

PhD fellowship 2- Effective river, affective river- Interdisciplinary chronicling of ecological flows, well-being effects and affective relations of two Western Ghatian rivers

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Ecological flows refer to the quantity and quality of freshwater flows needed to sustain aquatic ecosystems and human well-being, cultural and economic. This is an intuitive yet systematic concept that has found policy favour. In 2018 the National Mission for Clean Ganga gazette-notified a minimum water quantity or ecological flow across dry, lean and monsoon seasons. This flow prescription was loosely akin to a nutritional prescription to humans, and the analogy is no stretch given that earlier in 2017 the Uttarakhand High Court declared the Ganga as a juristic person or living entity with legal rights. The Ganga is India's most famous instance of a river servicing the economic and cultural needs and expressions of farmers, fishermen and devotees.

India's rivers are aquatic, economic, political, and symbolic resources whose biological, territorial, livelihood and cultural values and interrelationships need chronicling and assessment. That rivers as biophysical entities that can only be objectively known and valued is a modernist and colonial ontology that discounts human-river interactions of the co-creative, emotional, and recreational kind. But rivers are material and meaningful resources, and people value rivers diversely. They are spaces of plural valuation involving diverse articulations of nature's values. And how they are valued, imagined, appropriated, and contested is a complex interface of material and symbolic aspects, making for a cultural political realm. Therefore, an interdisciplinary agenda around ecological flows is possible, and necessary. One that ambitiously approaches rivers as spaces and resources for plural valuation, nature based solutioning, decolonizing, cultural politics, and juristic personhood.

The Nilgiris, a Tamil Nadu hill district in the Western Ghats offers an appropriate catchment context. The upper plateau in which originate the rivers Bhavani and Moyar were famed for the Shola-grassland vegetation complex. The plateau's grasslands have been afforested since the colonial period with exotics like pine and eucalyptus, and the invasive wattle, gorse and scotch broom. Perennial cash crops like tea, and bi-annual vegetables like potato, carrot and cabbage are grown extensively over areas that once used to be grasslands. Many rivers and their tributaries in the upper plateau have been dammed for hydel power, including the Pykara that originates in the Mukurthi National Park and becomes the Moyar as it reaches the Mudumalai Tiger Reserve. The Moyar then flows east and joins the Bhavani River. The Bhavani itself originates in the upper plateau's south and flows east where its confluences with the Moyar. Besides dams, upstream stressors and disruptors include pollution by public and private sector chemical and armament factories; evapotranspiration due to spread of exotics and invasives that reduce dry season flow; rampant groundwater extraction; and unregulated tourism with disproportionate water demands.