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Title: **A program theory approach in measuring impacts of Irrigation Management Transfer interventions: the case of Central Asia**

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Presenter's bio: Murat Yakubov is an IWMI Researcher with major interests in institutional and socio-economic aspects of water management reforms in Central Asia. His field and research work are based on mixing both quantitative and qualitative methodologies and looks into a range of issues relating to bottom-up participatory establishment and development of IWRM institutions, irrigation performance assessment from the user perspective, impact assessment and water governance as a whole. His first academic qualification is in Indian Studies from Tashkent State University and his second is Master of Research in Social Research Methods from London Metropolitan University.

List of key words: Aid fragmentation, water users associations (WUAs), Irrigation Management Transfer (IMT), Central Asia, impact evaluation, quasi-experimental design, mixed methods, qualitative-quantitative debate, attribution.

The topic of the paper falls under either of the following 2 themes of the NONIE 2012 meeting:

- Mixed methods/ alternative design approaches/ methods for addressing the challenge of attribution;
- Policy use/ how IE influences policy.

Abstract

INTRODUCTION

Since their independences the newly established transition economies of Central Asia – Kyrgyzstan, Tajikistan and Uzbekistan - have been struggling to bring irrigation management in their respective countries in line with the realities of faster moving agricultural reforms. Most of such efforts have been driven and widely supported by multiple international development aid providers. Despite this, irrigation management reforms in most of these countries have remained slow and patchy. This has been especially the case with multiple donors' support of irrigation management transfer (IMT) efforts aiming at the establishment of water users associations (WUAs). As a result quite a confusing mix of different approaches to WUA establishment have been implemented to date without really knowing what works and what doesn't. So this paper argues that a major comparative impact study of all such 'piecemeal' approaches is needed to better inform and consolidate the overall IMT reform in each respective country. Placing the discourse within the larger evaluation research domain and drawing on the lessons of an impact evaluation exercise completed for a specific IMT project in Central Asia this study looks into the ways, approaches and tools that can inform the design and implementation of the proposed larger sector-wide evaluative effort.

METHODOLOGICAL DEBATE

Literature on impact evaluation and IMT reforms suggests there is a considerable gap both globally and locally with development projects, as a whole, and IMT projects, in particular in measuring and evaluating the impacts. Despite the global push from major international aid agencies for quality impact studies based on mixed methods designs the latter are still lacking. One of the reasons is the continued qualitative-quantitative debate in the field of impact evaluation with both research traditions claiming the sole superiority of their own methods. As a result, there is no clear methodology or approaches that would allow effective combining of both methods in a single impact study. Or if they do exist they are often short of details, not explicit and would normally address the needs of single projects only. So designing and conducting a sector-wide comparative impact study with multiple projects involved might represent an additional challenge for those who want to do so.

THE CASE OF A SPECIFIC IMPACT STUDY

As improving irrigation water management is most likely to be the common denominator for most IMT projects in the region at the outcome level the paper presents a specific ex-post impact study case of an IMT project in the region funded by the Swiss Development Cooperation (SDC) and implemented by the International Water Management Institute in collaboration with its major regional partner. The study used a mixed methods quasi-experimental design sequentially involving both qualitative and quantitative methodologies. At qualitative stage an explicit and elaborate impact theory of the intervention as well as a conceptual framework for measuring project effects on water management from the perspective of project's ultimate beneficiaries, the farmers was developed. These were further used to formulate a set of big and smaller evaluation questions and design a survey tool for the ultimate quantitative phase of the impact study that was conducted.

DISCUSSION AND PRACTICAL IMPLICATIONS

Based on literature review and the case study presented the paper concludes that impact evaluations are best designed and conducted when both, qualitative and quantitative, approaches and methods are meaningfully combined. Despite the rekindled qualitative-quantitative debate there is growing understanding in real world practice that each methodology has its own comparative advantages and as such both are perfectly complementary and synergetic. In fact, the more complicated is a research issue in question the more it is likely that using only one of the methods would produce less convincing and credible evidence than if used in combination. Considering that a sector-wide impact study of different WUA approaches as proposed by this paper poses a considerable methodological challenge the success case mixed methods (SCM) approach developed by Brinkerhoff (2005) can be a way to go as it seems quite fitting well the purpose. With this in mind this paper argues that regardless of the philosophies underlying quantitative and qualitative methods of inquiry both are equally good to be used and as such can be effectively combined to produce both representative and contextually in-depth impact findings to inform and facilitate the key policy level decision making regarding more consolidated IMT reform.

Drawing on the SCM approach a 3-phase mixed methods design can be suggested for the proposed sector-wide impact study. The design comprises qualitative exploratory phase 1, quantitative explanatory phase 2 and qualitative in-depth follow-up phase 3. Phase 1 will focus on collecting and reviewing all documents and reports pertaining to WUA projects in each country concerned. At this stage a complete database of major WUA projects and models with detailed description of project contexts, interventions and change drivers will be generated. This documentary review phase will also allow consolidating and refining the underlying impact theory for the whole bunch of different WUA projects and settings. Based on the impact chain model representing a program theory a major quantitative survey will be prepared and implemented at phase 2 to get the representative picture and at the same time identify the most and the least successful IMT cases. Ultimately all such cases will be followed up by an in-depth qualitative inquiry at phase 3 to for deeper insights into what worked or didn't and for what reasons.

Besides the methodological difficulty facing the design and implementation of the proposed sector-wide impact study as outlined above, making the entire evaluation planning and implementation process as inclusive as possible also represents a significant importance and challenge. A broad coalition of all those concerned – most importantly, governmental and donor agencies as well as other key stakeholders, will need to be mobilized and built for the evaluative effort to be effective, credible and successful. Ideally the study should be placed under the auspices of a national water agency or other key governmental body in each country concerned. Once completed and properly communicated, the proposed study will also provide an additional impetus for improving donor coordination, collaboration and the ultimate effectiveness of allocation of aid money.