

## **The dissonance between concept and practice: The WATERCAP project as an example of a partial paradigm shift towards system innovation**

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### **Abstract**

Approaches related to system innovation, including participatory action and monitoring have become mainstream in planning and implementing development projects. It is far from clear, however, what different stakeholders mean when they commit to these approaches. This study investigated a specific project “Strengthening Universities Capacities for Mitigating Climate Change Induced Water Vulnerabilities in East Africa – WATERCAP” to understand how stakeholders conceptualized these approaches and put them into practice. The project intended to strengthen the capacities of universities in East Africa to mitigate climate change induced water vulnerability. We used indicators derived from concepts of innovation systems and Reflexive Monitoring and Action to analyze data gathered by applying qualitative methods. Our results show a dissonance between espoused theory and practice, as structural realities and personal interests dominated the project processes. The study raises the question whether communicative action for system innovation can be achieved in results-oriented development projects which require accountability to external donors.

**Key words:** Communicative processes, facilitation, innovation system, participatory action

### **Résumé**

Les approches liées à l'innovation du système, y compris les actions participatives et le suivi, sont devenus importants dans la planification et la mise en œuvre des projets de développement. Il est, cependant, loin d'être clair, ce que les différentes parties prenantes disent quand ils s'engagent dans ces approches. Cette étude a examiné un projet spécifique, celui de « Renforcement des capacités des universités pour atténuer les changements climatiques induits à vulnérabilité de l'eau en Afrique de l'Est – WATERCAP », pour comprendre comment les acteurs avaient conceptualisé ces approches et leurs mises en pratique. Le projet vise à renforcer les capacités des universités en Afrique de l'Est pour atténuer le changement climatique dû à la déficience de l'eau. Nous avons utilisé des indicateurs dérivés des concepts des systèmes d'innovation et de Monitoring et Action Réflexive pour analyser les données recueillies par l'application de méthodes qualitatives. Nos résultats montrent une dissonance entre la théorie et la pratique utilisées, comme si des réalités structurelles et les intérêts personnels avaient dominé les processus de projet. L'étude soulève la question de savoir si l'action communicative de l'innovation du système peut être

réalisée dans des projets axés sur les résultats de développement qui exigent la reddition de comptes aux bailleurs de fonds externes.

Mots clés: processus de communication, la facilitation, le système d'innovation, action participative

## Background

The notion of scientific paradigms as a set of theoretical assumptions and associated actions was established by Kuhn (1979). The currently powerful paradigm of innovation systems proposes that social and technological changes emerge from interactions within a social system (Röling, 2009). Corresponding practical approaches such as multi-stakeholder platforms, participatory action and reflexive monitoring have made their way into project proposals and operational plans. The empirical experience, however, shows that it is far from clear what different stakeholders mean when they commit to these approaches. Moreover, the actual mindset governing project implementation and evaluation is often focusing on results rather than processes. This study analyzed the project WATERCAP to investigate how different stakeholders translated the concept of system innovation from proposal to practice. We then followed up on structural and individual characteristics to reflect on explanations for the observed project processes.

WATERCAP is a project that intended to strengthen the capacities of universities in East Africa to mitigate climate change induced water vulnerability (WATERCAP, 2012). We studied a core activity of the project, the initiation of water innovation platforms in two rural Ugandan communities. The innovation platforms had the goal to host a learning process on practices and technologies that would allow to mitigate water stresses in smallholder agriculture. The innovation platforms were moreover expected to feed the achieved learning outcomes into an adaptation of university curricula.

## Analytical framework and methods

Theoretically, we refer to complex adaptive system perspectives, and specifically to the concept of agricultural innovation systems (Klerkx *et al.*, 2012). We developed a set of indicators that were applied to the project proposal and the empirical data gathered on-site. Following the approach of Reflexive Monitoring and Action (Mierlo *et al.*, 2010), we grouped the indicators in process and effect sets. The indicators were distilled from the literature on transformative learning and empowerment in similar contexts, endorsing the notion that learning occurs where critical reflection and dialogue are possible and form part of practice.



Figure 1. Analytical framework. Indicators are grouped in domains (actors, processes, effects) and used for investigation at conceptual and observed level.

The empirical data for this qualitative study were collected using participatory methods and tools involving all project stakeholders related to the two project innovation platforms.

### **Findings and implications**

Our results show that conceptually the project set high standards regarding stakeholder participation and decision making in innovation platforms. On the ground, bringing together stakeholders in a platform proved to be challenging and a clearly framed goal of such a process did not exist. The realities of power structures partly overrode the conceptualized project system, so that some stakeholders were bypassed or included only as result of a learning process in the course of the project. The strategic interests of universities and project staff dominated decision making, and underlying social dynamics such as land tenure and political positions were not fully anticipated in the project planning. Related to these challenges, both researchers and farmers complained about a lack of mutual trust. At the effect level, however, the project did change water management in the community: farmers adapted suggested water harvesting technologies to meet their needs, being motivated by tangible and immediate benefits. A more fundamental change in managing water was not triggered by the project and the project staff continued trying to achieve the outcomes agreed on with the donors.

We conclude that the process facilitation in general and particularly the start-up phase would have required more attention. Questions of power relations and strategic interests need to be explicitly addressed and stakeholders need to invest in developing a common understanding of terms, goals and processes. Building trust and learning together takes time, but are essential for communicative processes to emerge.

We also suggest that the case reflects a fundamental dilemma of participatory intervention for system innovation: structural constraints and strategic interests jeopardize undirected facilitation. Being embedded in a highly log-framed world, the need of the project staff for controlling outcomes was stronger than the conceptual knowledge about the complexity of system innovation. The challenges in implementing the conceptualized activities pose the question whether the proposal itself emerged from a communicative process and resonated with the values and interests of the implementing partners.

We close with the question how and whether a more comprehensive shift in paradigm towards system innovation can be achieved, ensuring both the necessary time and space for learning and accountability to external donors.

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