

## **Workshop Sessions: 8. Water Governance: A Driver for Food and Urban security.**

### **Paper title: Changing Water Institutions and Governance of the Intersectoral Water Transfer: Melamchi Water Transfer Project in Nepal.**

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**40-words summary:** Due compensation and benefit-sharing are at heart of the discussions on intersectoral water reallocation. Despite of tremendous economic benefits generated, implementation of the Melamchi intersectoral water transfer project is complicated because of poor governance and inadequate institutions.

**Workshop Problems to be address:** This paper discusses about governance of rural-urban nexus for effective approaches for food and urban water security by analyzing the complexities involved in implementation of Melamchi intersectoral water transfer project in Nepal. It evaluates the changing dynamics and roles of both formal and informal institutions in relation to Melamchi project. Study on institutions is important, as what institutional mechanisms yield effective solution are not yet cleared.

**Key words:** Impact of intersectoral water transfer; Project compensation; Water rights; Governance; Public-private-participation; Melamchi project Nepal.

**Presentation of topic and analysis of the issues:** Recently, the government of Nepal has initiated a large-scale intersectoral and interbasin water transfer project called Melamchi Water Transfer Project. This will transfer up to 0.51 million m<sup>3</sup>/day of water from Melamchi river to Kathmandu city with total costs of about US\$470 million spread over 8 years. This project is expected to meet the city water demand until 2030. The Melamchi case represents a situation that is common worldwide, i.e., the growing urban sector water needs is being met by reallocating water from surrounding rural areas. Unlike the case of developed countries where water reallocation has a long history, the institutions for intersectoral water transfer are at infant stage in South Asia, and developing countries in general, where they are rapidly evolving recently.

This paper analyzes the Melamchi project brought changes in institutions and water governance structures (i.e., accountability, transparency, legitimacy and participation) in the water-supplying basin. Because of scale of activities and conditions attached with the external funding, this project will bring several changes in water sector governance structures in Nepal. The initiation of public-private-participation in Kathmandu water supply system, under management contract system, is one of them. More specifically, this paper analyzes: (i) efficacy of existing water institutions and governance structures in the water-sharing two basins to address the public concerns and skepticisms; (ii) the role of local institutions for water re-allocation, water rights arrangements, and means for conflict resolution; (iii) the opportunities, constraints, and compensation schemes to effectively implement the water transfer project.

**Discussion of the major results/findings:** Because of acute water scarcity and an ineffective management of the existing water supply systems, the poor and marginal households in Kathmandu city are now paying about 2.5 times higher price for per unit

volume of the piped supply water than the well-off households. The Melamchi project is planned as a 50 percent cost recovery type of a water transfer project (i.e., full cost recovery for the external financing and loans). After the implementation of the project, the water supply system in the Kathmandu city will be managed as public-private-participation (now management contract to private sector), a precondition attached with the donors' financing. This project is economically beneficial; however, because of its size, scale, and costs involved, this project is not free from controversies.

Our study showed that traditional informal institutions and governance structures are so far effective in regulating water use practices in the water supply basin, but the case of the Melamchi water transfer is different one because of the scale of water transfer, and unequal bargaining power; the organized public sector at one side and the dispersed and unorganized large number of farmers at other end. This makes it difficult for the water users to collectively negotiate for fair and due compensation of their losses.

The process adopted and level of project compensation are at the heart of discussion and debates on intersectoral water transfer. In the absence of formal water rights arrangement, the Melamchi project plans to invest about US\$20 millions in the water-supplying basin, as one time compensation and rehabilitation packages. This is about 4 percent of the total project costs. However, the effectiveness of the project compensation is conditioned upon structure of resources use rights (water rights), institutions, and process adopted for compensation and mechanism established.

At present, most of the project compensations/benefit-sharings are spent for provision of local public goods like school, road, and health services, which the project displaced households would be least using at the end. In addition to the indirect compensation like local public good, the provision of a fair amount of direct compensation (monetary) to displaced communities/households would be more equitable and socially acceptable. The direct compensation scheme is also better in reducing the vulnerability of the displaced communities and households –directly affected by the water transfer project.

**Conclusion:** In the absence of clear past experiences in managing intersectoral water reallocation projects in Nepal, it is not yet cleared what form of compensation and benefit-sharing mechanisms would be efficient, effective, and socially acceptable in sharing the project benefits (costs) across the sectors (regions). In fact, these institutions are in evolving stage in Nepal. This paper discussed these issues on project compensation and benefit-sharing taking an example from the Melamchi project in Nepal; but these issues and findings are equally applicable to the wider regions of developing countries where such intersectoral water transfer plan is under discussions.

To be an effective and socially acceptable, the water transfer decision should be flexible enough to accommodate underlying complex institutional, social, physical, economical and other related factors involved in the water transfer process. Despite of its huge social (economic) gains by such intersectoral water reallocation, the absence of appropriate water laws and the inadequate institutions are some of the major constraints for effective implementation of water transfer across the sectors (basins).