WORKING GROUP Sustainable Industrial Areas

SIA

cooperación alemana DEUTSCHE ZUSAMMENARBEIT

Implemented by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

TECNOLOGÍAS PARA LA ADAPTACIÓN Y MITIGACIÓN DEL CAMBIO CLIMÁTICO

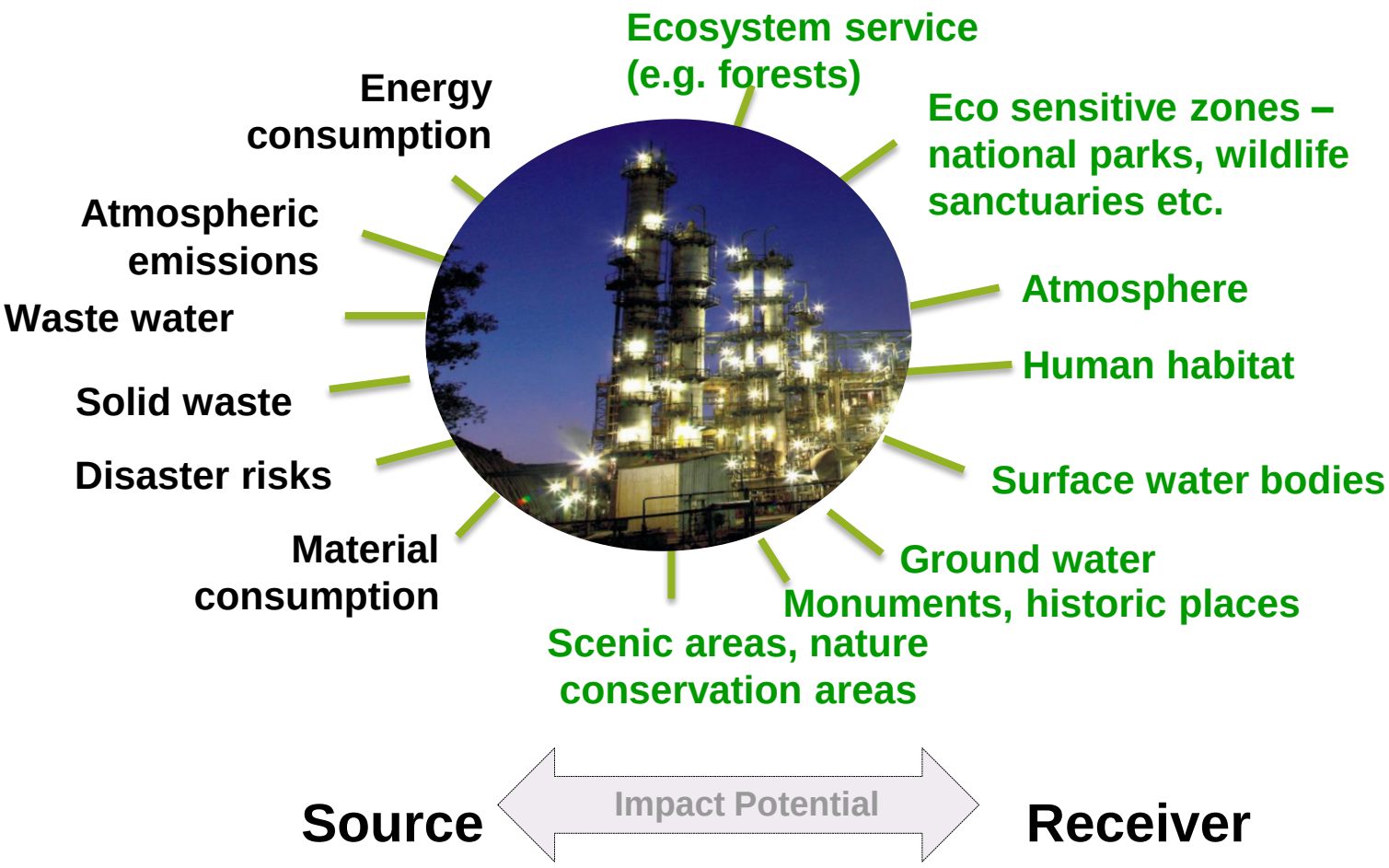
Procesos Industriales y Residuos

Experiencia Internacional con Criterios de Sustentabilidad en Áreas Industriales

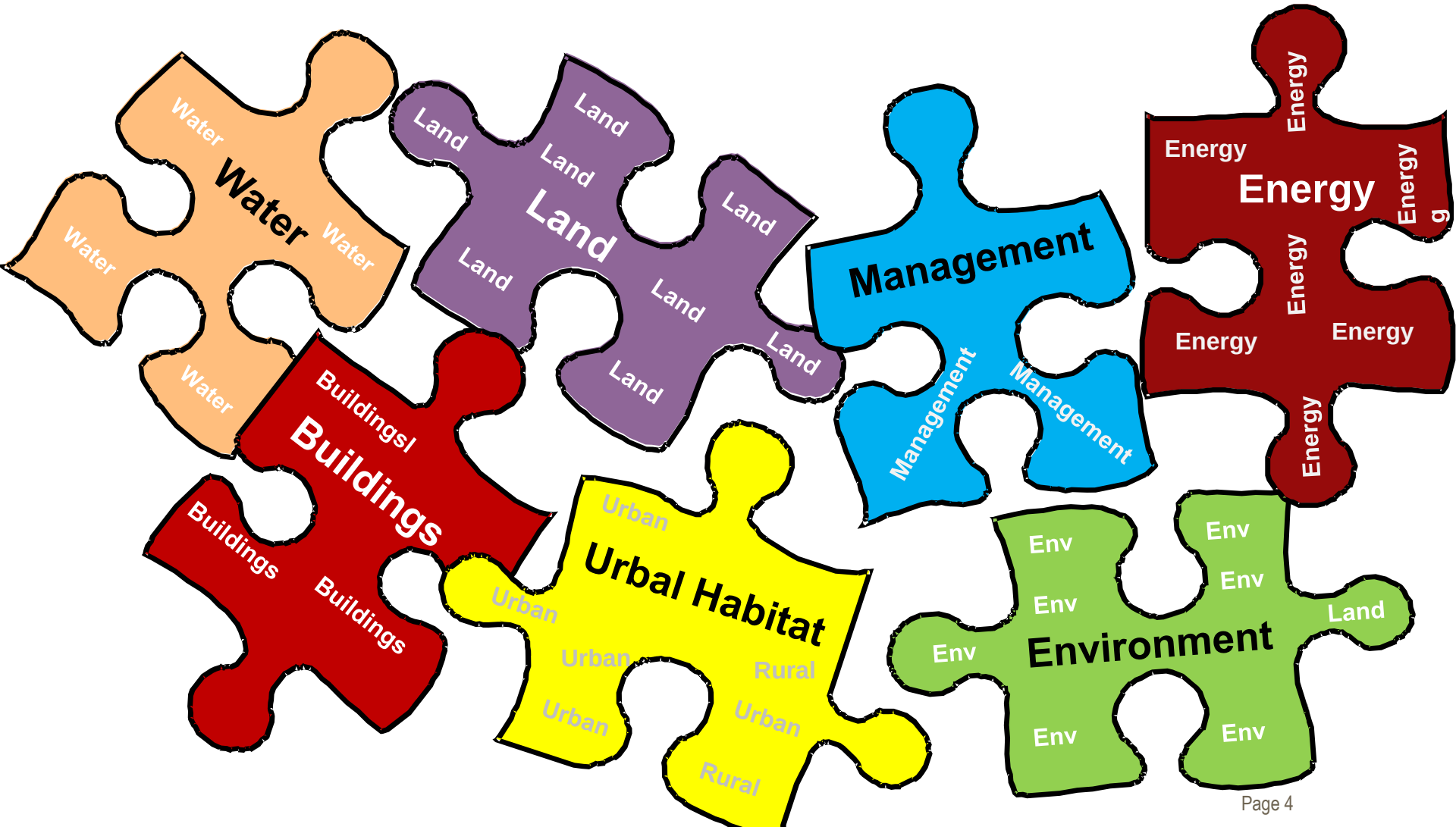
Dr. Dieter Mutz, Asesor GIZ

- General Remarks
- Siting and Site Suitability
- Site Master Planning and Rating of Sites
- Resource Efficiency

The relevance of Industrial Areas on Climate Change



Sustainable Industrial Area: Multi Sector Approach

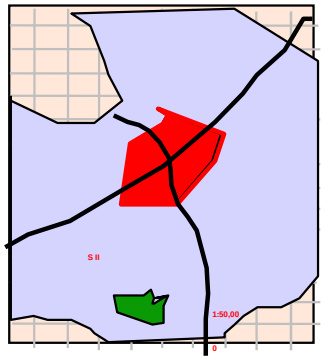


Joint Statement Signed on 14 April 2015

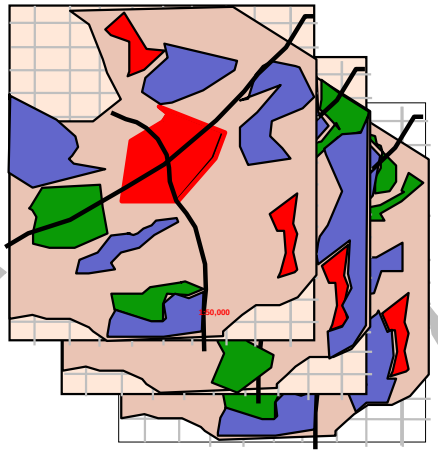
- General Remarks
- **Siting and Site Suitability**
- Site Master Planning and Rating of Sites
- Resource Efficiency


Regional Plan
Development Plan
Industrial Region
District
Industrial Region
District
Siting and
Site Suitability

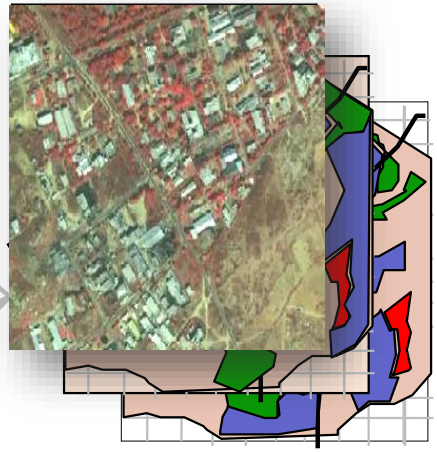
Scales of Study



Regional Planning,
Env. Assessments



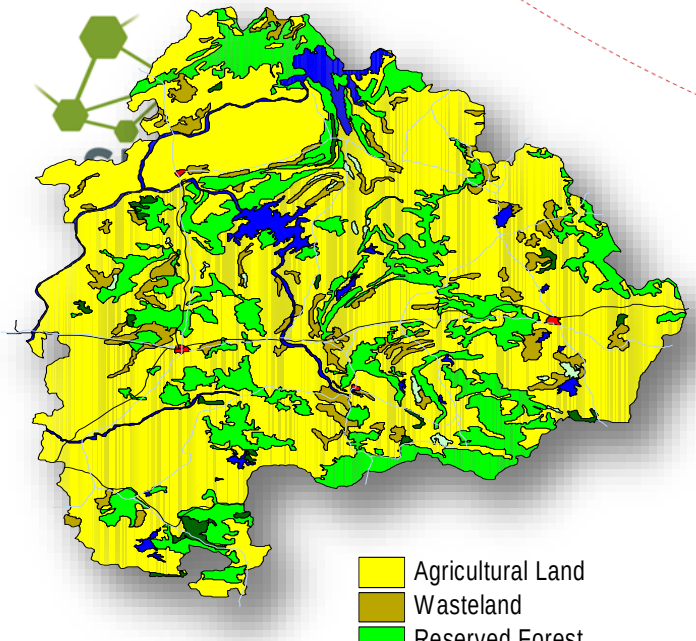
Detailed Env. Planning,
Assessments



Layout planning

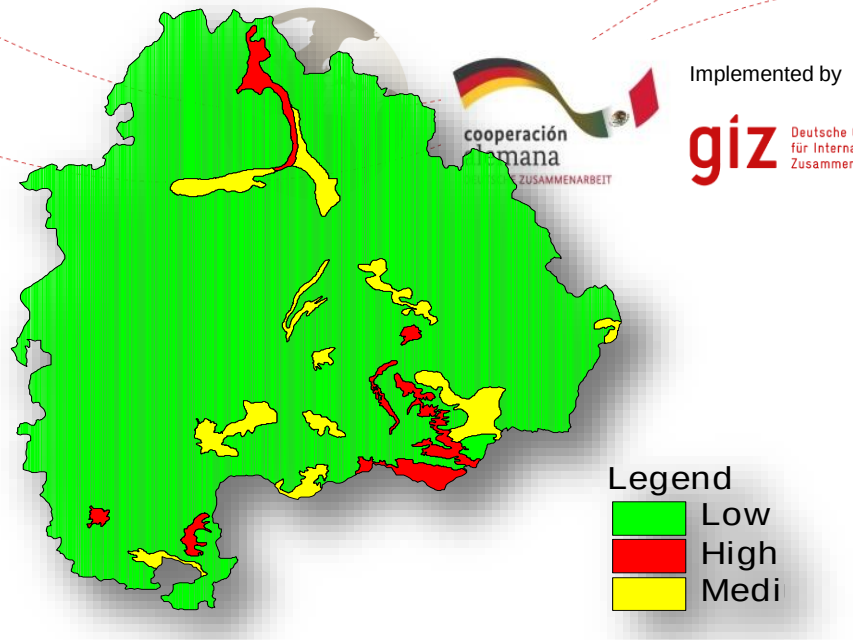
- Regional Planning – 1:50,000 - 1:25,000
- Development Plans (urban areas) – 1:10,000 - 1:8,000
- Local Area Plan/ Special Purpose Plan– 1:5,000 – 1:1,000
- Building Plans – 1:100

Source: URDPFI, 2015

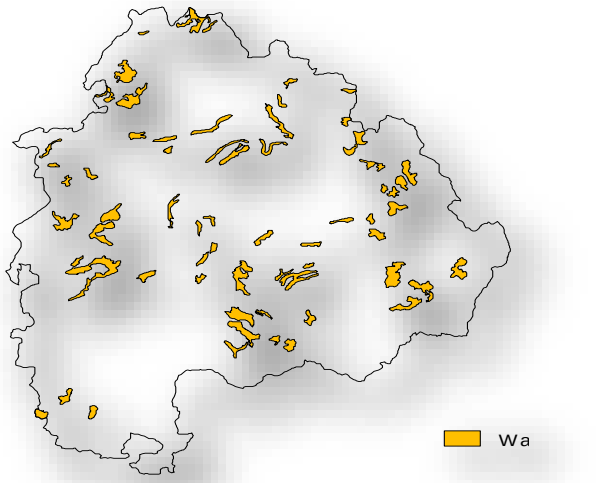


Agricultural Land
Wasteland
Reserved Forest
Open & Dense Forest
Degraded Forest
Settlements
Rivers/Water Bodies

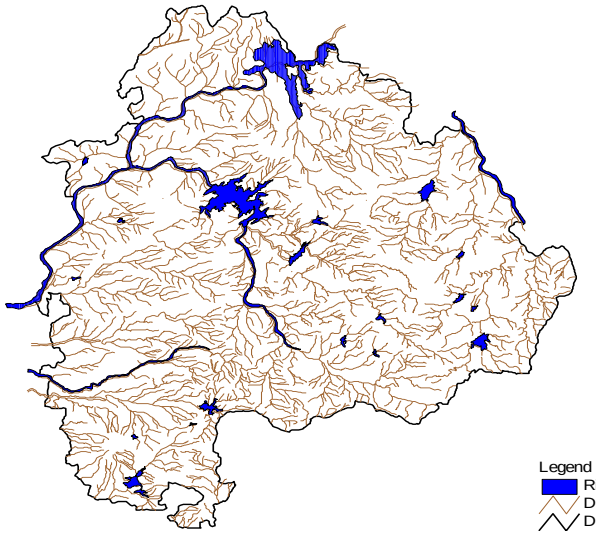
Land Use



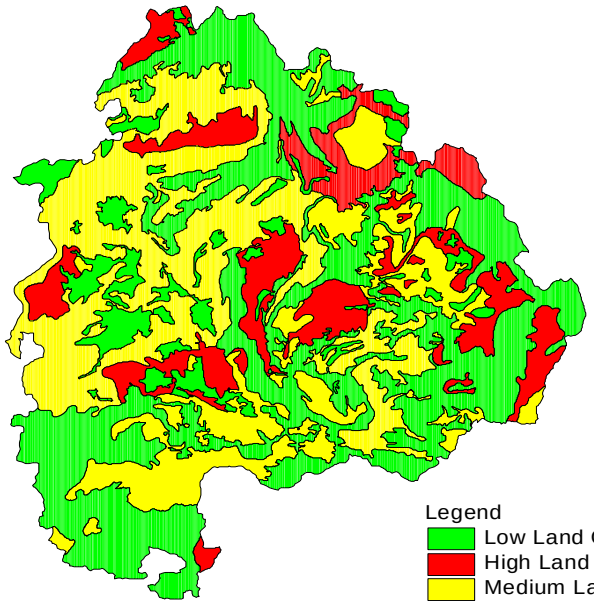
Physiography



Wastelands



Drainage



Land Capability

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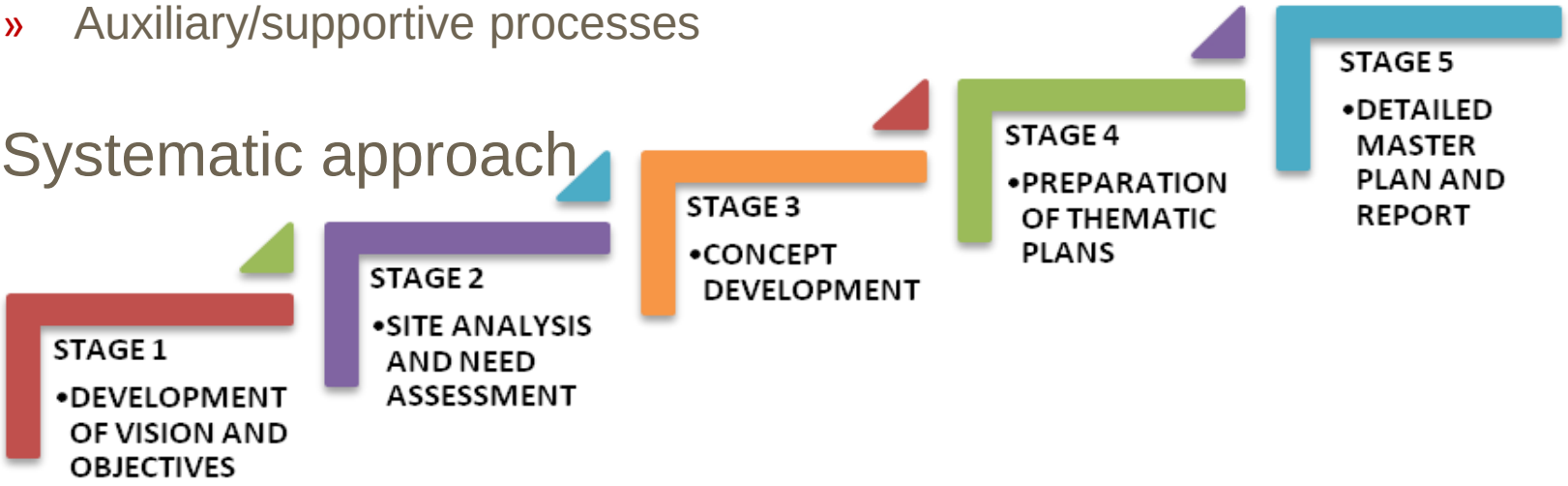
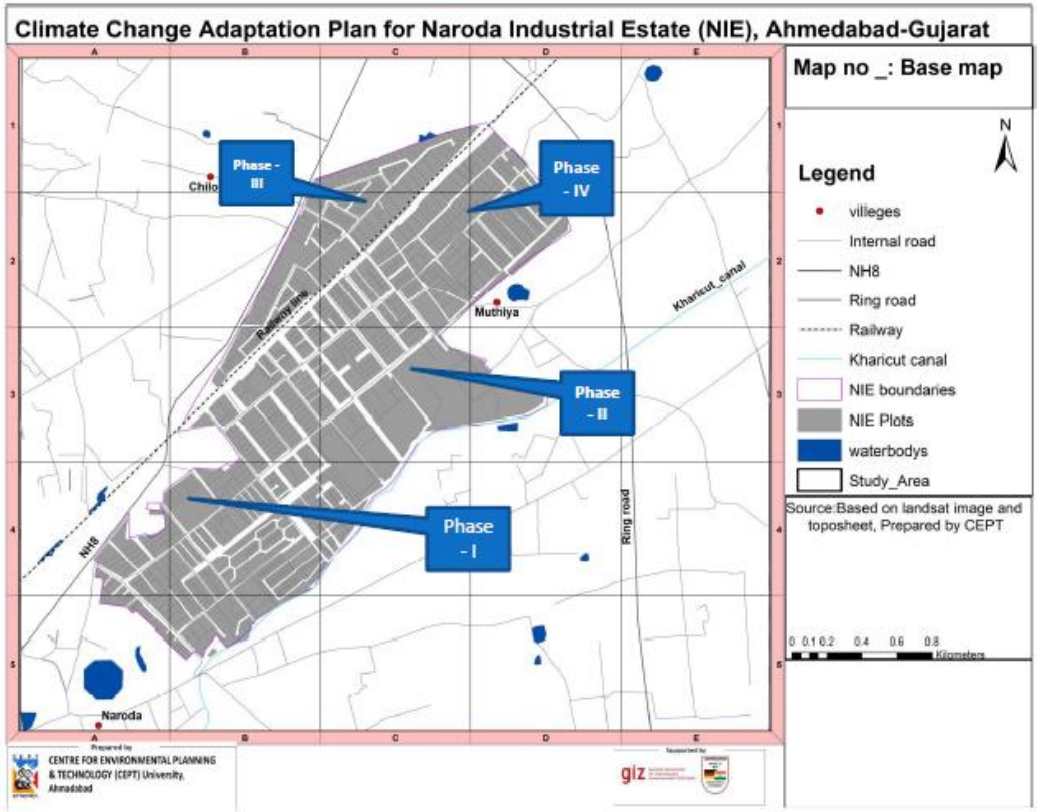
- **Site Master Planning and Rating of Sites**
- Resource Efficiency

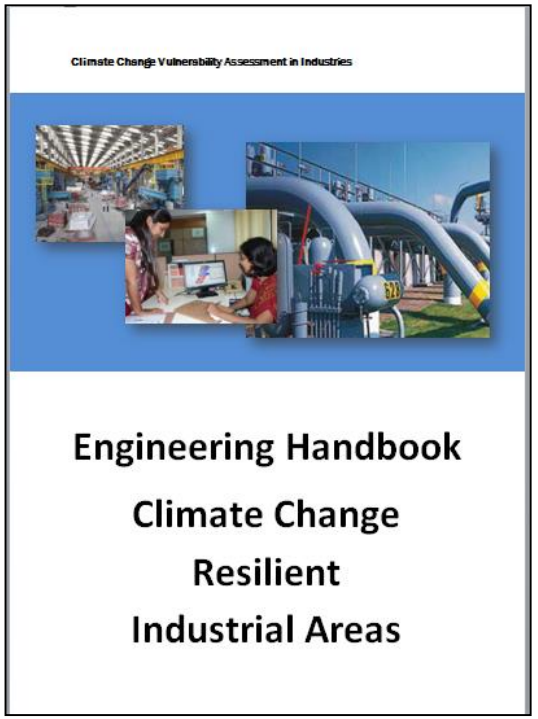
Site Master Planning for Sustainable Industrial Area

- Stakeholders landscapes – public and private park developers; entrepreneurs, communities, government…
- Elaborate processes for stakeholder involvement
  - » Steering process
  - » Core processes - technical/participatory/learning processes
  - » Auxiliary/supportive processes
- Systematic approach

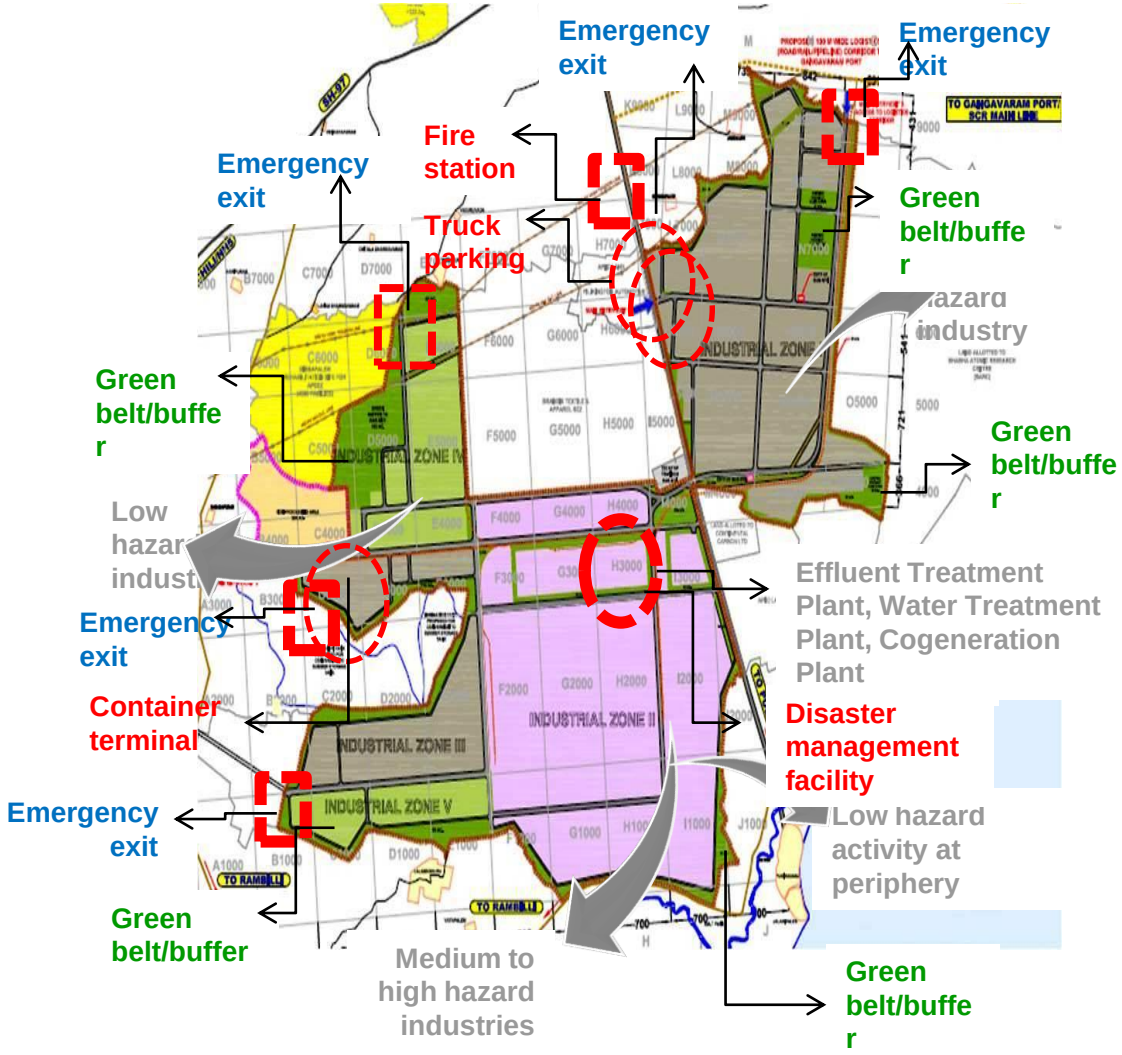


Climate Change Adaptation in Industrial Parks



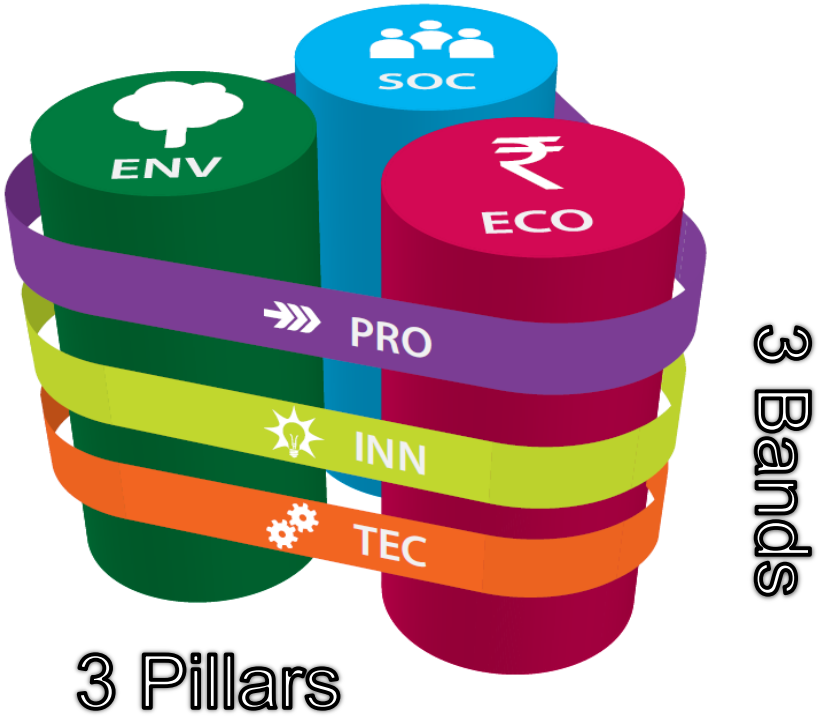


Site Master Plan of APSEZ



- Zoning as per polluting/hazard nature of industries
- Renewable energy systems
- Waste water treatment, recycle; Rain water harvesting
- Common environmental infrastructure and facilities
- Restriction of unsuitable industries
- SPV for management of services (waste water, sewage, marine outfall)
- Climate change resilient area

DGNB Rating System
German Sustainable Building Council



Quality Criteria Applied for sustainability

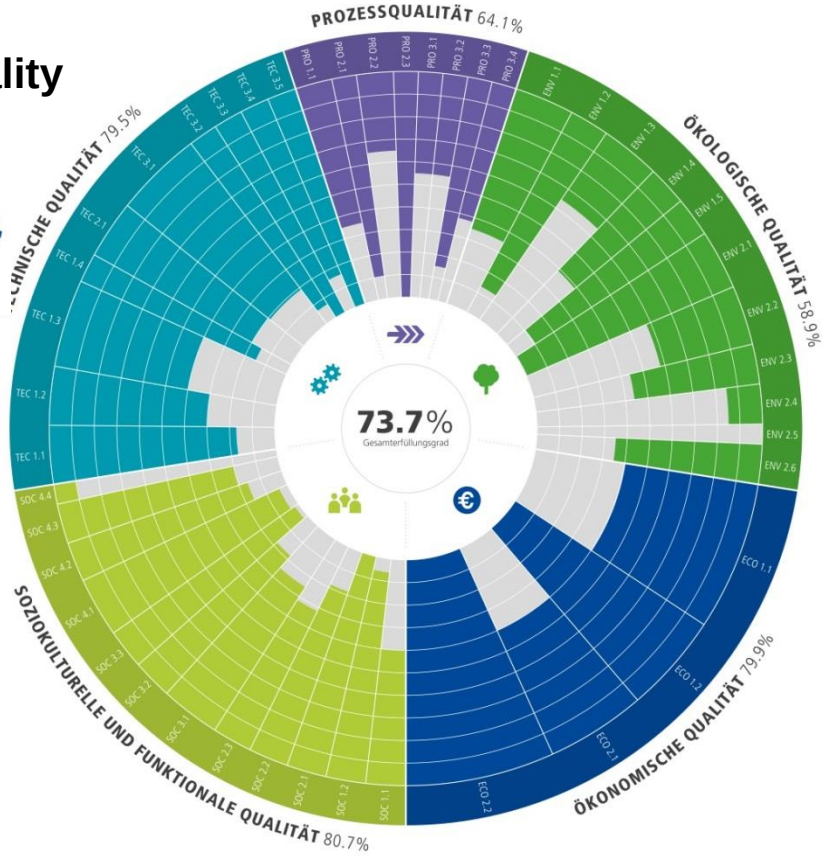
- Ecological Quality
- Socio-Cultural Quality
- Economic Quality
- Technical Quality
- Process Quality
- Innovation Quality

Criteria for a sutainable industrial area (DGNB)

Process Quality
PRO

Environmental Quality
ENV

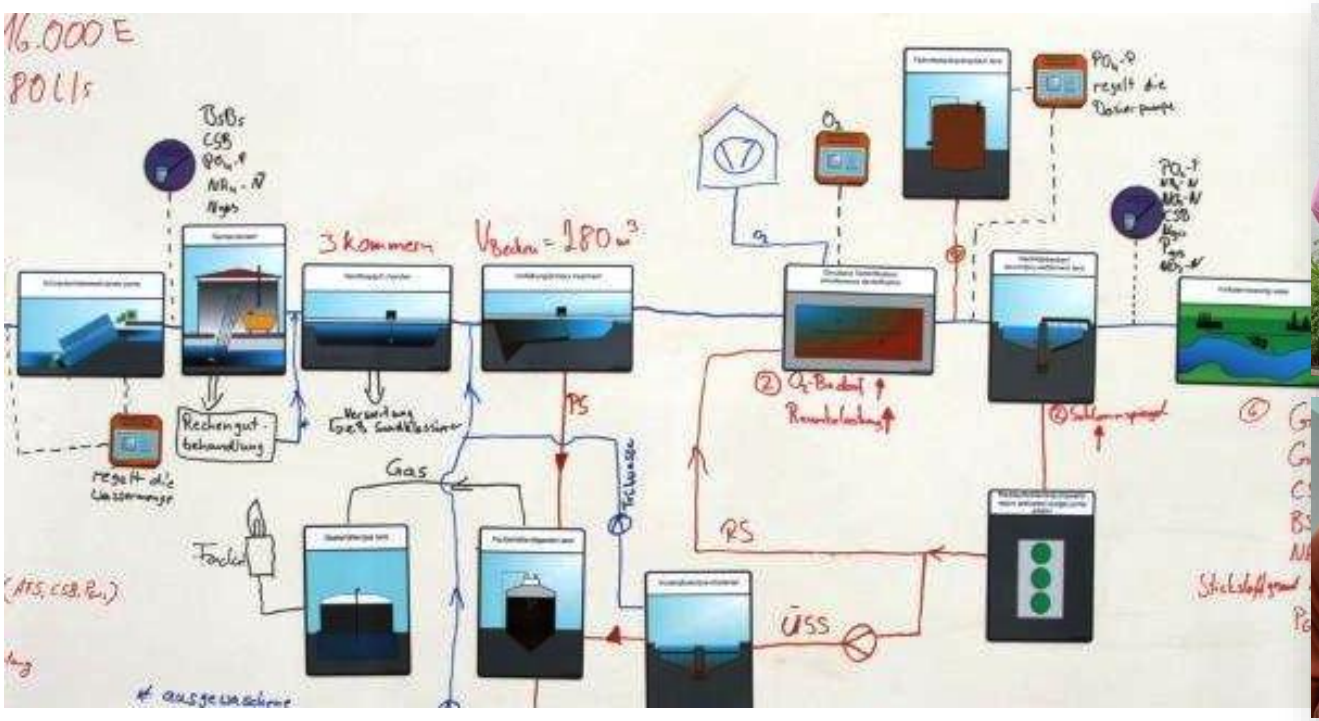
Technical Quality
TEC



Socio-cultural Quality
SOC

Economical Quality
ECO

Efficient Operation of Environmental Services



Skills development modules for operators of ETPs/CETPs

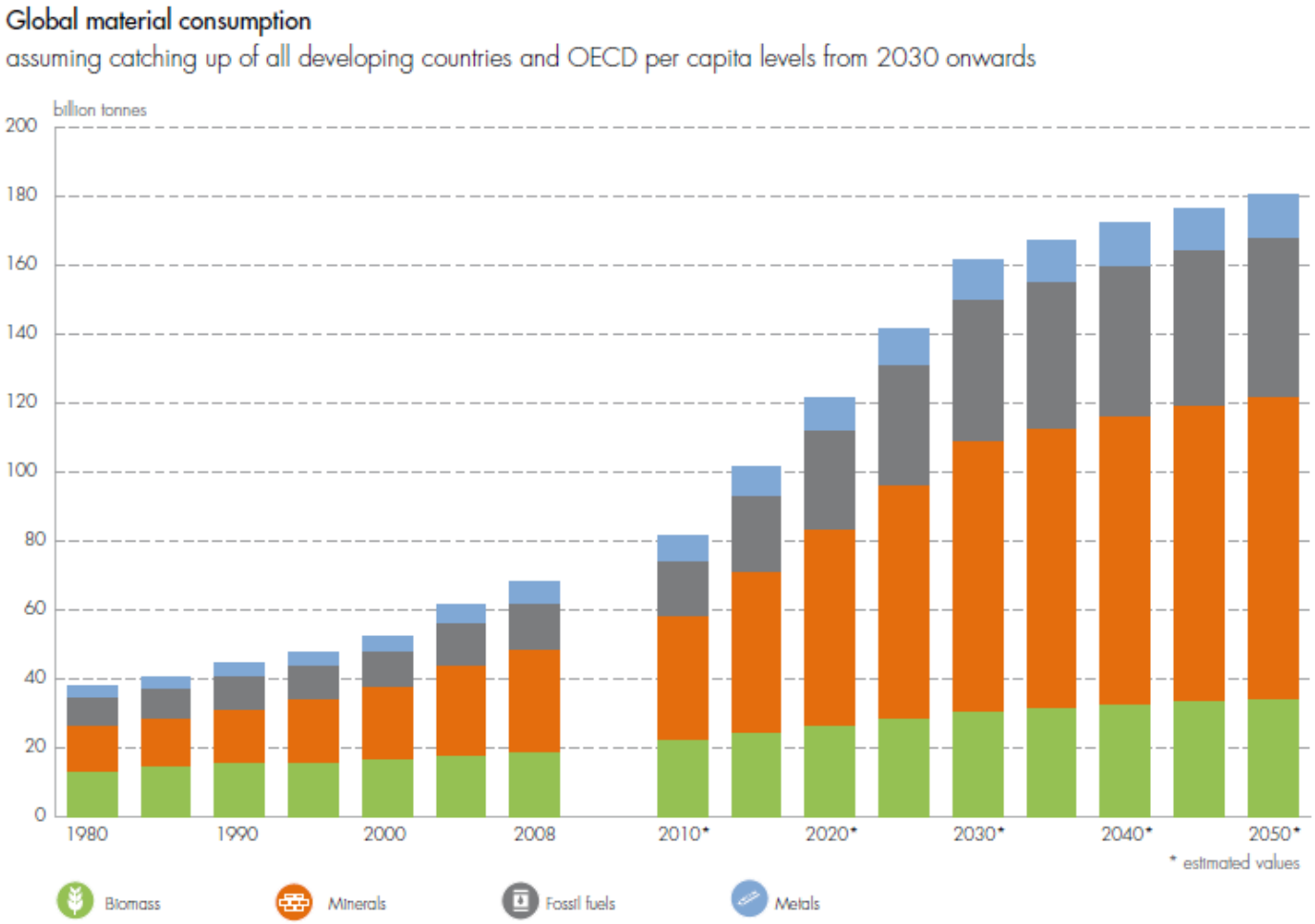
- General Remarks
- Siting and Suite Suitability
- Site Master Planning and Rating of Sites
- **Resource Efficiency**

No growth without „Resources“

- Biotic
- A-Biotic
- Water
- Air
- Land and Soil

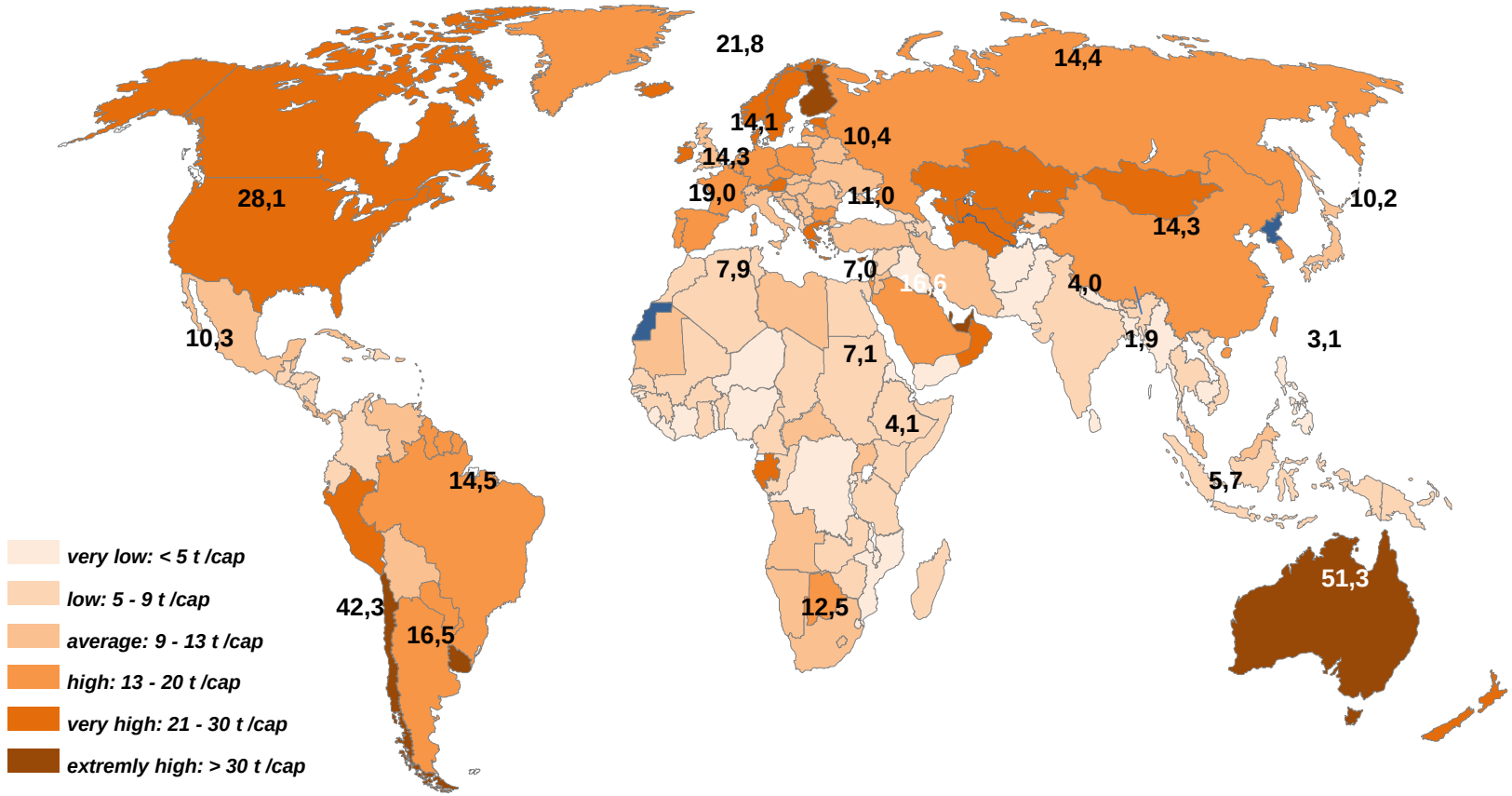
- Bio-Systems:
  e.g. Atmosphere and Climate

Global material consumption will increase



Ssource: Dittrich et al. 2012, Green Economies around the world?

Global resource consumption per capita: range from 1.5 to >50 tonnes

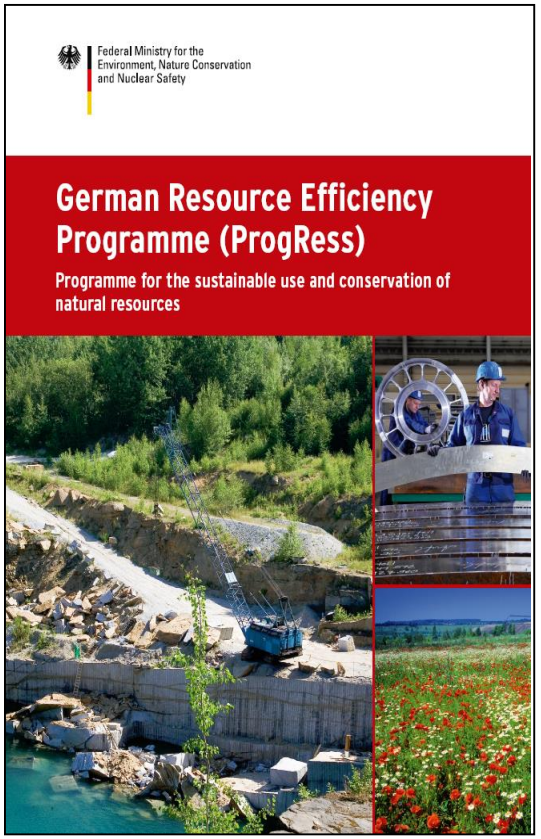


Source: SERI, Domestic Material Consumption (DMC) per capita, 2008

German Resource Efficiency Programme (ProgRess)

- **Goals:**
  - Decouple economic growth from resource use
  - Reduce environmental impacts of resource use
  - Improve the sustainability and competitiveness of the German industry

- **Impacts along the whole value chain**
  - raw materials supply
  - production and product design
  - consumption
  - closed cycle management




Thank you
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