Sustenance of forest dependent livelihoods of local communities in a changing and variable climate: Integrating local knowledge for adaptation options

L. D. C. B. Kekulandala[1], R. H. S. S. Fernando[2]

[1] Practical Action, Sri Lanka, No 05, Lionel Edirisinghe Mawatha, Colombo 05, Sri Lanka

[2] Centre for Applied Biodiversity Research, Allen Avenue, Dehiwala, Sri Lanka

Background

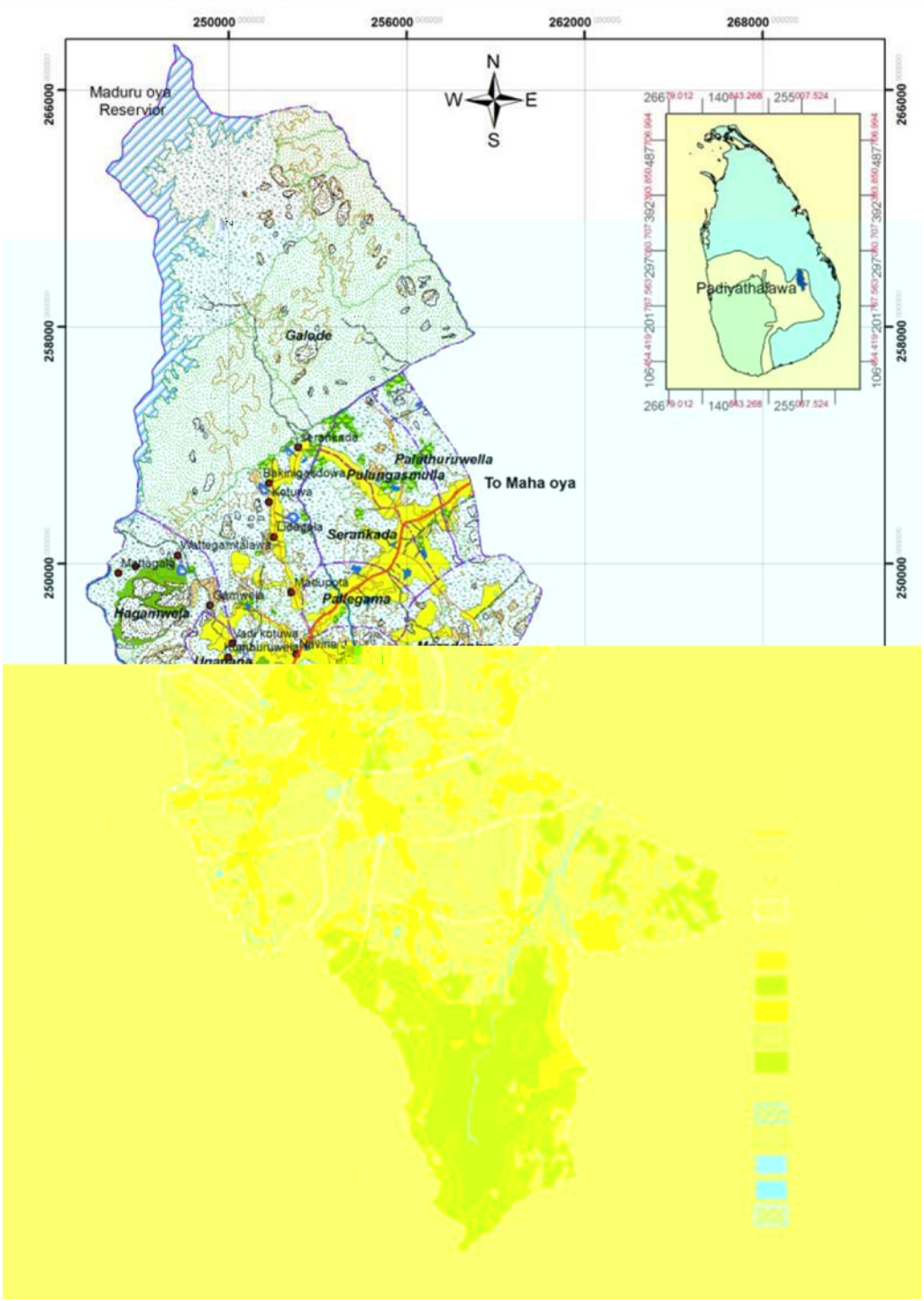
* Forests ecosystems provide many services and provisioning of NTFP is an important service for forest dependent communities.
* NTFP's have been a valuable means of subsistence for traditional/indigenous communities
* Communities have been harvesting NTFP's in a sustainable manner for centuries bounded by cultural norms and practices that evolved over the years.
* Growing population, high demand for natural resources, degradation and deterioration of forest ecosystems has led to depletion of NTFP's.
* How changing climate is affect provisioning of NTFPs is poorly understood.

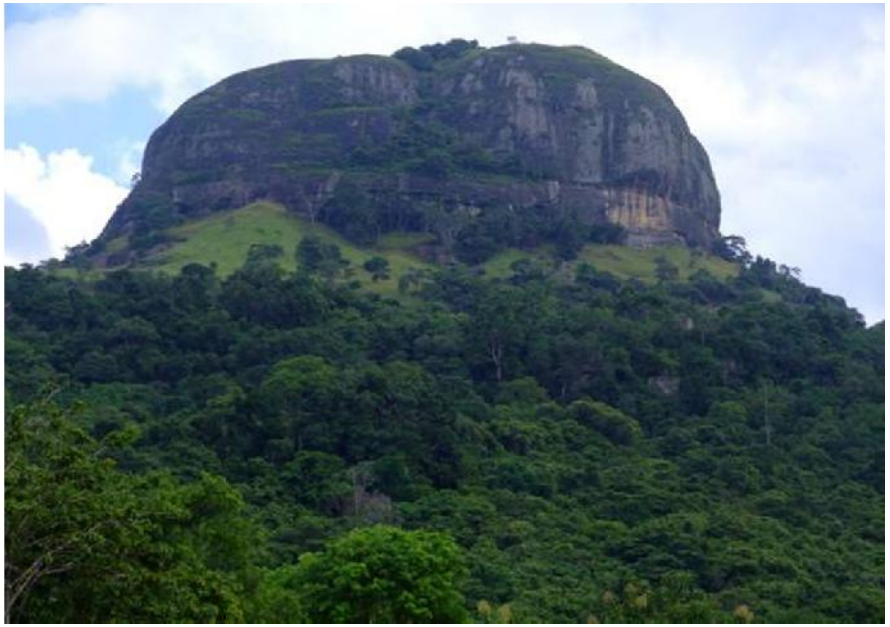
Context

* Padiyathalawa is a small township situated in the eastern intermediate zone of Sri Lanka.
* The primary livelihood of the local communities is rainfed agriculture and primarily paddy farming.
* Paddy farming is carried out during the north east monsoon season from October to January.
* There are two major forest reserves in the area (Kokagala and Nilgala Forest Reserves).
* People depend on the NTFP's as a subsistence during the dry season

Location

- Padiyathalawa, Ampara district, eastern Sri Lanka
- Low country eastern intermediate zone
- 3 villages
- Adjacent to two forest reserves
- North east monsoon from Oct- Jan





Process

* A research was carried out in 3 villages in padiyathalawa with 250 households
* To identify the dependency of local communities on NTFP's, most important plant species.
* Identify harvesting mechanisms,
* How the market links, threats and issues for the sustenance of the NTFP's.
* Furthermore key informant surveys and focus group discussions carried out to assess the different uses, harvesting mechanisms and identify possible climate change impacts

Some Results

* 41 species of plants were used by communities as NTFP and 12 species were recorded as commonly/mostly harvested species.
* 9 -12 species were found to be harvested from the deep interior of the forest whereas another 10-15 species were found to be harvested from forest fringes.
* Generally most products are harvested and dried before selling to village vendors.
* NTFP's provide important subsistence income for forest dependent families in the dry season.
* The study also found that population size of many species has gone down over the years due to unsustainable harvesting practices (eg: cutting down the entire tree to extract bark or leaves, cutting down branches for collecting fruits), forest clearing for highland crops.

Climate Vulnerabilities (Community Perceptions)

* Changes to rainfall patterns (late arrival of monsoon rains)
* Changes in fruiting and flowering seasons (No stocks when demand is high and vice versa)
* Changes in quantity and quality of fruits.
* Decreasing populations of species
* Bee hives are hard to find

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Adaptation Priorities

* Developing fruiting and flowering calendar for most commonly harvested species was identified as a priority adaptation action.
* Informing the market chain on changes in seasonality of NTFP's,
* Value addition for NTFP through improved post harvest technologies, improving the agricultural productivity in highland crops and home gardens
* Cultivation of certain commercially valuable NTFP's in home or village gardens, replantation of forests fringes.
* Awareness and capacity building on sustainable harvesting practices were identified as key measures to reduce the vulnerability of communities against potential impacts of variable/changing climate and also to ensure the conservation of the forest ecosystem.
* Joint management of forest resources was envisaged between forest department and local communities as current management mechanism does not provide opportunities for the communities to involve in managing the resource.

Thank You