

**ECO-RECYCLE PORT**

*For A Clean Environment and Quality Of Life on Earth*



# CREATIVE COMPANY LTD.

**RPPWF<sup>®</sup> / GREEN COAL<sup>®</sup>**

*As*

*Sustainable Growth Engine*

Kikuo Sagawa / Director / Tokyo International Office

UNEP-AIST Workshop on Waste Plastics Management  
for Developing Countries  
at AIST TUKUBA Center, March 2, 2011



## **CREATIVE COMPANY LTD.**

*Biomass Fuel*

*Manufacturing Industry*

- Japan Headquarter (Hiroshima) // Creative Co. Ltd., Eco-Recycle Port
  - Tokyo International Office (Marunouchi) // Creative Co. Ltd, Tokyo
- India Headquarter (Delhi) // Creative Ecology Private Ltd.,
  - India Office (Mumbai) // Creative Eco-Recycle Port Private Ltd.,
- UK Office (London) // Creative Eco-Recycle Port



[www.eco-recyclport.co.jp](http://www.eco-recyclport.co.jp)  
[www.eco-recyclport.co.uk](http://www.eco-recyclport.co.uk)



## Global Warming Effects - Entrepreneur from the Earth-wide Perspective



Early 1900s

◆ Our challenge is started from the vision of Ecologically Sustainable Growth.



Nowadays



## Innovator for Regional Energy Solution- **RPPWF<sup>®</sup>** **GREEN COAL<sup>®</sup>**

### ◆ Sustainable waste management to convert into resource:

- ✓ Locally Produced and Locally Consumed
- ✓ Different Strategies in Different Regions
- ✓ Focusing on Creation of Regional Employment

✓ Setting a Standard of 4R (Reduce-Reuse-Recycle-Recover)

✓ Being Conscious of CO2 Efficiency



## The Fuel of future – New Biomass Energy from Waste

### ◆ RPPWF® / GREEN COAL®

- ✓ Refuse Paper, Plastic & Wood Fuel
- ✓ Patented Fuel and Technology
- ✓ Alternative Fuel to Coal and Oil, registered as the Class 4 Solid Fuel in International Fuel List
- ✓ High Biomass Content of 80%-90%
- ✓ High Calorific Value of over 26MJ/Kg



## Smarter Characteristics - RPPWF®/ GREEN COAL®

### ◆ High Energy Fuel - Alternative to Coal:

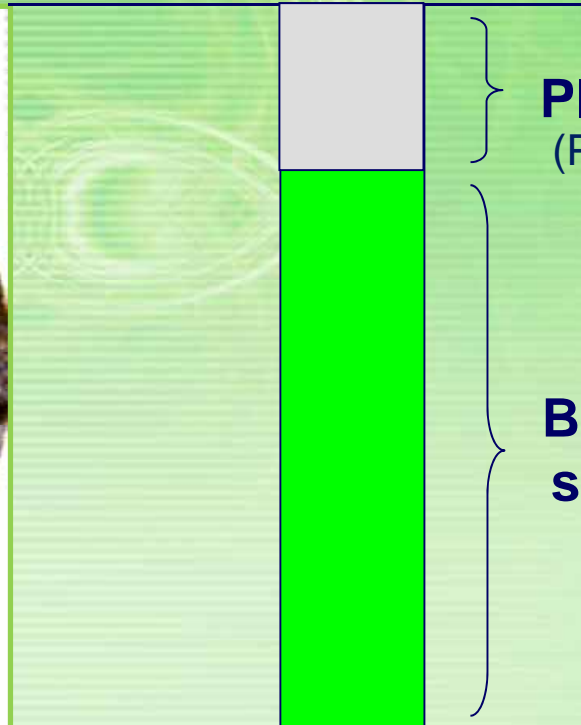
<b>Ranges</b>	<b>Coal</b>	<b>RPPWF®</b>
Calorific Value	19-22 MJ/kg	26 MJ/kg
Moisture	30-35%	7%
Active Material – Volatiles (% of total that will burn)	38-50%	97%
Ash	20%	2-3%
Sulphur	0.5-10%	Negligible



## Smarter Characteristics - RPPWF®/ GREEN COAL®

### ◆ High Biomass Contents:

#### Composition of Standardized Form

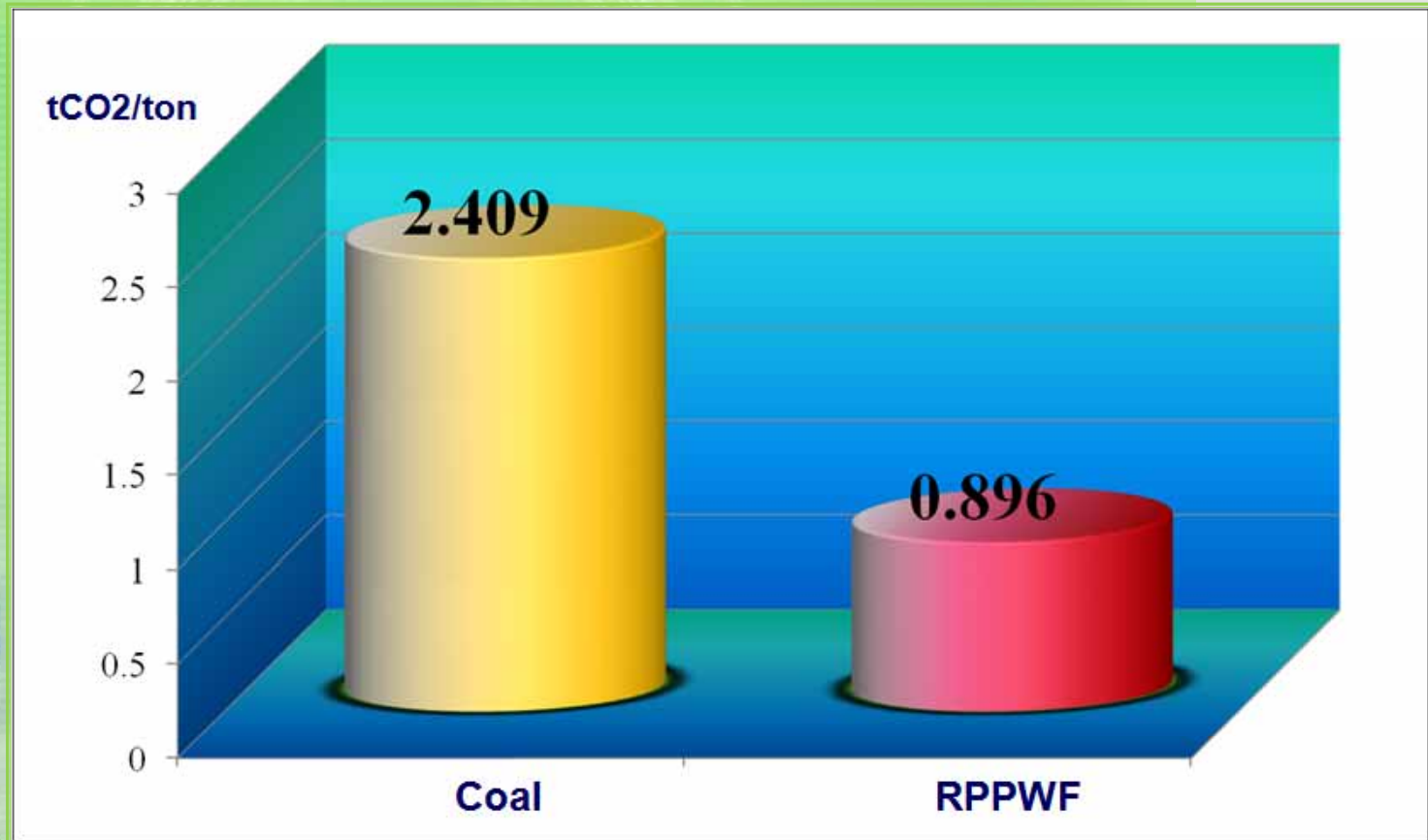


**Plastics: < 15%**  
(PVC Free)

**Biomass sources : > 85%**

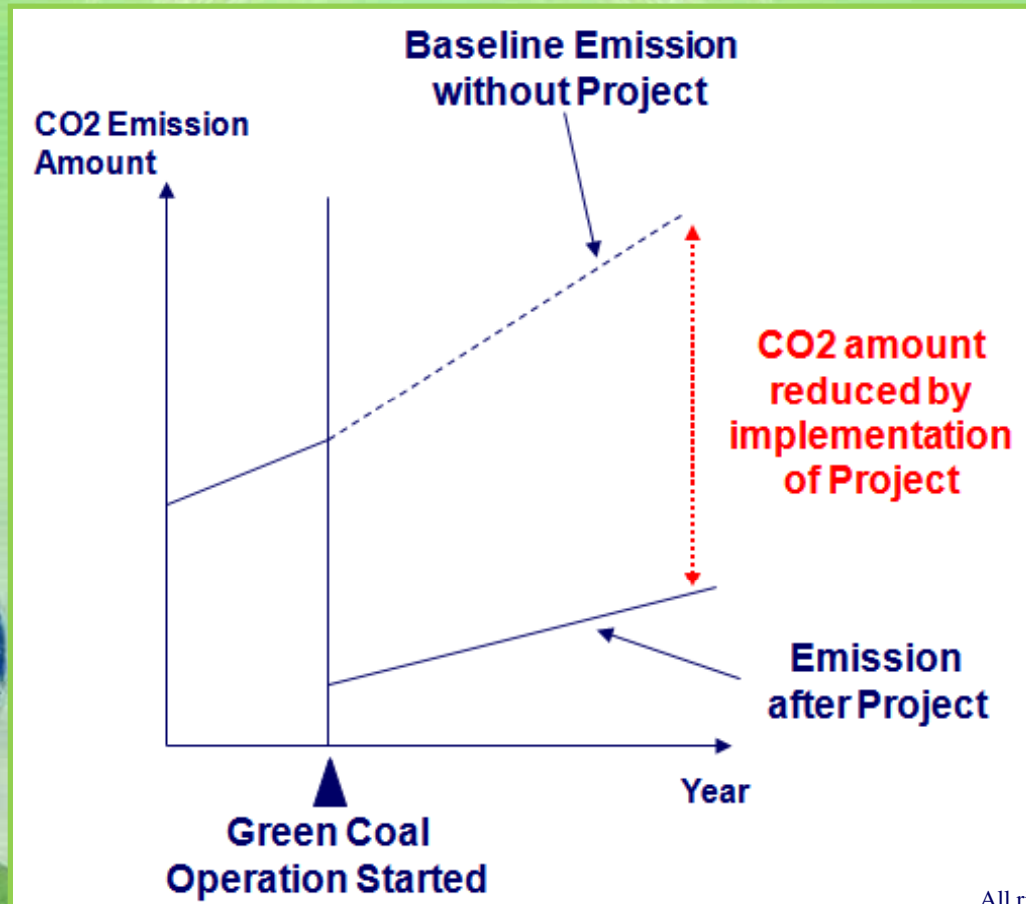
## Smarter Characteristics - RPPWF®/ GREEN COAL®

### ◆ Amount of CO2 Emission Level : RPPWF® vs Coal



## Smarter Characteristics - RPPWF®/ GREEN COAL®

### ◆ User's Benefit : Emission Rights



Operational Change

Conventional Boiler



Biomass Boiler

## Impact on Environment & Business (Comparison with Fossil Fuel)

**80% reduced !**  
Running Cost (Boiler)

RPPWF®

**70% reduced !** **GREEN COAL®** **100% obtained !**

CO2 Emission

Emission Rights



## Impact on MSW Management

(MSW: Municipality Solid Waste)

### ◆ MSW focused RPPWF® / GREEN COAL® Deployment:

Municipal Solid Waste



RPPWF®/ Green Coal®



Operation  
Deployment

MSW Stream

**Reduced!**

Boiler / Plant Ash

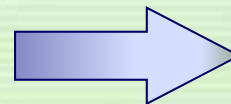
**Reduced!**

Workload for Landfill

**Reduced!**

Landfill Capacity

**Reduced!**



Total MSW Cost

**Reduced!**

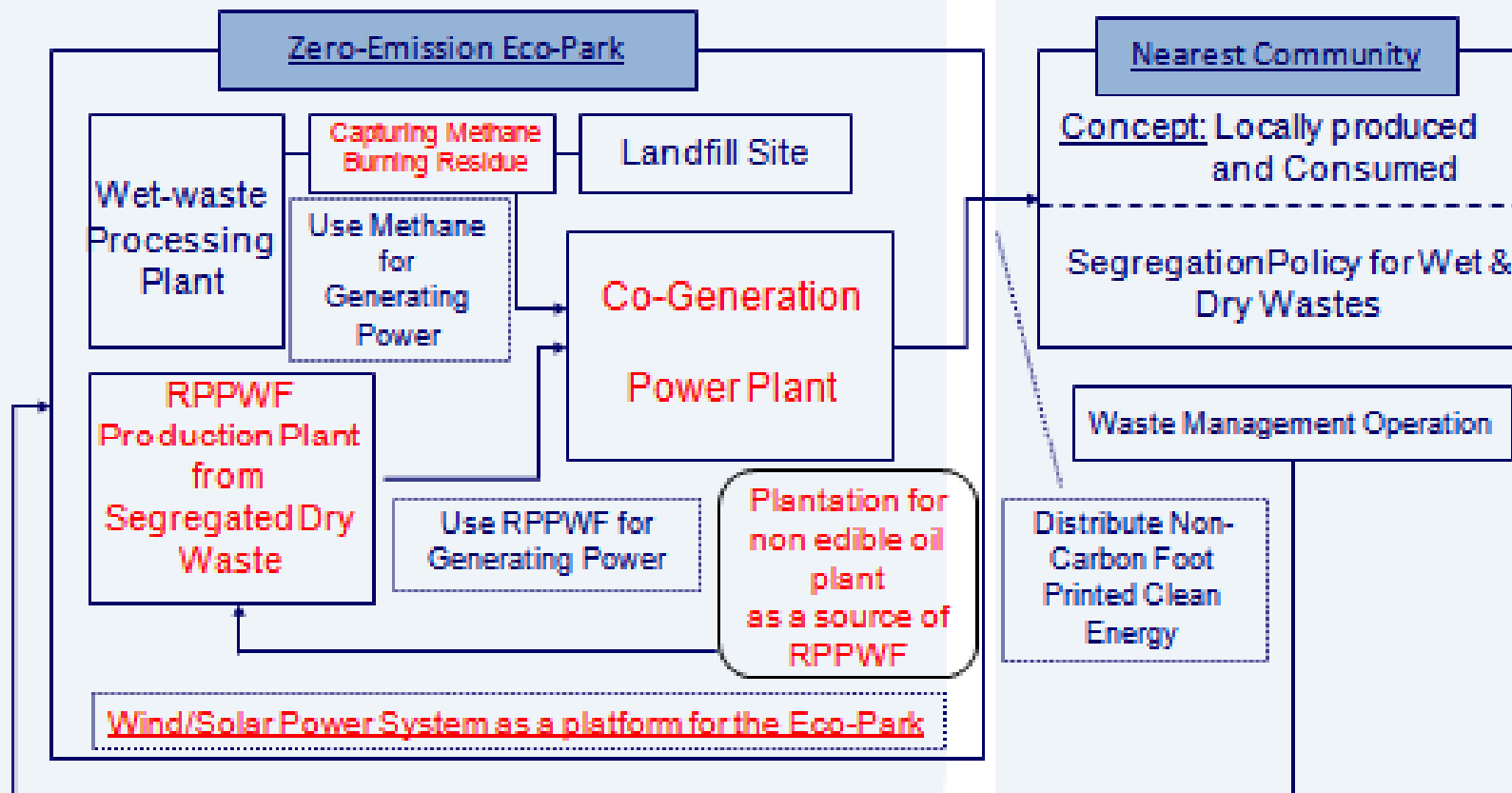
## Zero – Emission Consortium Enhancement

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- ✓ Closed Loop Value Chain in Local Community
- ✓ Definition settings for “Garbage” and “Waste”
- ✓ Energy Producing Processes with “Garbage” and “Waste” respectively
- ✓ Synergetic Combination with other Low-carbon Technologies
- ✓ New Agricultural Business Setup for Energy<sub>12</sub>



# Zero – Emission Consortium Enhancement



Figures in Red: Synergetic Facility/Function for Zero Emission

## Zero – Emission Consortium Enhancement

### ◆ Synergy with “Heat-pump” low carbon technology:

RPPWF®/ Green Coal®



+

Heat – pump Technology



✓ Highest Impact on Energy Cost Reduction

✓ Highest Impact on CO2 Emission Reduction

## Our Mission for Low-carbon Tech Introduction in India

- ◆ Creative Co. Ltd. is authorized for delegation of Japanese Government's ODA Program in India :



Japan International Cooperation Agency



CREATIVE LTD.  
Ecology Recycle Port



Institute for Global Environmental Strategies

## Our Indian Operation / Project

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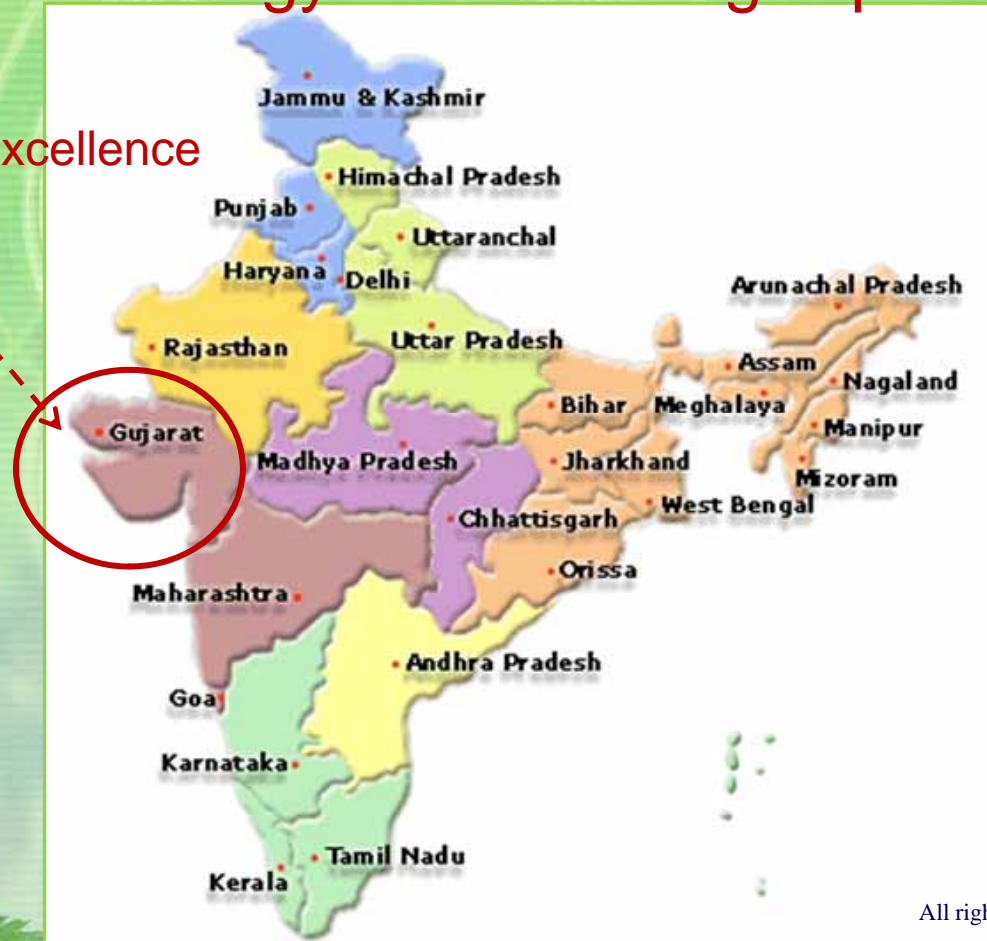
- ✓ MOU with the State of Gujarat in 2009
- ✓ Public-Private-Project (PPP) in Gujarat is in progress as our Flagship Project
- ✓ Enhanced MOU with the State of Gujarat in 2011 in wider scope of RPPWF®
- ✓ Received EOI from the Key State Governments



## Our Indian Operation / Project

### ◆ Indian-wide Strategy from the Flagship Project in Gujarat:

Project  
As the Center of Excellence  
in India



## Our Indian Operation / Project

### RPPWF® Bio-mass Fuel Production Project in Ahmedabad, Gujarat

**PPP Project Between Ahmedabad Municipality – Creative Co. Ltd.**

**State :** Gujarat

**Place :** Gyaspur, Ahmedabad

**Land :** 25 acres (Leased by AMC for 30 years)

**MIX MSW Volume :** 800 tons/day (committed by AMC)

**Capacity of Plant (ton/hr) :** 8 tons/hr (Average)

**Annual Production Volume:** approx 60,000tons/yr

**Main Users of RPPWF :** Manufacturing companies in SEZ

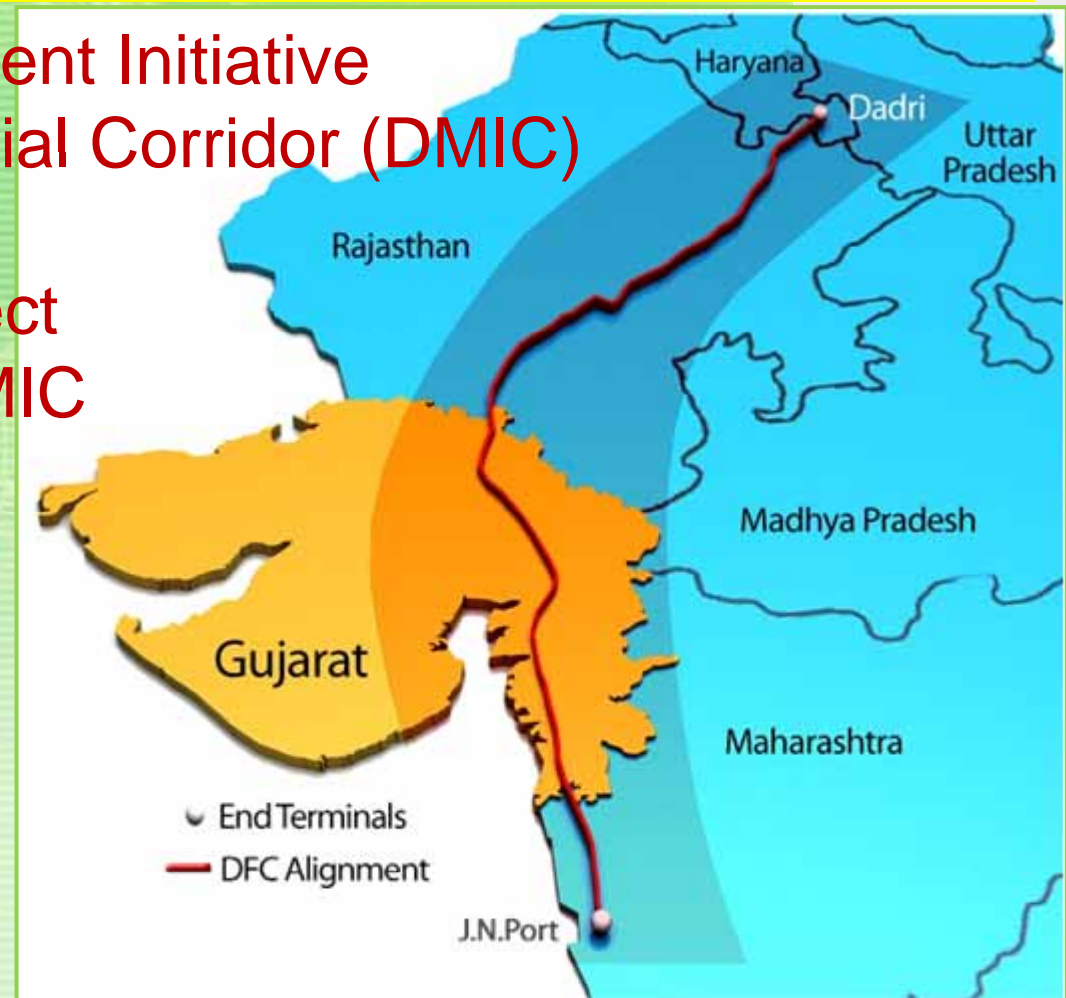
(Infrastructure such as Electricity, Water/Drainage are provided by AMC)

## Our Indian Operation / Project

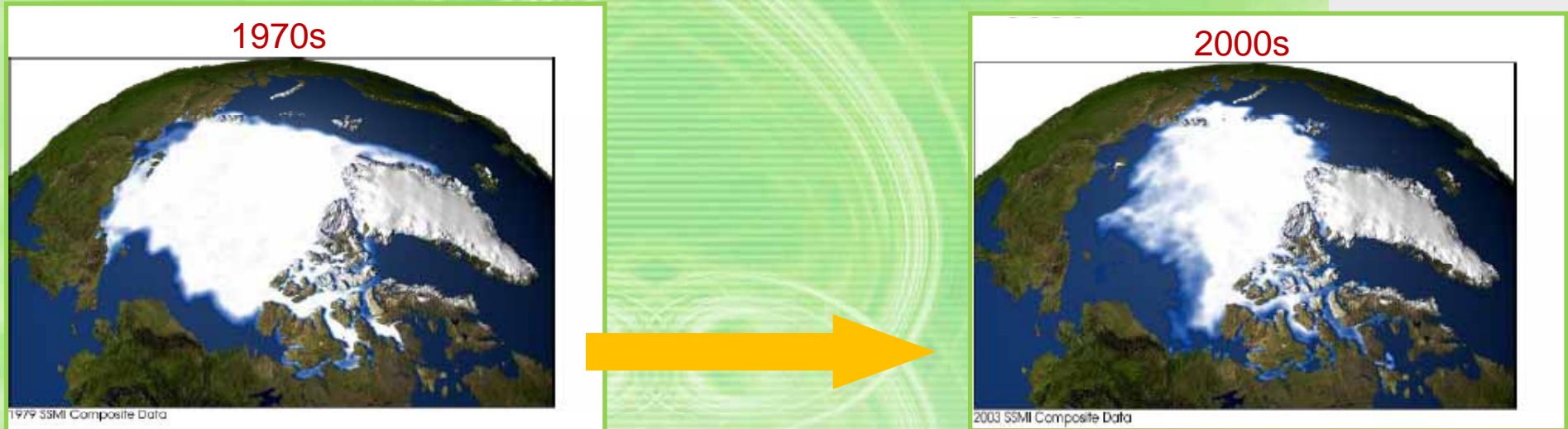
- ◆ Japan-India Government Initiative  
Delhi-Mumbai Industrial Corridor (DMIC)

Smart-township Project  
along side of DMIC

(RPPWF<sup>®</sup> is in SCOPE.)



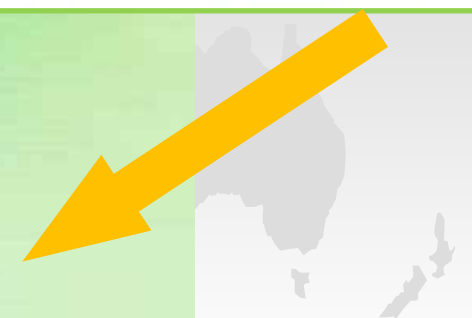
## Our Challenge to the Future



Ice-cap is shrinking



Let's Turn-back the **CLOCK**  
with  
**RPPWF<sup>®</sup> / GREEN COAL<sup>®</sup> !!**



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*Thank you for your attention.*



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