



Role of Social Capital in Coping Water Scarcity: Governance Lessons to Trans- Himalayan Region of Nepal from Pre-colonial South India

Nilhari Neupane , Ernst-August Nuppenau, T. S. Amjath Babu

Background

- Agriculture is the basic option for livelihood of the people of developing countries and irrigation is the major input of agriculture growth.
- The problem of water scarcity is much more severe in mountainous and trans-Himalayan part of Nepal than the mid hills and plain areas.
- Locally based irrigation system is popular where the presence of the central government is very limited due to remoteness. In such society, the irrigation system is developed as a culture and an important social capital.
- In Nepal, out of 650,000 hectares of irrigated land, 4000,000 hectares(62%) is served by locally managed irrigation. This system has higher productivity and crop intensity which are 6 ton/ha and 247 against the performance of agency managed system which are only 5 ton/ha and 208 respectively (Ostrom and Gardner, 1993).



Objective of the study

To illustrate locally based irrigation system of mountainous society, point out the changing environment affecting social capital and make comparison with locally based tank irrigation system of South India.

Methods

- Primary data were collected from 151 households of 3 irrigations systems of Upper Mustang consisting 46 and 105 from upper and working class respectively.
- Interview with key informants, local king and chair.
- Descriptive analysis, comparison of historical pathway of locally based irrigation of upper Mustang and tank irrigation system of south India.

Findings

- Social stratification based upon the caste: upper class, middle class and outclass (Dhungel,1999) and have distinct roles for irrigation management, water right confined with upper class.
- There are established water allocation rules; labour and cash contributions based upon caste system which is valuable social capital of the society.

Figure 1 : Organization of irrigation committee in upper Mustang

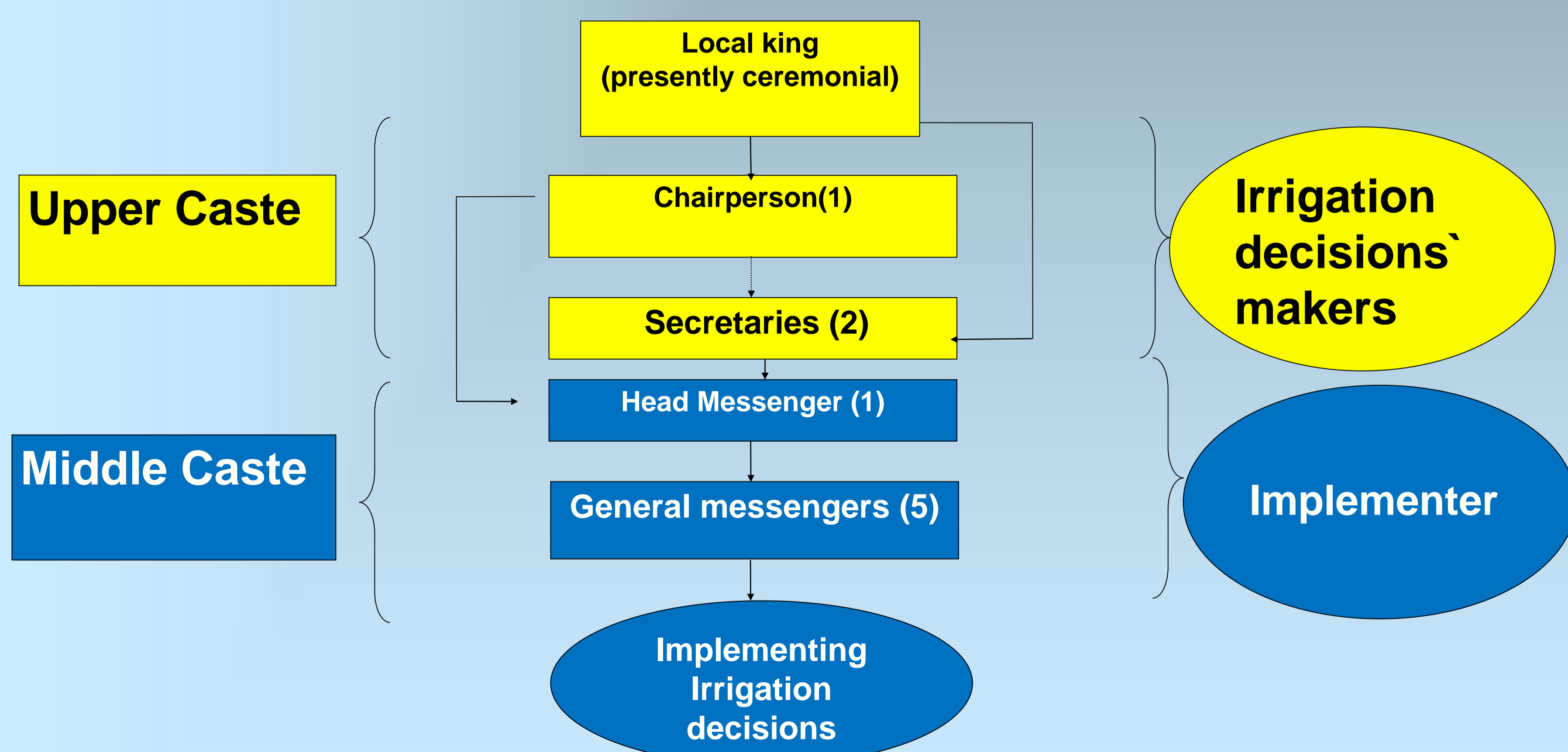


Figure 2 : The role of social classes in irrigation management

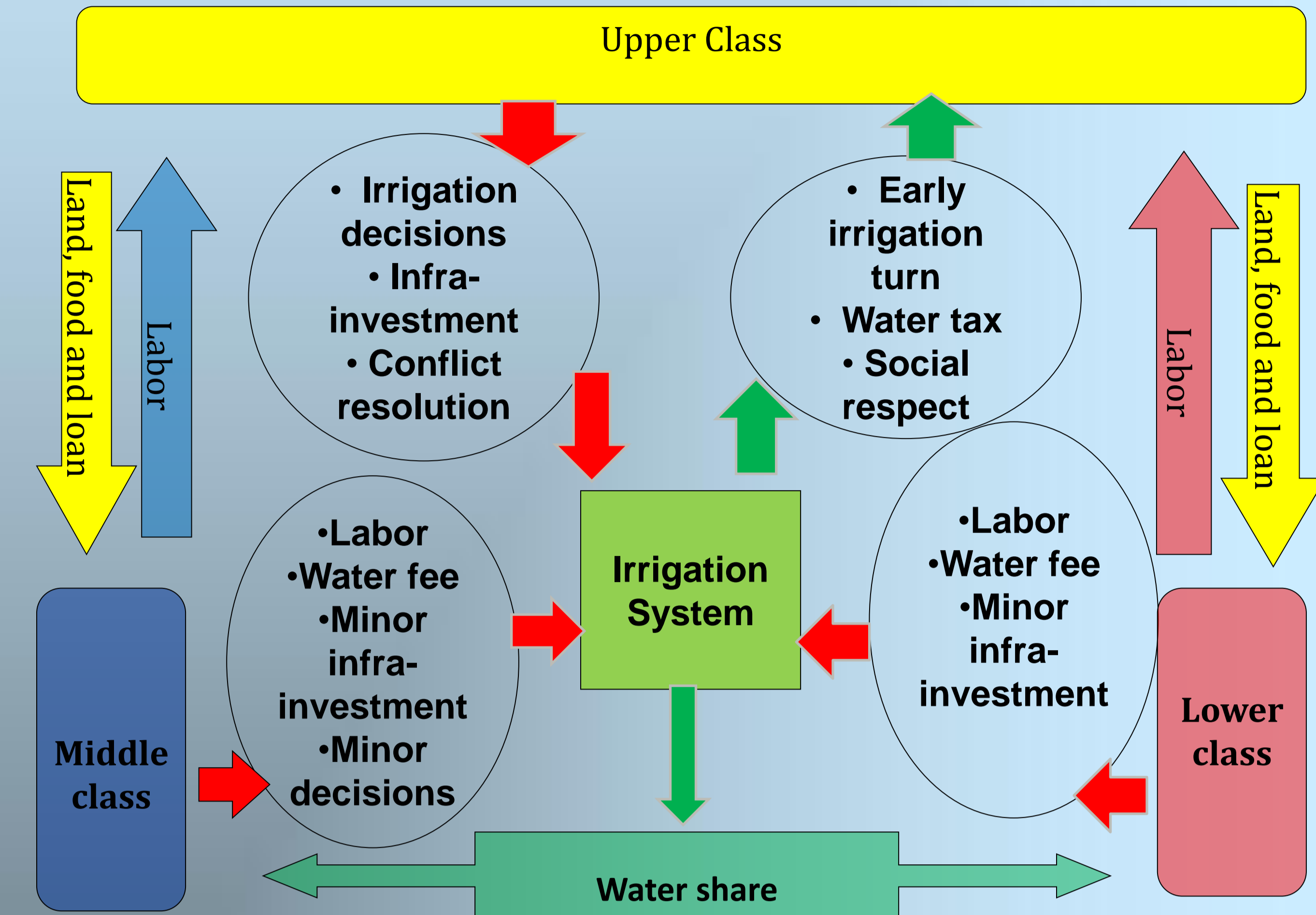


Table 1 : Resource contributed by different social classes for irrigation management (per year/house hold)

Contributions	Upper class (N=46)	Working class(N=105)	Both class (N=151)	t-value
Labour (man-day)	6.46(7.70)	15.61(4.75)	12.87(7.14)	-8.85***
Cereal (in kg)	94.80(13.23)	80.80(11.59)	84.20(12.18)	0.22
Cash Nrs(000)	7.20(0.88)	5.90(1.00)	6.36(1.13)	7.50***
Cereal (in kg) for irrigation related festivals	59.84(15.86)	21.92(4.15)	42.60(12.18)	5.71***

(*** signifies level of significance at 1%, the figure in bracket is SD)

Local irrigation at crossroad and South-Indian case

- Overthrown of local king; local power is undermined.
- Water resource act 1992 has considered water as state property.
- Climate change will further reduce water quantity.
- The intervention from outsiders without examining the local power situation may fail the locally based irrigation.
- The traditionally based tank irrigation was failed when British government started to collect tax directly from farmers in South India (Mosse, 1999).

Conclusions

- Locally managed irrigation is still active and successful
- The social capital developed must be preserved
- Any intervention from outsiders must consider the social capital, otherwise the irrigation system may failed like tank irrigation of South-India.

References

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