

An introduction into interdisciplinary and transdisciplinary water governance research

Joanne Vinke-de Kruijf

Postdoc researcher

Institute of Environmental Systems Research (IUSF)

November 5, 2015, Autumn School (morning session)

What to expect from this morning?

- Learn more about ‘doing’ research with a focus on communicating science to ‘outsiders’
- This introduction:
 - Why is this relevant or important when doing water governance research?
 - What are characteristics of research that is relevant to policy and practice?
 - Based on discussion session with the resources management group at IUSF

Water governance research – an interdisciplinary field (Patterson et al, 2013)

- Encompassing societal (political, social, economic, institutional) and ecological dimensions
- Cuts across disciplines, each of them having their own traditions, perspectives, understandings and approaches

Interdisciplinary research

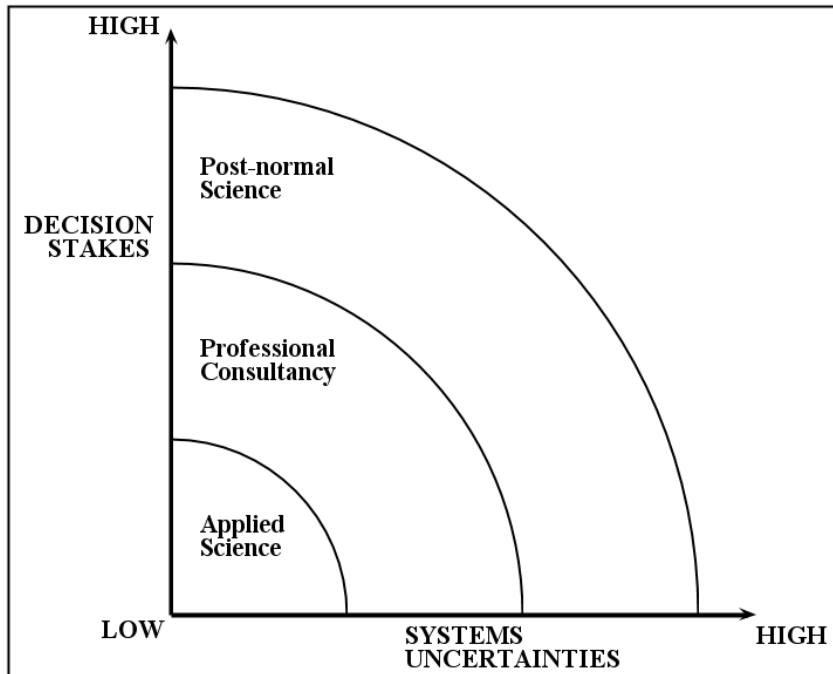
- The production of research that involves the transcendence of or crosses (traditional) academic or disciplinary boundaries (e.g. Aram, 2004 In: Wesselink 2009; Bridle et al, 2013)
- Small versus big interdisciplinarity (Bridle et al, 2013)
 - Big: Collaboration between distant disciplines, e.g. natural and social sciences
 - Small: collaboration between similar disciplines, e.g. public administration and organization sciences

Why interdisciplinary is not enough (Jahn, 2012)

Post-normal science (Funtowicz and Ravetz, 1990, 1991, 1993)

High uncertainty (facts) due to longterm nature of issue (e.g. climate change)

High stakes – urgent decisions – values in dispute



Mode 2 knowledge production (Gibbons et al., 1994)

- Mode 1 (traditional)
 - Researcher-driven
 - Focused on academic knowledge production (not bothered by the applicability of findings)
 - Discipline-based
- Mode 2: multidisciplinary teams working together for short periods of time on specific problems in the real world
 - Context-driven
 - Problem-focused
 - Interdisciplinary

Transdisciplinary research

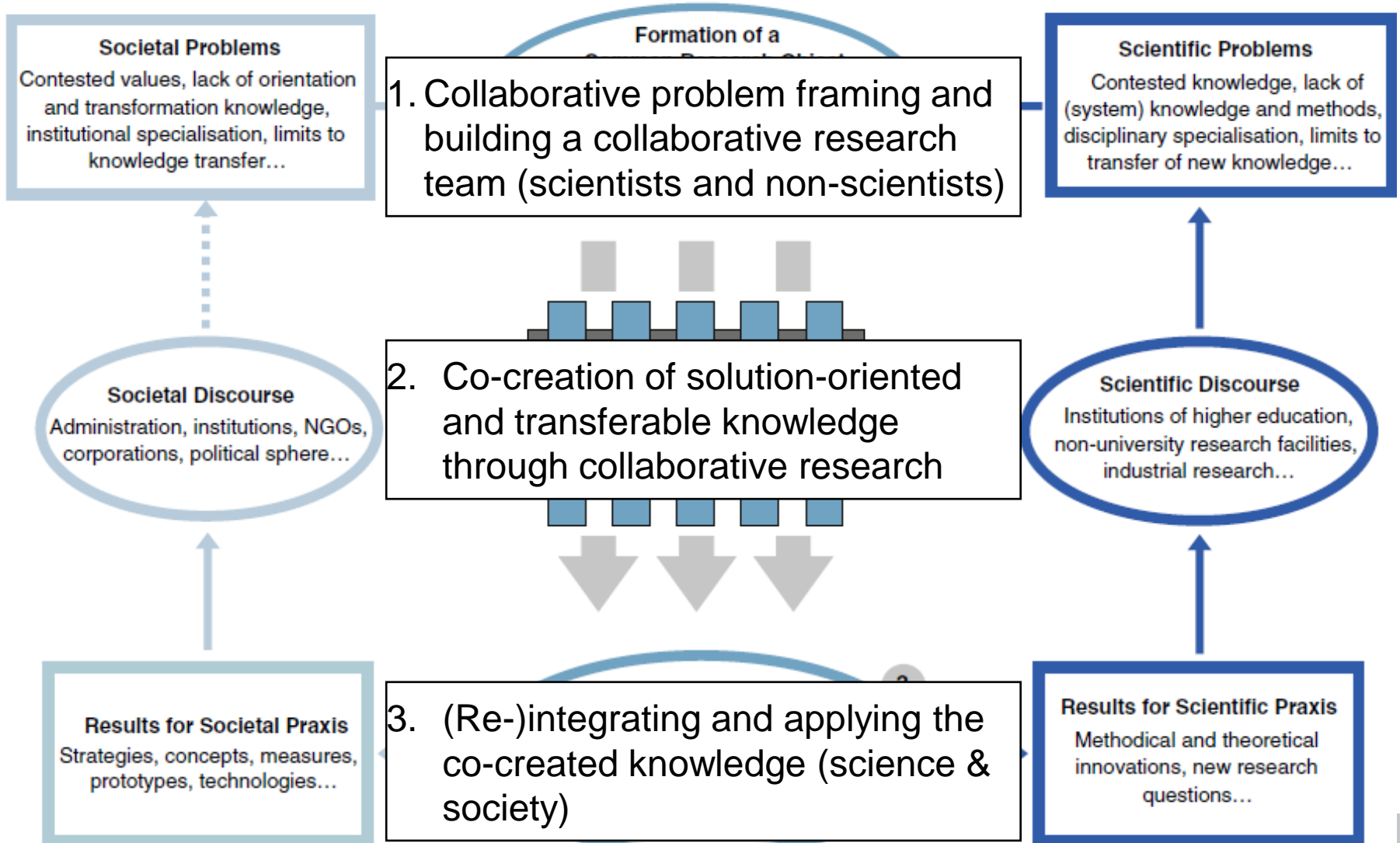
- Water governance research deals with complex, societal ('real') problem situations → *How to produce knowledge that is relevant to science, policy and practice?*

- Move beyond academic disciplines
- Incorporate **non-scientific knowledge** or **non-academic actors** in the research process

Transdisciplinary research (Jahn, 2012; Patterson, 2013; Angelstam et al, 2013)

- Starts of with complex societal problem (applied practice, joint problem formulation and solving)
- Involves scientific actors (cooperation between various scientific disciplines and fields) and non-scientific actors (science-society)
- An approach (not a theory or methodology) that does not replace disciplinary practice
- Producing peer-reviewed knowledge AND influencing policy or practice, with the potential of enabling mutual or transformative learning

A transdisciplinary research process (Lang et al, 2012; Jahn et al, 2012)





Thank you!

Questions? Suggestions? Comments?

References

- Angelstam, P., Andersson, K., Annerstedt, M., Axelsson, R., Elbakidze, M., Garrido, P., . . . Schlyter, P. (2013). Solving problems in social–ecological systems: Definition, practice and barriers of transdisciplinary research. *Ambio*, 42(2), 254-265.
- Bridle, H., Vrieling, A., Cardillo, M., Araya, Y., & Hinojosa, L. (2013). Preparing for an interdisciplinary future: A perspective from early-career researchers. *Futures*, 53(0), 22-32. doi: <http://dx.doi.org/10.1016/j.futures.2013.09.003>
- Jahn, T., Bergmann, M., & Keil, F. (2012). Transdisciplinarity: Between mainstreaming and marginalization. *Ecological Economics*, 79, 1-10. doi: <http://dx.doi.org/10.1016/j.ecolecon.2012.04.017>
- Patterson, J. J., Lukasiewicz, A., Wallis, P. J., Rubenstein, N., Coffey, B., Gachenga, E., & Lynch, A. J. J. (2013). Tapping fresh currents: Fostering early-career researchers in transdisciplinary water governance research. *Water Alternatives*, 6(2), 293-312.
- Lang, D., Wiek, A., Bergmann, M., Stauffacher, M., Martens, P., Moll, P., . . . Thomas, C. (2012). Transdisciplinary research in sustainability science: practice, principles, and challenges. *Sustainability Science*, 7(1), 25-43. doi: 10.1007/s11625-011-0149-x
- Wesselink, A. (2009). The emergence of interdisciplinary knowledge in problem-focused research. *Area*, 41(4), 404-413. doi: 10.1111/j.1475-4762.2009.00882.x