



Welcome to Dignitaries

Govt of Karnataka

Sustainable Infrastructure Development

Infrastructure Development Department

12/3/2010

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Poverty can no longer be seen exclusively in statistical terms; what matters moreis access.....to entitlement & Opportunities- A.B.VAJPAYEE

Presentation about?

1. Why Invest in Karnataka?
2. Sustainability- means?
3. Development Vision
4. Our Eco- Efficiency Framework
5. Infrastructure Indices
6. Eco-foot print Concerns in Infra/Industrial Investments
7. Infrastructure- Focus areas
8. PPP- Framework
9. Important PPP projects

Why invest in Karnataka?

- Target 9 % of GSDP
- India Competitive Index- 49
- Huge deficit in Tax- GDP ratio 22 %(35 %)
- Investment requirements: Rs 92462 cr
(11th plan)
- Present Investment : Rs 11000 cr
- Required Annual Investment : Rs20- 21,000 cr

Gnanam Nyeyam Parigyatha Thrivisha Karmachodana

12/3/2010



Development Vision 2020

			Units	Level	
				Present	2020
A.	Economic Sector				
1	Agriculture				
		Irrigated Area	% on potential	49	>90
			Lakhs Hectares	30	61
		Watershed Area	Lakhs Hectares	44.75	80
		Agricultural Labour	% of total	61	35
		Agricultural Growth	%	0.8	4
2	Public Transport	On total trips	%	45	73
	Public Transport with renewable energy		%	0	100
3	Forest	Area covered	%	16.7	33
4	Industry Growth		%	7.9	9
	Industrial Employment		%	15	22
5	Road				
		Average	Km / sq.Km	1.07	1.50
		NH + SH	Km	21486	40000
		≥ 2 lanes	Km	6696	66456
		All weather Roads	%	60	100
6	Electricity				
		Infrastructure Capacity	MW	9559	18500
		T&D Loss	%	28	< 15
		Agriculture IP Set metering	%	29	> 90

Development Vision 2020

			Units	Level	
				Present	2020
7	Railways	Rail Density	Km /1000 sq.Km	16.9	28
8	Output per workers (Agri : Services)		Ratio	8.8	4.9
9	Cold Storage Capacity		1000 MT	250	4800
B.	Social				
	Literacy Rate	Literacy Rate	%	67	100
		Access to Skill Training	%	low	100
	Health	IMR (Infant Mortality Ratio)	No.	48	10
		MMR (Maternal Mortality Ratio)	No.	228	25
	Population Spread	Urban	Crores	2.08	2.8
C.	Others				
		Rural Poverty	%	20.8	< 5
		Urban Poverty	%	32.8	0
		Access to water	LPCD	27	100
		Slum population	%	7.8	0
D.	Pollution Levels	SPM		> 160	40

What Sustainability means

Sustainable Development: Development that meets the needs of the present without compromising the ability of the future generations to meet their needs.

In addition to balancing economic, environmental and social objectives , a basic tenet of sustainable development is the need to balance the needs of current and future generation.

Earlier it was satisfaction of needs now desire

Sustainability means- Challenges

- **By 2030, 2 earths will be required to sustain us**
- **Rate of extinction of species is 1000 times greater than that has been ever in Earth's history**
- **The loss of key elements of an eco system can alter the balance between its components and lead to long term or permanent changes**
- **Over the last decade alone 1 billion workers have joined the global market place**
- **50 years have passed since it was found that Carbon dioxide makes an insulated blanket around the planet.**

Market rates on return on investment may exceed the social rate of interest on consumption

Sustainability means- Challenges

- **5 Major threats to Bio-diversity**
 - **Habitat loss- alteration and fragmentation**
 - **Over-exploitation of wild species populations**
 - **Polution**
 - **Climate Change**
 - **Invasive Species**

Unsustainable Ecological Footprint

- Ecological Footprint (EF) Vs Biological Capacity(BC) of Key Nations

Countries	GDP/Capita (USD PPP)*	EF(GH/Capita)**	Bio capacity GH/Per capita	Eco-deficit
World	10500	2.8	1.20	-1.60
UK	33,535	4.60	2.10	-2.50
US	45,790	8.00	3.50	-5.50
China	5,345	2.30	1.10	-1.20
India	1030	1.30	0.76	-0.54

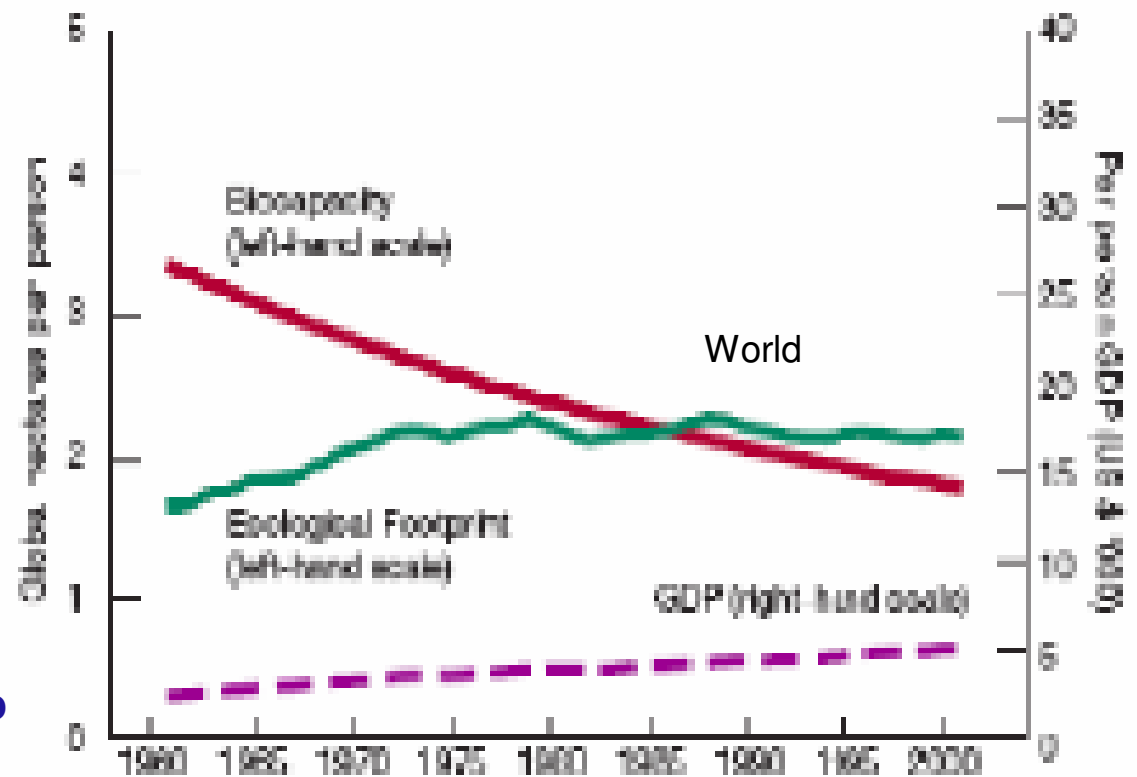
*WB Report 2007

** Global Hectares/ Capital - WWF Living Planet Report 2010

Unsustainable Ecological Footprint

- **Ecological Footprint overtook Bio-Capacity**

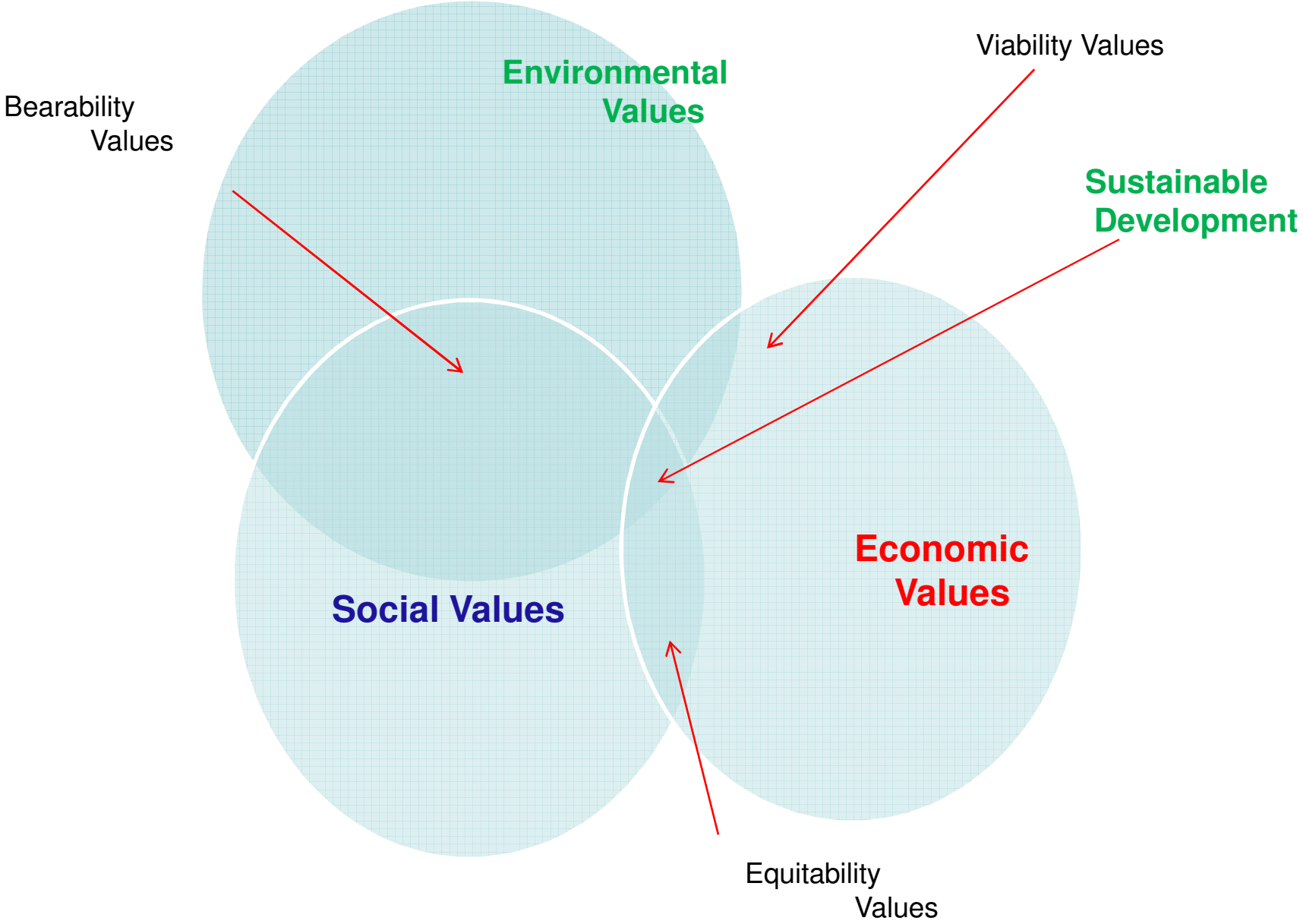
- World : 1986
- Asia- Pacific : 1987



Bio-capacity refers to the capacity to generate an on-going supply of renewable resources and to absorb its spillover wastes. Unsustainability occurs if the area's **ecological footprint** exceeds its **bio-capacity**

Source: WWF Living Planet Report AP- 2005

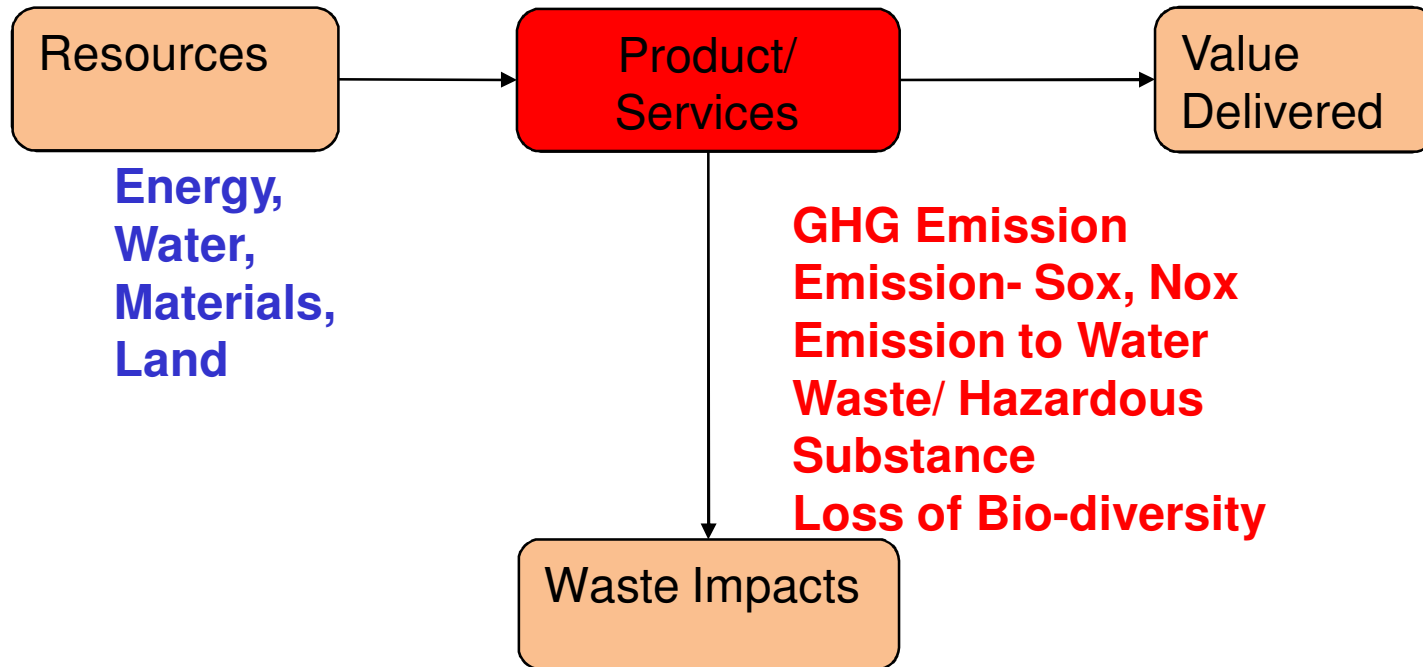
Themes of Sustainable Development



What Sustainability means- the Optimists

- **Big, brightly lit grocery stores.... Will compete poorly with warehouses that delivers web and phone orders ...*By William Kelvin***
- **Fourth Generation nuclear power plants will run on spent fuel of earlier generation *By William Kelvin***
- **Clean Green energy that annually pours down the earth is 3 Mn^{1020} Joules**
- **Sun sends down 7000 times as much energy as we use**
- **World changing from *reductionist perspective* (quantum theory, genetics, high speed computers, germ theory of diseases) to system approach (interdisciplinary research, geo-biology leading to web of life)**
- **Plug into good old resources base of humanity- solar energy, recycled materials, peer to peer networking to enable information flow**

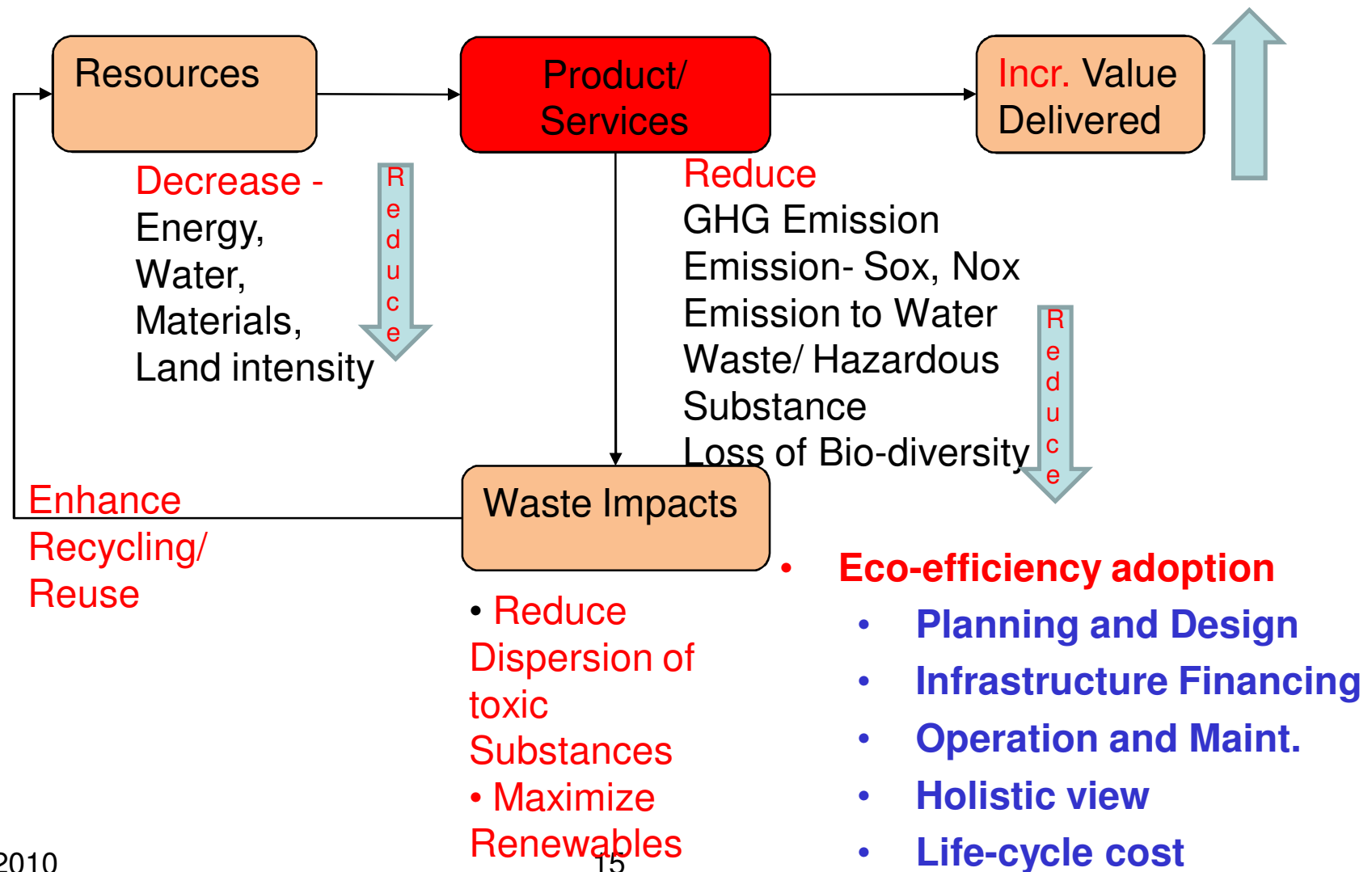
Eco-Efficiency Framework



- **Eco-efficiency = $\frac{\text{Product/ Service Delivered}}{\text{Environmental Impact}}$**

Eco-Efficiency Criteria

Reduce, Recycle, Reuse



a few Infrastructure Indices - 2020



SI No	Sector	Index	Target Index(2020)	Invest (Rs Cr)
1	Railways (railkm/ 1000sq km)	16.90	30	14000 (by 2020)
2	Roads- All Roads (km/ Sqkm) NH+SH km 2 lane & more	1.09 21486 6696 (10%)	1.50 40000 66456 (55%)	125000 (by 2020)
3	Energy (units per capita- annum) T&D loss Peak Energy Deficit Peak Deficit MW	700 (9559MW) 28% 13.7% 26.5%	1400 (18500MW) 15% 0 0	85000 (by 2020)
4	Renewable Energy	2767MW (4%)	7093MW (by 2014)	23890 By 201416

12/3/2010



a few Infrastructure Indices - 2020

o	Sector	Index	Target Index	Invest (Rs Cr)
5	a. Airports	4	11	1500 (by 2012)
	b. Air strips		13	
6	Rapid Mass Transportation (km)- Bangalore	0	693km (Metro-103+HSRL-34+Mono-60)	27000 (by 2017)
7	Ports (MMT/Annum)	44	142	7506
7	Logistics (Food Processing)	18% GDP	9% GDP	
8	Forest Cover	16.7%	33%	

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What we see depends mainly on what we look for - H.A. Overstreet

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Other Indicators



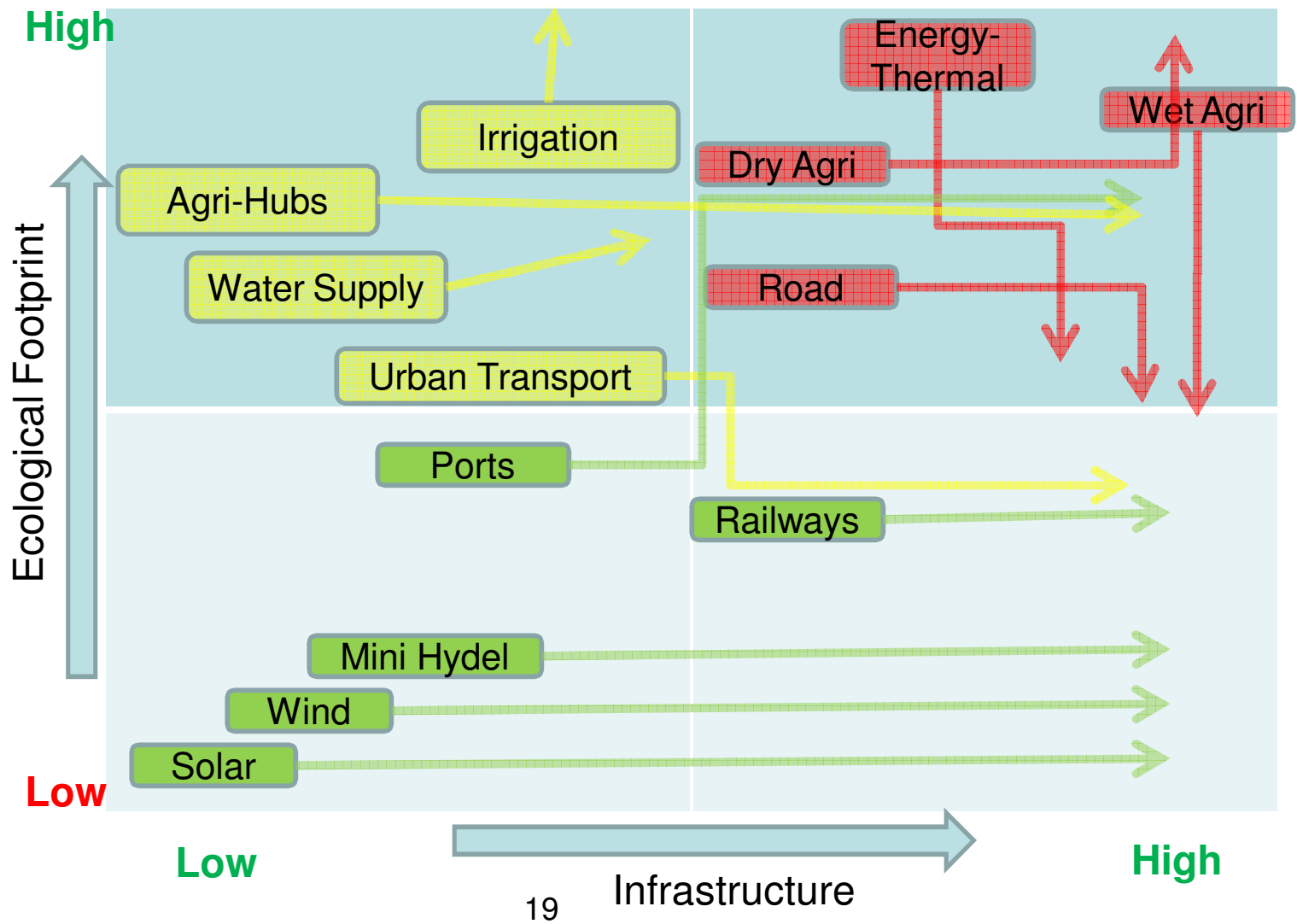
Sl No	Current year	Index	Target 2020
1	% Employment in Agriculture	61	35-40 2-3 Lakh shift to Ind/ Dervices
2	Literacy Rate(%)	67	100
3	Agri Growth Rate (%)	0.80	3-4

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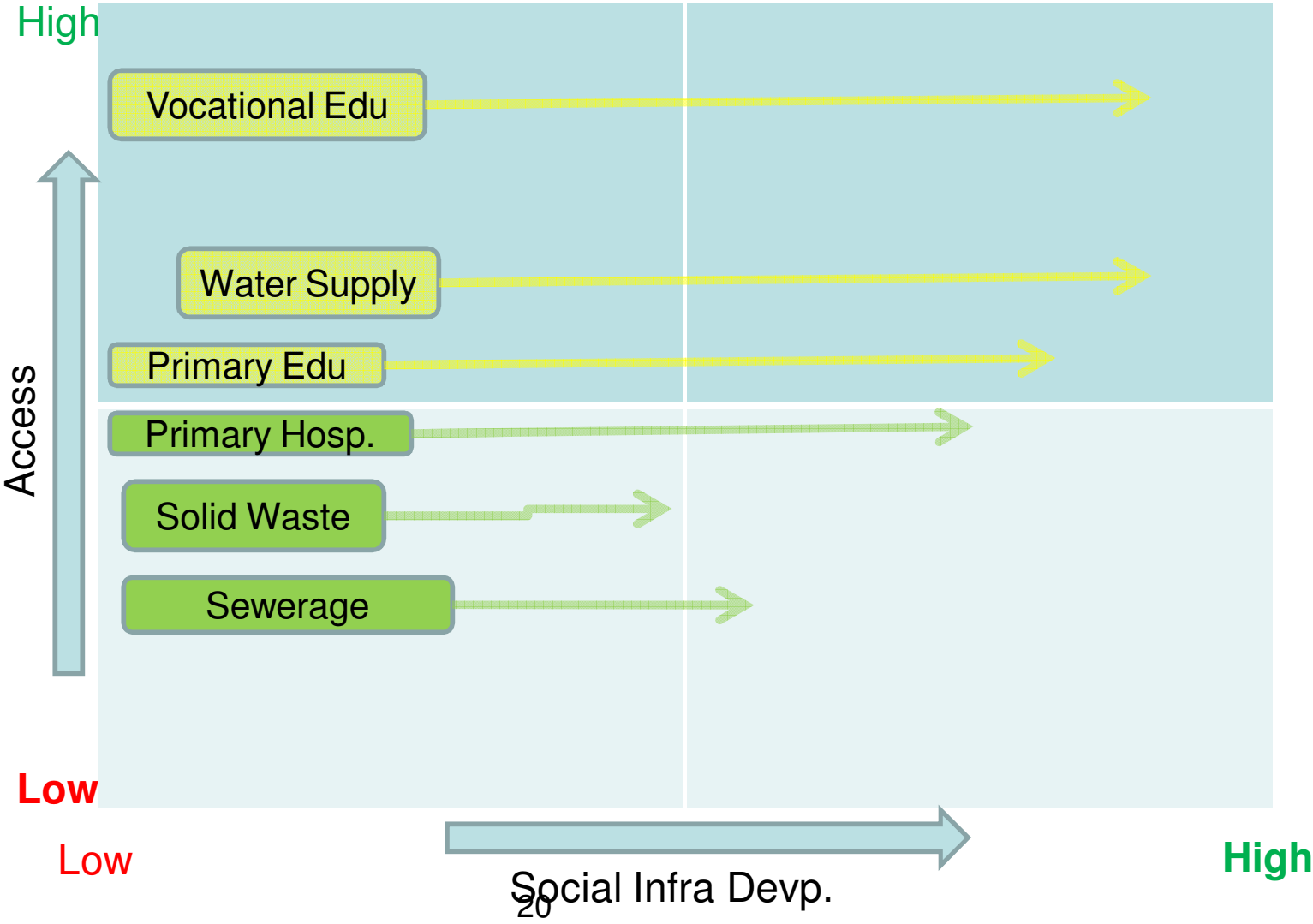
No one knows what he can do till he tries - Publius Syrus

Infra Eco-Footprint :

Present and Future



Social Infra Vs Social Inclusion



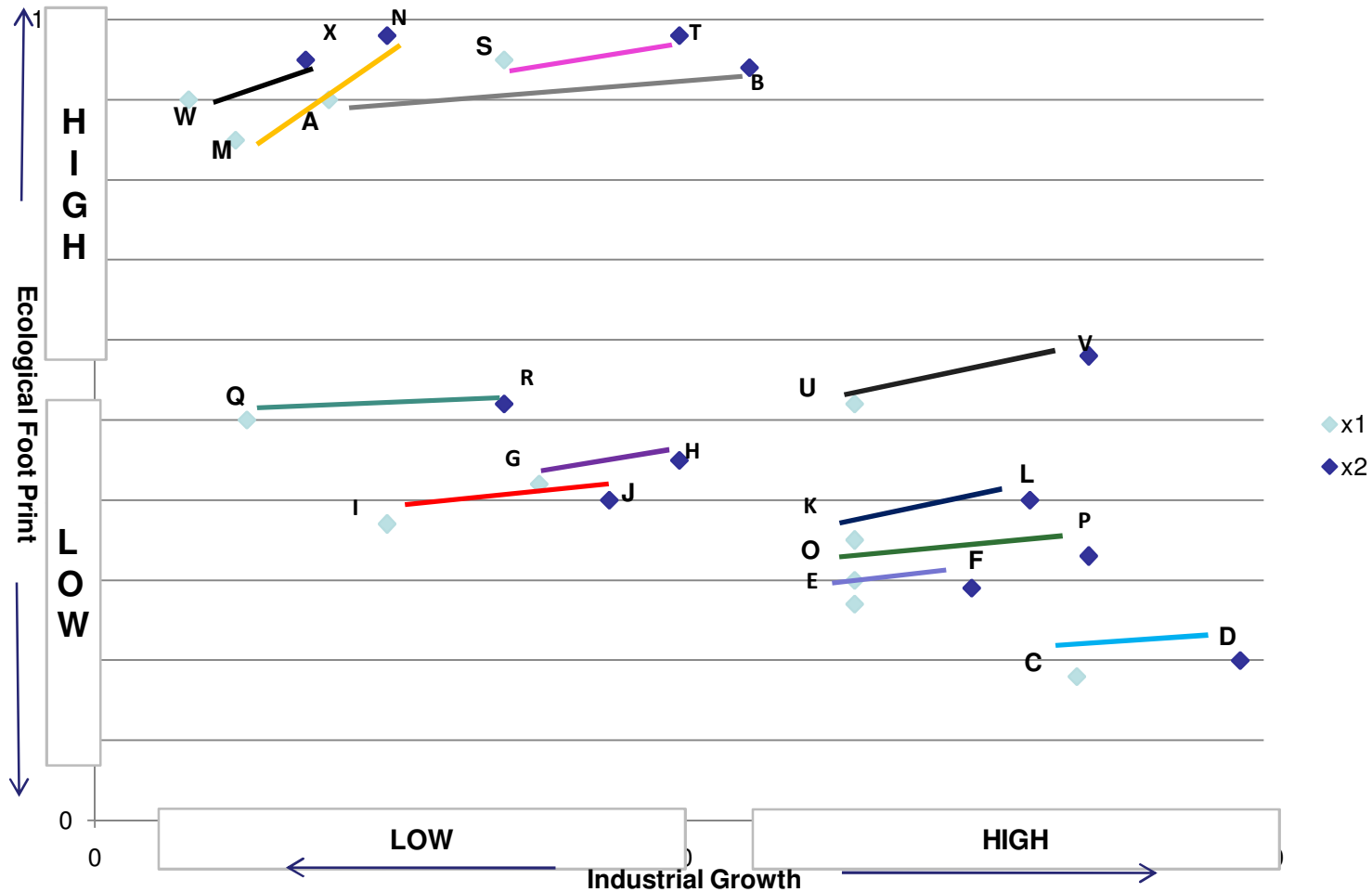
India's Carbon Emission

- **India's Carbon Emission (Base year 2007, projected at 9%)**
- **World:**

Year	CO2 Emission in '000 MT *
2007	1612362
2008	1773598
2009	1950958
2010	2146054
2011	2360659
2012	2596725
2013	2856398
2014	3142037
2015	3456241

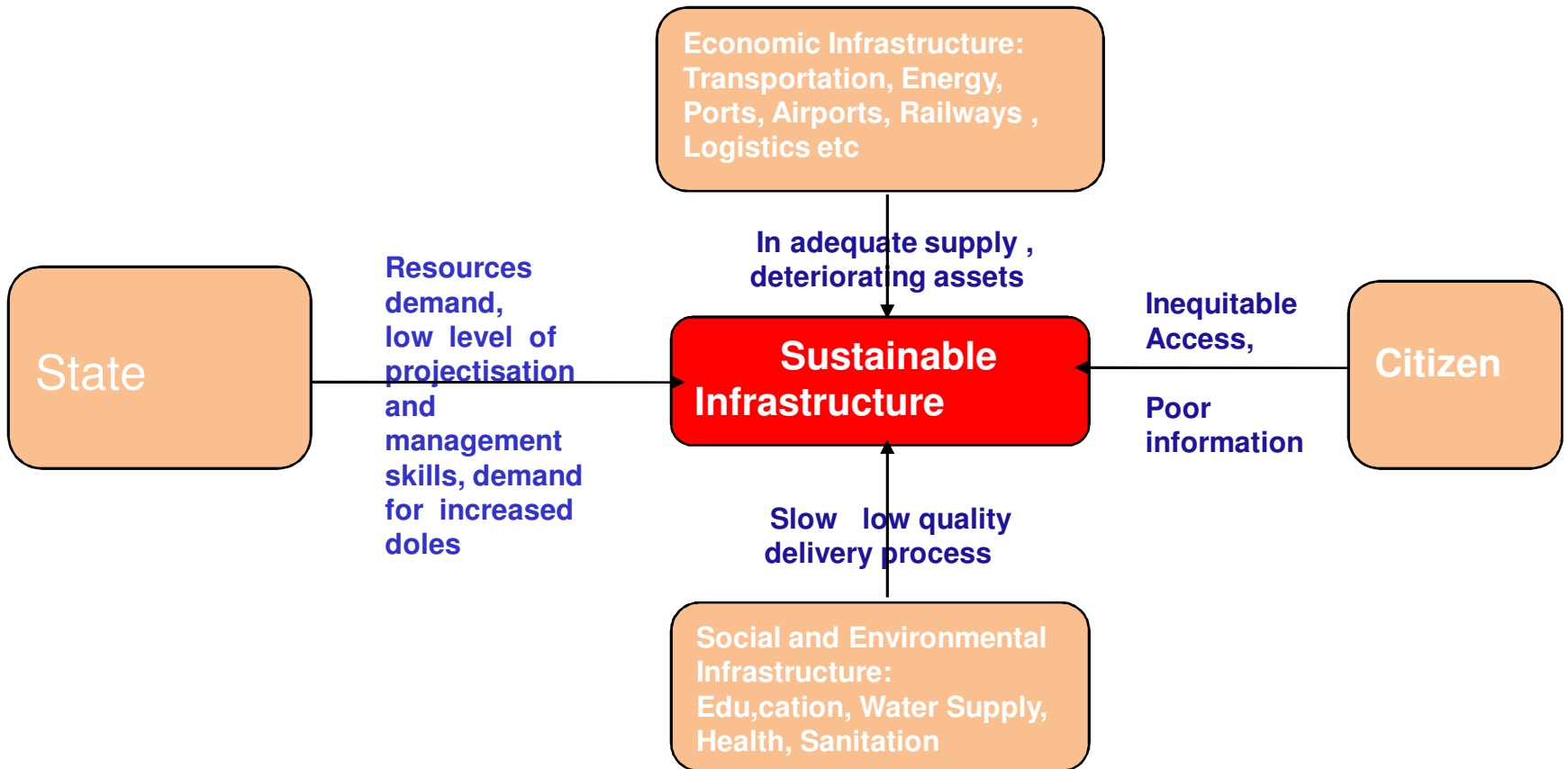
* Carbon Dioxide Information Analysis Center Data collected for UN

Industrial Growth- Present & Future



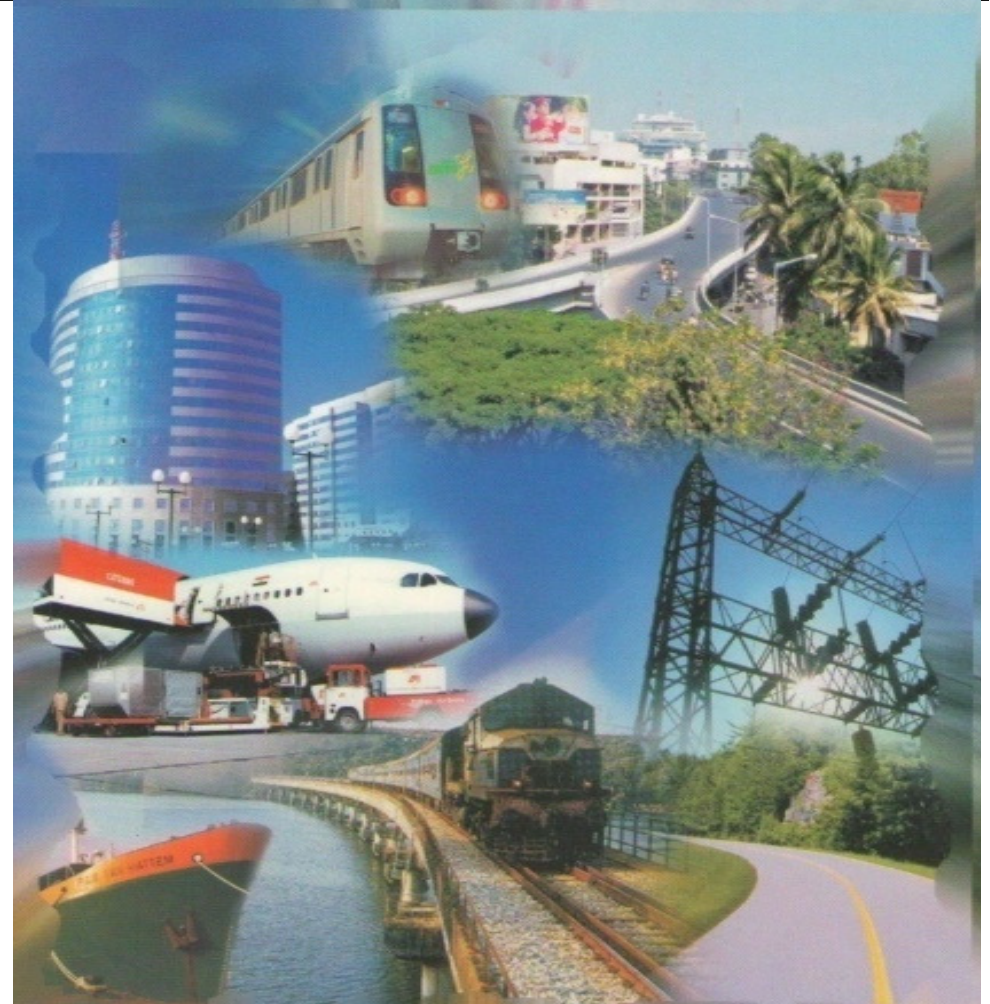
AB	Aerospace Sector	MN	Iron / Steel	<u>Industrial Zones</u>
CD	Software / Hardware	OP	Sugar	
EF	Electronics / Telecommunication	QR	Textiles	
GH	Engineering	ST	Drugs & Chemicals	
IJ	Automobile	UV	Distillaries / Breweries	
		WX	Distilleries / Breweries	

The philosophy of one century is the common sense of the next
- *Henry Ward Beecher*



VISION 2020

- **Triple –bottom Concept**
 - **Financial Viability**
 - **Environmental sustainability**
 - **Social inclusiveness**
- **Infrastructure Policy**
 - **PPP route –**
 - **Swiss Challenge**

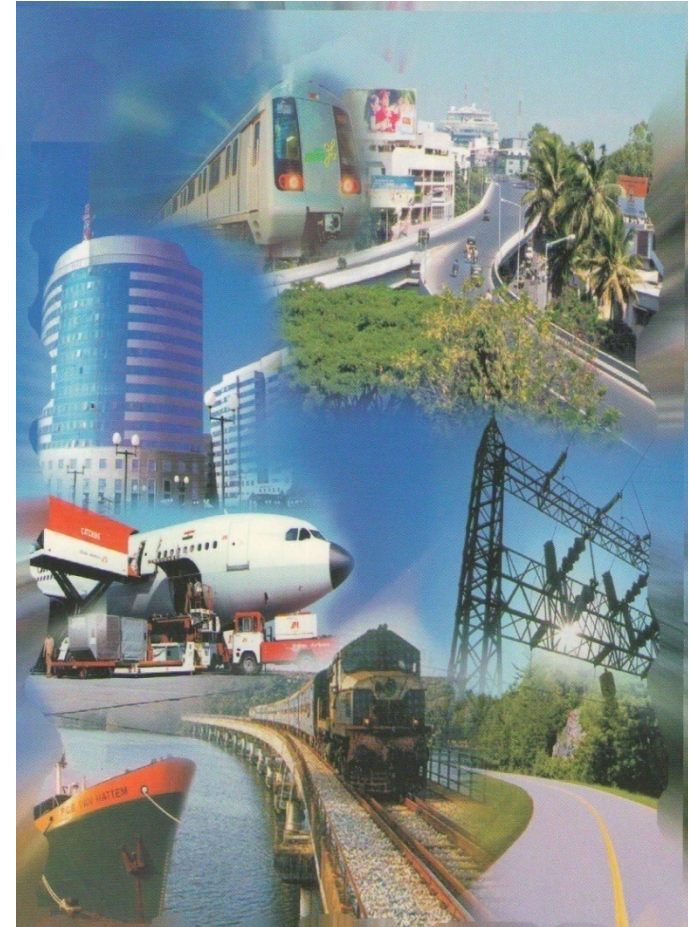


The best preparation for tomorrow is to do today's work superbly well

- William Osler

Sector

- Agri-Infrastructure
- Education
- Energy
- Healthcare
- Industrial Infrastructure
- Irrigation
- Public Markets
- Tourism
- Transportation & Logistics
- Urban and Municipal Infrastructure



Focus Areas

- **A. Projects:**
- **Logistics**
 - (just in time)*
 - Airports
 - Ports
 - Roads
 - Urban transportation
 - Railways
- Energy
- Industrial Infrastructure
- Tourism
- **B. PPP Structure & Issues Initiatives**

We think in generalities, but we live in detail - Alfred North Whitehead

Initiatives

- **Standardised**
 - **Bidding Documents**
 - RFQ
 - RFP
 - **Model Concession Agreements**
- **Approval Mechanism**
 - **SWA established**
 - **SLHCC**

What we need is more people who specialise in the impossible – Theodore Roethke

Infrastructure- *Issues & Requirements*

- Enabling Policy and Regulatory Framework**
- Long-term equity and debt**
- Capacity to manage the PPP Process-
Shelf of credible, bankable Projects**
- Private Sector capacity to invest in projects**
- Acceptance among the stakeholders**

Issues in PPP

- **Size of Infrastructure investment- 20.5 Lakh Cr in 11th plan**
- **(GOI-40:SG-30:Private-30)**
- **Value For Money**
- **Public Sector comparator**
- **Monopoly in PPP- Art 12**
- **RTI**
- **CAG**
- **Perceptions & Attitudes of Governance- the three arms**
- **Dynamic Concession period**

Issues in PPP

Regulatory Framework

Risk Sharing- Political & Commercial risks

Fourth Estate

Gap in funding- IRR for private sector

**Micro- management Vs Macro-
management**

Sustainable Infrastructure

Every ceiling, when reached, becomes a floor, upon which one walks as a matter of course and prescriptive right. – Aldous Huxley

SWISS CHALLENGE

- Clause 29 of the Infra '07 policy
 - Innovative/ *suo moto* Proposals
- Procedure
 - Proponent Submits proposal for Prelim examination
 - Provide 'approval to proceed' with studies
 - Submits a DPR with output based specification
 - Project Bid out
 - Original proponent has first right of refusal if Bid Value within 15%

Central Assistance- VGF

- **PPP project should be from-**
 - Roads, Sea ports, airports, inland waterways, Power, Urban transport, water supply & sewerage, solid waste and other physical infrastructure
 - Infrastructure in SEZ
- **Government Support**
 - VGF not to exceed 20% of the total project cost- Land cost
 - Government or statutory entity can top up with another 20%

Incentives & Concessions

- A. Facilitation:
 - Land to be acquired if required
 - Clearances
 - Provision of water & power
- B Asset based Support
 - Land would be acquired
 - Allowing Commercial development
 - Develop critical linkage Infra

Incentives & Concessions

- C. Tax Concessions:
 - Entry & Spl Entry Tax on Machinery, Equipments & Construction materials- Limited to 25 Lakhs & 3 years
 - Stamp duty on land transfer in Zone I(100%0, II(50%))
 - Conversion fine- same pattern as above
- D. Take or pay Guarantee
- E. VGF

Deliverables by Government

- Clearances
- Land Acquisition
 - Compensation payment
 - Market value of land
 - Replacement value of building
- Resettlement & Rehabilitation
 - Dislocation allowance
 - Allocation of proportional as
 - *Share in the new project ?*





HOW to proceed in PPP?

Time	No of Studies	Projects
30/04/10	32	49
31/ 07/ 10	26	26
31/ 12/10	Dept Master Plans	100

* each studies has more than one project

Project Development

Sl.No.	Sector	Under Planning/Procurement		Under Implementation		Completed		Total	
		Nos	Cost (in Cr.)	Nos	Cost (in Cr.)	Nos	Cost (in Cr.)	Nos	Cost (in Cr.)
1	Agri-Infrastructure	8	855.75	0	0.00	0	0.00	8	855.75
2	Education	0	0.00	0	0.00	0	0.00	0	0.00
3	Energy	4	7350.00	0	0.00	0	0.00	4	7350.00
4	Healthcare	0	0.00	0	0.00	0	0.00	0	0.00
5	Industrial Infrastructure	15	24346.00	0	0.00	0	0.00	15	24346.00
6	Tourism	7	1164.00	0	0.00	1	32.00	8	1196.50
7	Transport & Logistics	39	29398.59	7	1383.33	3	3006.29	49	33788.21
8	Urban and Municipal Infrastructure	2	144.32	0	0.00	4	108.64	6	252.96
Total		75	63259.16	7	1383.33	8	3146.93	90	67789.42

Silence is deep as eternity; speech is shallow as time - Thomas Carlyle

KEY PROJECTS

SI No	Name of the Project	Project cost (Rs Crore)	Relevance	Status
1	Bellary Airport <u>Airport Projects (1/2)</u>	140	Connectivity Steel City- Fast growing region	Project Development Agreement to be signed
2	High Speed Rail	6689 (<u>completion cost</u>)	Connects City to Airport - BIAL	RFP Stage; Bid by 12/08/2010
3	Sea Port at <u>PORTS</u> Tadri (35 MT expandable to 114 MT)	3000 Phase - I	To serve the Cement, Steel & auto Region	RFQ issued on 15 th Apr; Response by – 30 June 2010 (Pre-bid on 05/06/2010)
4	Sea Port at Haldipur (19MT- Swiss Challenge Project- MEL)	1900	To serve the Cement, Steel & auto Region	DPR under Progress; Bid by Dec 2010
5	Monorail Project in Bangalore- <u>Corridor- 31 Km</u>	5600	To serve as feeder to Metro	DPR under process

KEY PROJECTS

SI No	Name of the Project	Project cost (Rs Crore)	Relevance	Status
6	Monorail Project in (Swiss Challenge-15KM-SCOMI- GEODESIC)	2100	To serve as feeder to Metro	DPR Stage Bid likely by end June or July 2010
7	<u>Energy /Gas</u> Pipeline Projects	7000 by GAIL	From Dhabhol- Bangalore	Under implementation; COD by Mar 2012.
8	City Gas distribution		Green Field Development	Feasibility Underway; Likely to be taken up in 12 towns/ cities along the Gas pipeline.
9	Mega Power Projects (Three projects of <u>700MW each</u>)	10500	To meet the Karnataka's Power needs	Gas based: PCKL- 2100 MW (Feasibility study done) Belgaum, Gadag, Davangere; Bid by June 2010 KPCL-1400 MW;

KEY PROJECTS

SI No	Name of the Project	Project cost (Rs Crore)	Relevance	Status
10	<u>Railway projects</u> (2421 KM) (1428 km - under progress +892km - newly sanctioned)	14000	To improve connectivity to ports, Industrial Zones.	1428 kms of Rail works under implementation. In 2010-11, 9 projects have been approved . Out of this for 5 projects GoK has approached Railways for sanction on PPP: 1. Hubli- Ankola, 2. Talaguppa- Honnavar, 3.Kudchini- Bagalkot, 4.Bijapur- Shahbad, 5.Dharwad- Belgaum. DPR ready for first three.
11	Roads (<u>general</u>)	3500	1600 km	NIT by Jun/July 2010 (partly issued)

KEY PROJECTS

SI No	Name of the Project	Project cost (Rs Crore)	Relevance	Status
12	SH-69 & NH 63 – Roads to Ports	1600	Connectivity to ports	SH-69: Feasibility under examination; NH-63: NHAI- preparing feasibility report
13	SH- 132 Road	160	26 Km	Under Procurement
14	Logistics Architecture in Karnataka for fruits and Vegetables	680	To serve Karnataka's horticulture and provide both backward and forward linkages	Feasibility Study done in respect of Belgaum, Bijapur, Gadag, Dharwad and Bagalkot
15	<u>Food Parks</u>	100		Mid Tender stage in respect of Bangalore Rural, Tumkur, Shimoga, Davanagere, Bijapur, Haveri and Belgaum Districts

KEY PROJECTS

SI No	Name of the Project	Project cost (Rs Crore)	Relevance	Status
16	VADA- Industrial Infrastructure	30345	State - of - the Art Industrial Park over 500 Sq Km in Bellary	Feasibility done; RFQ by June / July 2010
17	Convention Centre at Devanahally (Tourism)	1050	Will be the largest in	Bid Process completed
18	Other Tourism Projects <u>Tourism Projects</u>	1621	Tourism circuits, Golf Course, Aquamarine, etc.,	Partly under bid
19	Logistic Park at	154 (Phase - I)	Transportation, storage and Logistics in	Feasibility & DPR Stage
20	Devanahalli <u>Business Park</u>	9500	Business Hub by the side of the fastest growing Airport- Bangalore	RFQ by end June 2010

KEY PROJECTS

SI No	Name of the Project	Project cost (Rs Crore)	Relevance	Status
21	7 Intermodal Terminal HUBs		(6 in Bangalore 1 in Mangalore); To provide seamless interchange	Feasibility Study done for Peenya, Yeshvantpur, Yelahanka, Mysore Road, Majestic & Bayappanahalli
22	Airstrips at Raichur, Gadag, Bagalkot and Chikkamangalur <u>Airstrips Projects</u>	145	Air connectivity to Districts	PPP Annuity – Bid in June 2010
23	Renewable <u>Energy</u>	23890 (by 2014)	Sustainable Energy	Under Implementation
24	Sustainable <u>action</u>			

We are the change that we seek. – Barack Obama

Renewable Energy

Resource	Potential MW	MW	
		Allotted by 2009-10	Commissioned by 2009-10
Wind Power	13236	9234	1511
Mini and Small Hydro	3000	2351	451
Cogen. In Sugar Industry	1500	1078	648
Biomass/Bio-gas	950	476	87
Solar PV and Thermal	20000	129	4
Total	38686	14268	2767



Airport Projects (1/2)

No	Airports	Name of District served	Mode	Date of Commencement	Present Status
1	Bangalore	Bangalore City, Bangalore Rural, Kolar, Tumkur, Chikkaballapura	PPP	24.05.2008	Commissioned
2	Hassan	Hassan	PPP	May 2012	Work Started
3	Shimoga	Shimoga	PPP	Feb 2012	Work Started
4	Bidar*	Bidar	AAI	July 2012	New terminal building constructed. Awaiting MoCA clearances.
5	Bijapura	Bijapur	PPP	17.01.2012	PDA signed on 18.01.2010. Master plan under preparation
6	Mangalore	Mangalore	AAI	Operation commenced	New terminal building commissioned
7	Mysore	Mysore, Mandya	AAI	Commissioned	Commissioned. Operation to start.
8	Hubli	Dharwad	AAI	Operational Airport. The date for II phase operations will finalized after acquisition of additional land	Required additional land is under acquisition

The only difference between stumbling blocks and stepping stones is how you use them - Anon

Airport Projects (2/2)

No .	Airports	Name of District served	Mode	Date of Commencement	Present Status
9	Belgaum	Belgaum	AAI	Operational Airport. The date for II phase operations will finalized after acquisition of additional land.	Required land has been acquired.
10	Bellary	Bellary	PPP	September 2011	Concessionaire selected. PDA i signed.
11	Gulbarga	Gulbarga	PPP	Feb 2012	Work Started



We have a choice: to plough new ground or let the weeds grow - Jonathan Westover

Airstrips Projects

Sl. No	Category	District	Required land (acres)	Type	Present Status
1	I	Bagalkot, Davangere, Dui	250	For landing ATR 72	Bagalkot – Master plan ready; Davangere , Udupi – site yet to be selected by DC
2	II	Haveri, Gadag, Karwar, Kollegal	250	Initially the airstrip will be developed for a capacity of 25 seaters aircraft and to expand it later	Gadag – Master Plan ready; Haveri, Karwar, Kollegal : land to be selected by DC's
3	III	Chikmagalur, Kushalanagar, Chitradurga	60	Airstrip will be developed for a capacity of 25 seaters aircraft	Chikmagalur – Master Plan ready. Kushalanagar and Chitradurga – Land to be selected by DC

RAILWAY NETWORK



12/3/2010

All the darkness in the world can't put out the light of one candle - Confucius

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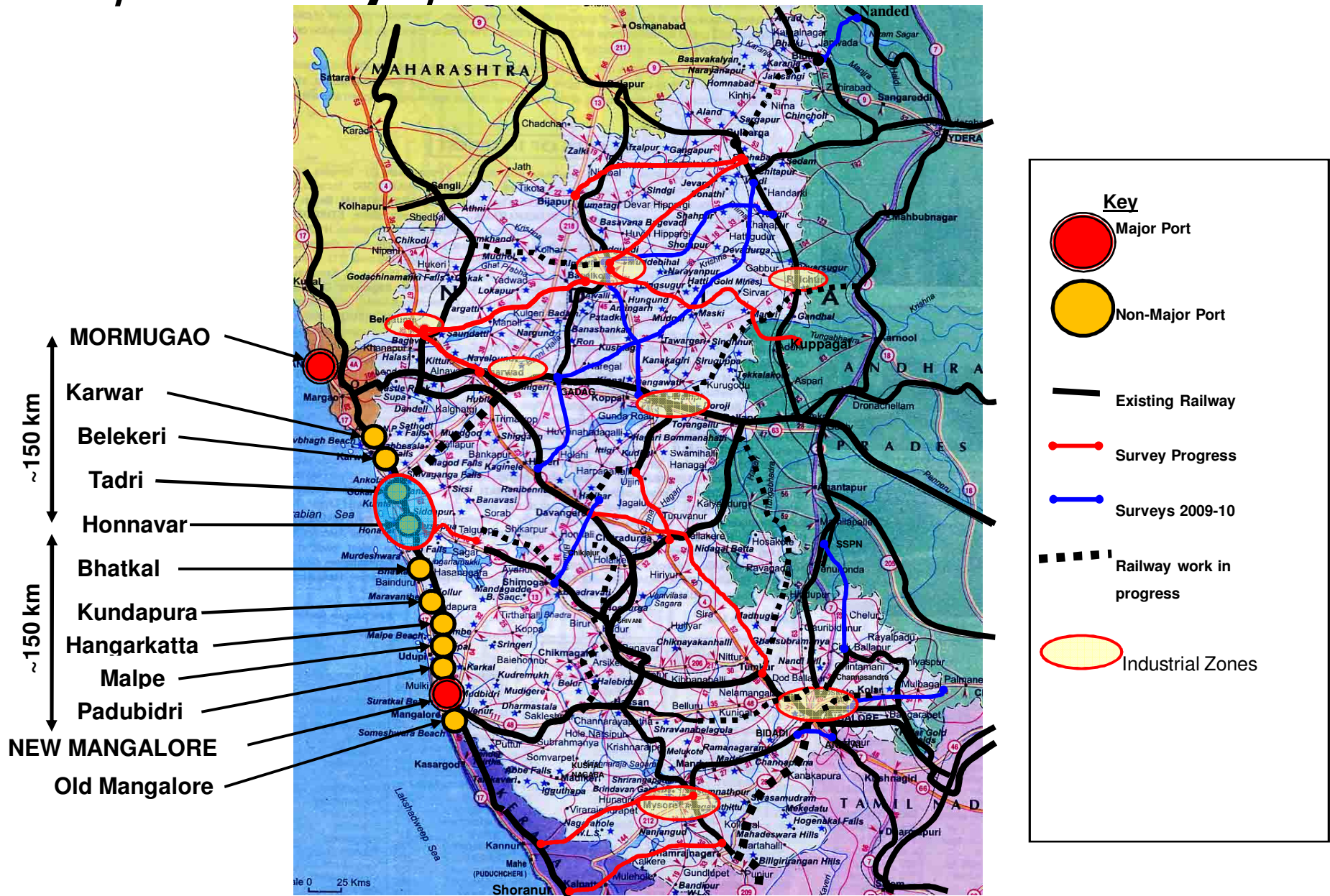
Railway projects in progress



Existing: 3200 km
New: 2421 km

NL: 17 cs:15
GC: 4 cs: 3
DL: 11 cs: 3

Port / Railways/ Industrial Zones



All our dreams come true, if we have the courage to pursue them - Walt Disney