A Comparative Assessment of Research Approaches for Sustainable Development: Towards an Integrated Methodology

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The complexity of sustainable development cannot be approached by restricting approaches to individual scientific disciplines. Comprehensive assessments in the realms of natural resources, environmental sanitation, health and social development must address multiple external (professional) and multiple internal perspectives (concerned populations, stakeholders). Both perspectives relate to systems and institutional frameworks, which are addressed in different ways, depending on their respective epistemology. On one hand, development-oriented research faces century-old debates, rooted in the time of the Enlightenment. On the other hand, it is driven by the urgency of problem-solving, thereby adopting necessary (neo)-pragmatism characterised by the pluralist and syncretistic views of the respective disciplines. We analyse three examples of integrated research approaches within the NCCR North-South which combine natural science (geography, sanitation, health) with humanities and social sciences (cultural sciences, anthropology, sociology). In all case studies transdisciplinary methods were applied or developed, including participatory processes and local knowledge (indigenous knowledge). In this phenomenological analysis we inquire about practical approaches, how results from different disciplines are actually compared, what the added value of different disciplines addressing the same theme is, and what the minimal common denominator between disciplines avoiding conflicts of major epistemological divergences could be. Transdisciplinary approaches are common to all three examples, with differences in the structures of the processes. Outcomes are beyond what a purely scientific or even single discipline-driven approach could yield. Formal assessments of interfaces between disciplines require further methodological developments and are restricted mostly to sharing information and knowledge, cross validation, and triangulation or plausibility analysis. Research outcomes indicate clearly that there is added value from interdisciplinary collaboration in all examples. We recognise that development-oriented research requires basically all disciplinary dimensions to be considered in a holistic manner. These experiences contrast with the current fragmentation of scientific disciplines, which appear incongruent with current priorities of complex problem-solving in development research. Options for specific curricula which provide a firm rooting in a particular discipline but empower further studies to acquire competence in transdisciplinary dialogue and interdisciplinary research are discussed.

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