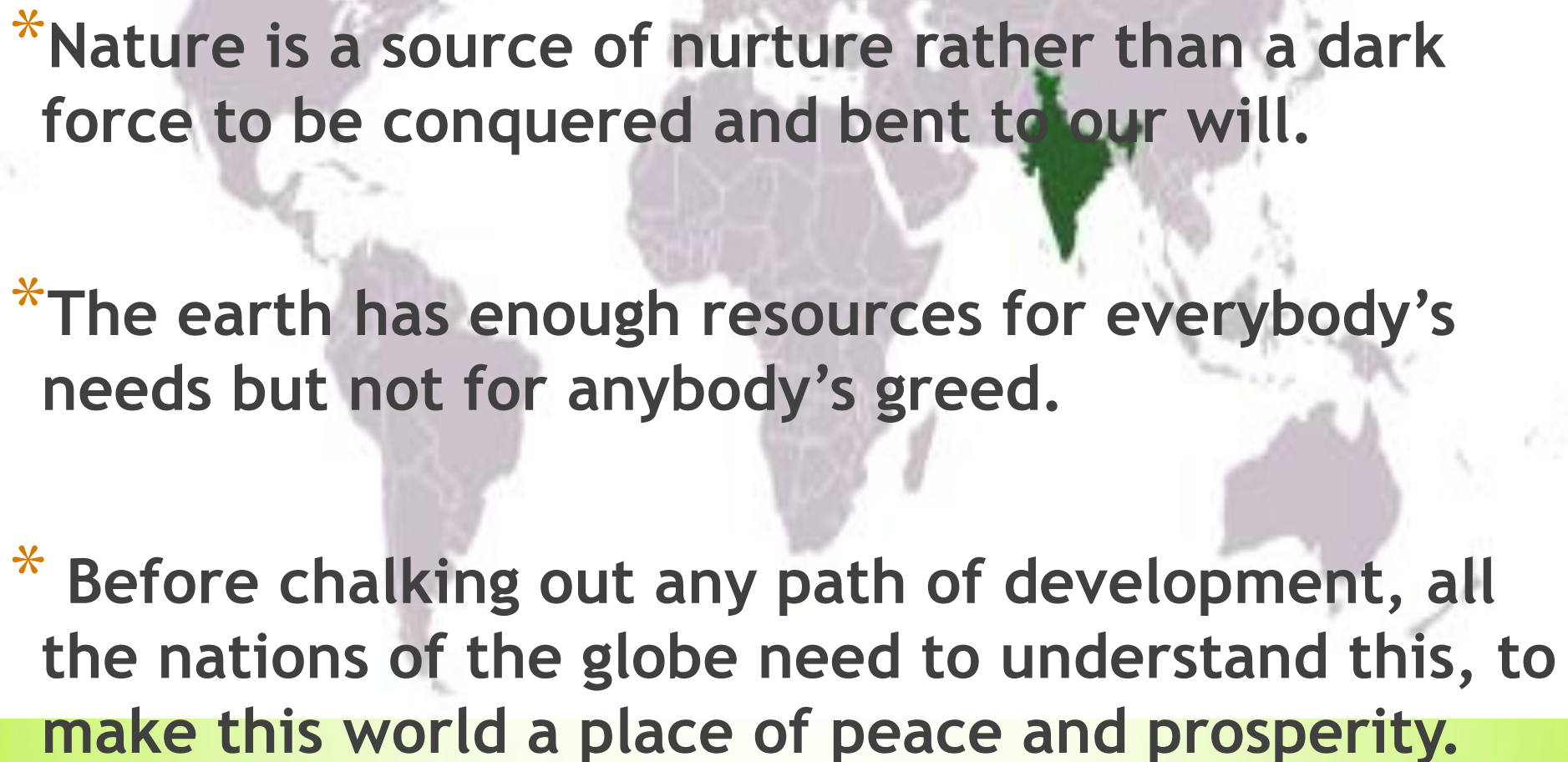
Annual Estimation of emission
reduction (in tonnes of CO₂e) is
41,160 for 10 years

Tirupapti Temple: Green Temple

The solar panels on the roof of the
temple power solar cookers,
powering the community kitchen
Carbon Credits earned are sold to
Japan's Government

Suzlon and Enron donated wind
turbines to generate 7.5 Megawatts

* Conclusion

- 
- A world map is shown in the background, with the country of India highlighted in a dark green color. The rest of the map is in a light purple/grey tone.
- * Nature is a source of nurture rather than a dark force to be conquered and bent to our will.
 - * The earth has enough resources for everybody's needs but not for anybody's greed.
 - * Before chalking out any path of development, all the nations of the globe need to understand this, to make this world a place of peace and prosperity.

A world map is shown in a light purple color, centered on the Indian subcontinent. The country of India is highlighted in a dark green color. The text "Thank you" is written in a large, black, cursive font across the top of the map.

Thank you

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