

Micro Plans

Preamble

Panchayats, with the guidance and support of the Gram Sabha are the most viable institutions to ensure grass roots level decentralized planning and implementation, even in areas known to harbour significant levels of biological diversity and landscapes under various forms of protection.

Panchayats are elected village councils incorporated into the Indian Constitution in the year 1993, ensuring representation of the marginalized sections of the community. This seemingly simple and implicit statement, contrary to expectations, is the most problematic to effect since the overriding impression amongst many nature enthusiasts, scientists and policy makers is that presence of human habitations, even if historical, is anti-conservation.

It is also true that there is an equally strong position on the other side of the fence; which is that human aspirations and needs are paramount and conservation programmes and policies are alien, and externally influenced.

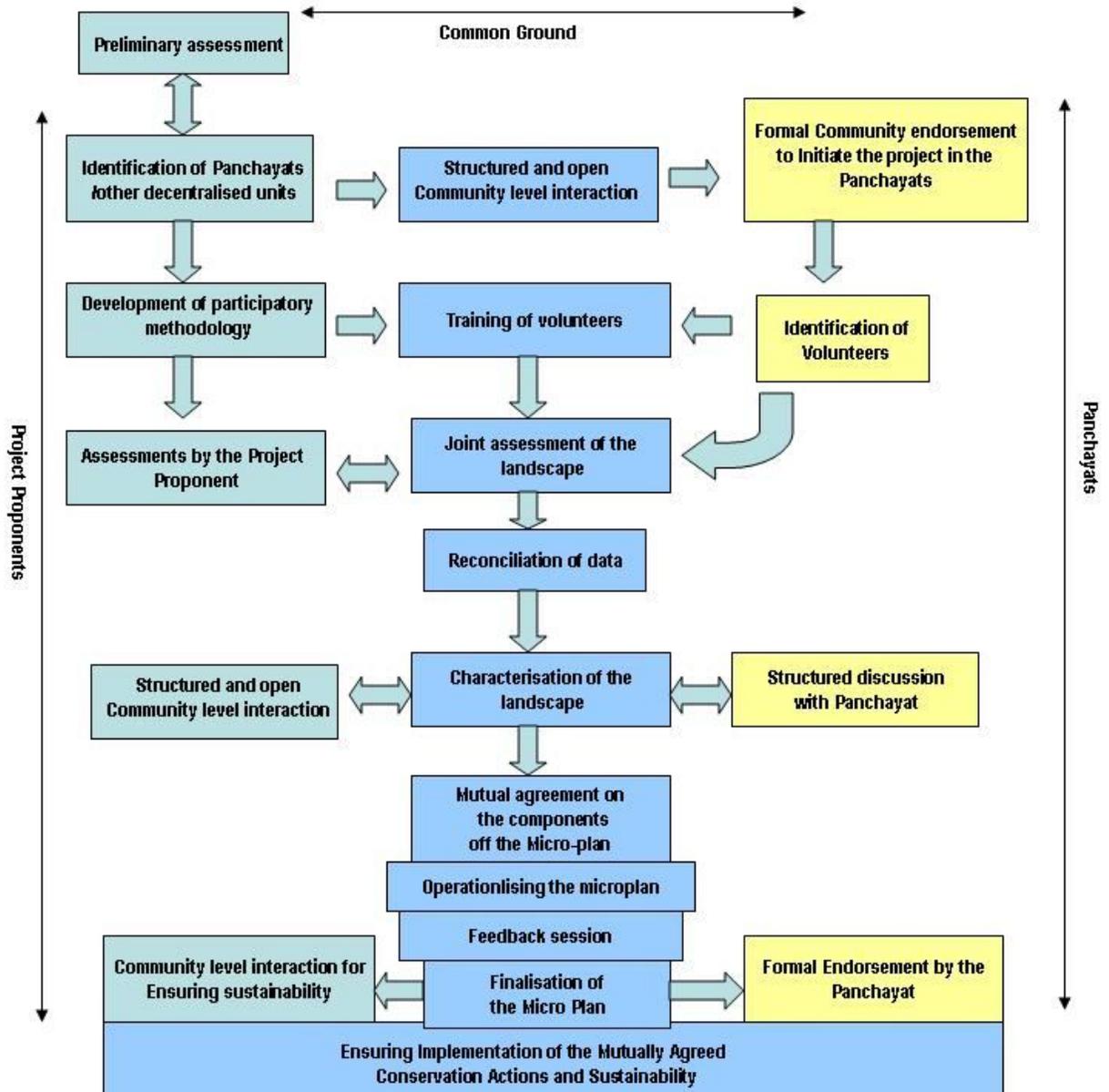
The project titled 'Building a grassroots constituency to conserve River Moyar in the Mysore-Nilgiri Corridor, Western Ghats' took cognizance of both the positions and attempted a reconciliation of the two, by engaging five Panchayats along a riverine system. The framework for operation is as follows:

- Planning documents at the level of Panchayat or Grama sabha
- Identify mechanisms for improved management through better networking amongst the stakeholders and the planning units
- Specific strategies for areas under varying ownership patterns/management regimes
- Evolve a protocol or mechanism to sustain the initiatives
- Development of participatory research methodology

Process

The process adopted for the development of the Micro-Plan is depicted in the following diagram:

Fig 1: Process depicting the formulation of the Micro Plan

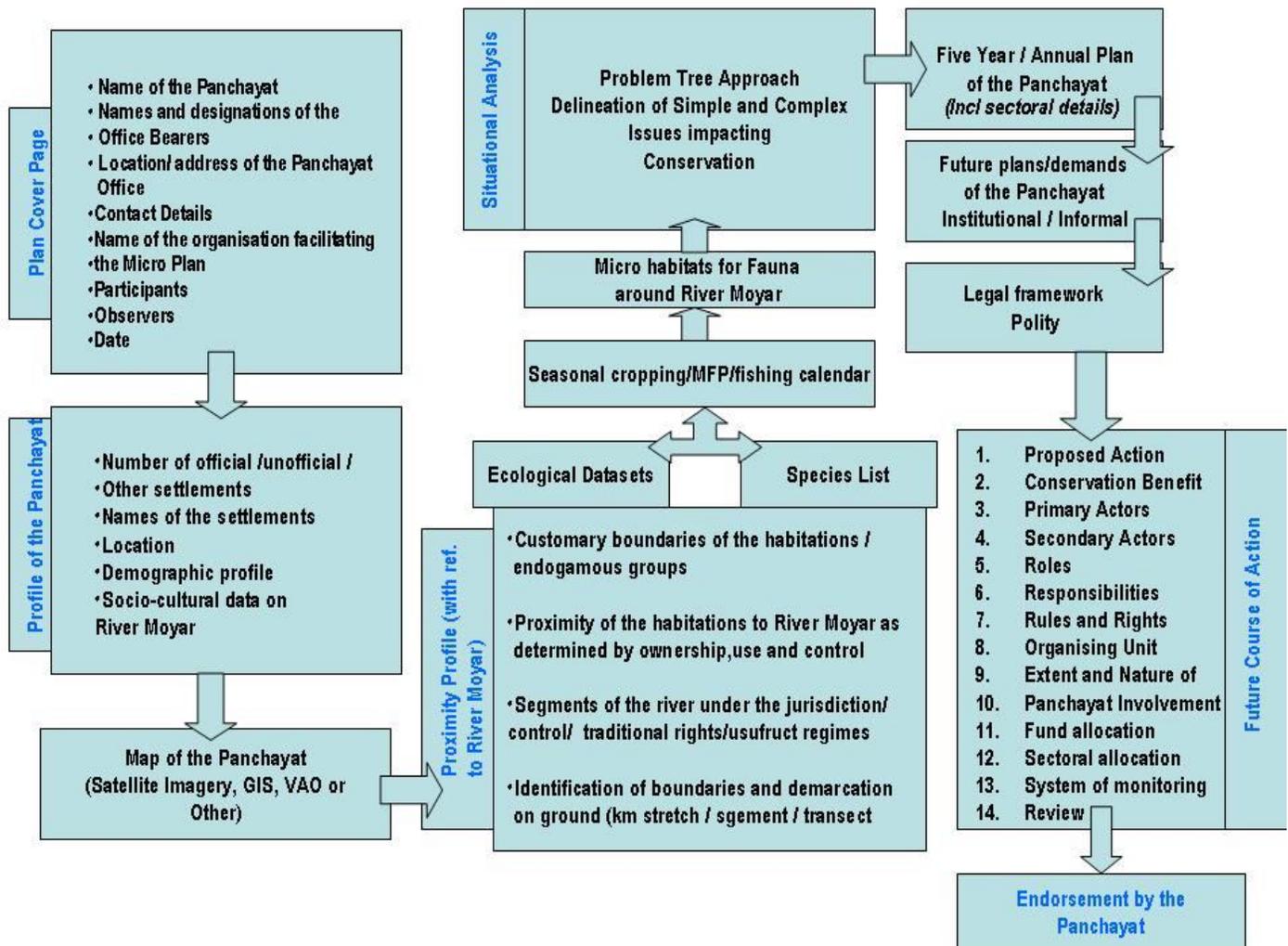


Mutually agreed components of the Micro Plan

A Micro Plan by design and purpose needs to include the data/features and issues that are pertinent to the Administrative Unit that is engaging in developing in the Plan as well as the landscape which it administers. This is on a comparatively scale, easier defined and implemented in landscapes that are homogenous, or simpler in terms of ownership since administrative jurisdiction is well defined. On the other hand, in landscapes that are complex, in ownership pattern or under the Protected Area system, micro planning is a rather daunting task. This is primarily because of the existence of two or three parallel and often contradictory streams of administration. For instance, while the Sathyamangalam WLS and proposed Tiger Reserve should be administered and conserved on the principles of 'inviolable management', which in other words means resettlement of human habitations from the designated core zone, the presence of decentralized democratic units, as mandated by the Constitution of India, with their inherent rights and responsibilities is tangential to its operation. Likewise, the non-recognition of the term forest dwellers as endogamous groups that have historically colonized the forests, and not merely Scheduled Tribes, by some of the government departments is equally problematic.

It is in this context, a set of meaningful yet mutually agreed upon components of the Micro Plan had to be developed. While the documentation is in Tamil (the official working language of the Panchayat as well as being the native language) for the purposes of the current report, it has been translated into English and depicted in the following diagram.

Fig 2: Components of the Micro Plan



Results

The results of the Micro Planning process are described under the following two overlapping categories. While category 1 provides the status and compliance to the project mandate, category 2 highlights the schematic diagrams that were developed based on the assessments for use by the Panchayat and local communities, summary of recommendations, excerpts from the Micro Plans (translated versions), and the future course of action / as endorsed / committed to by the Panchayats. It is also to be noted that an unanticipated result of the project has been the request

from the State Forest Department to depict the process and outcomes of the project by way of a signage at the check post to the landscape near Bhavanisagar.

Category 1: As stated in the earlier sections of the report, one municipality (urban unit of administration) and five panchayats represent the human habitations and the landscape along the 90 km course of River Moyar. The current project is limited to the five Panchayats (East to West). The following table presents the status of Micro Plan formulation in the five Panchayats.

Table 1: Summary table on the Status of Micro Plan formulation and endorsement

Name of the Panchayat	Participation in Micro Planning	Remarks
Pungar	Comprehensive Plan developed and Endorsed	Conservation Action detailed in the Plan commences operation
Puduberkadavu	Initially skeptic, followed by conditional participation Plan developed and endorsed	Plan would be tested for one year and reviewed for effectiveness
Thengumaragada	Comprehensive Plan developed and Endorsed	Conservation Action detailed in the Plan commences operation
Masinagudi	Reluctant, participation restricted only to profiling	Data provided to the Panchayat; plans of doing the Micro Plan without external support
Mudumalai	Redundant, participation restricted to profiling	Currently under voluntary relocation

The original plans have since been handed over to the respective Panchayats, while copies of the plan have been given to the District level Officials and relevant Government Departments. Parallel copies are also available for perusal at the offices of Arulagam and Care Earth. By March 2012, excerpts of the Plans would be hosted on a dedicated website, and also shared with the Western Ghats Portal. The dedicated website would be the platform for contacting individual Panchayats. The audio-visual narrative of the project in the form of a short film has also been completed and is being submitted separately

Category 2

One of the most critical components of the Micro Planning Process was joint assessments of the landscape by teams comprising of the project staff and nominees of the Panchayats. The data thus obtained was pooled, validated and analysed for further action. This however had to be stored in two formats for ease of use and understanding. While the first set of data was in the form

of spread sheets and graphs, with basic analysis, the second and more critical data set was the schematic representation of the data.

The lacunae of losing scale while developing local community friendly data sheets / maps and visual representation was overcome by mapping the project landscape on a graph sheet, with a scale of 1 cm = 1km, and layering the data. From this rudimentary, hand drawn 'GIS map', schematic diagrams were evolved. The diagrams were shared with the community, modified to enable easier understanding and used as the basis for the Micro Plan process. The diagrams are presented in the following sections.

This rudimentary map was also used as the basis for defining the boundaries / tacit jurisdiction of the Panchayats. As stated elsewhere in the report, the incongruence of the mandates and administration between State Departments entails that there can be no stated boundary of the Panchayats. Hence using the following two criteria viz. proximity to a landscape element that is frequented by the inhabitants for various uses and the customary boundary, if any, Panchayat boundaries were defined on the graph sheet in terms of kms on all four directions. Accordingly, transect data of the field assessments was regrouped and provided to the Panchayats (attached as separate file titled Segments1).

Fig 3 Base sheet (to scale) consolidating the assessments of the Project Landscape

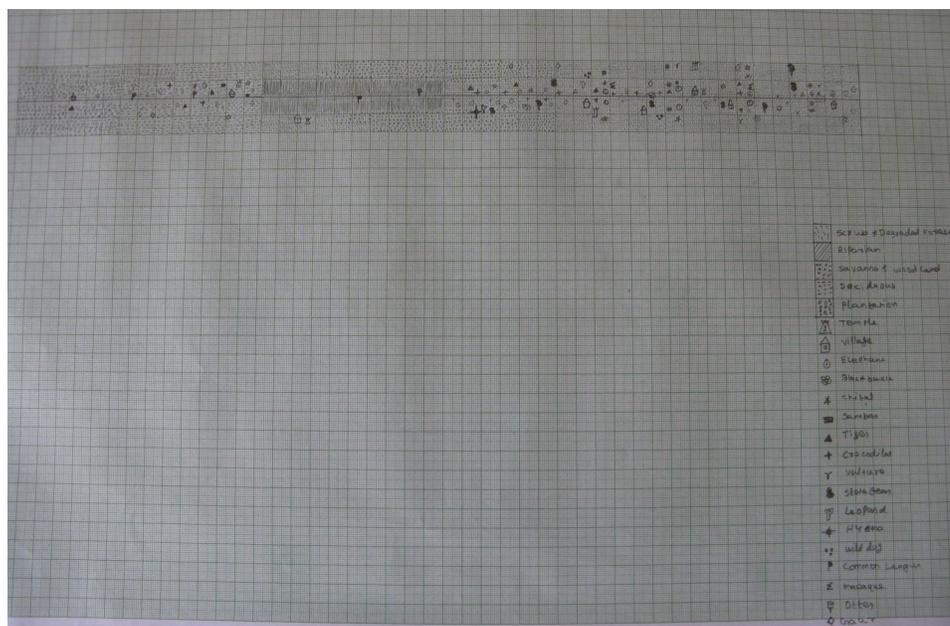
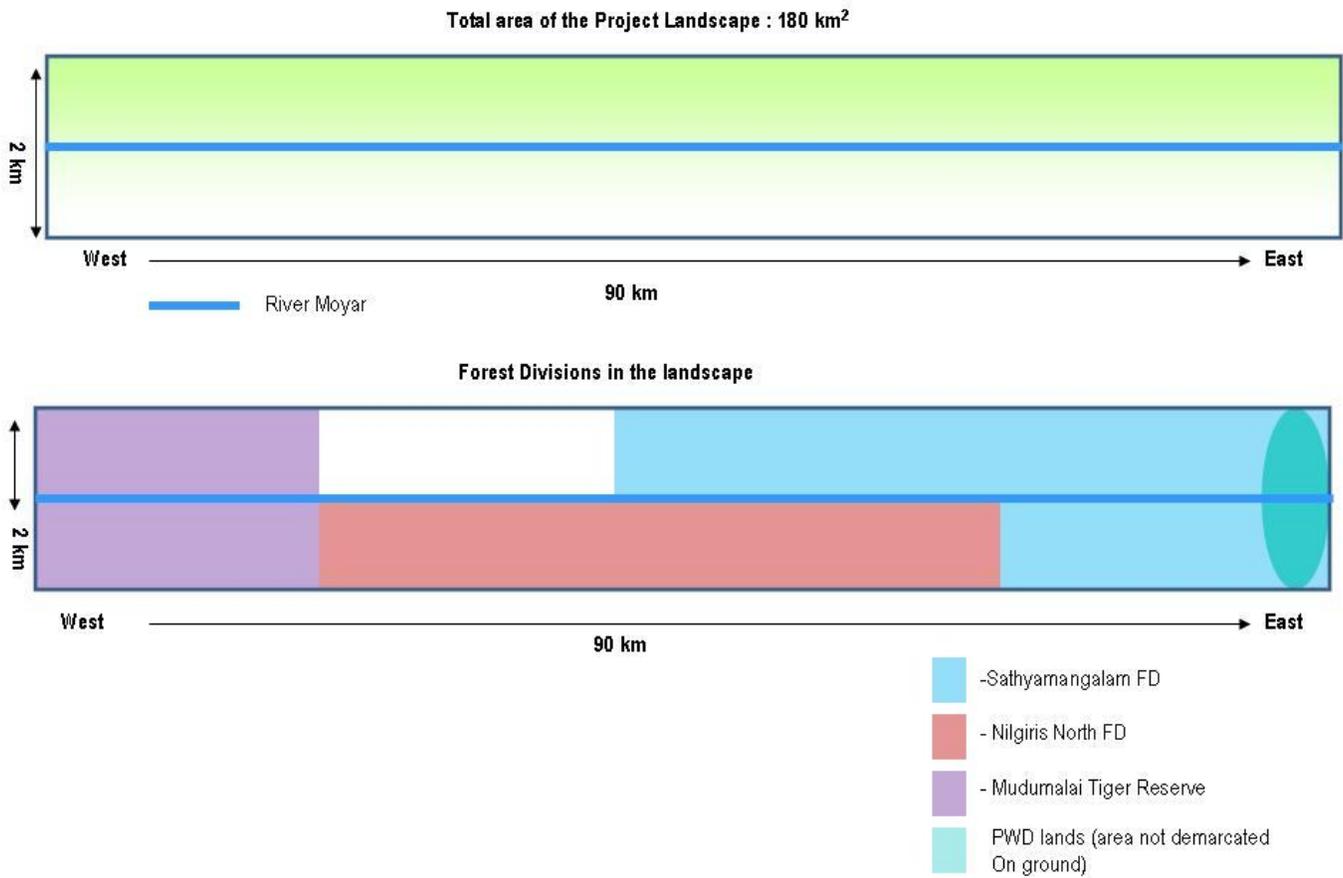
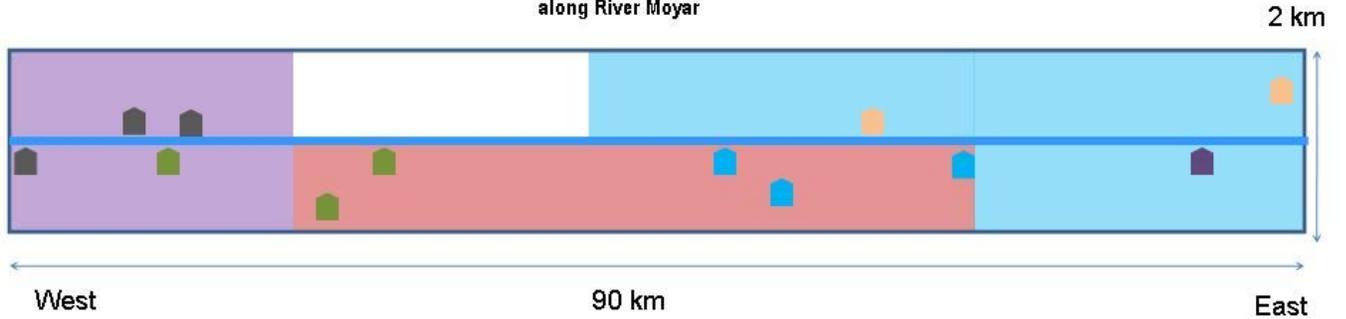


Fig 4 : Schematic representation of the assessments along River Moyar, under various categories

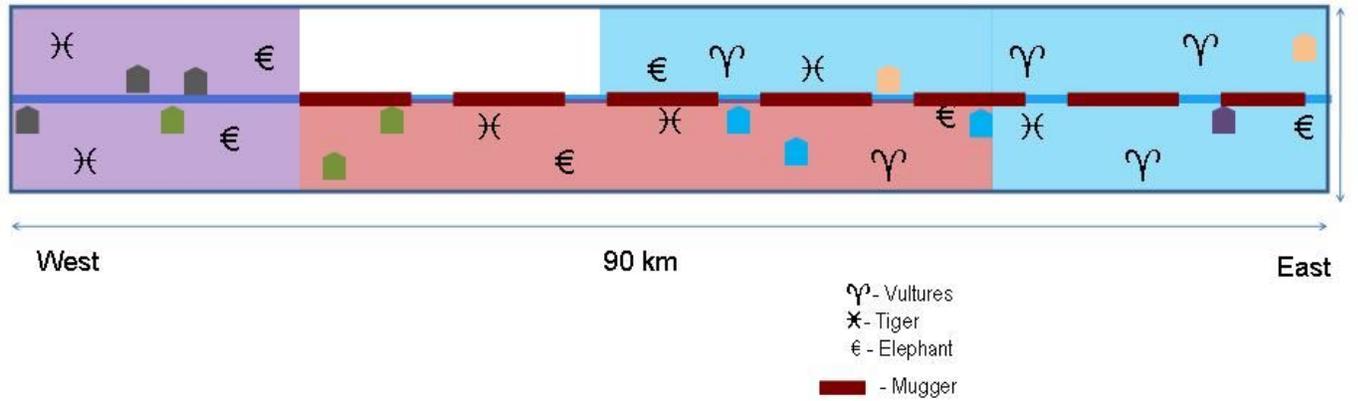


Distribution of Panchayats and their administrative jurisdiction along River Moyar



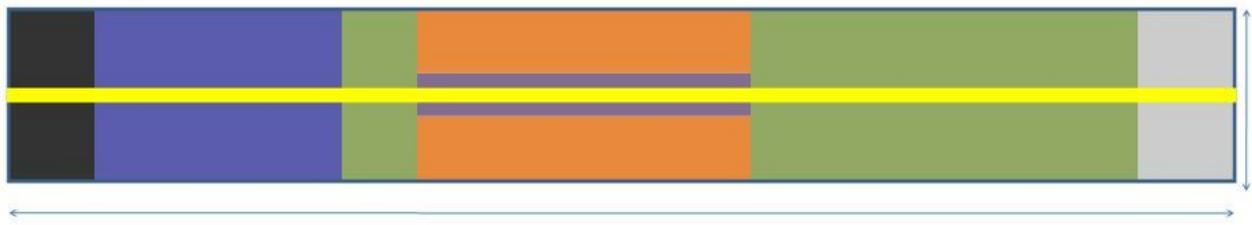
- Panchayats within the project landscape
-  Pungar
 -  Pudubeerkadavu
 -  Thengumaragada
 -  Masinagudi
 -  Mudumalai

Representation of the Major Fauna along River Moyar
- Basis for designating the Micro habitats



-  - Vultures
-  - Tiger
-  - Elephant
-  - Mugger

Representation of the major
Vegetation types in the project landscape



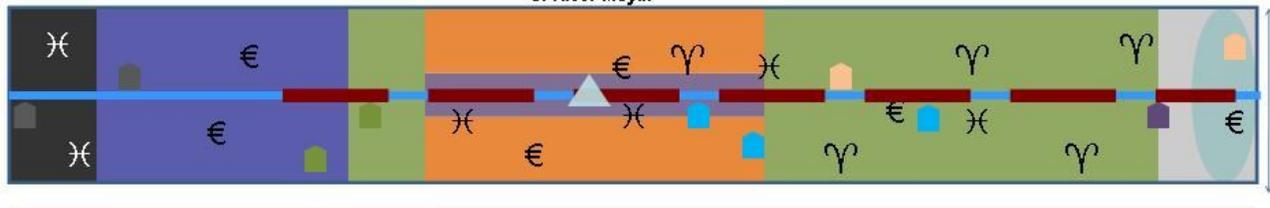
West

90 km

East

- Invasive sp. impact area
- Plantations
- Scrub forest
- Savanna-woodland
- Gorge – woodland
- Riparian forest
- Deciduous forest

Schematic representation of the socio-ecological characterisation
of River Moyar



West

90 km

East

- Invasive sp. impact area
- Plantations
- Scrub forest
- Savanna-woodland
- Gorge – woodland
- Riparian forest
- Deciduous forest

- Vultures
- Tiger
- Elephant
- Mugger

Panchayats within the project landscape

- Pungar
- Pudubeerkadavu
- Thengumaragada
- Masinagudi
- Mudumalai

- Sathyamangalam FD
- Nilgiris North FD
- Mudumalai Tiger Reserve
- PWD lands (area not demarcated On ground)

Summary of Conservation Issues highlighted for the Landscape in the Micro Plans

1. The significance of River Moyar to landscape is viewed in a holistic manner by the local human populations especially those endogamous groups who are the historical inhabitants of the landscape. This view strongly supports the notion of 'Cultural Landscapes' which underpins the inherent link between socio-cultural and ecological aspects in a landscape.
2. Migration to the landscape has been historical, in phases and intensity. As with many other landscapes, this has contributed to the marginalization of the historical endogamous groups in terms of neglect of traditional / customary rights, access and participation. This is especially pertinent to the upper reaches of River Moyar, notably within Mudumalai WLS and Masinagudi Panchayat.
3. Although the landscape has had a historical tradition of agriculture and tenancy cattle rearing, the year long availability of water in River Moyar and its tributaries which has been facilitated by the Hydro-electric Projects has been the most detrimental factor contributing to a) the absence of dry seasons and fallow periods b) intensive two to three cropping seasons c) the predominance of water loving crops such as banana and paddy in cropping systems d) the replacement of subsistence farming systems with monocultures and intermediate forms of cropping and e) the most critical flip of rainfed system of agriculture being replaced by river-irrigated system of cropping.
4. This is further enhanced by the increase in cropping area in the immediate vicinity of the landscape (outside the boundaries of the Protected Area) especially in the eastern end of River Moyar.
5. The reservoir during lean months furthers cultivation which conflicts with the migration of the elephants; also resulting in two wildlife corridors.
6. These lands are in the category of 'no man's land' and hence enforcement of any rules or regulations is refrained from by the concerned government departments.
7. While the Bhavanisagar reservoir is a hub for inland fishing with a number of food fishes being introduced by the Department of Fisheries, and the presence of a well entrenched

- system of harvest and trade by external contractors, with local population being hired as wage labourers, there is an official ban on fishing in River Moyar.
8. This entails that primary data collected during the project cannot be utilized for the purposes of the planning, nor can any system of monitoring fish population dynamics linked to sustainable harvest be evolved and implemented with local participation.
 9. This also means that customary rights and practices of fishing cannot be mainstreamed into the planning process.
 10. Further, as reported by the local communities, the impact of the water gauge stations of the Public Works Department in creating conducive habitats for select exotic fish species cannot be assessed and included in the plan.
 11. Riparian forests within the landscape are restricted as a narrow strip along the river course, with severe degradation and colonization by invasive plants such as *Prosopis* on the eastern end of the river. It is to be noted that prime stretches of riparian forests were cleared for the creation of the Bhavanisagar reservoir.
 12. Similar trends are observed in the vicinity of the Special Task Force Campus at Managalapatti as well.
 13. The impact of effluent discharge by two major companies in the upper reaches of the river remains unstudied.
 14. There is a significant increase in land holding around the tail end of River Moyar (outside the limits of the project landscape) which needs to be monitored for its impact.
 15. The emphasis of conservation for the landscape needs be Node based rather than single species ecology focus. It would therefore augur well for the landscape if the upcoming Tiger Reserve Management takes note of this recommendation.
 16. It is also to be noted that while certain species in the landscape receive significant attention, the 180 sq. km project site is conducive for enabling the conservation of fauna such as the Mugger, Feral Buffalo and the Vultures. It is also a candidate site for the conservation of endemic riparian flora like *Homonoia riparia* and *Phyllanthus polyphyllus*. River Moyar hence needs to be highlighted as a landscape that facilitates multi-species conservation.
 17. Three nodes are identified by the current project:

- 22 km stretch (44 sq. km) of the river east of the Moyar Valley (addressed as beginning at 11.52375N, 77.00847E and ending at 11.60640N, 76.81951E) and under the proximity based definition of Panchayat boundary of Thengumaragada, where Belmeenkadavu is the point of interest
- The Moyar Valley whose significance is well established as a wildlife corridor but ignored for the unique savannah type of vegetation.
- The two kilometer (4 sq.km) stretch between 11,31043N, 77 12886E and 11.55686N, 76.95135E which is over run with invasive plants, and is a prime wildlife corridor. This stretch, as defined by the proximity factor, falls within the boundary of Pungar Panchayat.

18. In conclusion, the focus should ideally be on multi species, node based conservation, with real time, active participation of the Panchayats. .

Summary of Conservation Actions and the Sustainability Mechanism in the Micro Plans

Conservation Action	Organizational Unit	Roles and responsibilities	Panchayat	Fund /Resource allocation	Sustainability
Setting up of River Moyar Conservation Brigade	Youth Groups/ 10 member unit / only male	Sustained monitoring of River Moyar Assessments along the established transect change of riverine fauna Wildlife Intelligence to prevent poaching	Thengumaragada and Pungar	Endorsement by the Panchayat/ Provision of Identification Cards	To explore means of providing incentives such as livelihood training and capacity building
Setting up of Community Conservation Learning Centre	Local school / children of middle school 4 units in place	Local hub for child centered conservation learning Development of Little Theatre groups for awareness creation on River Moyar	Thengumaragada and Pungar	Provision of dedicated space, volunteers	To explore means of seeking support from the Tribal Welfare Department, Government of Tamil Nadu
Using the Micro Plan as the basis for the Biodiversity Monitoring Committee	Panchayat	Mandate stipulated by the Biological Diversity Act 2002 and Rules 2004 Organisational unit for enabling conservation, sustainable use and equitable sharing at the level of the Panchayat	Thengumaragada, Pungar and Pudu beerkadavu	Funds provided by the State	Funds provided by the State

Conservation Action	Organizational Unit	Roles and responsibilities	Panchayat	Fund /Resource allocation	Sustainability
Evolving Eco livelihoods	Womens' self help groups	Ensure responsible collection of NTFP Exploring links with eco tourism component Evolve livelihoods that would replace intermediate form of cropping and wage labour especially banana cultivation Arrest seasonal migration	Thengumaragada, Pudubeerkadavu and Pungar	Revolving funds through ongoing government programmes. Rs 100,000 per group	To explore training and capacity building in post harvest technology and setting up mobile food unit, explore revival of traditional crafts
Monitoring Fish Populations	River Moyar Conservation Brigade	Assessment of fish population dynamics Site-specific monitoring at Belmeenkadavu Regulating fishing by visitors / illicit trade	Thengumaragada, Pudubeerkadavu and Pungar	Contingency grant	Made part of the Panchayat's agenda
Monitoring Fishing practices	River Moyar Conservation Brigade	Undertake a systematic study of current fishing practices in the reservoir and develop a sustainable system of fishing	Pungar	Actual	Made part of the Panchayat's agenda.

Conservation Action	Organizational Unit	Roles and responsibilities	Panchayat	Fund /Resource allocation	Sustainability
Eliminate selective fishing	River Moyar Conservation Brigade	Assess the impact of fishing for selective species of fish and enacting a ban on the same	Thengumaragada, Pudubeerkadavu and Pungar	Actual	To be explored with the TN Forest Department
Vulture Watchers	River Moyar Conservation Brigade	Tracking the Vultures, contributing to the Vulture Watch data base along with Arulagam and Care Earth	Thengumaragada,	Contingency grant	Made part of the Panchayat's agenda
Regulating tourism Promoting eco tourism	Joint mechanism with project proponents	Developing a mechanism to monitor existing tourism trends Ensure responsible tourism to the sacred sites notably temples	Thengumaragada and Pudubeerkadavu	Contingency grant	To be explored with the TN Forest Department
Phased removal of invasive plants	Panchayat	Removal of invasive plants and restoration	Pungar	3 percent of the funds / sale proceeds will be ploughed back for maintenance	To be inalized with the TN Forest Department
Establishing Signage along the river course	Panchayat	Identify critical wildlife areas, prevent pollution by the tourists, provide an overview of the landscape, highlight the biodiveristy	Thengumaragada, Pudubeerkadavu and Pungar	Actuals to a maximum of 0.5 percent of the Panchayats annual budget	Made part of the Panchayat's agenda

Conservation Action	Organizational Unit	Roles and responsibilities	Panchayat	Fund /Resource allocation	Sustainability
Trainers trainers	Panchayat	Participate in conservation programmes elsewhere in the state as trainers trainers	Thengumaragada		Made part of the Panchayat's agenda
Phasing out of flood plain cultivation	Panchayat	Explore means by which cultivation in the 28 ha. of floodplain is totally banned and enforced	Pungar	Actuals to a maximum of 0.5 percent of the Panchayat's annual budget	Link to eco livelihoods initiative
Joint review mechanism for monitoring water use and pollution	Panchayat + Care Earth and Arulagam	Assess the extent of water use for various purposes with special attention to use of diesel motors, diesel operated boats , sewage discharge.	Thengumaragada, Pudubeerkadavu and Pungar		Made part of the Panchayat's agenda
Preventing sand mining	Panchayat	Assess the extent and area of illegal sand mining and enforce a ban	Pungar		Made part of the Panchayat's agenda
Seeking sustainable modes of connectivity	Panchayat	Revisit the demand for a bridge across River Moyar + explore means of erecting a rope + foot +narrow bridge	Thengumaragada	Mandate of the State	