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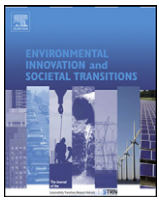

Breaking out of sustainability impasses: How to apply frame analysis, reframing and transition theory to global health challenges

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ABSTRACT

We combine frame analysis and transition theory into a thinking tool in sustainability science and analyse three serious and persistent problems in global health subject to sustainability impasses: HIV/AIDS, malaria, and indoor air pollution. Frame analysis identifies how problems are encased by scientific understandings and captured by transition barriers: policy cooptation, techno-institutional lock-in, and knowledge trap. Transition theory locates the transition barriers on a temporal scale and a conceptual level: landscape, regime, and niches. Frame analysis reveals how problems are embedded in particular narratives while reframing stimulates alternative understandings and problem solutions. Boundary work facilitates knowledge integration across units and transition management promotes actor oriented problem resolution. The thinking tool unites critical with problem solving research and ties reframing to analytical and temporal understandings of social change. The aim is dual: to advance methodology while stimulating critical problem solving in the quest for environmental innovations, social justice and sustainability.

1. Theory, methodology and research questions for sustainability science

Sustainability science strives to bridge knowledge, theory and methodology across disciplinary divides in search of solutions to integrated problems confronting humanity (Clark and Dickson, 2003).

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To that end it seeks and suggests integrated approaches for dealing with social–ecological causes and consequences of climate change, biodiversity loss, land use changes, water scarcity, major epidemics and other sustainability challenges (Jäger, 2009). As an emerging field it recognises multiple perspectives and approaches in science and society for tackling urgency, spatial scales, temporal inertias, non-linearity and functional complexity between actors, sectors and structures in a range of processes. In addition, it has a trans-disciplinary ambition to span disciplines, cross boundaries between science, policy and practice, and transcend science itself into stakeholder dialogues (Kates et al., 2001).

In reaction to scientific specialisation and disciplinary fragmentation (Sherren et al., 2009) sustainability researchers collaborate in broad interdisciplinary initiatives to overcome methodological barriers (Leach et al., 2010). Furthermore, sustainability scientists structure knowledge in new ways (Kumazawa et al., 2009; Ness et al., 2010) and attempt to bridge critical research with problem solving research (Cox, 1981) in order to deal better with sustainability challenges (Jerneck et al., 2010). Inspired by this, we explore how progress towards sustainability is hampered, but can be promoted, in the case of three serious, widespread and persistent problems in global health: HIV/AIDS, malaria and indoor air pollution (IAP). The three selected examples are interesting and relevant for social justice (particularly HIV/AIDS), environmental management (particularly malaria) and poverty reduction (particularly in-door air pollution). They all represent global health challenges where progress, we argue, is hampered by the current scientific framings and their corresponding actions and interventions. They also have implications for climate change and the environment, especially malaria and indoor air pollution, thereby reaching beyond global health and into the structuring of knowledge on environment and climate change. In terms of data and research design the article is based on secondary data that we generated from multiple methods such as policy and text analysis, a bibliographic survey and an extensive literature review. Our primary data is rooted in repeated field work in Kenya (2007–2011).

Climate change, land use change and land degradation affect the well-being of large populations in the global south and the situation is predicted to get worse (IPCC, 2007; Andersson et al., 2011). In addition, there is a mounting burden of disease in these areas (Patz et al., 2005). In response to such sustainability challenges, and as a sign of functional complexity, climate change policy is increasingly interlinked with food and energy policies. In parallel, there are signs that global health policies are currently changing profoundly with implications for how climate change-induced health challenges can be met. The international development community has acted forcefully on the fact that many people in developing countries are plagued by three major diseases: HIV/AIDS, malaria and tuberculosis (McCoy et al., 2009; Ravishankar et al., 2009). Meanwhile, a range of widespread but neglected tropical diseases have not yet benefited from such political and financial support and interventions (Hotez et al., 2007; Esser and Bench, 2011). As an example, every year over 1.6 million people globally die of respiratory diseases from in-door air pollution (IAP) from cooking over open fire and the victims are mainly women and children (WHO, 2002; Ramirez-Venegas et al., 2006). This demands action and research.

In this article, we use global health as an example to demonstrate a "multiple method of inquiry" (Saunders, 2003) for dealing with sustainability impasses. In our view, the term sustainability impasse refers to a situation of inaction owing less to lack of awareness, knowledge, technology or resources and more to a suite of other reasons like economic priority or human cognition, social neglect and denial (Rees, 2010). In the analysis we study three sustainability impasses by combining frame analysis and reframing with transition theory and transition management. The examples on HIV/AIDS and malaria relate to transition theory while the example on IAP relates to transition management. Transition theory is already at the core of sustainability research (Grin et al., 2010) while frame analysis is now developing in this context (Leach et al., 2010). Our findings show how the three persistent problems are subject to sustainability impasses resulting from, among other things, inadequate use of science; competing interests and values; a disconnection between science, practice and policy; or any combination thereof. In the analysis, we give priority to the three persistent problems but we also identify four strategic organisational shifts in global health which may have serious effects on the environment and on adaptation to climate change.

In research, we first apply frame analysis and then transition theory to identify and locate three types of multi-layered barriers to progress, which we conceptualise in both descriptive and