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Issues on the use and management of water and forest resources in East Africa

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In rural East Africa, it has been a matter of grave concern that the problem develops of scarcity in natural resources, and of smallholders' differential access to these resources. This study presents cases of irrigation water and forest resources with a view to pointing out some of more general issues to be examined concerning natural resource use and management.

The first two cases are of irrigation water use and management in Central Kenya and Northeastern Tanzania, and relate to (i) the impact of globalization, (ii) the socio-economic stratification among resource users, and (iii) the potentiality of their self-organised governance system for common pool resources. Commercial horticultural production is widespread in semi-arid areas in Central Kenya. Contract farming of various vegetables for the European market has collectively reached a considerable size, hardly fitting into the existing rotation system of water distribution at the research area. The unequal distribution of water has accentuated socio-economic stratification, and a new management system is yet to be agreed, allowing individualised water use and potential overuse. In Northeastern Tanzania, economic liberalisation policies stimulated the mining sector for export that created a huge demand of workers on food. The smallholders in the irrigated research area started to supply them with food crops, well exceeding their subsistence production level. In contrast to the Kenyan case, however, temporary reallocation of land among the water users has alleviated unequal land and water distribution at least partly, and the entire irrigation system continues to be managed collectively.

Next two cases are concerned with forest resource use in the same two research areas. For these several years, both countries have institutionalised Participatory Forest Management (PFM) in order to attenuate forest degradation. The issue is more broadly around (iv) the dichotomous prescription of total acceptance of local knowledge on resource use or simplistic exclusion of resource users, and (v) the legitimacy of both the existing resource use and the introduced forest management system, in addition to the above issues (i), (ii), and (iii). In the research area, Central Kenya, the local people have degraded the forest reserve, maximising short-term benefit at the expense of longer-term resource sustainability. An optimistic application of the notion of "ecologically noble" local institutions for communal resource management is clearly untenable. With no sign of "community forest association" formation stipulated by the forest act, the authorities argue that the declining economic value of the degraded forest reserve reduces the economic incentive for the local to be actively involved in PFM, even implying the denial of their resource use right. Meanwhile, the Tanzanian case has undergone institutional reform at the local level, thus introducing joint forest management between the local users and the authorities on the one hand, and a system of community-based forest management by a village committee for environment and forest, on the other. Although the new system has faced problems and the forest and wood resource use of the local people are differentiated by their socio-economic status, the need of land poor households which have no choice but to rely on wood resources from governmental forest plantation has been accommodated in the new institutional situation. This is realised through "domesticating" the PFM system in the local context and giving it legitimacy, which is again in a stark contrast to the Kenyan case.

All of these five issues and factors that create differences concerning these issues, as well as "scale gap" between detailed case studies and broader perspectives, are to be examined for sustainable use and management of natural resources, and for users' right, and more equal access, to natural resources.

Keywords: water resources, forest resources, co-management, East Africa