

# Bilateral Research Cooperation over Long Distances: the Case of the „Sustainable Hyderabad“ Project





# Climate and Energy in a Complex Transition Process towards Sustainable Hyderabad

Project funded by the BMBF Programme „Climate and Energy-efficient Structures in Urban Growth Centres“

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# 1. Basic Project Objectives (1)

## Two main problems:

1. **Climate Change is a long-term phenomenon:**
  - Even under the assumption of an immediate reduction of global GHG emissions we would still need to „Manage the unavoidable“
2. **Population of Hyderabad is expected to reach 10.5 million by 2015. At the same time lifestyles will change and become more resource intensive:**
  - This rapid growth puts strong tensions on the main service and supply systems of the city, such as energy, water, transport, food & health and also increases the pollution burden (waste)



# 1. Basic Project Objectives (2)

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1. The effects of climate change will reinforce tensions that are already visible today due to rapid growth and lifestyle changes, e.g.:
    - ⇒ Rapid decline of water tables – water provision
    - ⇒ Increasing extreme weather events - slums
    - ⇒ Mobility- social and environmental relevance
  2. Mitigation and Adaptation Measures are urgently needed – technical solutions and social construction needs to be combined
    - ➡ Mitigation and adaptation measures require **innovation in institutions and governance structures (emphasised by this project)**



# 1. Basic Project Objectives (3)

## **Institutions:**

“... are the rules of the game in a society. They are made up of formal constraints (e.g., rules, laws, and constitutions), informal constraints (e.g., norms of behaviour, conventions, and self-imposed codes of conduct), and their enforcement characteristics. In consequence, they structure incentives in human exchange, whether political, social, or economic” (North 1990: 3; North 1994: 359).

**Example:** constraints on the rights of industries to pollute water bodies in Hyderabad - replacing energy consumption by water pumping over long distances



# 1. Basic Project Objectives (4)

## Governance structures:

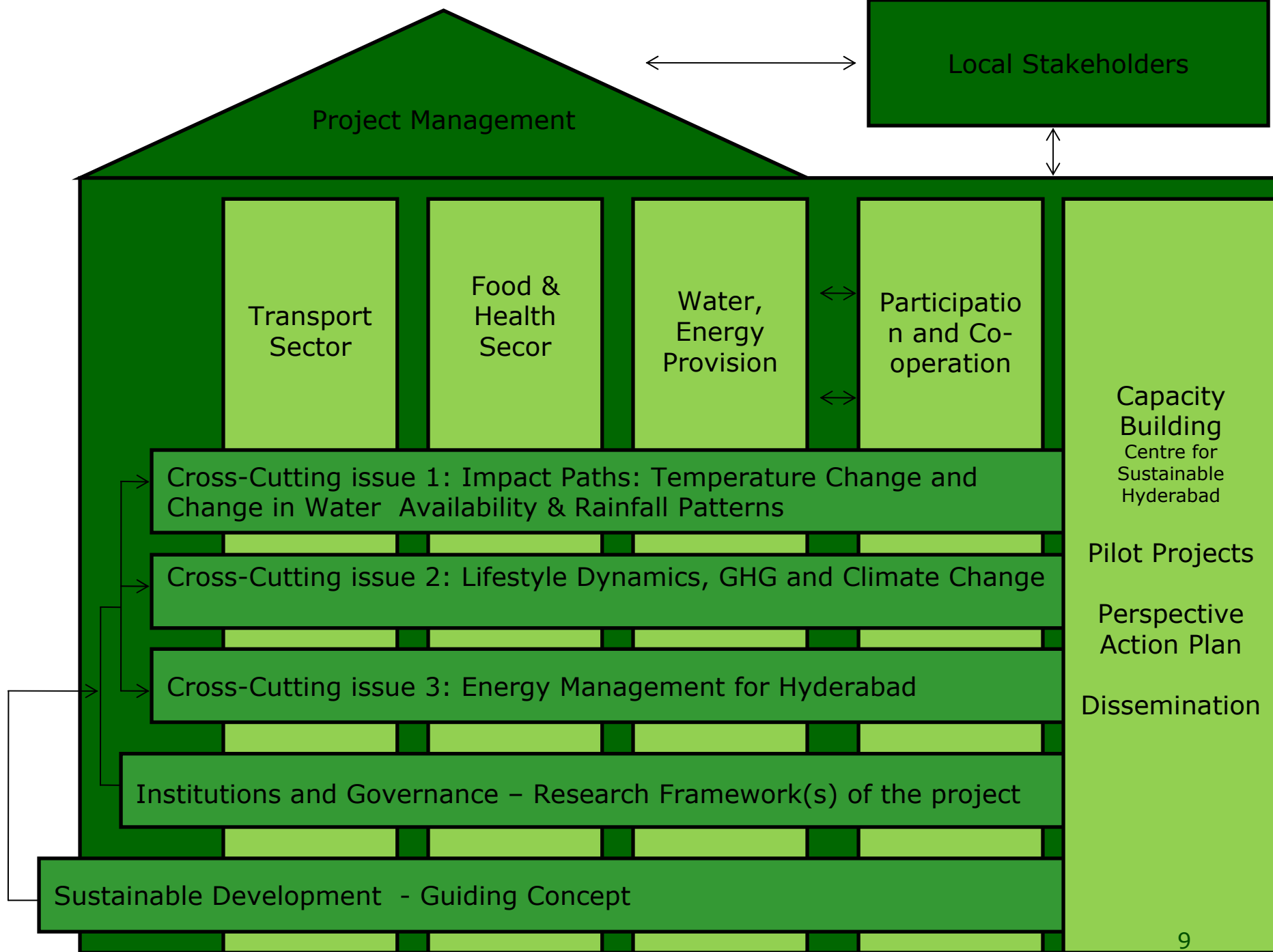
... are the organisational solutions for making sets of rules (institutions) effective, i.e., they are necessary for guaranteeing the rights and duties and their use in coordinating transactions (see, for example, Ostrom 1990).

**Example:** Hyderabad Pollution Board develops a market for pollution permits together with a monitoring and enforcement system that makes the constraints on industrial pollution rights mentioned above effective – puts them into practice



## 2. Operational Objectives (1)

- Focusing on the **core objective**: „Climate change and energy efficiency“
- **Operationalised** by three „cross cutting issues“:
  1. **Impact Paths: Temperature Change and Change in Water Availability & Rainfall Patterns**
  2. **Lifestyle Dynamics, GHG and Climate Change**
  3. **Energy Management for Hyderabad**
- ➔ This logic is **applied to all issue areas** included, such as transport, food provision and food security, water supply and and energy provision, pollution
- ➔ **Searching for solutions**: designing and arranging institutional innovation and governance reforms





## 2. Operational Objectives (2)

Achieve a **climate-friendly path of growth** in Hyderabad so that it can serve as an example for a „**low-emission city**“ by 2030. This means:

- ▶ **Mitigation:** 30% emission reduction compared to the BAU (Business-As-Usual) Scenario
- ▶ **Adaptation:** Increasing the adaptive capacity, especially among those whose prospects for being able to adapt are the poorest
- This will affect approx. 2 million people in Hyderabad who live in slums.
- Will effective climate, energy and environmental policies be feasible without alleviating poverty!



### 3. Ex-ante Assumptions vs ex-post Reality

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The Hyderabad Project aims at research results which can be put into practice:

⇒ Principal-agent relationship won't work!

⇒ Blueprints and transplants may fail!

Strategies that may facilitate application are:

■ Research fields are jointly evolved through the efforts of Indian, German, urban government stakeholders and NGO networks in Hyderabad

■ Embedding scientific cooperation and the outcome of the Project results in the overall development policies and programmes



## 4. Principles of Research Cooperation (1)

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### **BASIC PRINCIPLES:**

1. Building on a tradition of trust and integration into the cultural context and political networks
2. Enabling people and actors to identify with the project objectives, activities and outcomes
3. Involvement of stakeholders and partners in decision making, design of concepts and applied methodology and empirical work
4. Integration of research and academic education  
**(a well-known Humboldt Principle!)**



## 4. Principles of Research Cooperation (2)

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**Making Principle 2 work: „Ownership“**  
(„Issue framing“ and „Co-benefits“ )

- **Energy Efficiency Measures** are good for global climate and reduce the local energy bill
- **Reducing Congestions** through efficient traffic management is good for the climate and reduces also health-related diseases
- **Bioenergy Production** in semi-arid areas in peri-urban Hyderabad increases employment in rural areas and avoids migration to the city
- **Climate Change Adaptation Measures** linked to poverty reduction and health issues (e.g. clean water)

# Poverty in Hyderabad

(Photo: C. Dittrich)



# Traffic Jam in Hyderabad

(Photo: G. Kern)





## 4. Principles of Research Cooperation (3)

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**Making Principle 3 work: Involvement of local stakeholders and partners.** The Hyderabad Project distinguishes Stakeholders" and „Partners“:

- „Partners“ are Indian Research Institutes and Universities
- „Stakeholders“ are those who are supposed to implement the project results. These are classified according to **type, importance and competences**

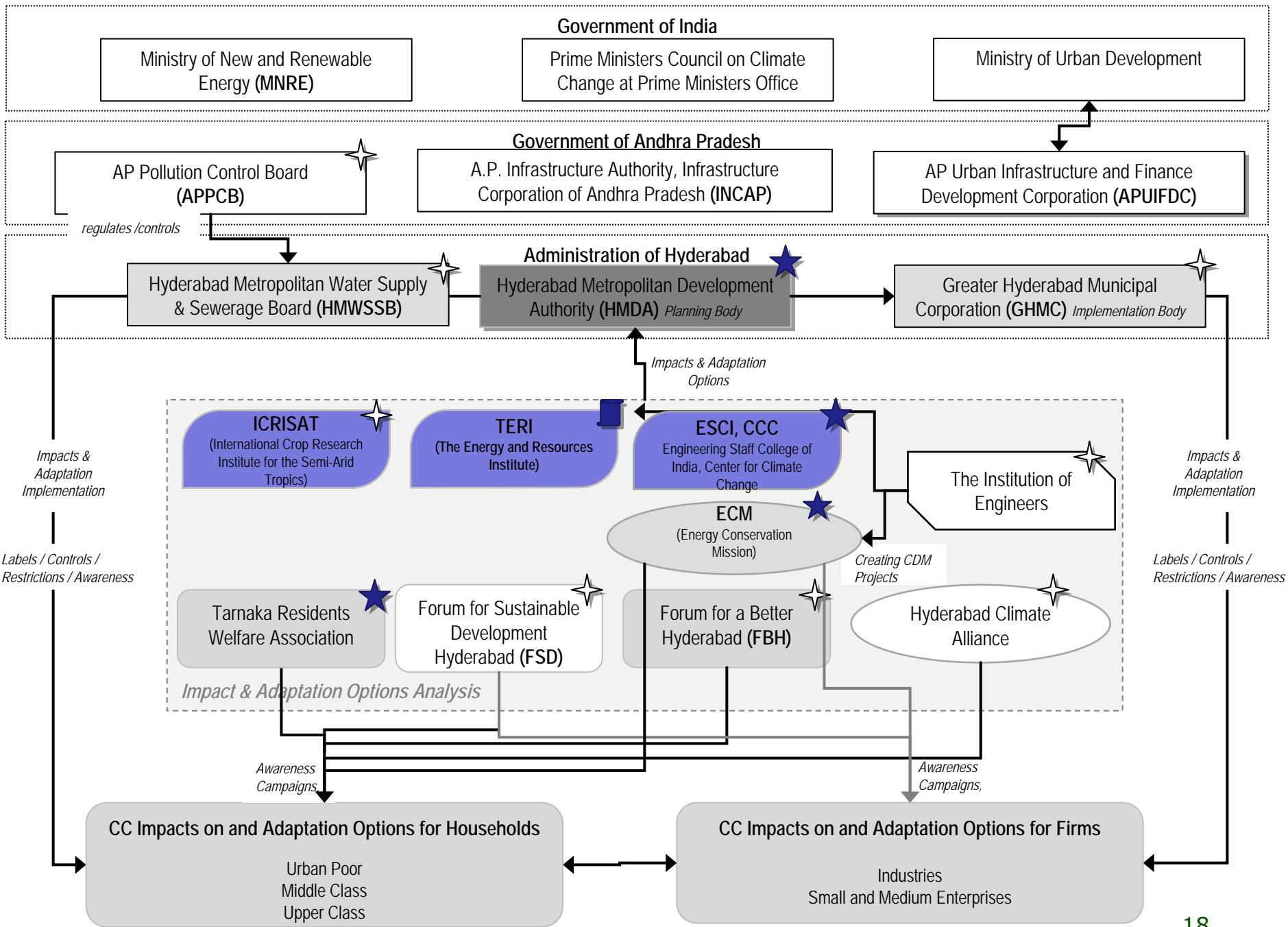


# Principles of Research Cooperation (4)

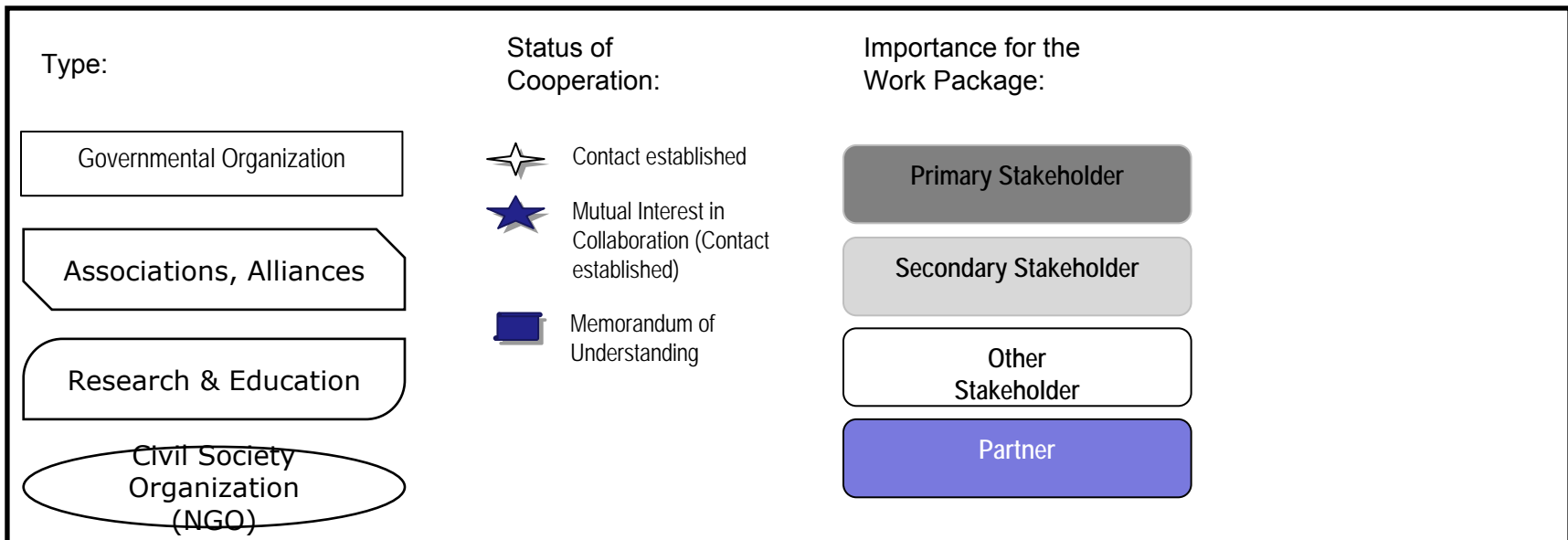
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## Categories of the Stakeholder Analysis

- **Importance:** Primary Stakeholders; Secondary Stakeholders
- **Type:** Government Organization; Associations; Research and Education; Civil Society Organization
- **Competences of the Stakeholder:** National Level; State Level; City Level or Ward Level (if applicable)
- **Status of Cooperation:** Memorandum of Understanding, Mutual Interest in Cooperation etc.



# Legend:





# 5. Project Management (1)

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## German Lead Partners are:

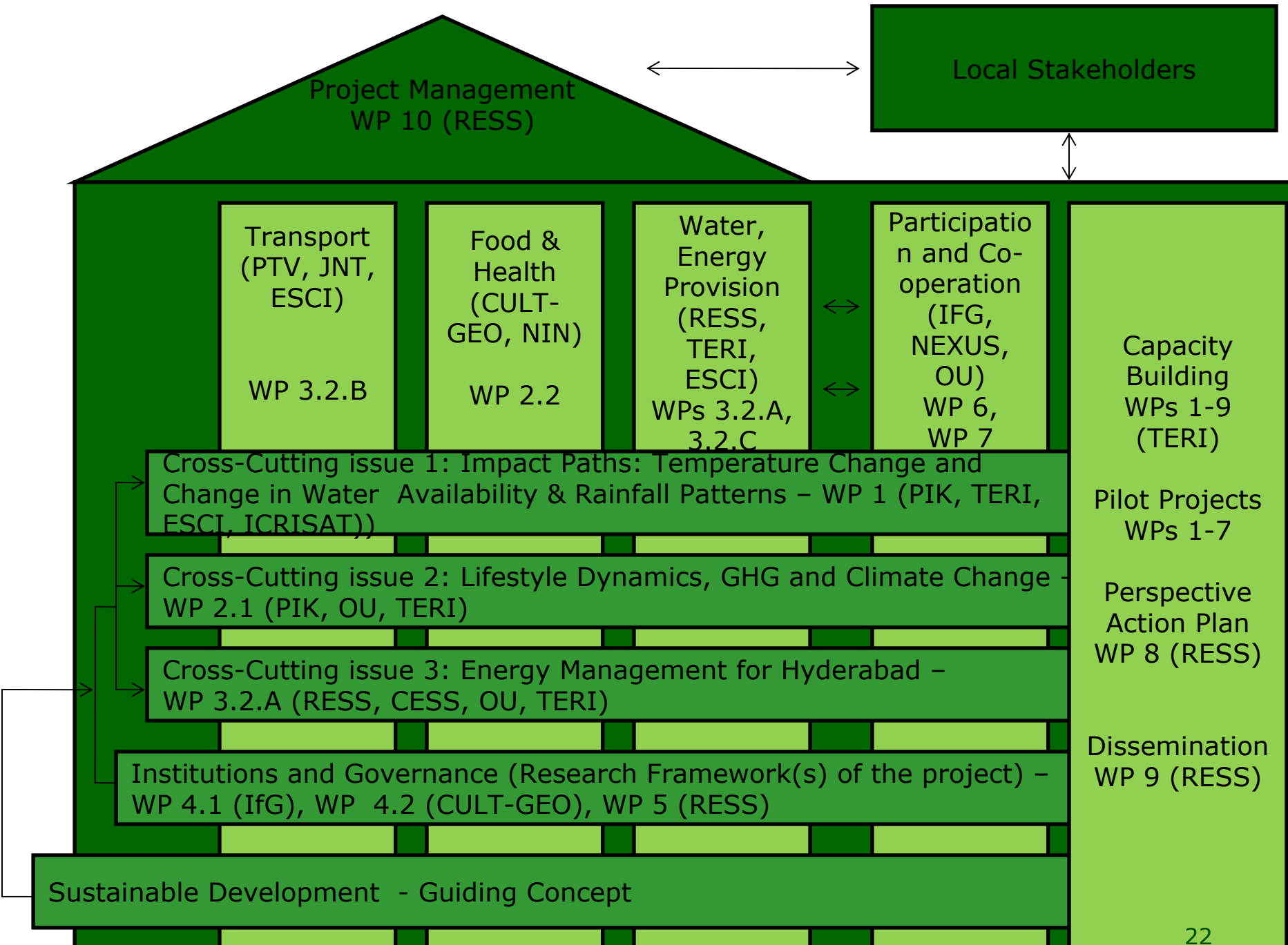
- Division of Resource Economics, Humboldt University Berlin (RESS)
- Potsdam Institute for Climate Impact Research (PIK)
- Department of Cultural Geography, University of Freiburg (CULT-GEO)
- Transport Mobility Logistics (PTV)
- Nexus Institute for Cooperation Management and Interdisciplinary Research (NEXUS)
- Berlin Institute of Cooperative Sciences (IfG)



# 5. Project Management (2)

## Indian Lead Partners are:

- The Energy and Resources Institute (TERI), New Delhi
- Centre for Sustainable Agriculture, (CSA), Hyderabad
- Centre for Economic and Social Studies (CESS), Hyd.
- Administrative Staff College India (ASCI), Hyderabad
- Engineering Staff College India (ESCI), Hyderabad
- International Institute of the Semi-Arid Tropics (ICRISAT – UN Institute), Hyderabad
- Osmania University (OU), Hyderabad
- Jawaharlal Nehru Technological University (JNT), Hyd.
- National Institute of Nutrition (NIN), Hyderabad





# 5. Project Management (3)

## Bottom-up style:

- **Work Package Management:** Every WP has a Coordinator which is responsible for the Coordination and Management of his Work Package
- **Overall Management:** All WP Coordinators meet at the occasion of regular „Project Management Board“ and “Steering Committee“ Meetings – the main decision making body of the Project

## In addition:

- Monthly Project Meetings for Monitoring & Evaluation
- Yearly National and International Workshops
- Advisory Council Meetings and recommendations



# 5. Project Management (4)

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Located in Hyderabad:

- **Permanent Representative** (contact person for the local project participants, ensures the constant information flow in both directions and monitors local project activities)
- **Open Project House** (visibility, organisation of workshops, organization of events such as capacity building measures, dissemination of results)
- **Active Research and Implementation Group:** post-docs, PhD and master students doing empirical work, organising pilot projects, etc.

# International Workshop in Hyderabad

02.03.09





## 6. Tools for Implementing Results

- To achieve innovations in institutions and governance structures, the Hyderabad Project is in the process of developing a tool called
  - ➡ **Crafting Rules by Discourse (CRD)**  
**(Building commitment towards change)**
- For the implementation of the project results, meetings between the different stakeholders of a thematic field will be organised
- Aim of this tool: *finding solutions* to conflicts and achieving *mutual gains* by the discussion of and agreements on rules of private or public ordering.



# 7. Outlook (1)

## Challenges in the coming project years:

1. Ensuring Data Base and Information (existence of data, comparability of data, availability of data):
  - **How to provide consistent comparable data base for the Project?**
2. Establishing transdisciplinary research partnerships and research management structures:
  - **How to achieve sustainable use and updating of research outcomes such as strategic planning methods and best-practice concepts by local partners in Hyderabad?**



# 7. Outlook (2)

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3. Horizons of expectations / assuring continued interest in the Project:
  - **How are the outcomes of the Project best embedded in the overall development policy and programmes of the local, state and the central governments?**
4. Influence of exogenous political developments (e.g. power shifts):
  - **How to continue policy dialogue and cooperation under new conditions and in the event of new priorities?**



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**THANK YOU**  
**for your attention!**

[www.sustainable-hyderabad.de](http://www.sustainable-hyderabad.de)