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How does transdisciplinarity contribute to sustainability?

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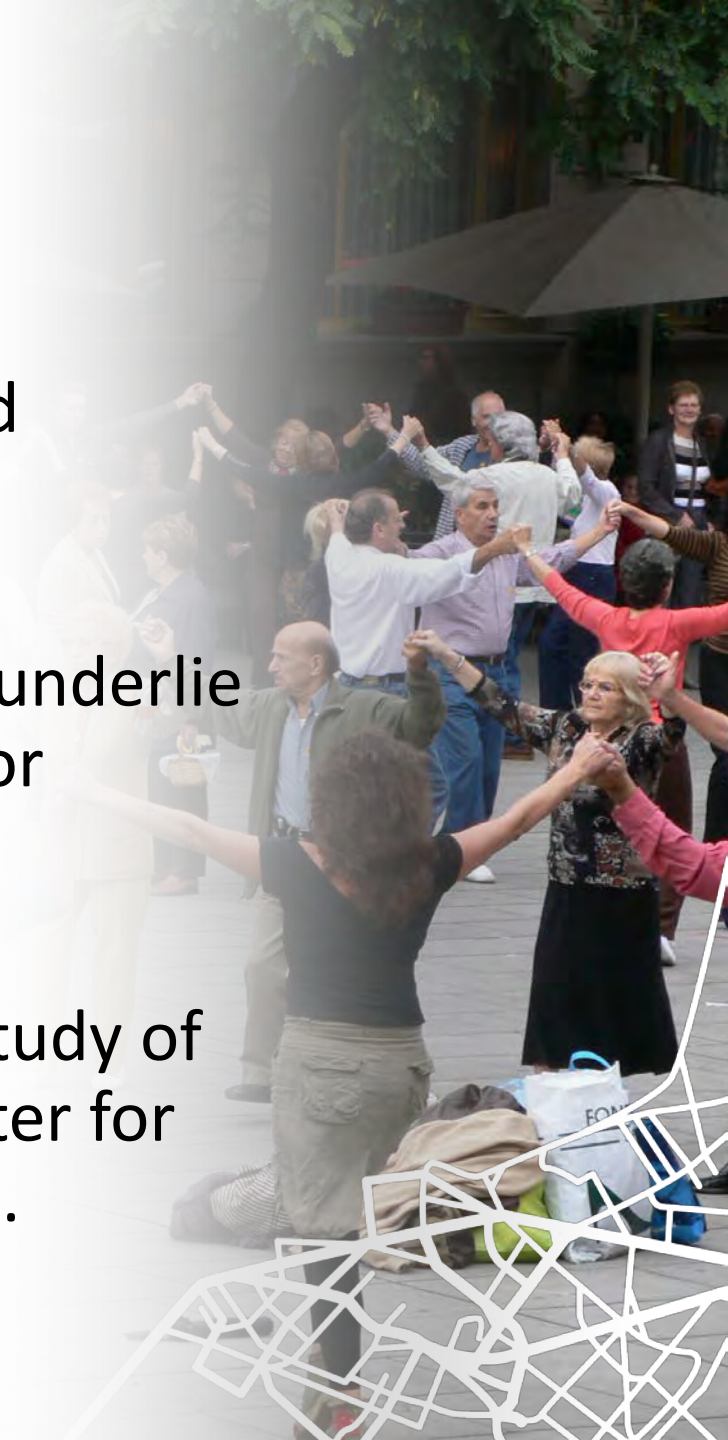
MISTRA URBAN FUTURES

The aim of this presentation

To critically explore the characteristics of transdisciplinary (TD) research which make it seen as more applicable to solving sustainability related problems than other forms of interdisciplinary and problem-based research.

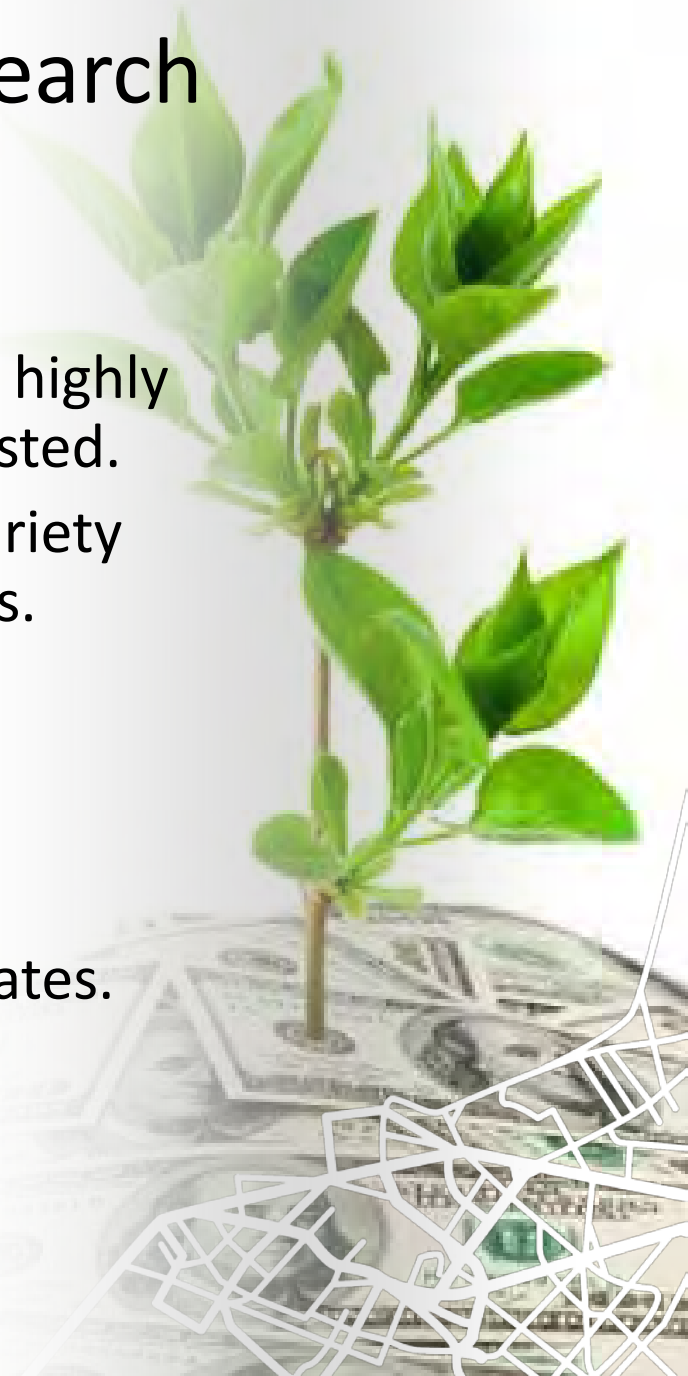
How will this be done?

- Clarifying the motivation behind transdisciplinary (TD) research
- Identifying the premises which underlie the promotion of TD research for societal problem solving
- Testing the premises in a case study of Mistra Urban Futures, a TD center for sustainable urban development.



Motivation for using TD research to solve wicked problems

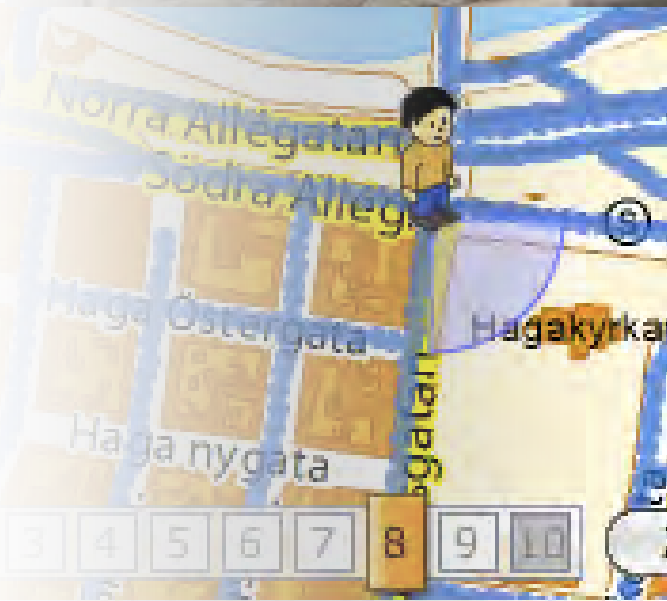
- Societal goals such as sustainability are highly ambiguous, ethically-loaded and contested.
- Such problems involve and engage a variety of interest groups, priorities, and values.
- Current socio-environmental problems transcend spatial, temporal, sector and disciplinary boundaries.
- They exceed institutional structures, disciplinary boundaries, political mandates.



Leads to an evolving role for science

Which can better contribute to real world problem solving… '*when facts are uncertain, values in dispute, stakes high, and decisions urgent*' (Funtowicz and Ravetz 1993 on post-normal science)

Mode 2 focuses on the context of application, transgression of disciplinary boundaries, heterogeneous organizations, social accountability and new forms of quality control (Gibbons et al 1994)



Overall definition

TD research focuses on contributing to solving real-world problems in a specific context.

It includes academics and their knowledge from different disciplines

– *interdisciplinary*

And practitioners and their knowledge and expertise from real-life practice

– *non-academic sources of knowledge and expertise*

Implicit claims of TD research

In-depth participation of responsible and affected stakeholders

and

the integrate of relevant and broad knowledge from both practice and research

lead to

socially robust results which can contribute to solving sustainability related problems.

Mistra Urban Futures is a center for sustainable urban development which

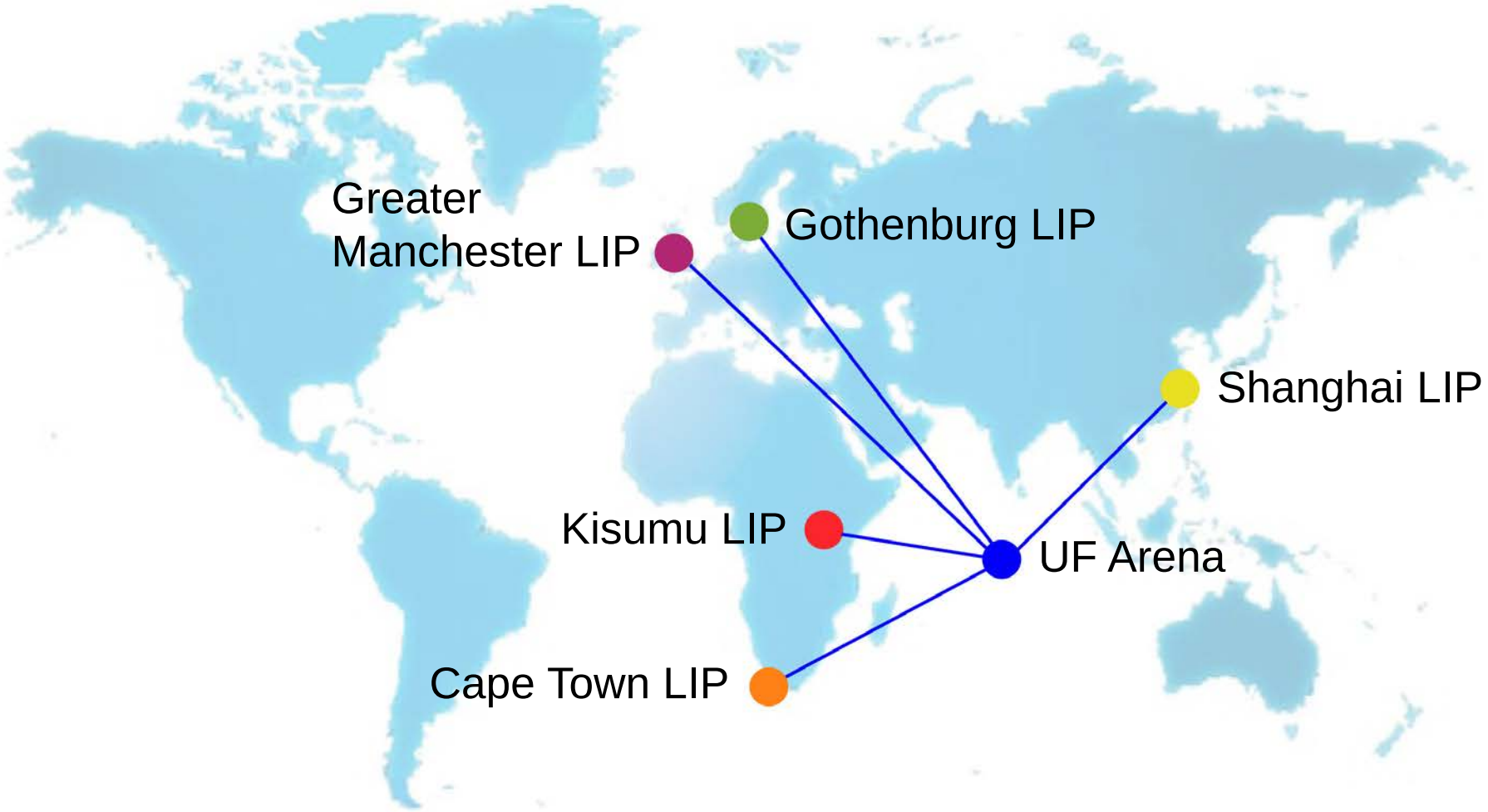
Addresses complex urban challenges…

Through in-depth collaboration
- we are all knowledge producers
- we are all knowledge bearers
- we are all knowledge users

Based on joint ownership and funding
- public-academic-private

With long term commitments
- ten years minimum

Local Interaction Platforms & the Urban Futures Arena



Five TD projects at Mistra Urban Futures

On a variety of substantive issues

- Multi-level governance
- Climate change adaptation in low lying central areas
- Urban empowerment
- Promoting business driven sustainable urban development
- Urban games for dialogue and learning

Symmetrical entitlement to the research process

- Project ideas originated from the public bodies
- Co-leadership pairs, broad groups of expertise from both practice and research
- Attention to inclusion, collaboration, integration, usability and reflection throughout the process

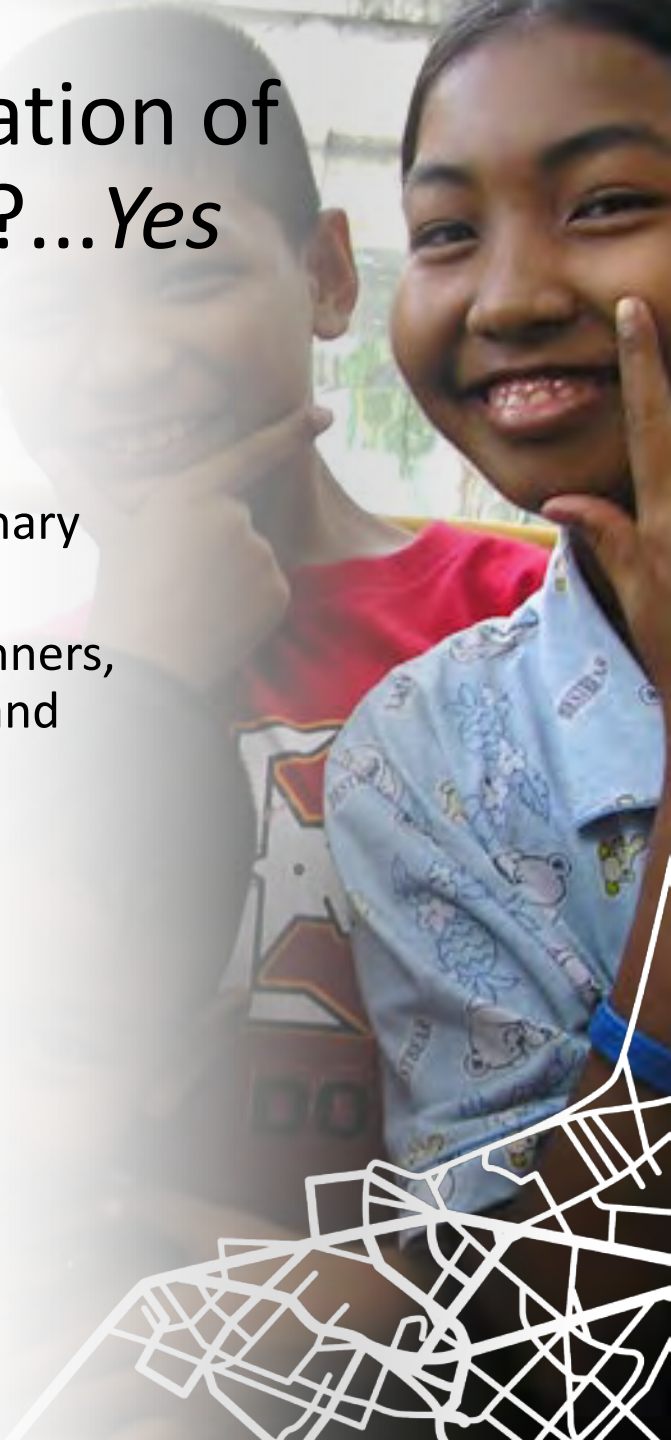
Was there in-depth participation of stakeholders in the projects?...*Yes*

The co-leaders recruited and included academic and non-academic participants:

- From research - natural, technical, interdisciplinary and social sciences
- From the public bodies and public sphere - planners, policy-makers, administrators, citizens, NGO's and business interests

In-depth participation was based on:

- In-depth collaboration - democratic meeting methods, project kick-offs
- Tight working teams, larger advisory groups
- Dialogue based data collection - focus group interviews, workshops and seminars



Was there integration of relevant and broad knowledge from both practice and research? …. *Yes*

Overall the six projects integrated a wide variety of both disciplinary and non-academic expertise and knowledge in the projects.

Knowledge integration occurred in different ways

- Joining practical and theoretical insights from participants in the project working, advisory and focus groups
- Integrating resident experiences and business interests in designing interventions and models
- Producing dialogue tools and iPad games for students

Was socially robust knowledge produced that can contribute to solving societal problems ?... *Yes and no*

If socially robust means context-sensitive, relevant, and user accessible, then there was a great deal of socially robust knowledge produced in the projects.

- Specific recommendations for increasing the effectiveness of using collaboration as a governance tool.
- A wider political discourse for climate change adaptation

However, integrating such results in formal processes for social change was highly problematic.

TD embodies a paradox

TD research must create hybrid spaces that enable the symmetrical participation of both practice and science proper.

This leads to the TD paradox.

Symmetrical participation leads to socially robust knowledge. But this knowledge is not necessarily:

- Legitimate outside of TD processes and participants
- Synched to formal decision-making
- Anchored in informal and formal admin routines
- Effective for promoting societal change

Moving forward

How can we deal with the TD paradox?

- TD processes are valuable for harnessing diverse knowledge and expertise about wicked problems.
- They need hybrid spaces which support autonomous, innovative and situated knowledge production.

TD research faces a number of institutional, cognitive, and practical barriers. More work is needed on how to:

- Create better institutional support from both science and practice
- Maintain autonomy while anchoring in practice
- Increase TD legitimacy in both science and policy spheres

Thank you!

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www.mistraurbanfutures.org