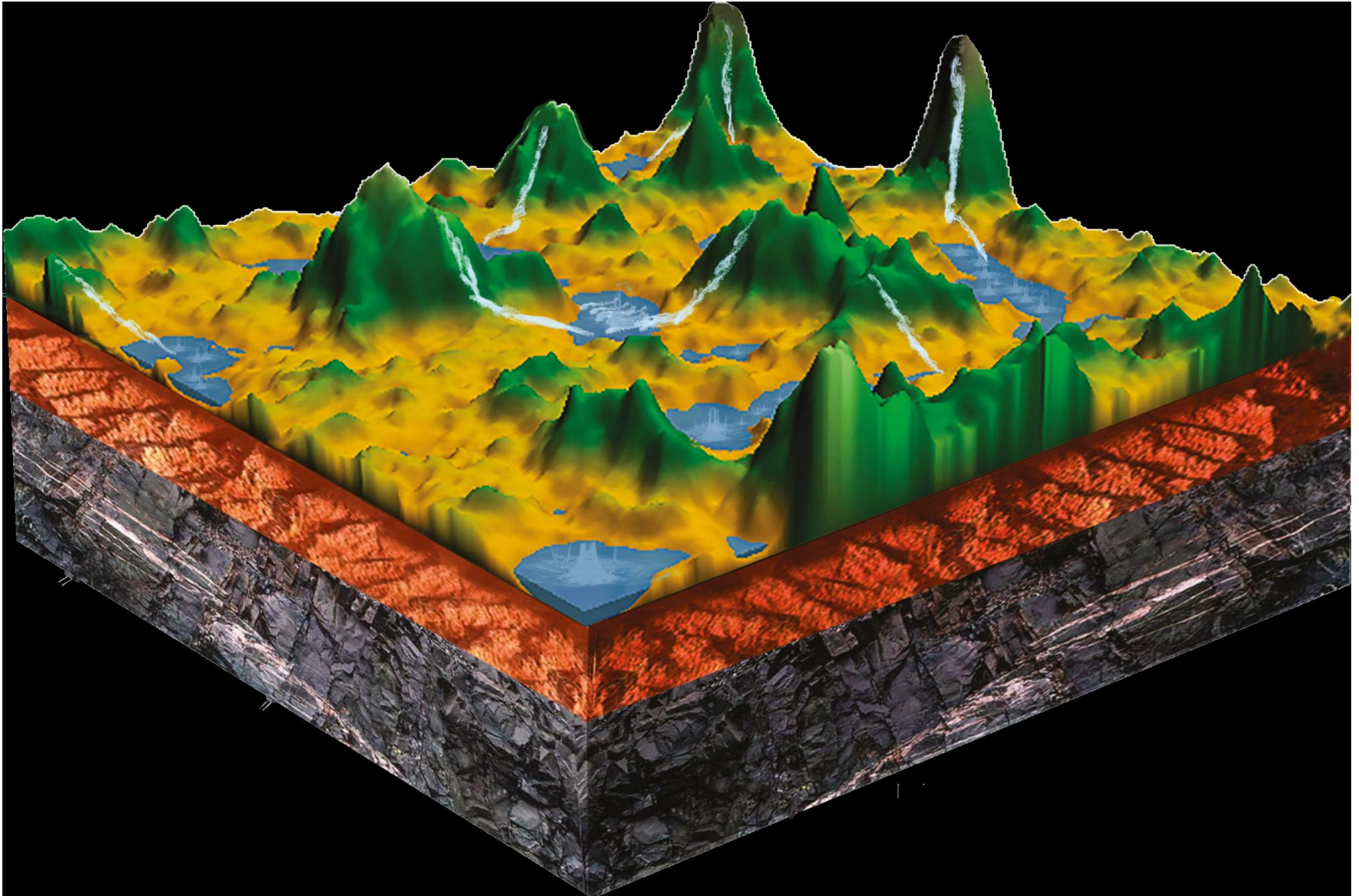
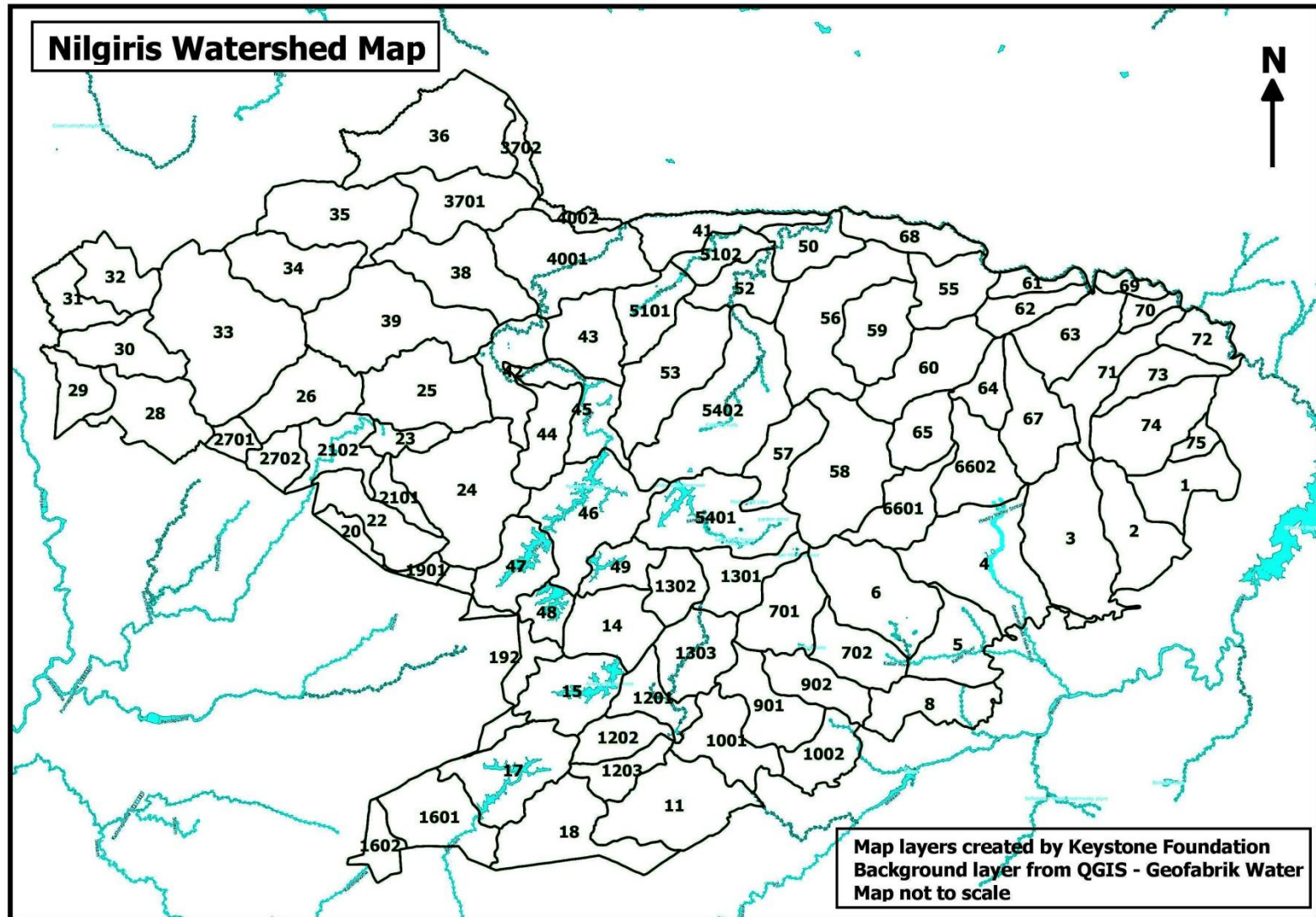


Eco-Restoration to Rejuvenate and Maintain Water Bodies

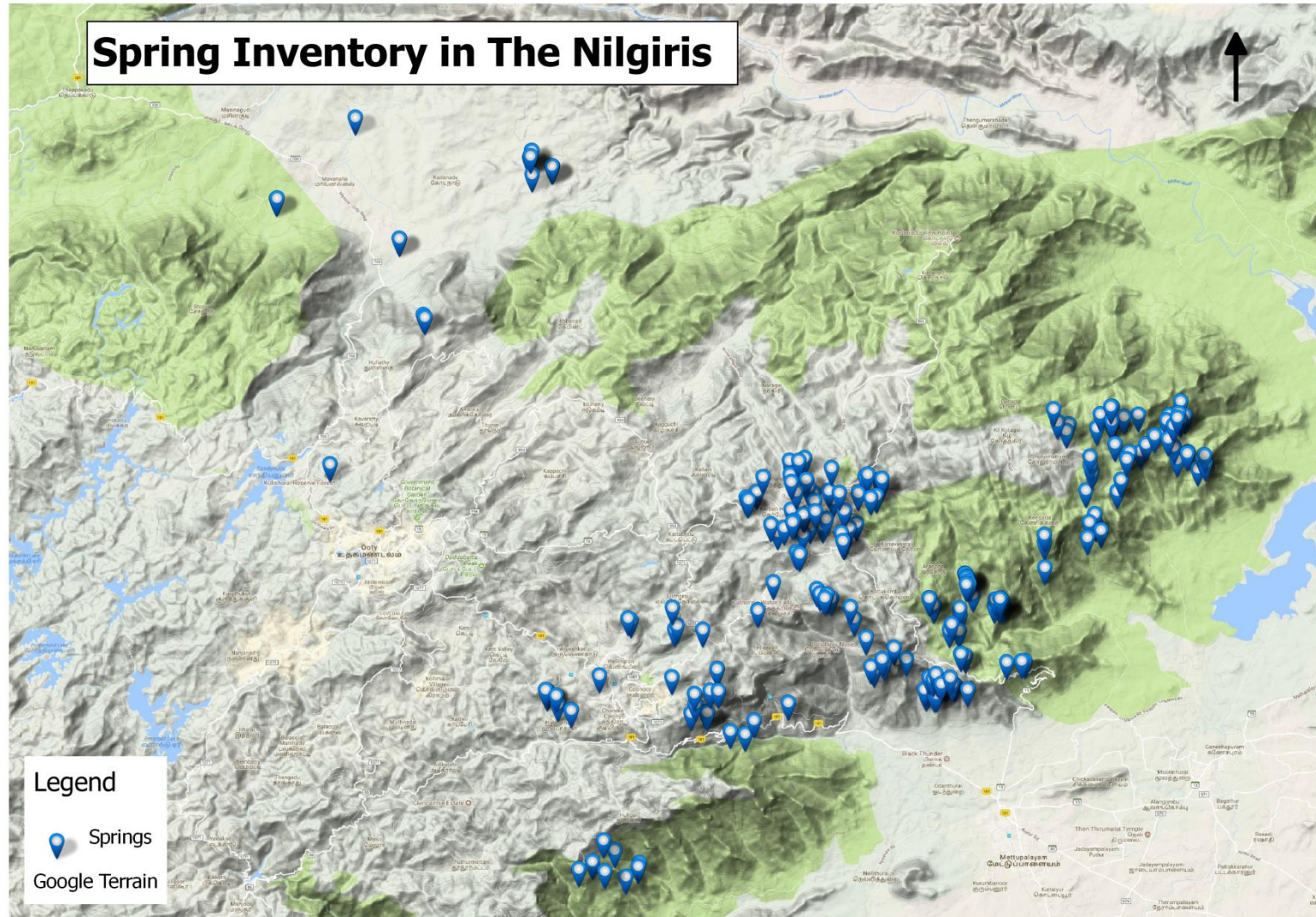


Keystone Foundation

Keystone's work in the Nilgiris focused on the most neglected but important water resources - Springs and Wetlands



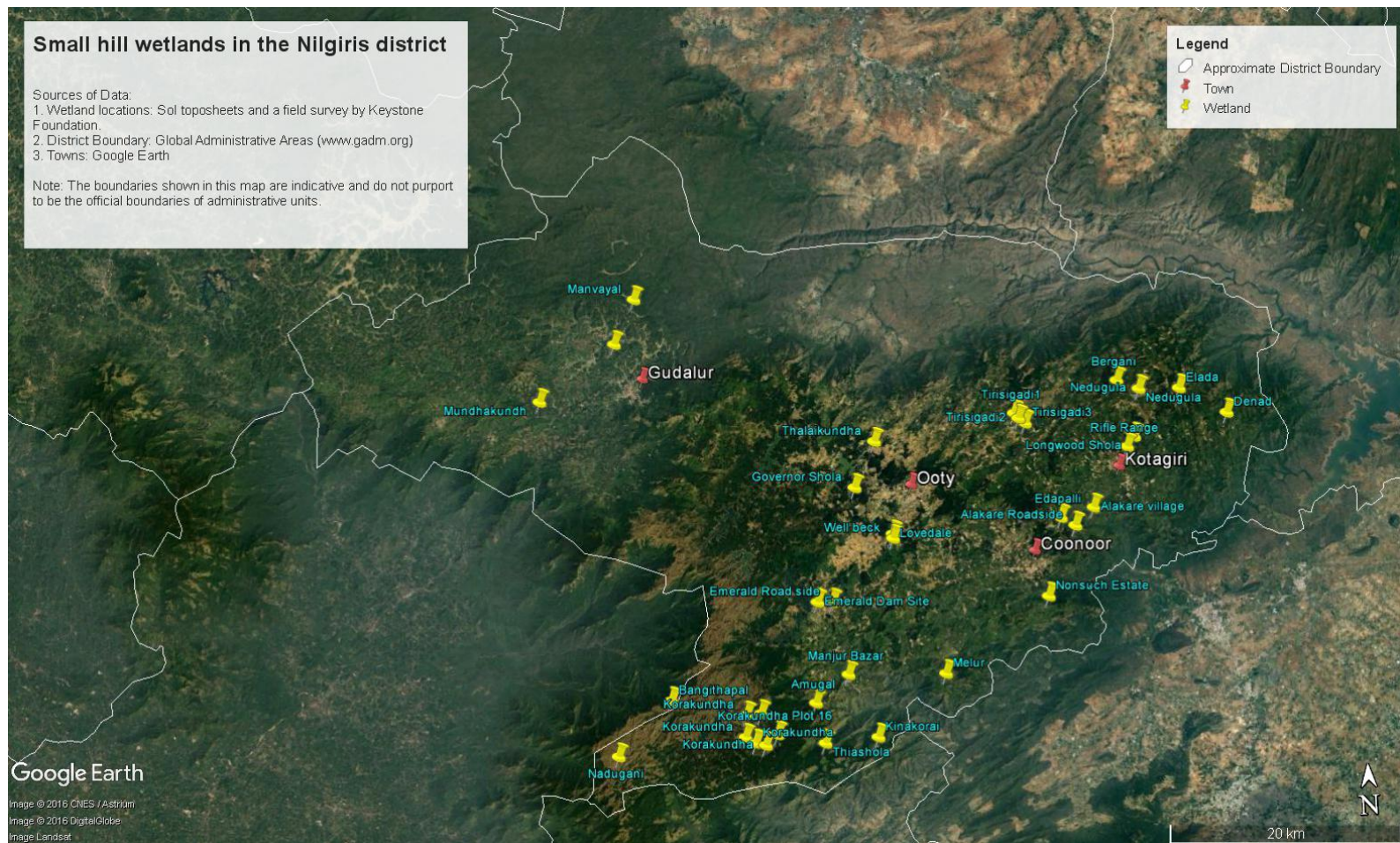
Springs - Inventory of 300 springs across Nilgiris Biosphere Reserve as part of the National Springs Initiative



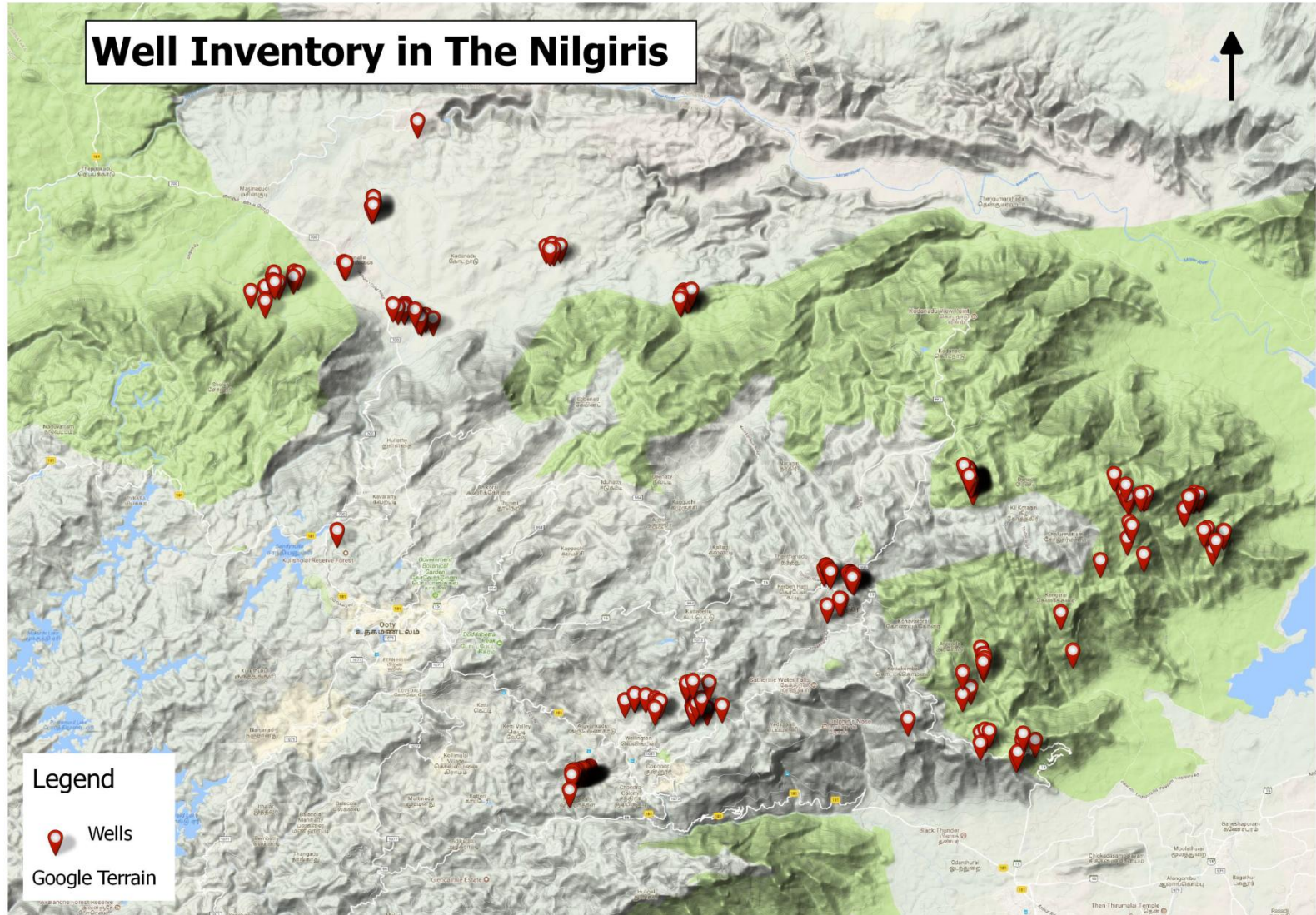
Wetlands - Wetlands inventory in 2006 and a status check in 2016 for almost 50 Small Hill Wetlands.



Wetlands inventory in 2006 and a status check in 2016 for almost 50 Small Hill Wetlands.



Well Fields - Inventory of 300 + wells (open and bore wells across the NBR)



Ground Water – A Blind Spot



Context

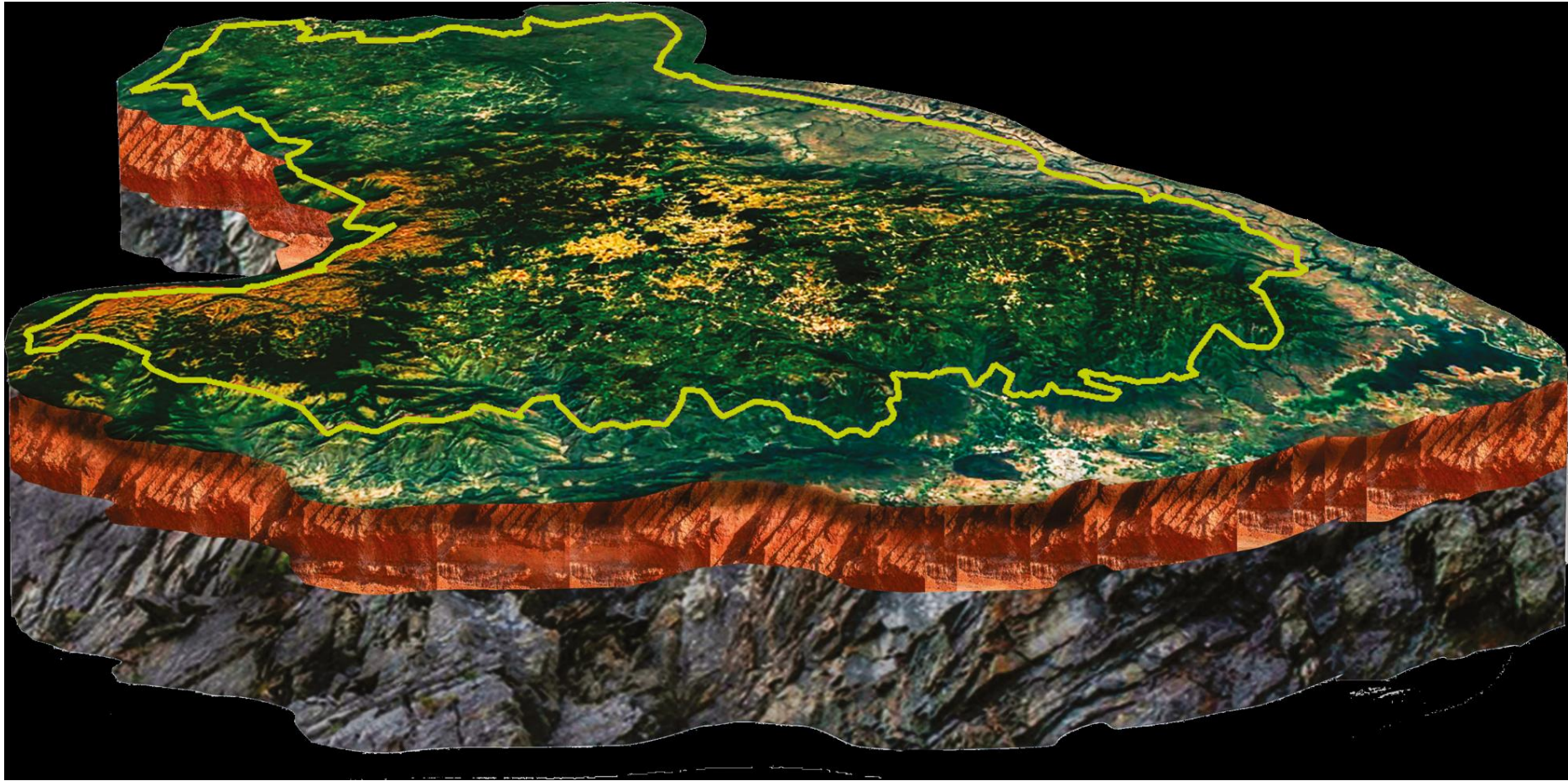
- Nilgiris is a water surplus district – CGWB classification.
- Severe water crisis in major towns like Coonoor, Ooty and Kotagiri.
- Scarcity of water in rural areas reported from our baseline study conducted around NBR.
- Drying up of springs, wells and streams in the past few years during the peak season.
- Conflict for water between communities and wildlife.

Monitoring of Ground Water Resources

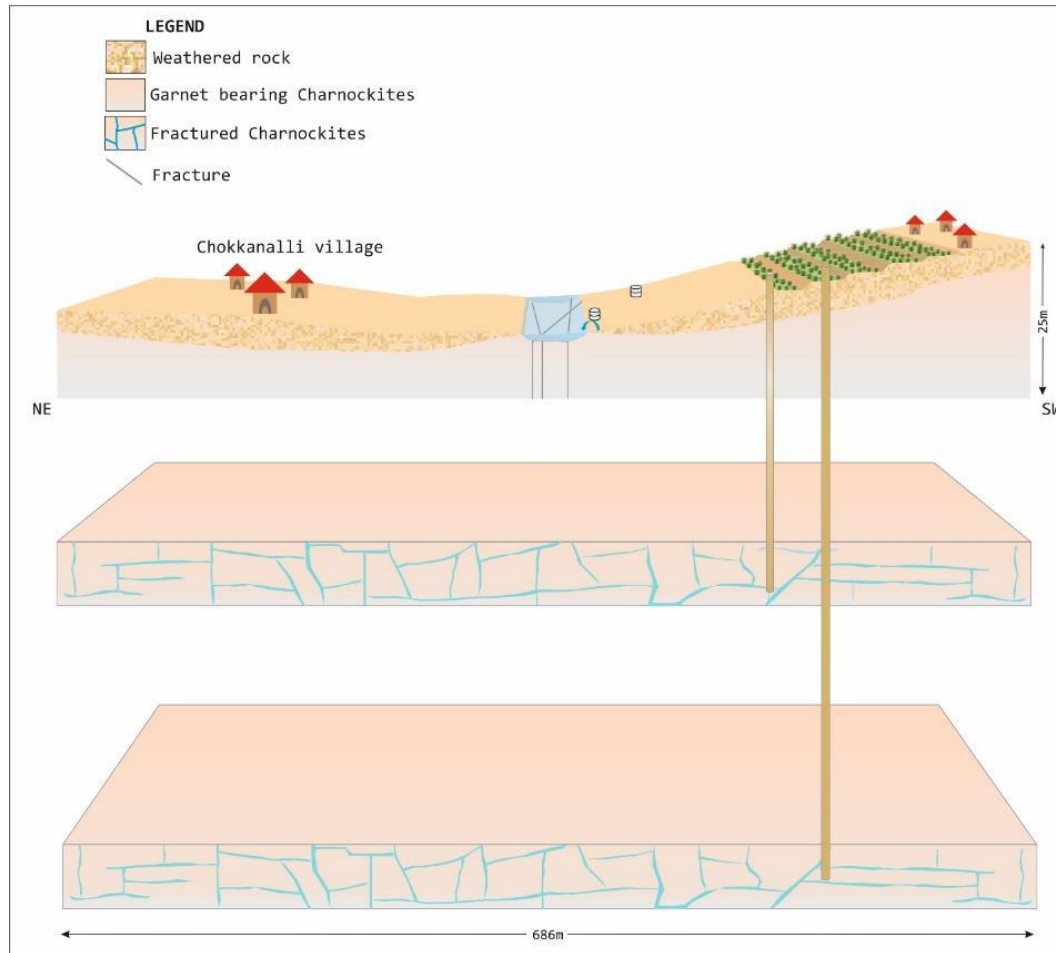


- Discharge in Springs
- Quality of Water in Springs and Wells
- Water level of Wells

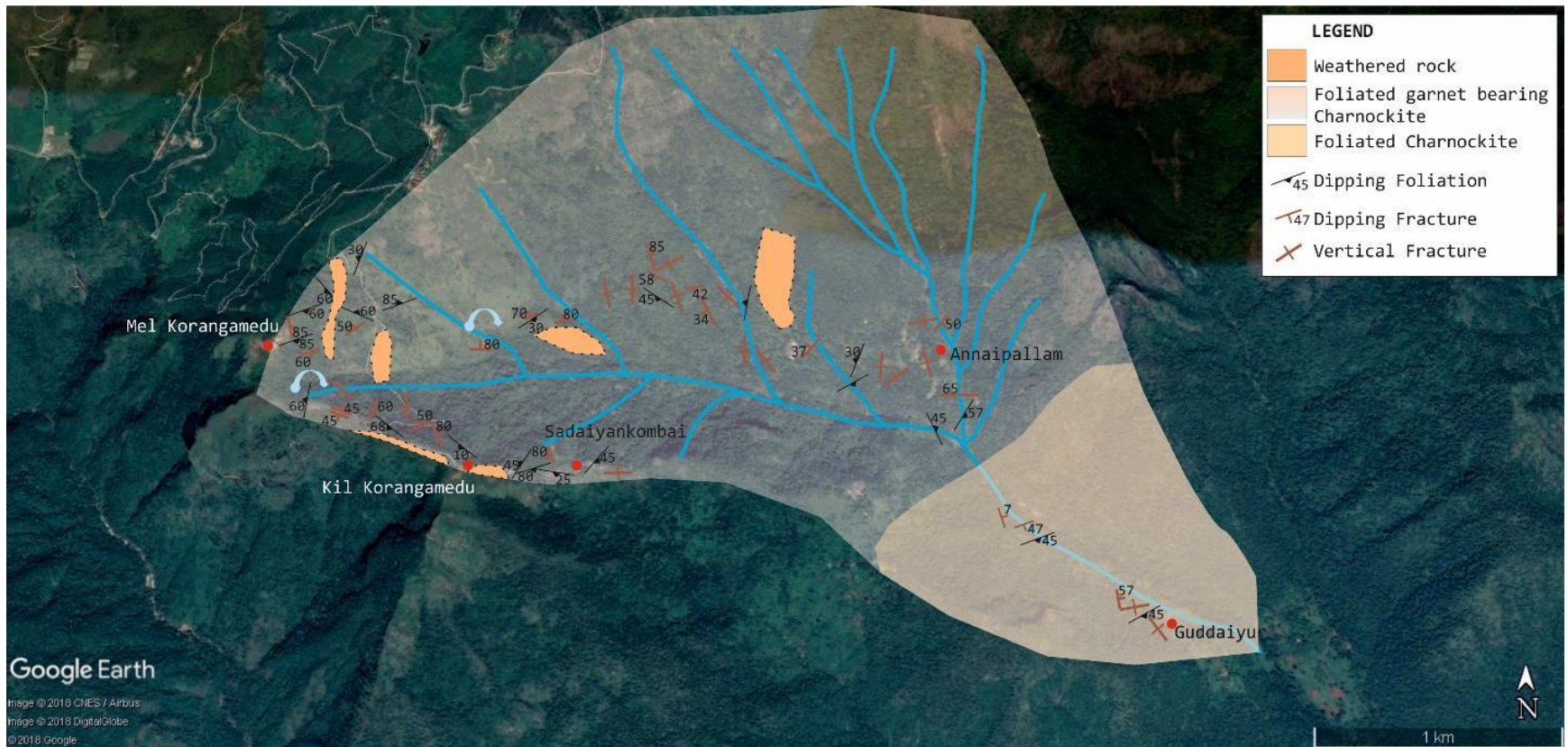
Geo-Hydrological Profiling - Conceptual hydro-geological layout of micro and macro watersheds



Subsurface geological map of a village



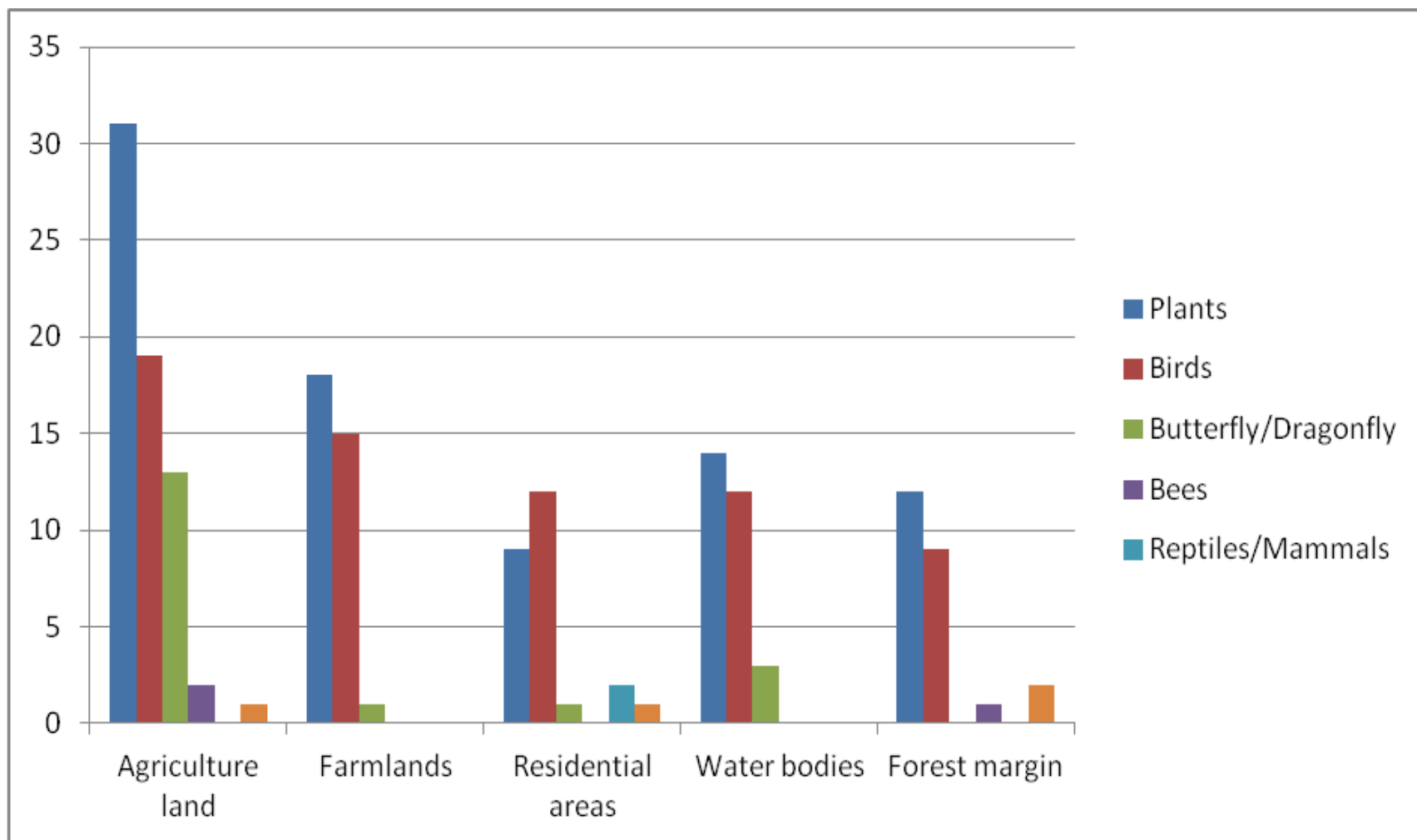
Different rock types and varying foliations and fractures as observed in the valley



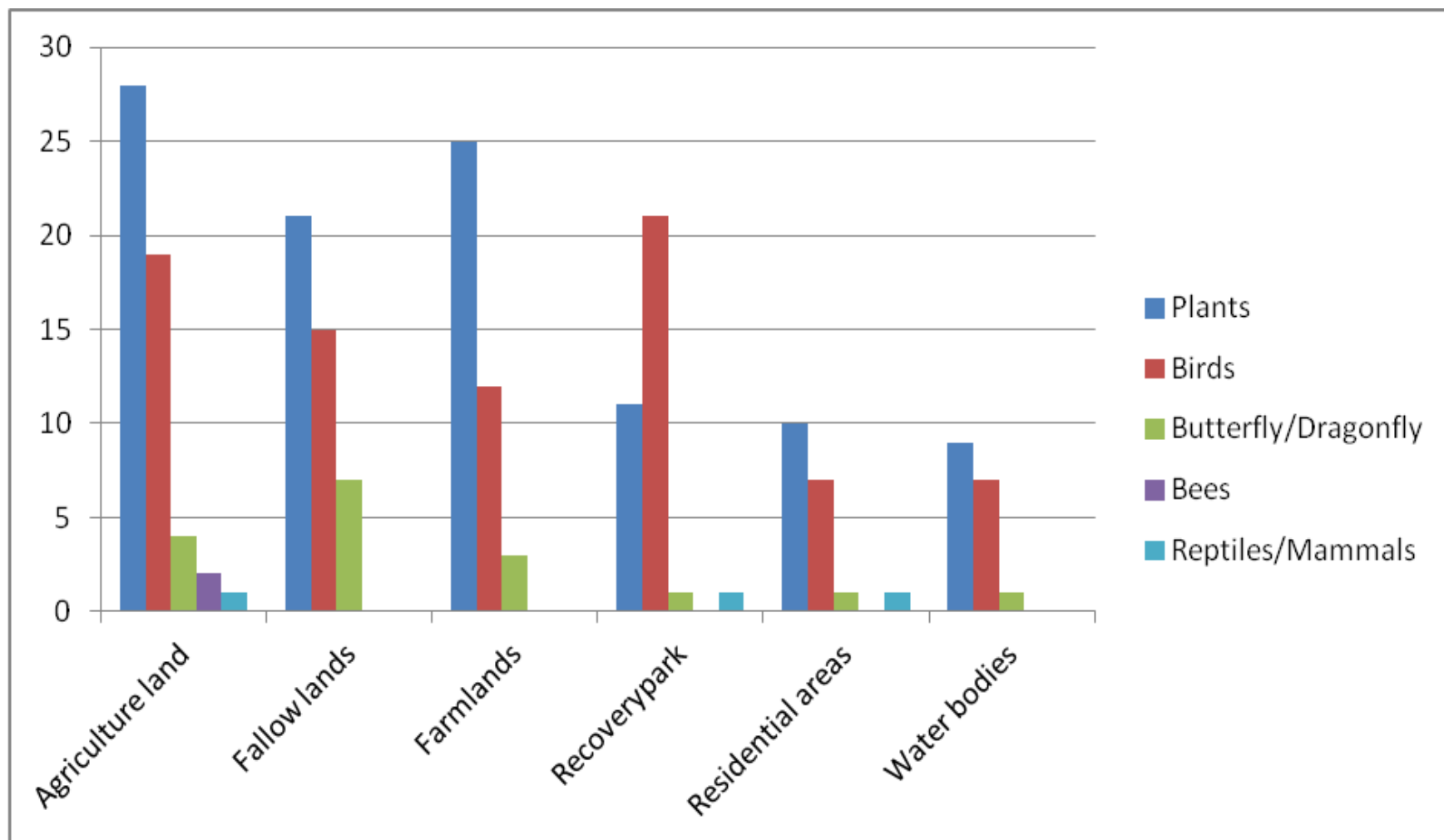
Natural Resource Management Study

- To understand the interaction between people and the natural landscape such as -
 - Biodiversity assessment
 - Ground water and Geohydrology
 - Land Use

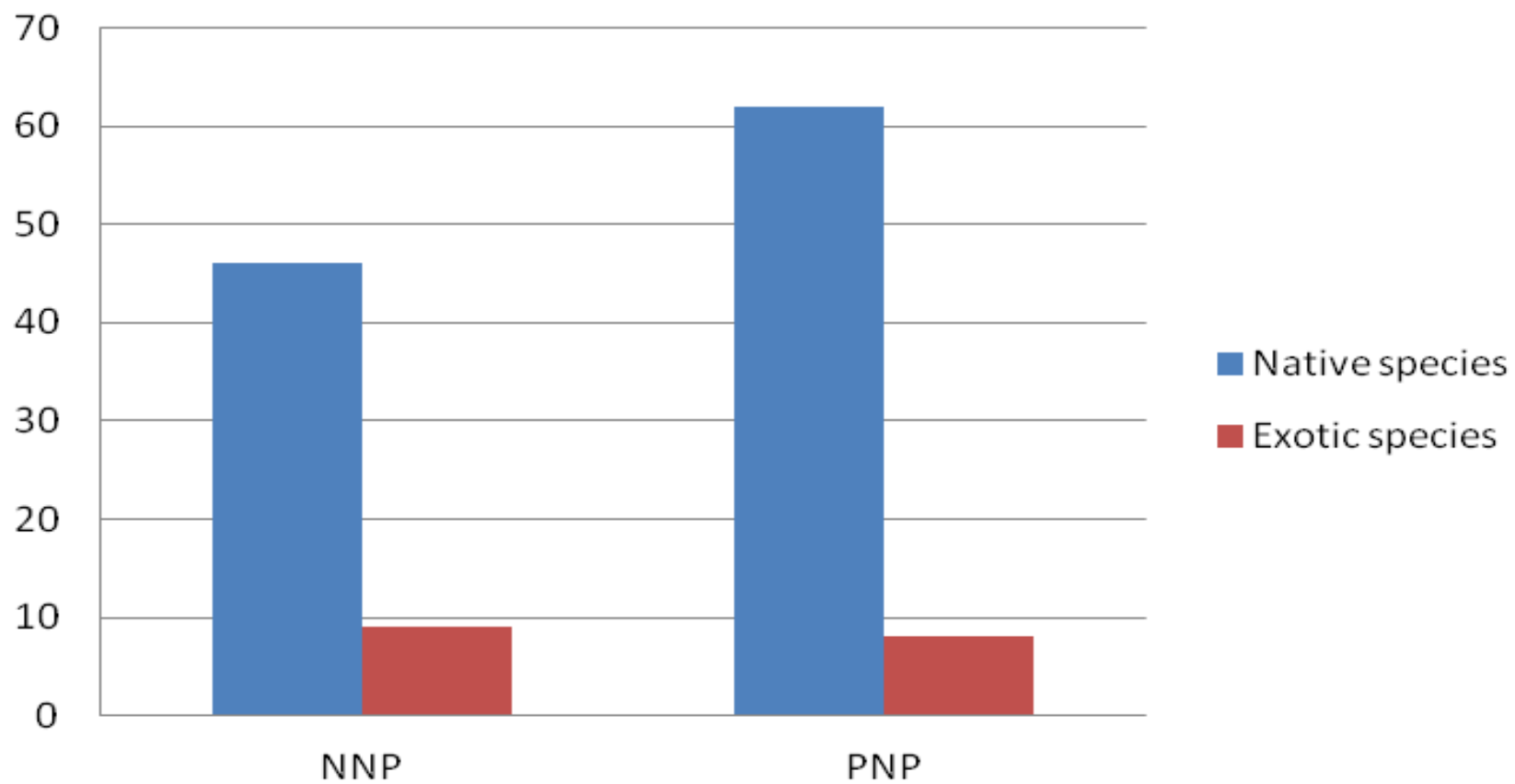
Biodiversity richness across different habitats of the NNP town panchayat



Biodiversity richness across different habitats of the PNP town panchayat



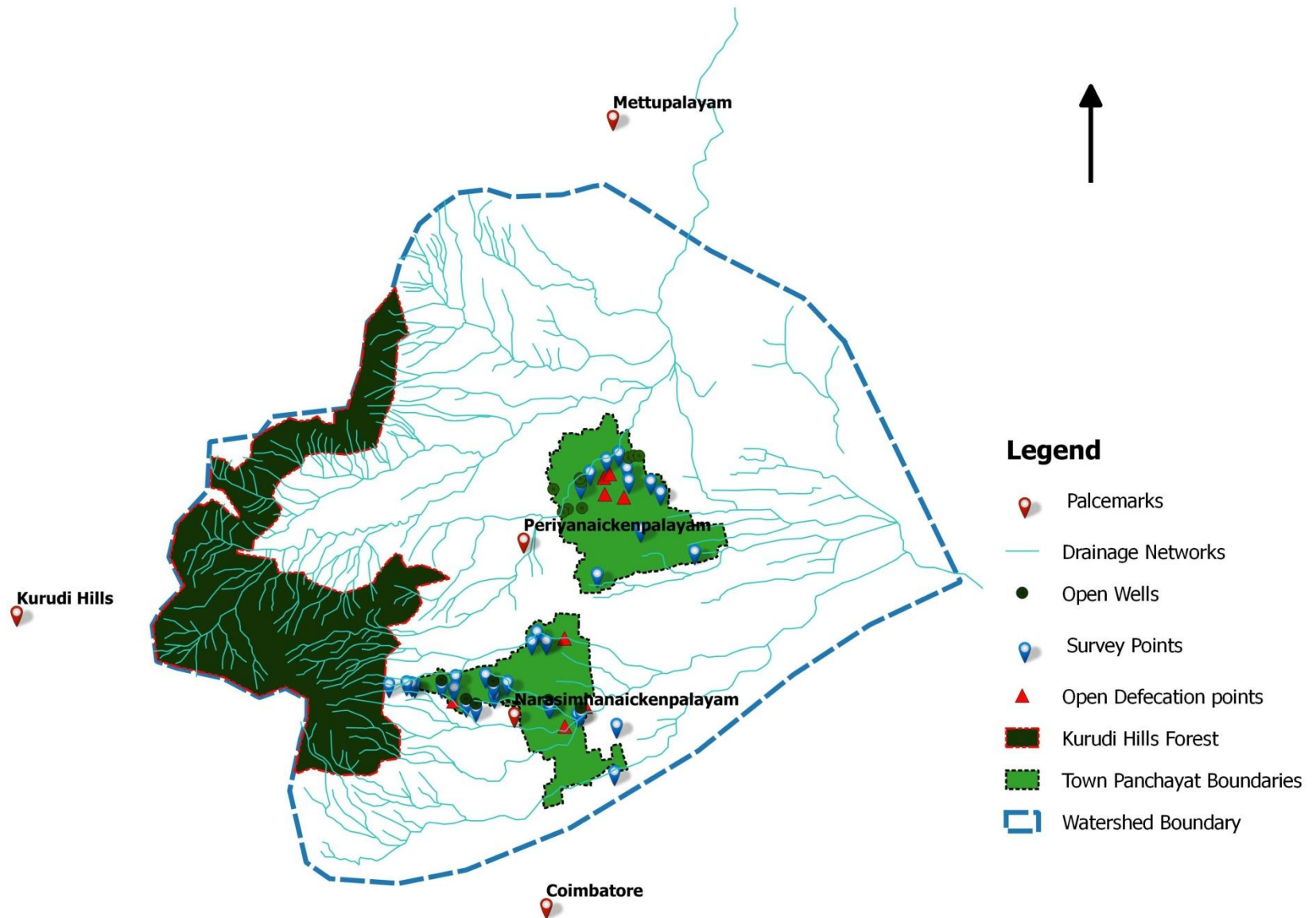
Native vs. Exotic species



Kousika River – A lost river



Watershed of Koushika River and Streams Draining through Periyanaickenpalayam and Narasimmanaickenpalayam

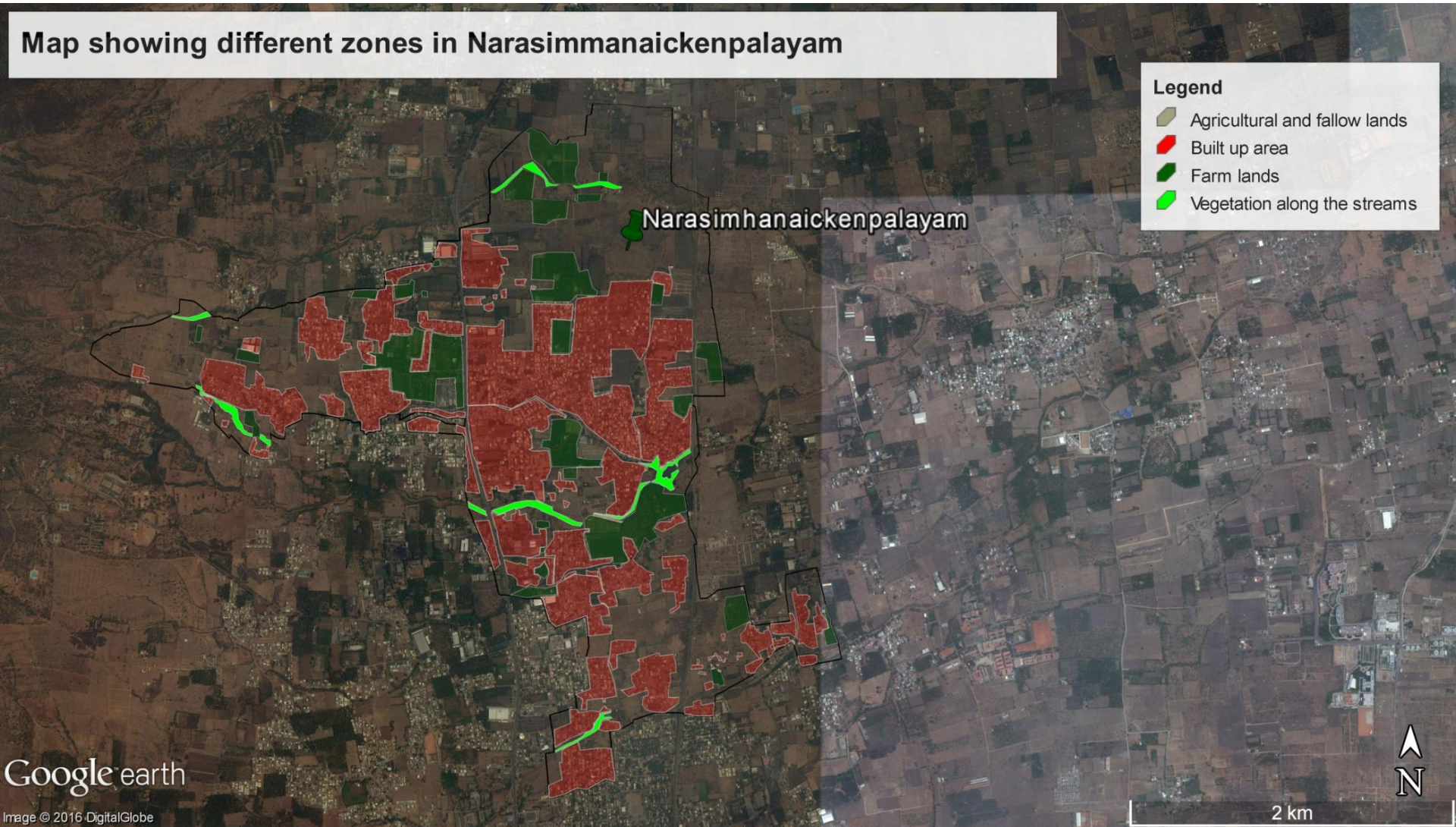


Sanitation in the 2 TP's



Land Use in 2 TP's

Map showing different zones in Narasimmanaickenpalayam



Land Use in 2 TP's

Map showing different zones in Periyanaickenpalayam

Legend

- Agricultural and fallow lands
- Built up area
- Farm lands

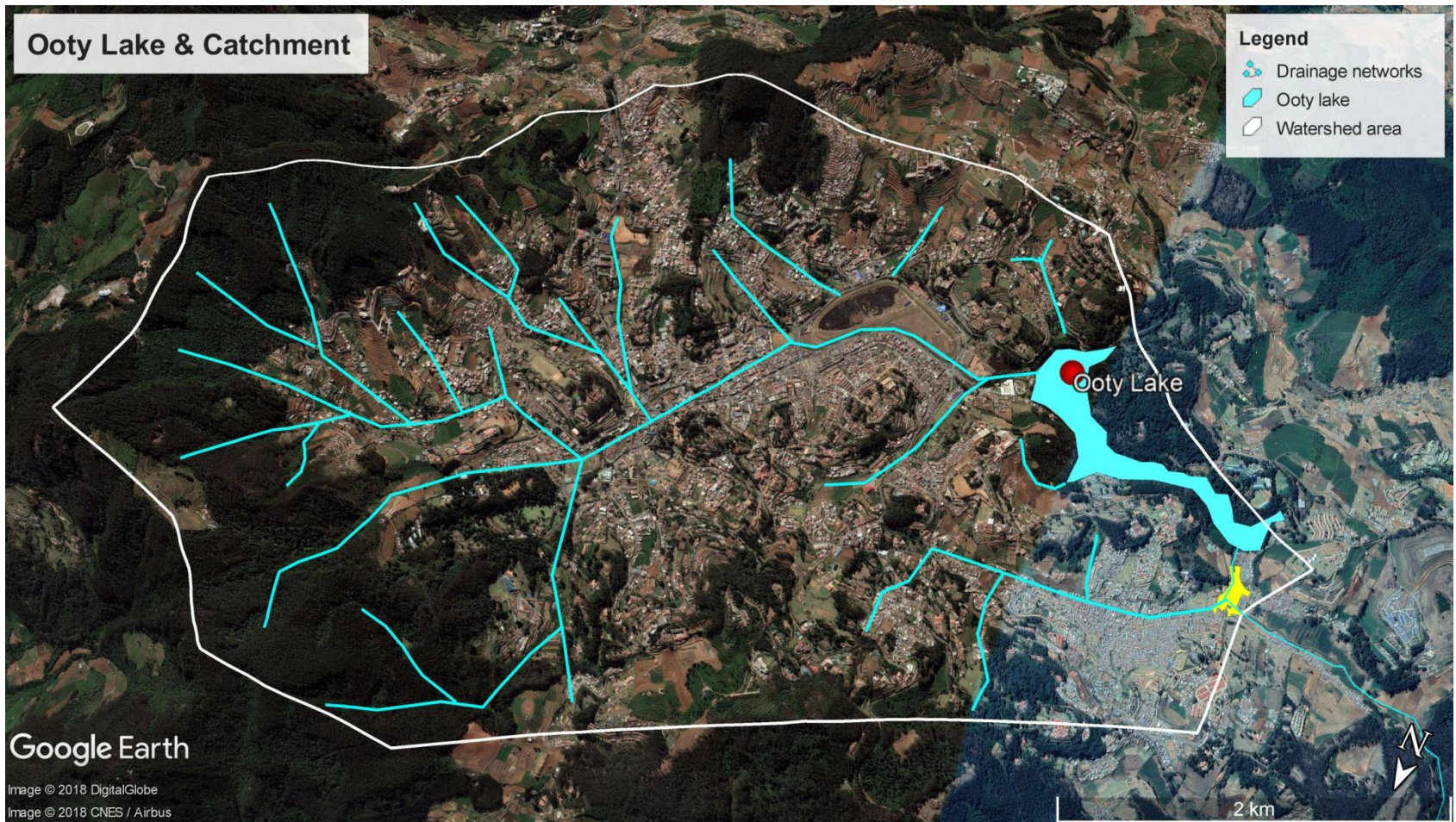
Google earth

Image © 2016 DigitalGlobe

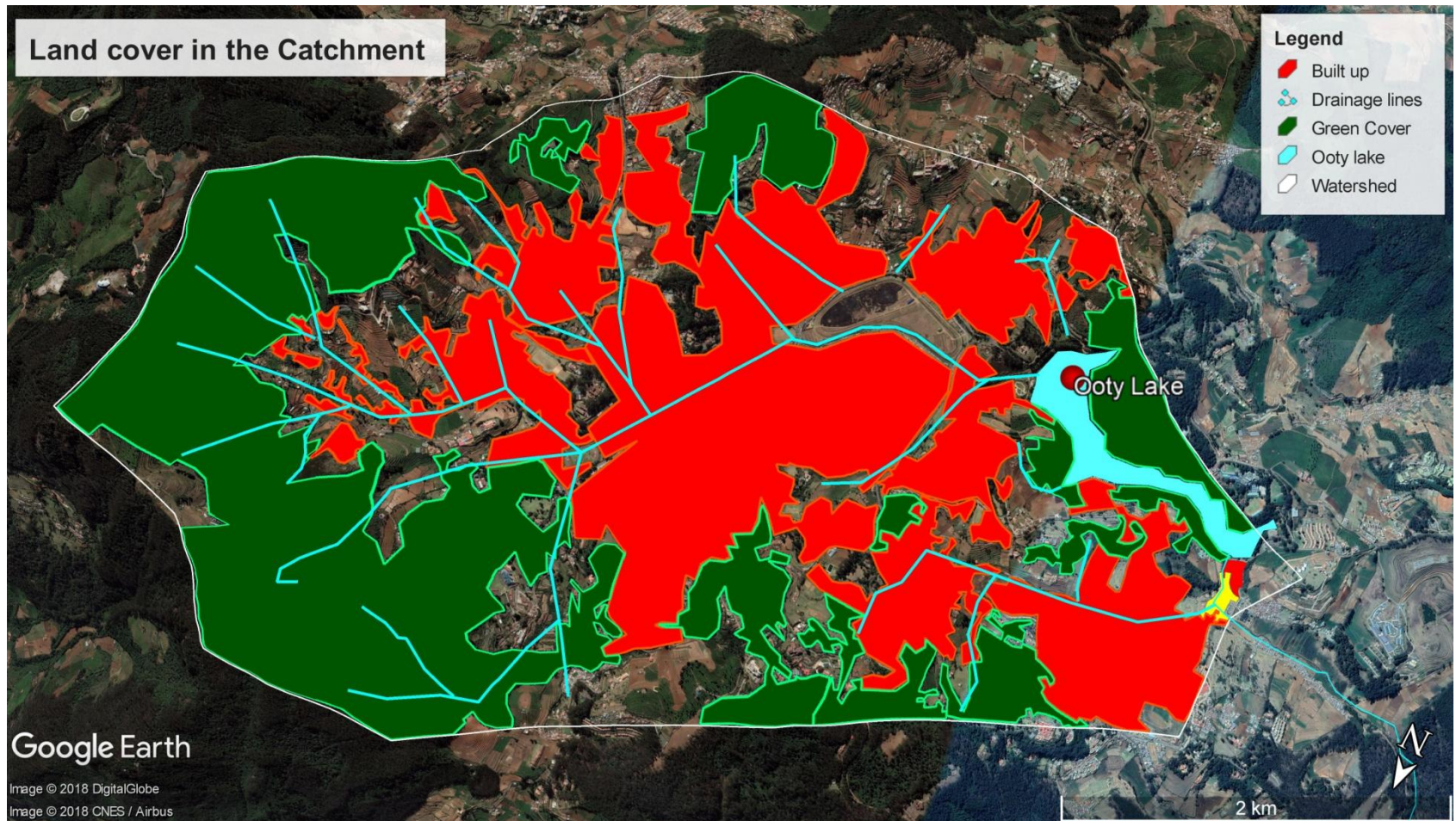
2 km



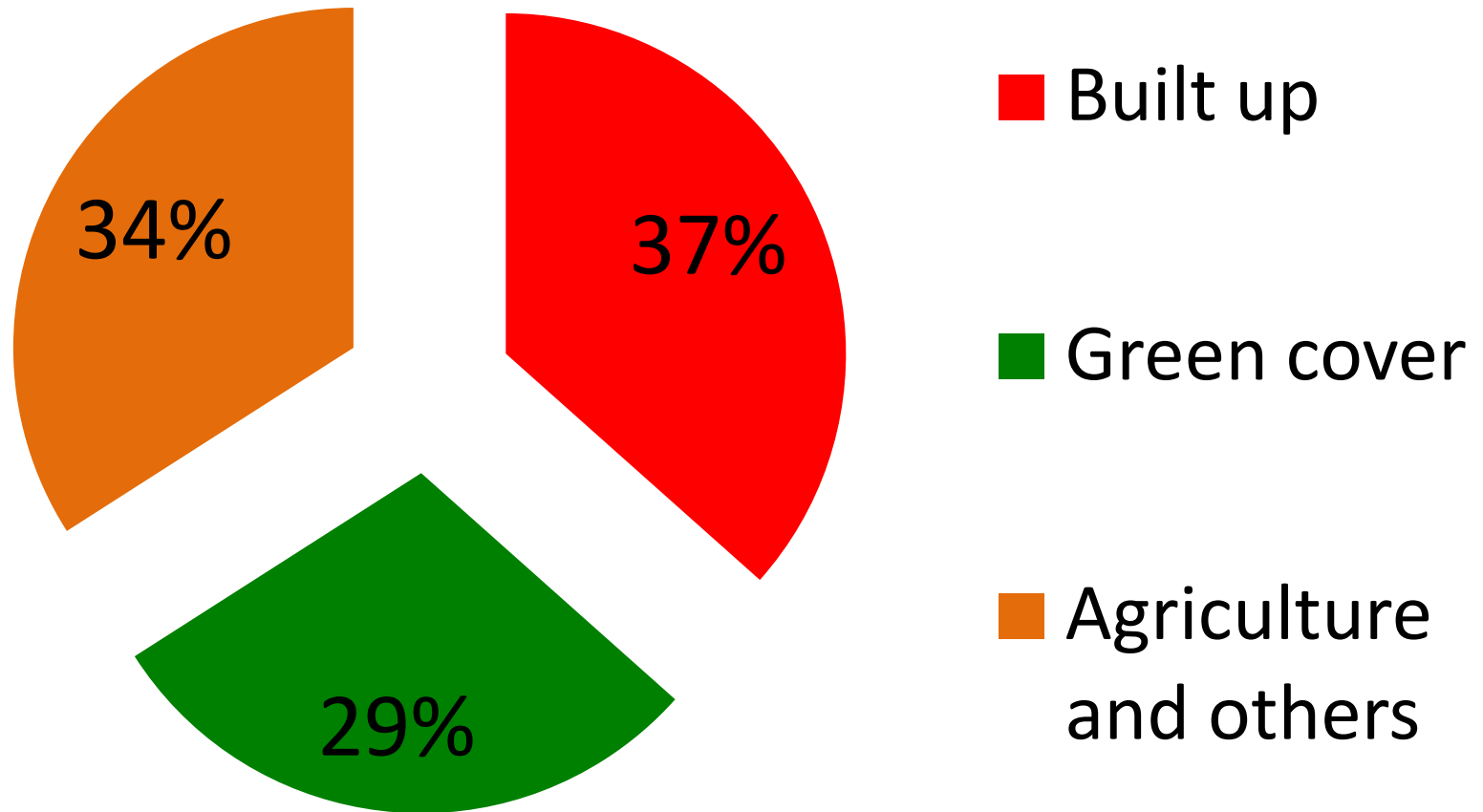
Ooty Lake & Catchment



Land cover in the Ooty Lake catchment



Land cover in the Ooty Lake catchment



Floating Wetland Islands



- Floating islands in the lake can be piloted to clean the water as well as create an habitat for wetland birds
- Removal of invasives in the catchment and restoring them to grasslands
- Stream bank restoration – Sewage treatment using wetland plants

<http://www.taru.co.in/index.php?r=pages/index&id=36>

[http://www.ayala-aqua.com/"\)\)](http://www.ayala-aqua.com/)

Eco-Restoration



Happy valley - 2008



Happy valley - 2012





Thank You

