A GREEN DILEMMA: WATER FOR ENERGY OR WATER FOR AGRICULTURE?

KLODJAN RAMA*; INSA THEESFELD
LEIBNIZ INSTITUTE OF AGRICULTURE DEVELOPMENT IN CENTRAL AND EASTERN EUROPE (IAMO).

Changing climatic patterns are posing diverse threats to communities all across the globe and also raising serious challenges to policy makers for finding the right measures to tackle these changing conditions. Warmer temperatures, increasing variability, changing hydrology, and more extremes – droughts, floods, heat waves, windstorms, and forest fires have become common phenomena nowadays, and in all these – as widely acknowledged – anthropocentric activities bear a significant portion of the blame. Hence, policy makers at global, national and local levels, farmers, business-owners and individuals may face substantial uncertainty as to what exactly to adapt to in terms of adapting to climate change. Lots of research has been done how the agricultural sector can adapt to climate change impacts, in terms of production strategies, plant and animal breeding or technologically more advanced irrigation and drainage systems.

We would like to focus in this paper on the simultaneous link between the water sector and the energy sector. Demand for energy is increasing and the quest for greener energy has gained prominence in the scientific and policy milieus. Here also the energy sector wants to adapt to climate change impacts. However, will such a move provide a long-term and sustainable solution for energy security and adaptation to climate change?

The complexity of such a socio-ecological system, particularly the society's needs and the competition of the energy and the agriculture sector for water is in the focus of this paper. Drawing from a current empirical case study in northwest Albania, we found that if water is used upstream for hydropower and downstream for agriculture, the variability in water availability due to the energy production at the head-end of the system, negatively affects the resilience and adaptation strategies of farmers located downstream. Institutional incongruence in the various rules-in-use and a disconnection of both sectors is a key factor. This is accompanied by low levels of trust among the regional actors, inherited from the past communist legacy and enhanced during the post-communist transition period – and a lack of investments and maintenance in the drainage and irrigation infrastructure. We investigate how this situation adds constraints on collective action and self-organization, as well as restricts the flexibility for long-term adaptation. Forms of cooperation can nevertheless be triggered once there is a reputable authority to take the initiative and the leadership. In our case, the priest has played an immense role for organizing the community. We will draw lessons from this positive example to come across the energy-agriculture competition for water particularly the way how collective action can show a way out of this dilemma.