



Climate and Energy in a Complex Transition Process towards Sustainable Hyderabad

Mitigation and Adaptation Strategies by Changing Institutions,
Governance Structures, Lifestyles and Consumption Patterns

**Project Consortium Led by Humboldt University Berlin
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Definition of the problem

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- Emerging megacity of “Greater Hyderabad”, will reach 10.5 million inhabitants by 2015
- Modernization and urbanization as well as consumption and lifestyle changes have led to growth in commercial energy use and increasing per capita greenhouse gas emissions
- The use of traditional biomass for fuel (e.g., firewood) is high in peri-urban areas
- Hyderabad is predicted vulnerable to climate change in terms of food production, water management, biodiversity and livelihoods
- Severe floods in 2002, strong heat waves in 2003 and altogether three drought years between 2000 and 2007 and floods of 2008 support this assumption



Definition of the problem

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- Given the risks of climate change, driven mainly by the consumption of fossil fuels, **a fundamental shift in energy consumption patterns** is required, leading to a **low emission society**
- Energy use and greenhouse gas emissions from production and provision of goods & services will not change sufficiently without **transformation of life styles and consumption patterns**
- **Technical measures and policy instruments** are certainly indispensable, but requirements and changes regarding **institutions and governance structures** are equally important for transition towards sustainability



Rationale of the Project

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- The project concept is concerned with **mitigation** achieved through
 - (a) accounting via a consumption oriented analysis of greenhouse gas emissions (diet, traffic and transport etc.), based on lifestyle changes
- The project concept evolves **adaptation** measures for climate change through
 - (b) a comprehensive study of its potential impacts on Hyderabad and its peri-urban regions
- The project designs measures for **transition** towards sustainability through
 - (c) concepts, regulatory studies, policy learning and governance reforms in infrastructure sectors, such as energy, transport and water



Overall Objectives of the Project

The Project aims at achieving the following innovations for Hyderabad and its region:

- 1. To develop a **Sustainable Development Framework (SDF)** which focuses on mitigation and adaptation strategies for climate change and energy provision & efficiency concepts*
- 2. Based on that, to design a strategy for a **Perspective Action Plan (PAP)**, focussing on the resolution of these problems, including related core issues of nutrition and environment*
- 3. To **build capacities and implement Pilot Projects** at the community level and organise learning processes for their adoption by **setting appropriate institutions and governance structures***

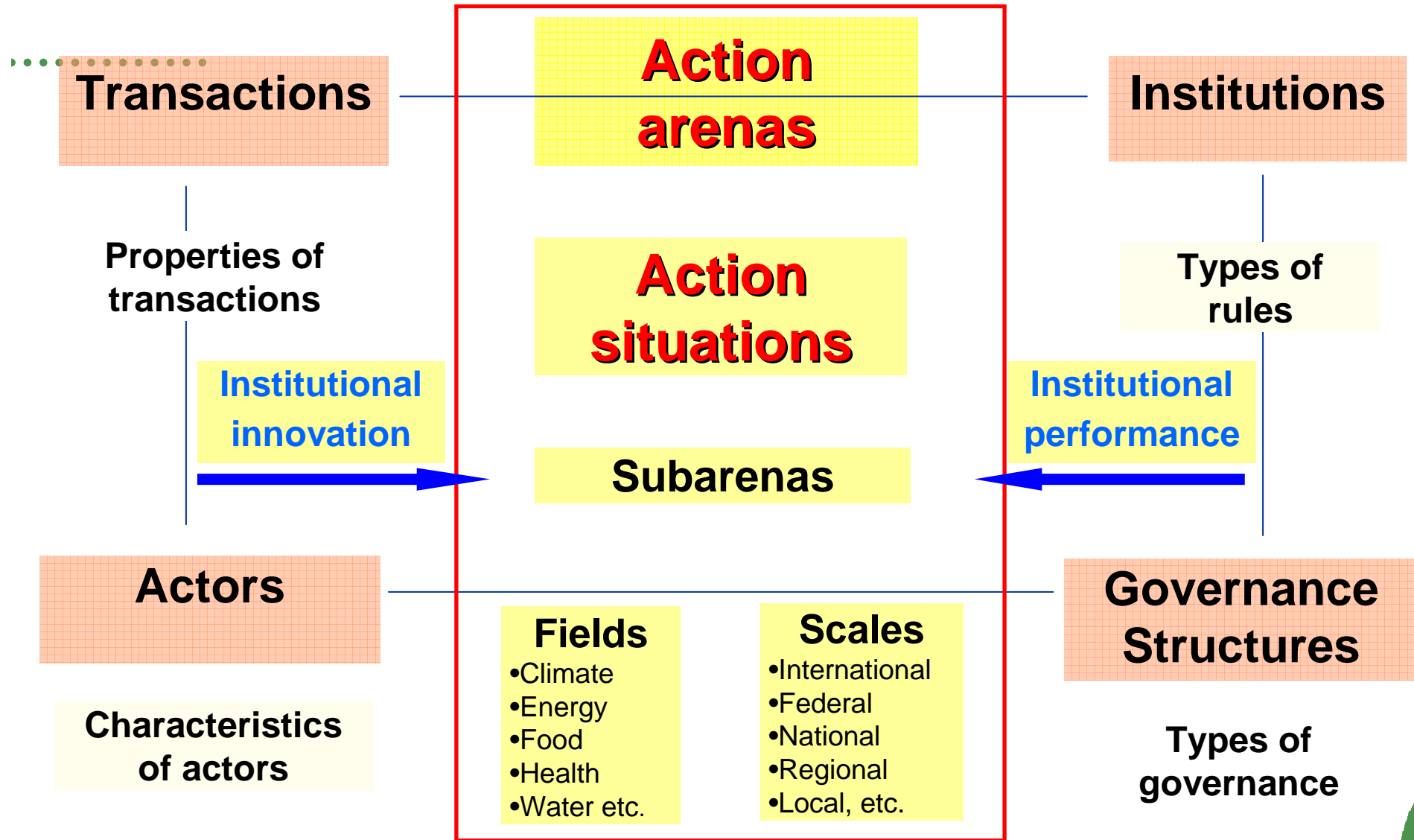


Analytical Framework and Applied Methodology 1/2

The Project uses as a basic concept of sustainability the analytical framework of “Institutions of Sustainability” (Hagedorn et al., 2002), which considers environmental protection, resource management and sustainable development as crucially depending on institutional change:



Institutions of Sustainability



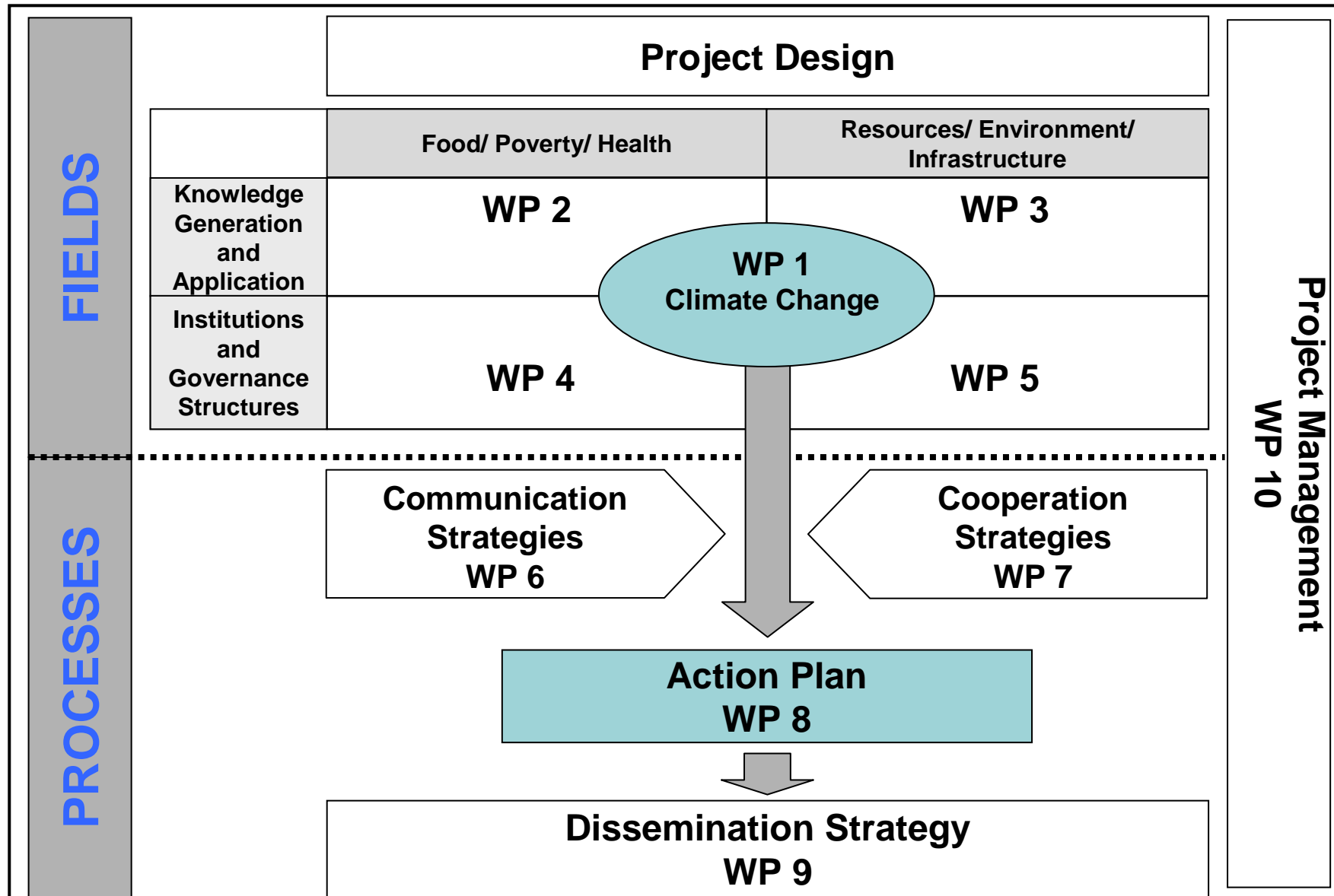


Analytical Framework and Applied Methodology 2/2

- Not only climate change and energy needs are at stake; This means that linkages, either representing trade-offs or enabling synergies intertwined with ecological, social, institutional, economic and cultural changes have to be taken into account within the framework
- Application of mutually co-ordinated methods is foreseen, such as concepts, regulatory studies, and measures for transition towards sustainability
- “Institutional Analysis and Development Approach” (IAD) from RESS and IFPRI, “Lifestyle Concept for Climate Change” from PIK, the “Governance of Energy Reforms Approach” from TERI, “Transport Planning Models” by PTV and others



Project Structure





Potential for Application of Research Results 1/2

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The research fields have been jointly evolved through the efforts of Indian, German and US scientists, urban government stakeholders and NGO Networks in Hyderabad. As a consequence, this Project is devoted to applied research that explicitly aims at the feasibility and effectiveness of generated knowledge through:

- Linking results with action, policy learning & institutional innovation workshops: background studies, stakeholder analyses, concept papers, capacity building, pilot projects, monitoring and evaluation



Potential for Application of Research Results 2/2

- Transdisciplinary research partnerships (Basic Research) and research management structures to guarantee sustainable use and updating of research outcomes such as strategic planning methods and best-practice concepts by local partners in Hyderabad
- Commitment of financial, technical and institutional cooperation by the Government of Andhra Pradesh for scientific-technological, but also for economic as well as development cooperation
- Establishment of a “Centre for Sustainable Hyderabad” in collaboration with the Government of Andhra Pradesh to institutionalise policy learning
- **www.sustainable-hyderabad.de**



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Thank you very much!