Inclusiveness of climate-change mitigation projects: the case of large-scale irrigation schemes and smallholder farmers in Ethiopia

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Concept note

Africa's agricultural sector in general and the smallholder farming in particular face enormous impacts of climate change. The mMajor impacts of climate change are include uncertainty and changes in rainfall patterns which are causing devastating consequences on crop and livestock productions and, hence, food security of the rural population. To mitigate these negative impacts, many African governments are seeking to implement climate-resilient agricultural systems. These efforts squarely rely on ensuring availability of water resources to the agricultural sectore, which is the major water-consumer sector. Thus, development of medium- and large-scale water infrastructures, including dams, canal systems, irrigation schemes and protection of watersheds, have become mainstreams of central to development policies.

However, these mega projects, often financed through climate funds involving multi- and bi-lateral agreements, reveal several risks that need to be taken into consideration and face major uncertainties that need to be addressed and, hence, further knowledge and understanding is needed. In this regard, the following key issues are identified from an on-going research project we are conducting in three large-scale dam and irrigation schemes in north-western Ethiopia.

- Questions of equitable access to the <u>new and established</u> 'developed' infrastructure and water resources has increasingly become contested. The projects often seek to involve thousands of farmers across different locations and they are expected to operate in cooperation. But defining boundaries and actors, as well as setting up of mechanisms that ensure equitable access to the infrastructures (the dams, canal systems, etc.) and the resources developed (water and irrigable land) has become an even bigger challenging.
- Given the scale of the projects and the number of beneficiaries involved, the question of how
 to create scale and collective action to equitably and sustainably manage the infrastructures
 and water resources has become critical.
- The prospects of transferring the management of the new canal systems from the public state authorities to the farmers associations is also explored reflected. While the role of top-down and planned approach were seen as important to accomplish the establishment of the scheme, the formation of water user (farmer) associations and water institutions from within and across the communities proved to be challenging. In this regard the dynamics, conflicts and tensions between the notion of creating new institutions and organizations, adapting them to the created physical and social realities and extending the realm of governance from the more formal domains of public authorities' decision-making in water allocation and the everyday interactions and practices of the local people are discussed.

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...these mega projects \dots reveal several risks that need to be taken into consideration and, hence, \dots

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...access to NEW infrastructure and water resources...
... new and established infrastructure...

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