

## Doing Transdisciplinarity in Research Cooperation for Sustainable Science:

### Joint Learning and Experiences from the German-Moroccan Research Cooperation on Urban Agriculture in Casablanca

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**td-conference 2011**

**EVALUATION OF INTER- AND TRANSDISCIPLINARY RESEARCH  
EXPERIENCES AND REFLECTIONS ON BEST PRACTICE**

**Berne, 14 - 16 September 2011**

**Setting**

**Research Cooperation for Joint Learning**

**Selected Results of Evaluation Experiences**

**Summary and Outlook**



# Setting



# The BMBF Programme “Future Megacities”



BMBF Megacity Projects - Phase II (2008 - 2013)



# The UAC Research Project

## Megacity Programme



## Action Research Project



- Inter- and transdisciplinary project
- Moroccan-German team
- Initial phase: 09/2005–03/2008
- Implementation phase: 04/2008–03/2013
- Research grant: 6.000.000 €

## Project Partner



# Casablanca



## The Urban and Rural Synergies



++ food provision +++ regional products and markets +++ recreational space +++ beautiful landscape +++ natural heritage ++ joint water use +++ water treatment systems +++ risk management +++ income generating activities ++ + open space production +++ healthy habitat development +++ resource and energy efficient cycles +++ peri-urban tourism +++ adapted technologies +++ city as an innovation multiplier +++ reduction of CO<sub>2</sub> emissions +++ network



## Research Cooperation for Joint Learning



# The Project Team



|                             |                              |                                   |                       |
|-----------------------------|------------------------------|-----------------------------------|-----------------------|
| Civil Society<br>4 partners | Administration<br>3 partners | Industry + Services<br>3 partners | Science<br>9 partners |
|                             |                              |                                   |                       |

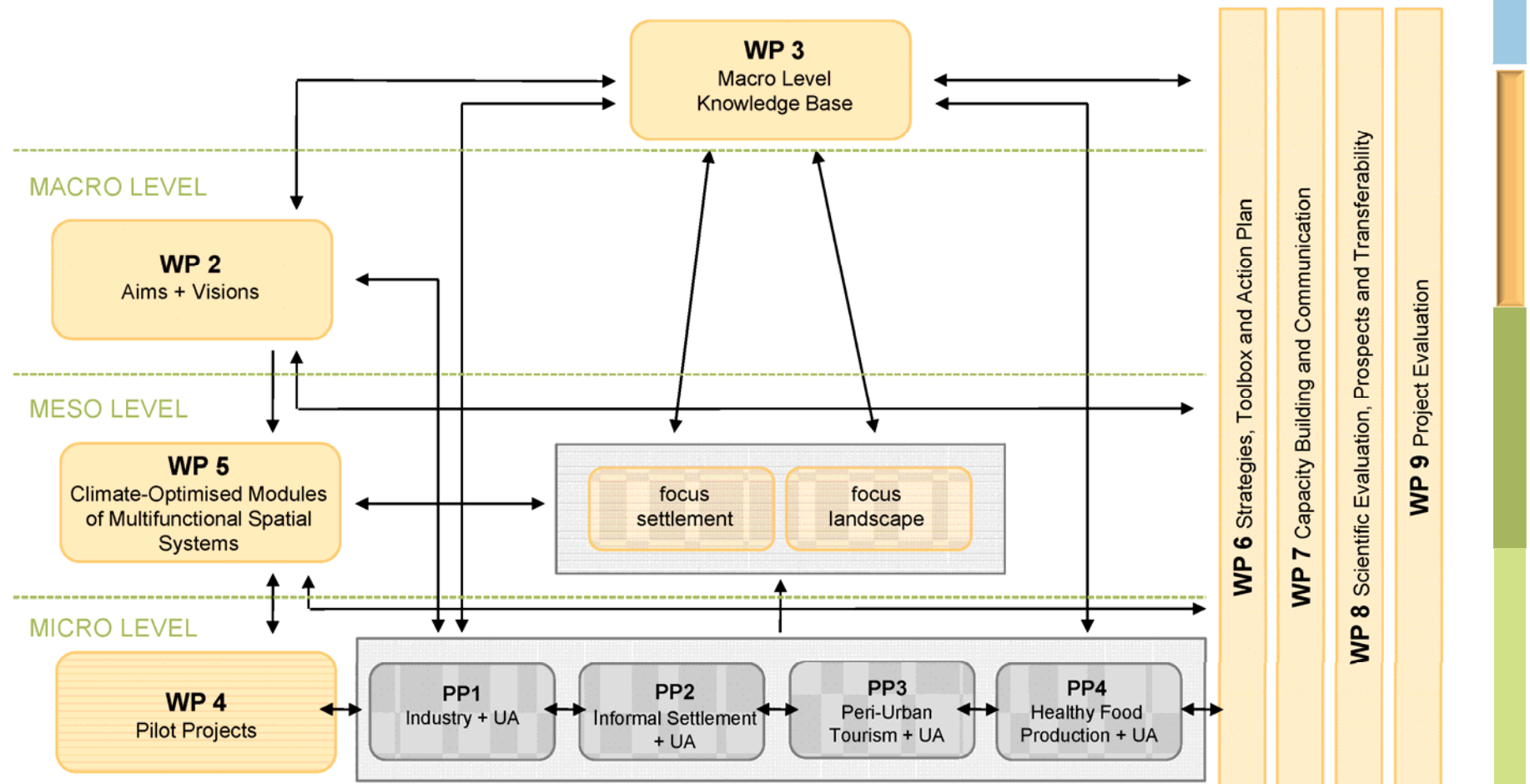


## Overview of the Work Packages (WP)

- WP 1 Project organisation & Cooperation Management
- WP 2 Aims & Visions
- WP 3 Macro-Level Knowledge Base
- WP 4 Pilot projects
- WP 5 Climate-Optimised Modules of Multifunctional Space Systems
- WP 6 Strategies, Toolbox & Action Plan
- WP 7 Capacity Building & Communication
- WP 8 Scientific Evaluation, Prospects & Transferability
- WP 9 Project Evaluation

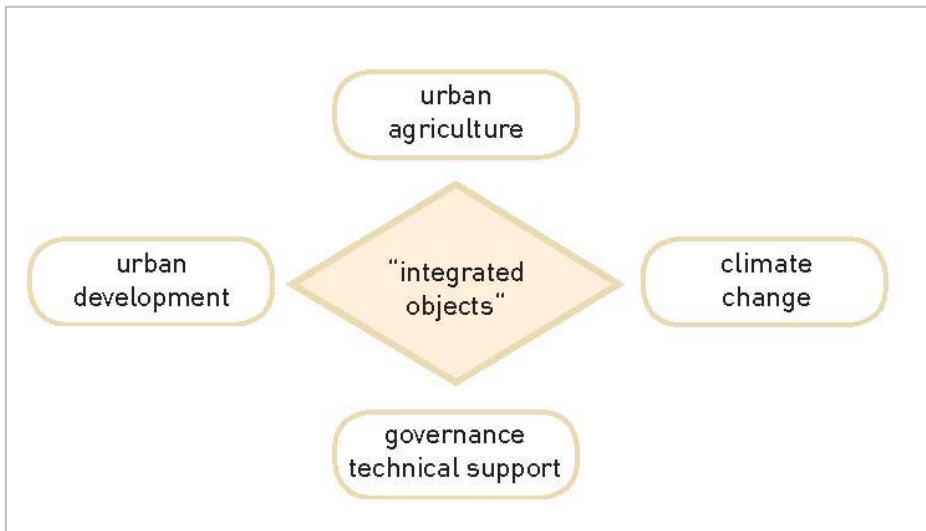
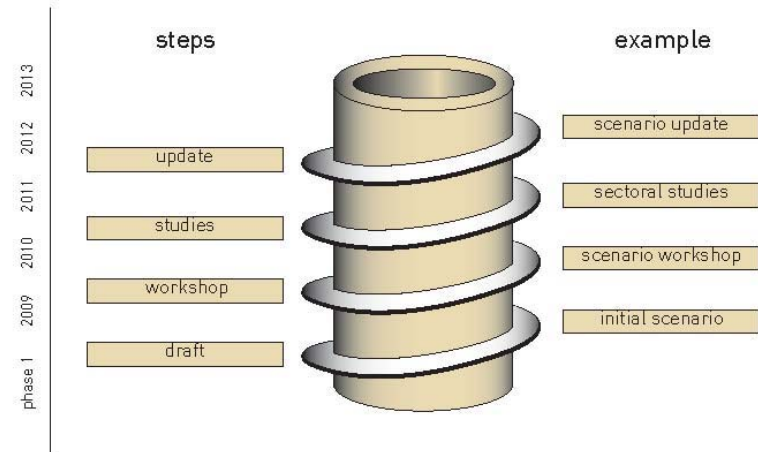
## Research on Different Scales

The working process includes switching between the different scales (macro/meso/micro-level) and up / downscaling processes.



## Our Three Most Important Methodological Tools

- The spiral-formed work approach (recursiv)
- The project rhombus (integration)
- The four pilot projects (action research)



## Selected Results of Evaluation Experiences



## Overview of Internal and External Evaluation Tools

- **Summative milestone trend analysis**  
(WP 9, online questionnaire, report) → every year
- **Internal self-evaluation workshop:**  
„Communication and cooperation in interdisciplinary, transdisciplinary and intercultural action research“ → after 2 years  
(February 2010)
- **External interim evaluation**  
BMBF evaluation conference → after 2.5 years  
(autumn 2010)
- **Project publication: integrated anthology**  
Bringing project results to fruition → until project end  
(March 2013)

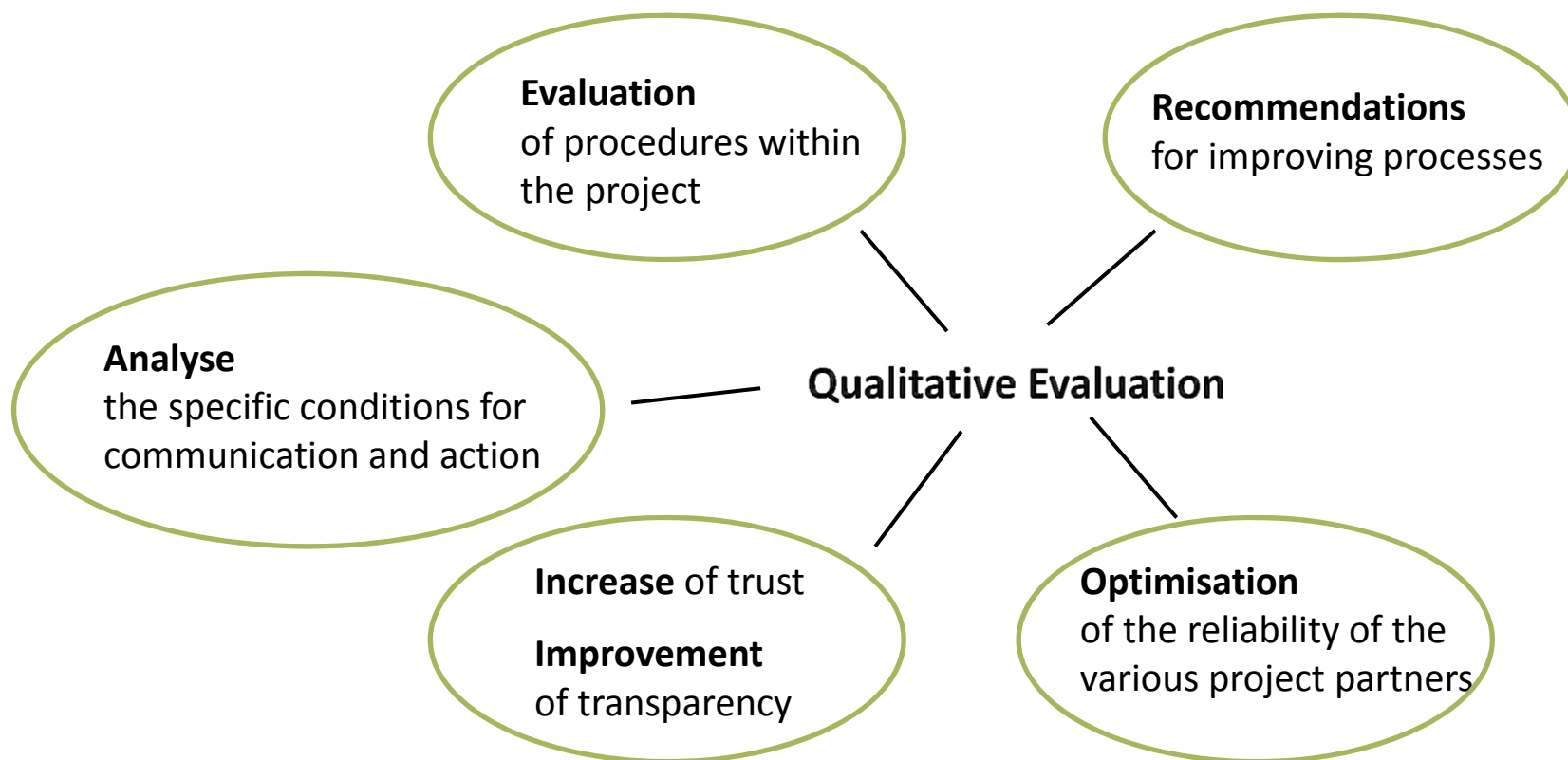


## Internal Self-Evaluation Workshop: KITI-Workshop (I)

February 25-26, 2010 in Casablanca, Morocco

**Preparation for the external interim evaluation**

And further goals:



## Internal Self-Evaluation Workshop: KITI-Workshop (II)

February 25-26, 2010 in Casablanca, Morocco

### Concept:

- **UfU, Independent Institute for Environmental Concerns:** commissioned to develop the 2-day workshop, workshop moderation
- **Preparatory meetings in Berlin:** concept, translation into French and English, sent to the partners
- **Method:** small working groups, plenary discussions, input lectures, world café, role-playing exercise
- **Analysis:** to elaborate strengths and weaknesses of communication processes of the status quo and future development of the project
- **Process:** 42 people took part (25 from Morocco, 17 from Germany)

## Internal Self-Evaluation Workshop: KITI-Workshop (III)

February 25-26, 2010 in Casablanca, Morocco

### Results:

- **Positive experiences with communication and procedures:**
  - participants consider the project highly professional
  - enjoyable research project
  - open partnership structure
  - mutual learning processes
  - all relevant ministries are familiar with the project (visibility, communication) (...)
  
- **Project procedures that require improvement:**
  - clarification of roles played by the various project participants
  - role problems especially at pilot project level
  - role problems in cooperation with authorities
  - misunderstandings regarding form of invitations (for Germans, an invitation by email is entirely sufficient, in Morocco public authorities and businesses require official invitation in writing) (...)

## Internal Self-Evaluation Workshop: KITI-Workshop (IV)

February 25-26, 2010 in Casablanca, Morocco

- **Recommendations for improving communication and project procedures:**
  - necessary to include feedback loops
  - communication tools were to be established
  - public has to be provided with more information about the project (...)
  
- **Establishment of the project long-term in Morocco:**
  - risk: project end up upon termination of funds from donor country
  - Moroccan actors have to make the topic their own (ownership)
  - enhance public visibility of the project
  - transfer the project results to other contexts
  - disseminate the pilot project approach
  - establish a research center
  - integrate interdisciplinarity and transdisciplinarity in education (...)



## Internal Self-Evaluation Workshop: KITI-Workshop (V)

February 25-26, 2010 in Casablanca, Morocco

### Conclusions:

- Workshop results confirm that the implementation of ID/TD projects entail special challenges for **communication** and project procedures
- **Misunderstandings** in the communication processes can also arise if the culture of a different country is understood only rudimentarily.
- Need for **periodic feedback** processes
- Other communication problems lie less in ID/TD but rather in the **complex structure of the UAC project**, both in terms of project budget and the number of project partners

# Internal Self-Evaluation Workshop: KITI-Workshop (VI)

February 25-26, 2010 in Casablanca, Morocco

## Workshop impressions



## External Interim Evaluation

Summer and autumn 2010 in Bonn, Germany (BMBF, DLR project agency)

### Concept:

- **Evaluation report (summer 2010):**  
max. 50 pages, in English
- **International experts:**  
reviewer of the project proposals;  
experts from sciences, practitioners  
(e.g. WB, ADB, consultant agencies)
- **Evaluation conference in Bonn, Germany (autumn 2010):**  
3-day international BMBF megacity conference;  
2-day evaluation conference with project  
presentation in public (all 10 megacity projects) and  
single inquiry of every project (“the inquisition”);  
participation of two counterparts (Morocco)



## External Interim Evaluation (II)

Summer and autumn 2010 in Bonn, Germany (BMBF, DLR project agency)

### Criteria:

- **Proposal description (milestones planned and achieved):**  
implementation of project activities, project budget
- **Proposal evaluation for main project phase (project start in March 2008):**  
**recommendations** of the international reviewers;

### set of requirements:

- project-specific questions and comments
- concerning implementation
- concerning all projects

### Results:

- 9 from 10 projects successfully passed the interim evaluation
- Funding for second part of the main project phase is secured



# Project publication: integrated anthology

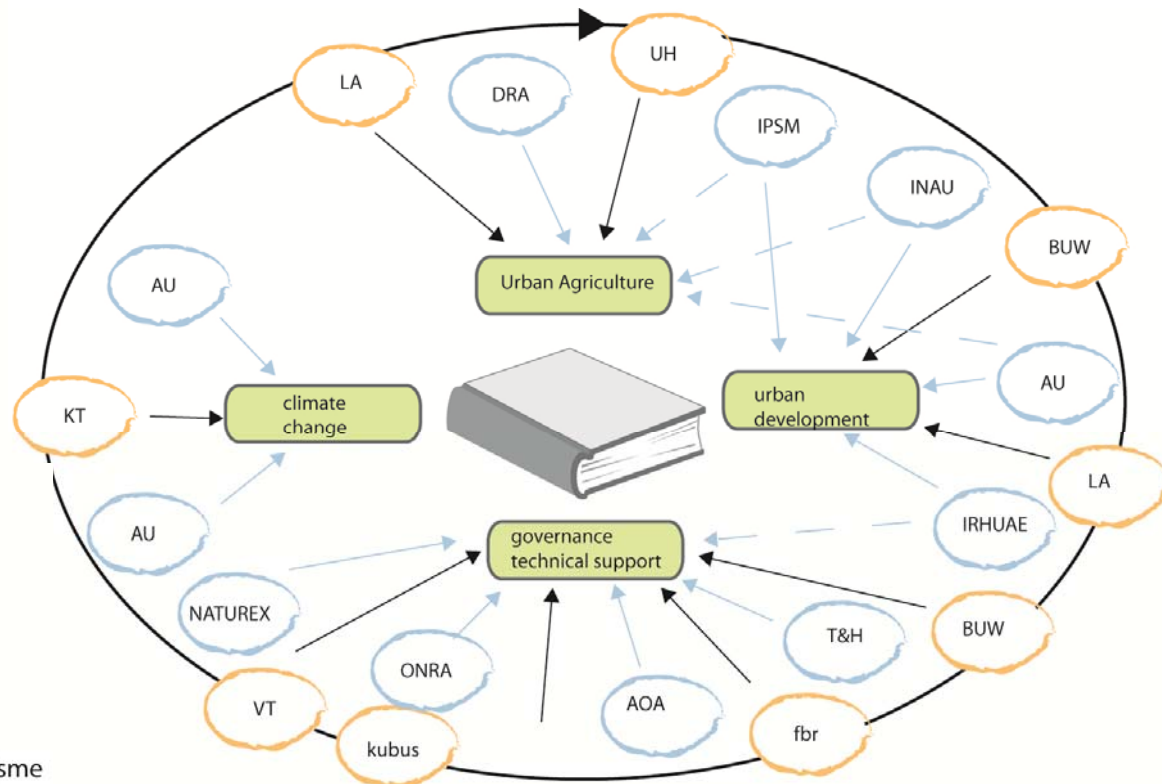
Bringing project results to fruition until project end March 2013

## German partners

- BUW = Bergische Universität Wuppertal
- DLR = German Aerospace Center, Bonn
- fbr = Fachvereinigung Betriebs- und Regenwassernutzung
- kubus = Kooperations- und Beratungsstelle für Umweltfragen
- KT = Klimatologie
- LA = Landschaftsarchitektur/ Freiraumplanung
- UH = Uni Hohenheim
- VT = Verfahrenstechnik

## Moroccan partners

- AOA = Association Oulad Ahmed
- AU = Agence Urbaine
- DMN = National Weather Service, Casablanca
- IPSM = School of Agriculture and Commerce Prince Sidi Mohammed
- INAU = Institut National d'Aménagement et d'Urbanisme
- IRHUAE = Regional Authority of Housing, Urbanism and Spatial Planning
- ONDA = Office National des Aéroports
- T&H = Terre et Hmanisme



## Summary and Outlook



## Working and Learning Together: Relevance of Communication



## 1. Inter- and transdisciplinary research is very exhausting!

Some ingredients for successful research cooperation:

- clear project design
- good communication strategy
- motivated research team
- sufficient time and money!

## 2. Need for awareness raising in inter- and transdisciplinary research!

In particular: actors in science and actors in research funding.





**Thank you! Merci! شكراً!**

[www.uac-m.org](http://www.uac-m.org)

