

Human Wellbeing through Water Management : A Comparative Study in Sri Lanka about the Ancient Irrigation Sector and its Application into the Modern Governance

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Water, a natural resource, is a miscellaneous useful heritage from the origin of human community. When investigating the earlier communities in the world, it is disclosed that water has been a key factor of making people group together. It is often connected with the social, political and agricultural sectors. People devote water as the symbol of their faith. Accordingly, it has become evident that, numerous concepts of water resource management have been developed throughout the world along with the civilization.

Water and poverty can be considered as the two sides of a coin, because ownership or accessibility to water sources can be identified with the prosperity of livelihood. A usage of water is also the symbol of social stratification. Especially, caste hierarchy is one component to decide the ownership, way of access and tradition of using natural resources. In contrast, the idea of community has grown as the result of tradition and culture, based on water management in the ancient society. Water tanks and cascade systems which were built by ancient people under the kings' direction, created a sense of community among people. It strengthened social capital in the ancient society. It gives strong argument to prove that water management is important even in the modern governing process and technology as natural resource.

Knowledge and experience gathered over the ages by Sri Lankans on technology and techniques contributed much to the building up of a local irrigation and water management system with a distinguishable identity. This had been a process continued from the pre-Anuradhapura Era (before 6th century BC) through the Polonnaruwa Era (up to 12th century). The irrigation methodology can be broadly divided into two major categories both being used in conjunction: dam based irrigation system and reservoir based irrigation system.

Both categories possess unique technologies and techniques that are identified separately. This presentation provides the unique technologies and techniques used in irrigation constructions that were recognized by the author through his recent research. This paper focuses on the author's findings on the above technologies and techniques and their applicability in the modern context. Furthermore, research finds are shared with modern experience to reawake the effectiveness of domestic technology, engineering capabilities to enhance government policy through the irrigation sector in Sri Lanka. It gives a new meaning to the poverty alleviation program in the country.

Keywords: Social Capital Theory, Poverty, Poverty Alleviation, Local Irrigation, Water Management System, Cascade System, Irrigation Methodology,