

## **Development within planetary boundaries? Distributional effects of recent African hydropower projects**

In Sub-Saharan Africa hydropower is on the rise and is often promoted as a low carbon strategy allowing for development within planetary boundaries. Hydropower development may contribute to the mitigation of greenhouse gas emissions and often benefits industries and urban areas. However, in the past it often took place at the expense of the project affected population even suffered from project-induced impoverishment (Cernea 1999). This paper therefore analyzes the likely distributional effects of recent hydropower development in Africa. To this end, it assesses the perceptions of project affected population and project developers in the cases of the 147 Megawatt Ruzizi III and the 80 MW Rusumo Falls regional hydropower projects which are currently being developed by Burundi, DR Congo and Rwanda and Burundi, Rwanda and Tanzania respectively. About 100 interviews were carried out in the four countries with representative of the project affected population; of local, regional and national governments; as well as of regional organizations and donors in the period January to April 2013.

The paper finds that in both project areas the project affected population (PAP) is generally supportive of the projects, which is an interesting finding in view of local protests against hydropower development elsewhere. However, in the cases at hand PAP have high expectations that these projects will foster development, offer employment opportunities and provide access to electricity, piped water supply and other social services; a result which can be explained by extreme poverty in the project areas. At the same time, project documents and interviews with the project developers and national governments indicate that meeting these expectations remains a challenge. Overall, those involved in project development primarily focus on electricity development for urban areas and industry. With respect to employing local personnel in project development, no specific provisions are in place yet. With respect to electrifying the project areas, in both projects this is not the responsibility of the project developers, but of the respective national utilities involved. One consequence is that the prospects of electrification are generally low except for Rwanda which has an ambitious rural electrification program in place. At the same time, despite similar numbers of affected households, the two projects differ with respect to the funds envisioned for local area development plans, which are about three times higher in the Rusumo Falls project than in the Ruzizi III project.

The investigations also shows that in both projects considerable uncertainties exist among the PAP with respect to status of the projects, actors involved and responsibilities, planned compensation procedures and amounts as well as potential benefit sharing mechanisms. One consequence is that PAP in DR Congo and Tanzania partly stopped cultivating their fields or renovating their houses despite the fact that it will still take several years until the two projects will become operational. In addition, given that the project design of Rusumo Falls was changed from a reservoir to a run-of-river project, which reduced the number of affected household from more than 17,000 to less than 700, in this case many people are confused whether they are still affected or not. While considerable efforts were already undertaken by the project developers to inform and consult the PAP – by and large following World Bank procedures – these findings indicate the challenges involved in informing PAP about the projects and in ensuring a truly participatory planning process in which PAP have a say, in particular in regions characterized by extreme poverty.

Given that the hydropower projects analyzed are in advanced stages of preparation and have not yet been implemented, it is still too early to come to a final judgment on their distributional effects. However, the research shows that still considerable efforts will be needed by the project developers to ensure that these projects are not only developed for sake of promoting low carbon development in urban areas, but also in a way that truly benefits the locally affected population. This, however, will be important to ensure that hydropower can be strategy that contributes to inclusive development within planetary boundaries.