

Significance of Forest Tanks (*Kuluwew*) Renovations in the Cascade Tank Systems (*Ellanga*) in Dry Climatic Zone of Sri Lanka: The Cases from the Cascades in Puttlam District

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This study investigates the significant role of *Kuluwew* (forest tanks) to sustain the forest ecosystems and the *Ellanga* (Cascades) social-ecological systems of the Dry Climatic Zone (DCZ) of Sri Lanka and points out the neediness of renovating these abandoned tanks. The *wew* (Tanks) civilization of Sri Lanka is unique and endemic because the tank systems have their own philosophy, science, technology, and arts. Basically, these tanks have been built by the kings of Sri Lanka under the Buddha's thoughts. King Parakramabahu the Great (1153 AD –1186 AD) has concluded the philosophy of irrigation tanks in Sri Lanka as "truly in such a country, not even a drop of water that comes from the rain must flow into the ocean without being made useful to all living beings". Under the concept, the cascade tanks lie on small valleys with low gradient in the DCZ to provide water for all needs of human beings and other living beings in the social and ecological systems. Consequently, there are many types of tanks in the same cascade and they play different roles. The *kuluwew* are located near to the forest or inside the forest for especial purposes like providing water for wild animals, reduce the silting, filtering the debris, store the rainwater and enrich the groundwater level, supply water to the irrigation tanks by seepage, maintain the food chain providing water, fruits, grass, leaves etc. Unfortunately, after the king's periods, the modern rulers did not pay adequate attention to protect those tanks and now they are malfunctioned. Consequently, lots of wild animals, have been migrated into the villages and it has become a major issue of tank villages in DCZ of Sri Lanka. Wild elephants, monkeys, porcupines, giant squirrels, wild bore, and hundreds of insects and caterpillars are invading the village ecosystems and threaten the whole wellbeing of settlers unprecedentedly. This study has done 07 case studies in 07 major cascade systems in Puttlama District. There are 159 tanks altogether in these 7 cascade systems and out of the 34 tanks are forest tanks. The main data collecting technique is PRA and resource and hazard maps, seasonal calendar, matrix analysis, transect walks, focus group discussions were the tools. The study has revealed that all the forest tanks have not been renovated for many decades and they are malfunctioned. Consequently, there is a lack of water and edible plants and fruits for the animals in annual dry periods from March to October. Therefore wild animals have been motivated to enter the villages and nearby farmlands. Sometimes some insects, rats and snakes are also coming into the residential and farming areas. The conclusion is that these forest tanks should be renovated systematically and the wild animal threat may reduce by 80 percent after a full renovation of all the forest tanks and restore the forest ecosystems.

Keywords: Forest tanks, *Kuluwew*, Cascades, *Ellanga*

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