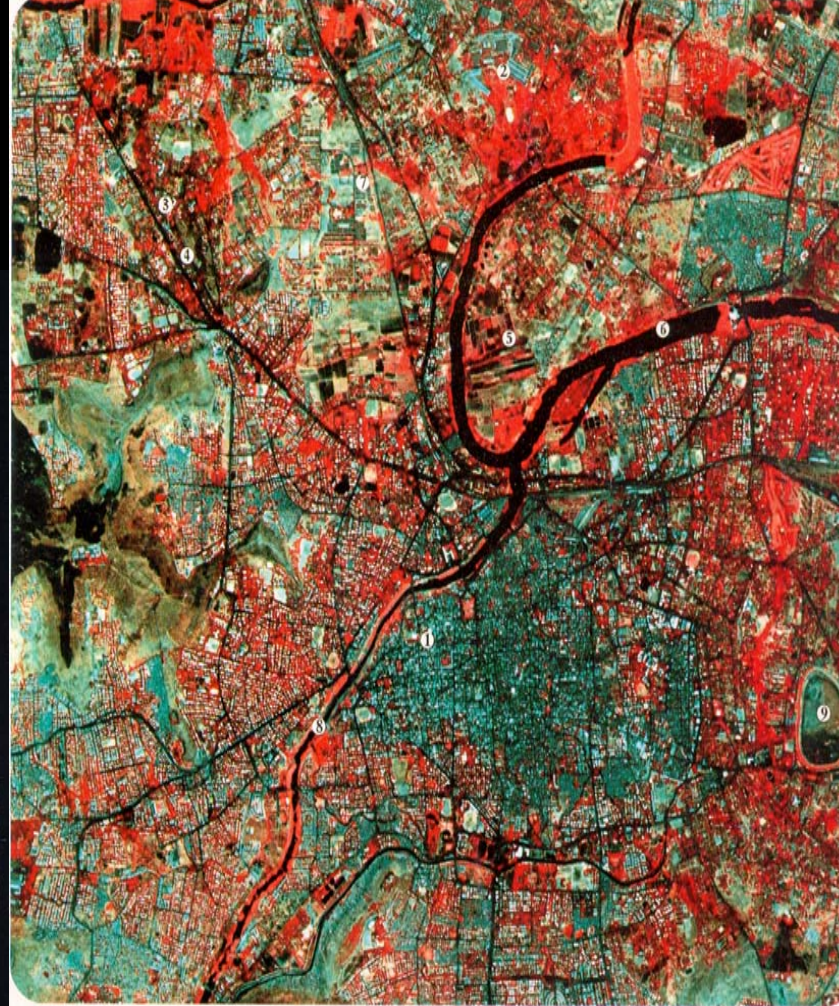




**Development of Eco-City
concept in Pune City**

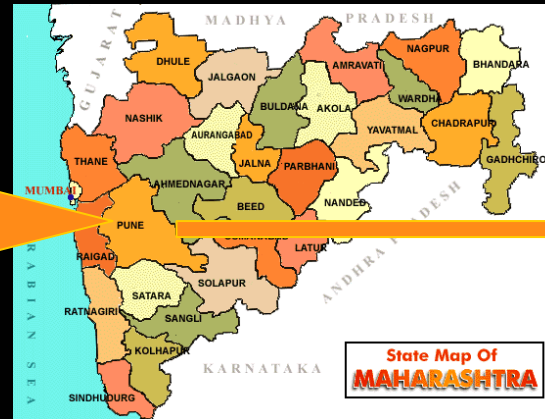
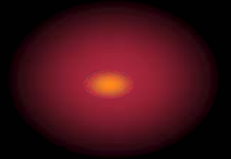
**Mr.Dinesh Girolla
Pune Municipal Corporation
INDIA**

EARTH



PUNE

Location



About Maharashtra State



- Maharashtra State is located in western part of India.
- One of the most important State in the country.
- It has many reputed Educational Institutions, Major International Industries, IT Companies etc.
- Has a reasonably good climatic condition.
- Major attraction for many International Companies for investments.
- Population 85 million.(2001 census)

About Pune Municipal Corporation Area



- Pune is located in western part of Maharashtra State of India.
- Established in 1950.
- Population 3.18 million.(2006)
- Area 243.97 sq.km.
- Altitude 560m above MSL
- Cordinates 18 34" N 73 58"E

About Pune Municipal Corporation (PMC)



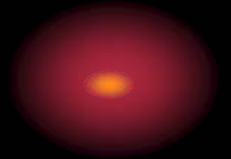
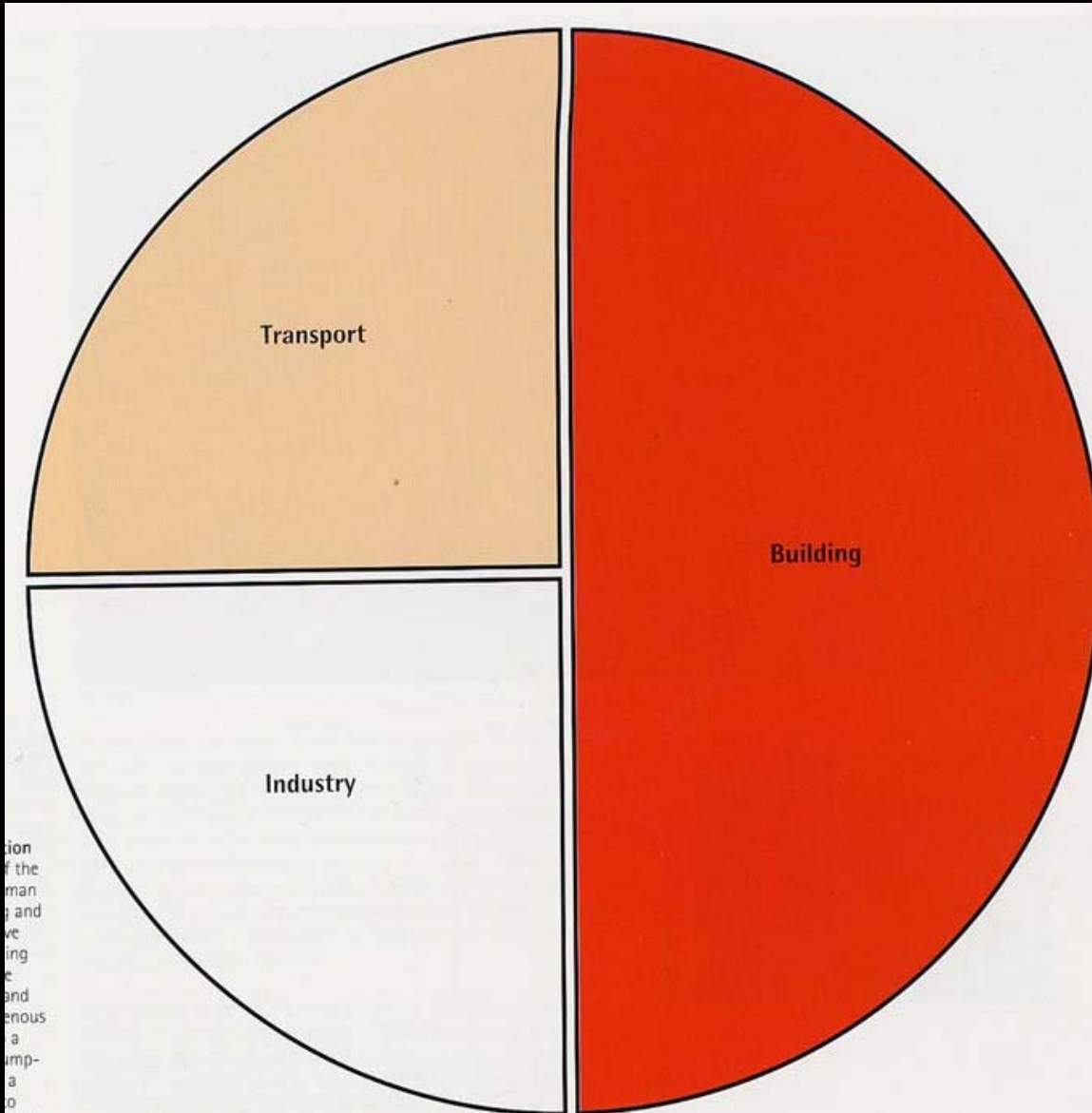
- One of the most important city in the country.
- Has a very good climatic condition.
- Destination for major Industries, Educational Institutions, IT companies and Allied Industries
- Good connectivity with Mumbai and other parts of the country by Road, Railway and Airways.
- Proposed International Air Port
- Large Pull factor.

Major Industries in and around Pune



- **Manufacturing Industries:** Bajaj Auto – Kawasaki, Bharat Forge Ltd., Kinetic Engineering, Tata Motors, Dailmer Chrysler, Mercedes Benz, Cummins Engines Co.Ltd., Whirlpool, Frito Lay, Coco Cola.
- **Software Industries** – Tata Counsultancy Services, Infosys, Wipro, Satyam, Mahindra British Telecom, Mastek Ltd., Kanbay Software, Cybage, HSBC Global Industries, IBM, Sybase, EDS, I –Flex, Cognizant, Sasken, KPIT, Amdocs, Avaya, Veritas, Aftek Infosys, Syntel, Zensar and TIBCO.

World energy consumption



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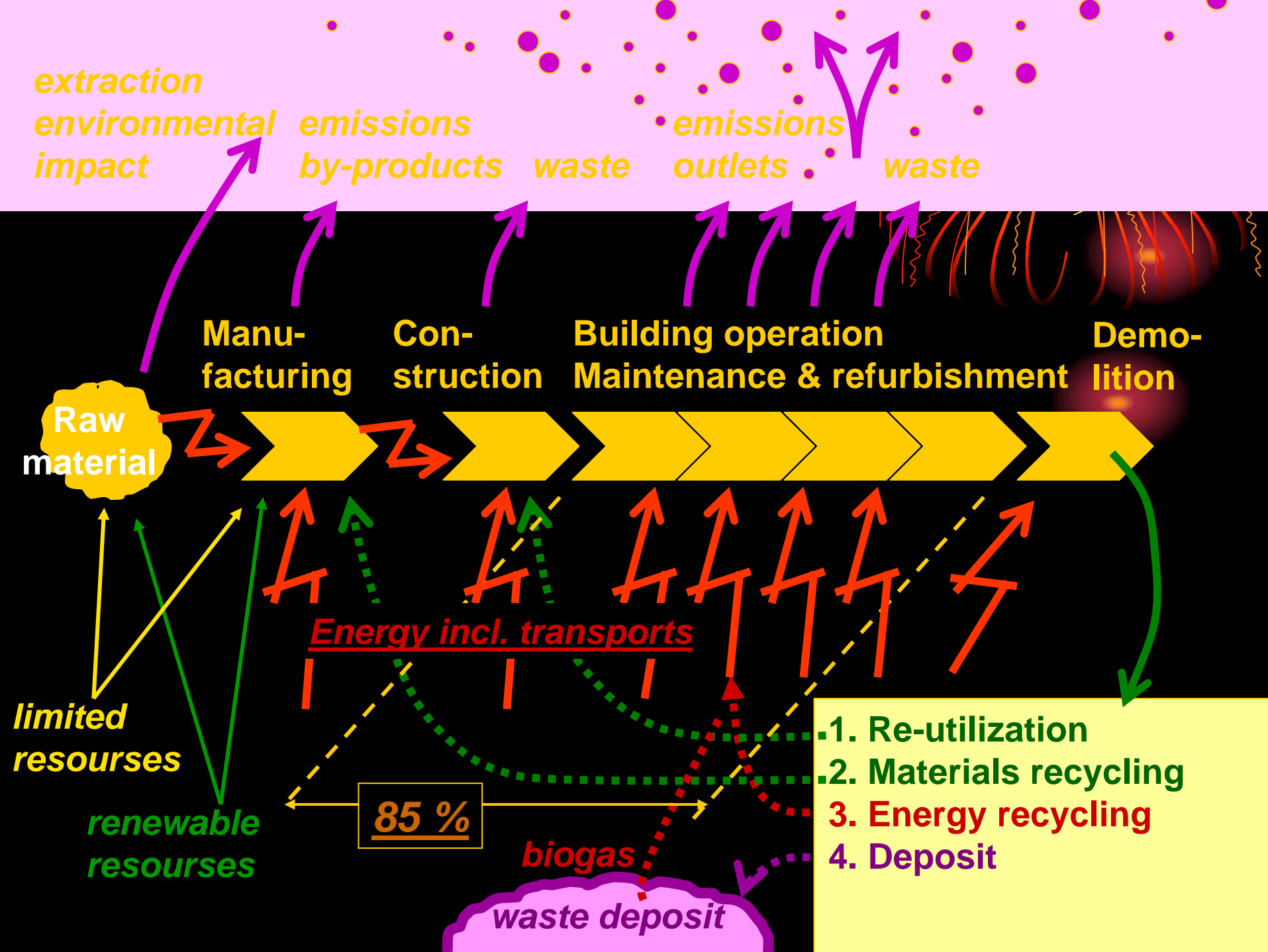
SUSTAINABLE DEVELOPMENT

the overall VISION of the concept



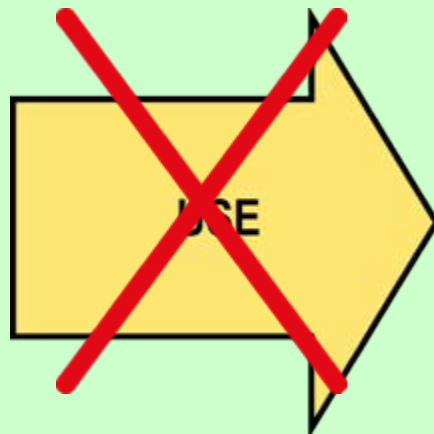
to develop an **INTEGRATED APPROACH** based on
INSTITUTIONAL ARRANGEMENTS and **POLICIES**
in interplay with sector fields



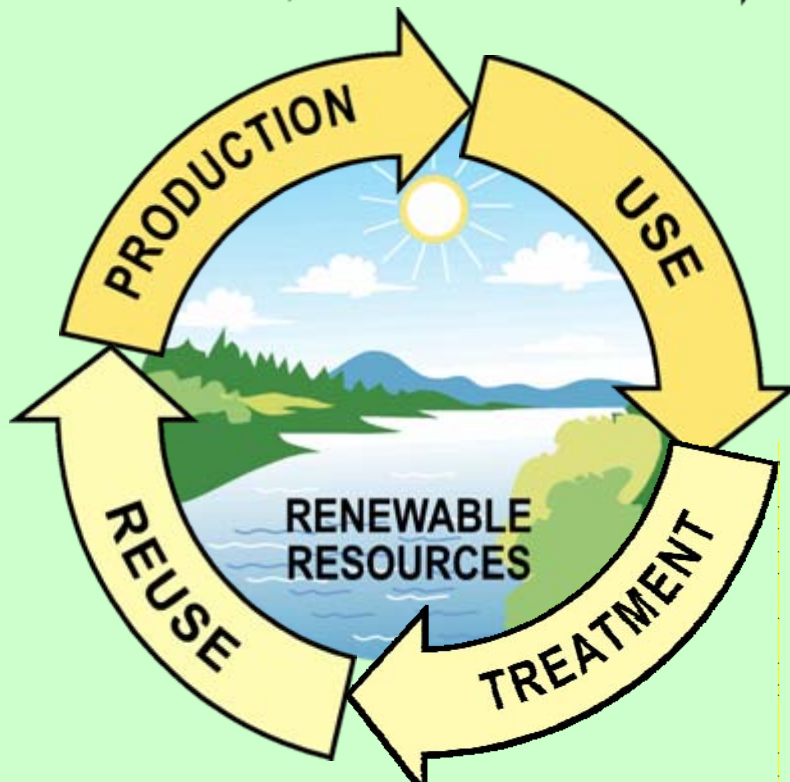




**NON-RENEWABLE
RESOURCES**

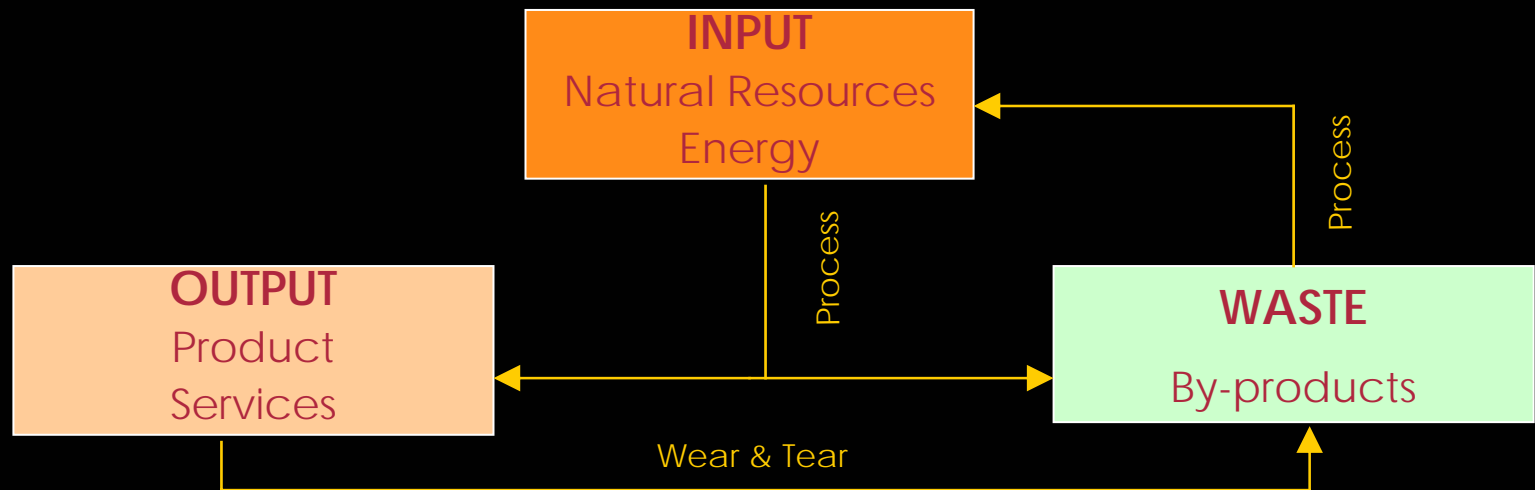


WASTE



What is Eco City?

“It is an urban center that is moving towards controlled and sustainable patterns of consumption and growth.”



What is Eco -City concept?



- It means reducing the *Ecological Footprint* while simultaneously improving the *Quality of Life* – for our and future Generations - within the *Capacity Limits* of the City

Eco City Program in India



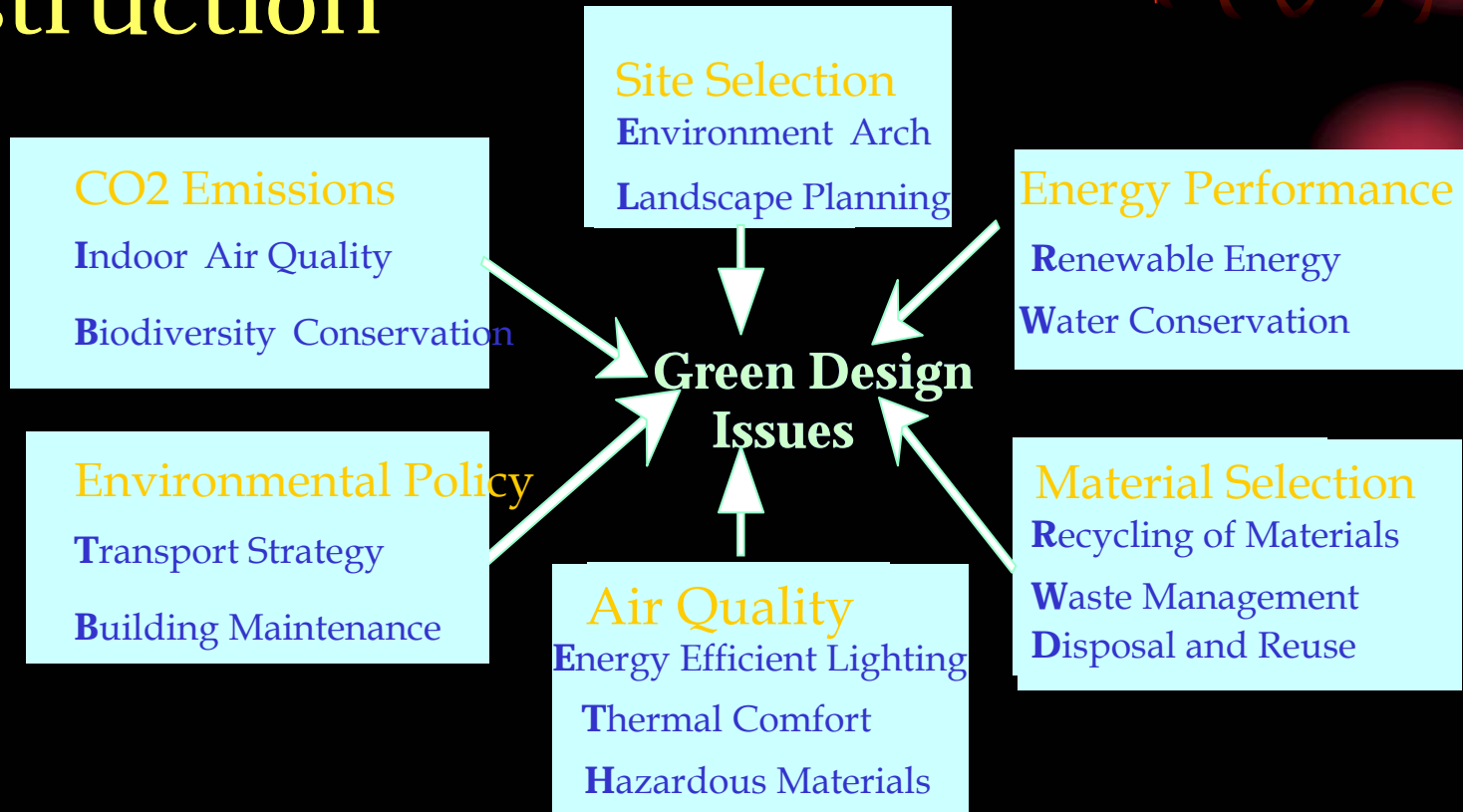
To carry forward the Eco City initiative, GoI has developed an Eco City Program where in pilot projects have been planned in strategic urban centers like Agra-“Taj Eco City” in Uttar Pradesh and Kottayam in Kerala.

Eco Housing concept



- In order to ensure that the future development will be sustainable PMC with technical assistance from IIEC (International Institute of Energy Conservation has developed criteria for Eco Housing .
- Total 8 focus areas.
- 88 criteria.
- 27 criteria mandatory.
- 1000 scoring points.
- Star rating system linked with incentives.

Scope of Eco-housing activities spans from site-selection to energy-efficient materials and construction



Focus Areas and Point Allocation

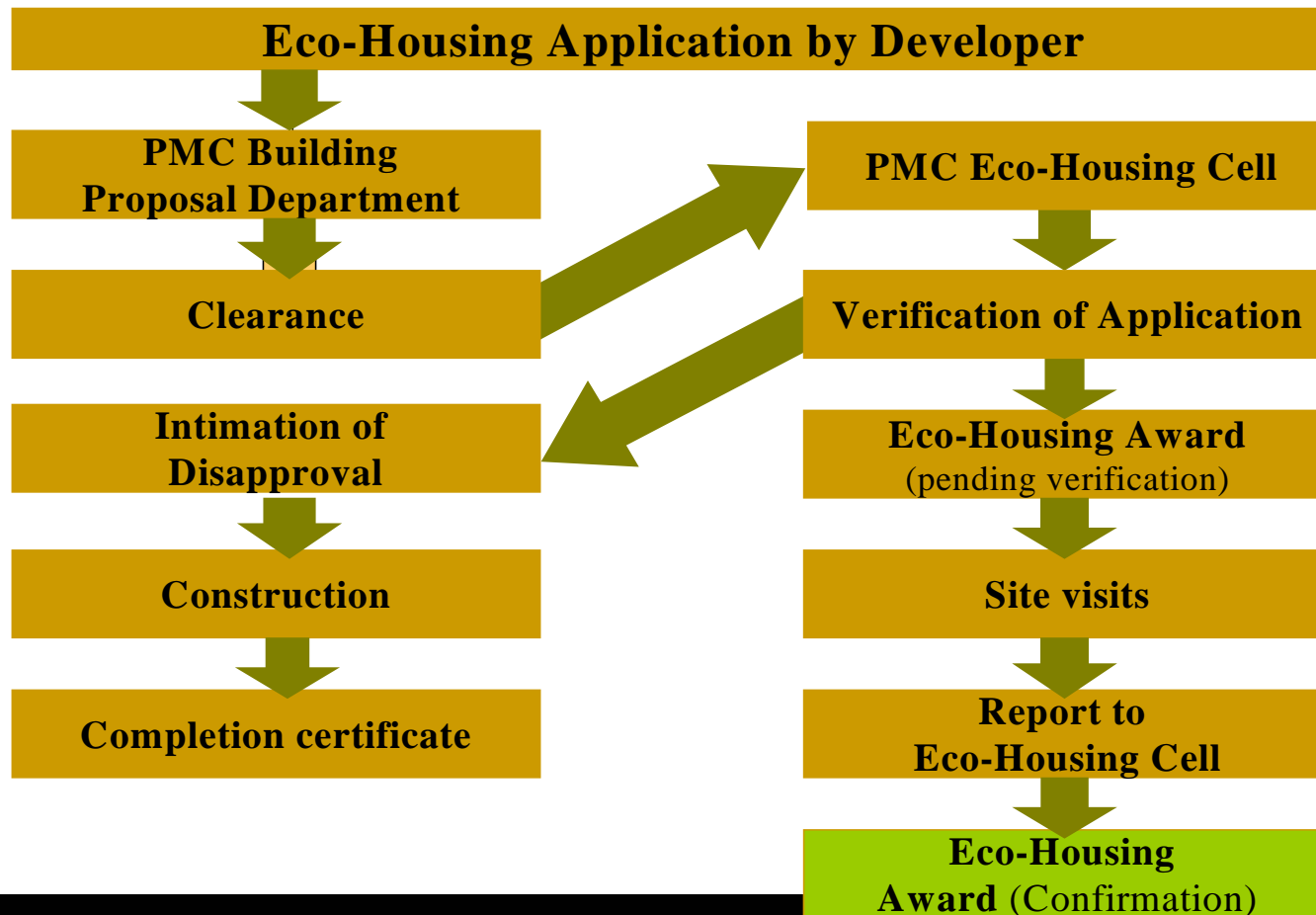


| Category | No. of Measures | Total Points | Mandatory | | Voluntary | |
|-------------------------------|-----------------|--------------|-----------|--------|-----------|--------|
| | | | Measures | Points | Measures | Points |
| Site Planning | 24 | 260 | 7 | 70 | 17 | 190 |
| Environment Architecture | 5 | 80 | 1 | 25 | 4 | 55 |
| Energy Efficient Lighting | 4 | 50 | 1 | 5 | 3 | 45 |
| Solar Water Heaters | 3 | 50 | -- | -- | 3 | 50 |
| Efficient Building Materials | 21 | 200 | 6 | 25 | 15 | 175 |
| Water Conservation | 18 | 200 | 7 | 75 | 11 | 125 |
| Solid Waste Management | 5 | 80 | 2 | 50 | 3 | 30 |
| Other Innovative Technologies | 8 | 80 | 3 | 30 | 5 | 50 |
| Total | 88 | 1000 | | | | |

Procedure Adopted



Proposed Eco-Housing Certification Process



Eco City Sustainability Framework

URBAN PLANNING & URBAN DESIGN

Environmental Programme – Architectural Programme

DETAILED DESIGN BUILDINGS, ROADS & LANDSCAPE

DEVELOPMENT

Technical Programme

TENDERING AND CONSTRUCTION

*Maintenance Programme
Feed-back gives input to future
Planning processes*

OPERATION & MAINTENANCE

economical

social

ecological



Need for Eco City Action Plan for Pune



Need for a Structured Approach : Pune does not figure in the list of GoI's Eco City Program. But at the same time NURM and NUIF give importance to urban environmental improvement.

Needs a direction towards Sustainable Development : Efforts made so far are in isolation, hence a comprehensive approach is required.

Needs a stakeholder participatory arrangement: Architects, NGOs, Educational Institutions, Builders play an important role in the development of city.

Needs an 'environmentally' oriented planning approach: It will bring a structured order to various projects and programs under environmental management in Pune.

Approach towards Pune Eco City Action Plan

Environmental Management Systems (EMS) Approach

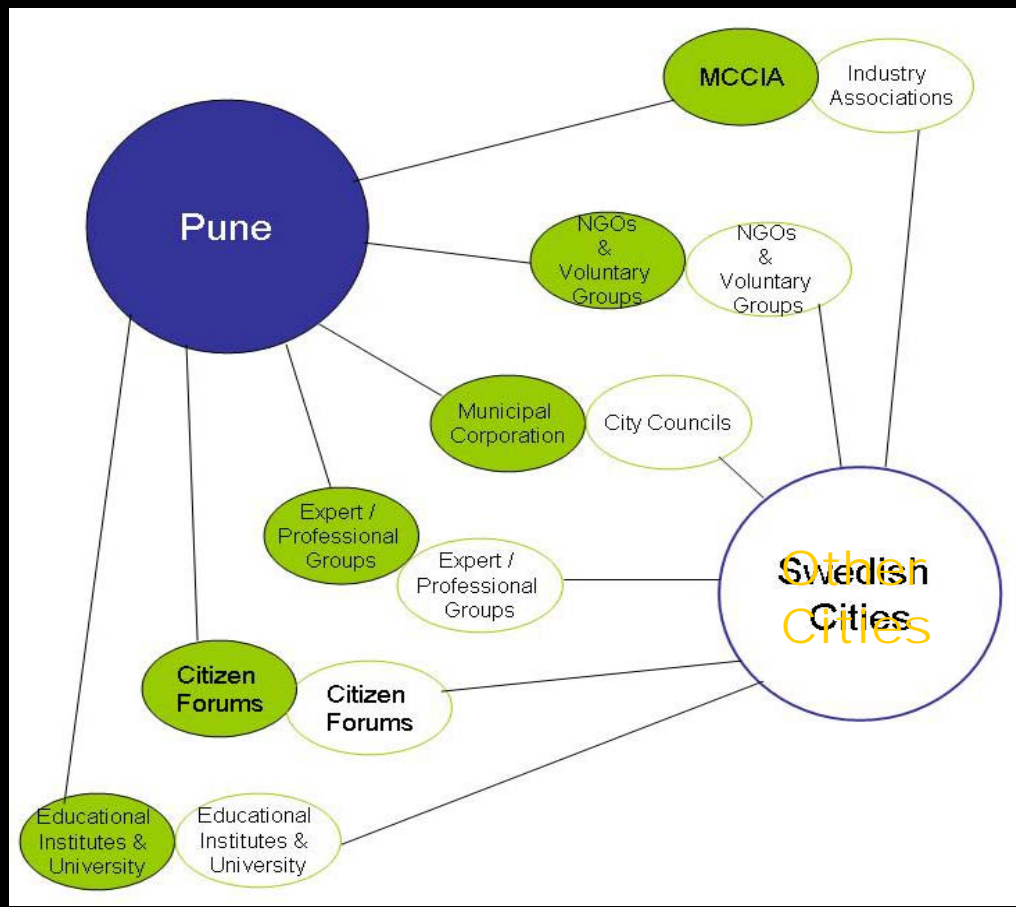


Approach to the Model Ecocity Programme



Approach towards Pune Eco City Action Plan

A Multi Level Collaborative Approach for Pune Eco City Action Plan



Process of Pune Eco City Action Planning



Formulation of Eco City Working Committee & sub committees:

Working Committee will play the role of nodal committee. The sub committees will deal with various themes of Eco City Plan

Identification of stakeholders: Architects, Builders, Specialist Engineers, Environmentalists, NGO, representation from Govt. organizations, citizens Forum etc.

Appointment of consultant: This involves experts in various fields such as Water Management, Solid Waste Management, Traffic & Transportation, Housing, Urban Renewal etc.

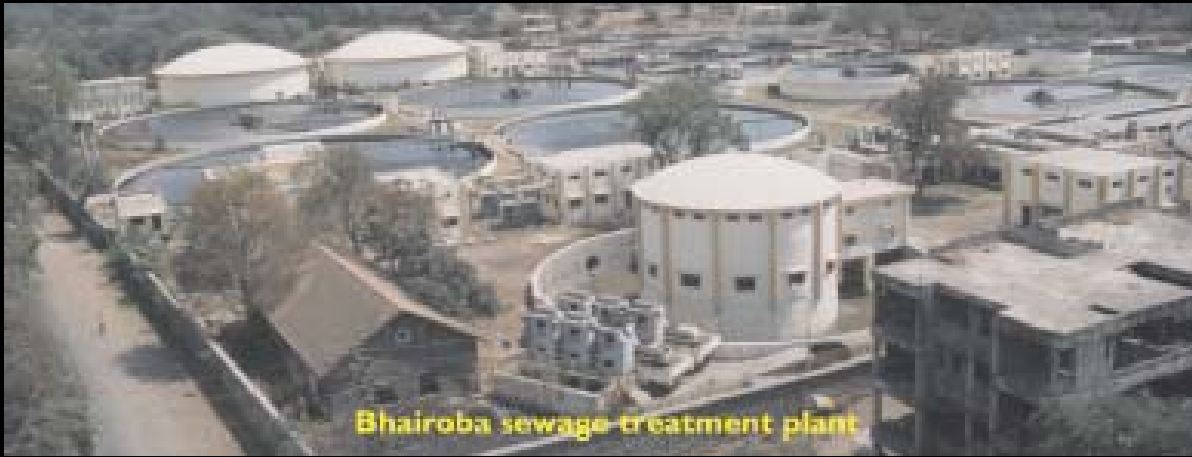
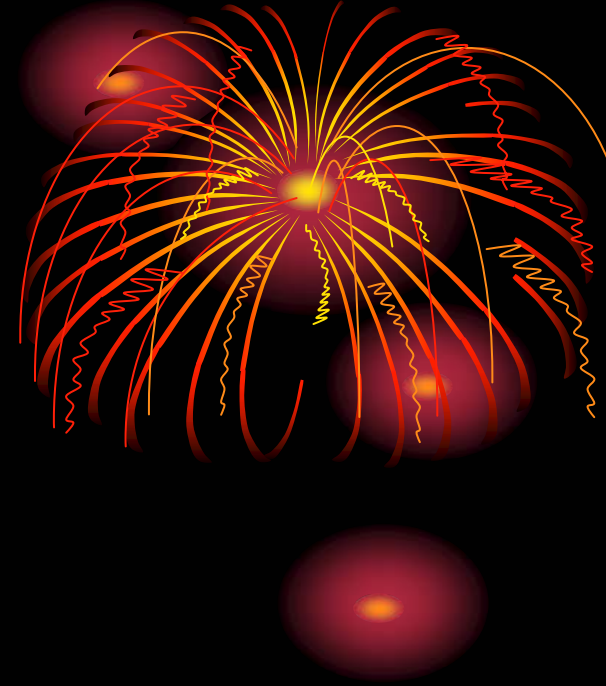
Stakeholder consultations: This involves experts in Town Planning, NGOs, Citizens Forum, Industrial Association, Educational Institutes etc.

Taking the Pune Eco City Action Plan Ahead



- A base document to guide Eco City action in Pune.
- Basic Structure for arranging and implementing projects and programs.
- Resource estimates and feasibility will be detailed out as a further step.
- Develop concrete projects and programs for implementation.

Initiatives of PMC



Initiatives of PMC



Tanajiwadi sewage treatment plant



Erandwana sewage treatment plant

Initiatives of PMC



Initiatives of PMC



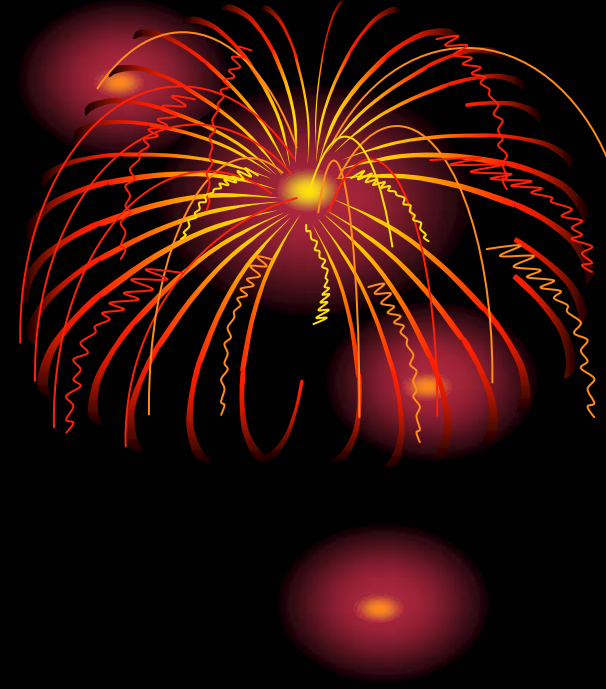
Initiatives of PMC

- PMC has also taken initiative for the awareness of the citizens and to have more interaction with the other international cities has formed International Office Agenda 21 on the Guidelines of Rio Summit of UN held in 92.
- This office has actively co-ordinated between the cities like Okayama – Japan, Bremen – Germany and San Jose – USA for sustainable development of the cities.
- This Office has played active part in promoting the Association of Friends Of Japan, PMC and Industries in Pune as well as Okayama to develop a Japanese Style garden in Pune.



Pune Okayama Friendship Garden





THANK YOU