



Diverse spectra of Sacred Grove Tradition

Haliastur indus (Barnard's hawk)

Syzygium travancoricum

Psilotum nudum

Graphium sarpedon tereon

Polypedates maculatus

Triton pompadora (Pompadora green garter)

Agaia roxburghii

Drymaria quercifolia

Catopsilia crocale (common emigrant)

Leptotilax khasiorum

Sturges malabaricus (Grey headed sturges)

Diospyros montana

Tectaria sp.

Geometrid Moth

Signature spider

Otus bakkamoena (Collared scops owl)

Vateria indica

Actinopteris radiata

Common Jezebel

Signature spider

Nidula liricincta

Francolinus gularis (Swamp francolin)

Actinodaphnae hookerii

Pityrogramma calomelanos

Vindula erota

Mariaella dussumieri

Macrochlamys sp.

Life forms in Sacred Grove

Sacred groves are well known for preserving local biodiversity. A good number of studies have reported the presence of unique floral and faunal assemblages along with rare and endemic members. The congenial microclimate, availability of food / nutrients and shelter are the major factors for making the groves suitable for a wide range of organisms which are not easily available in other areas.

Ecosystem Services are benefits provided by ecosystems that contribute to making human life both possible and worth living

Provisioning services

(Services focused on directly supplying food and non food products from grove)

Water conservation

There are few specific ecological features which help to trap moisture in the grove area. Deposition of fallen leaves and twigs, close canopy and floor vegetation (herbs, seedlings, saplings etc.) all in combination preserve moisture in the groves



Litter formation Floor vegetation

Freshwater supply

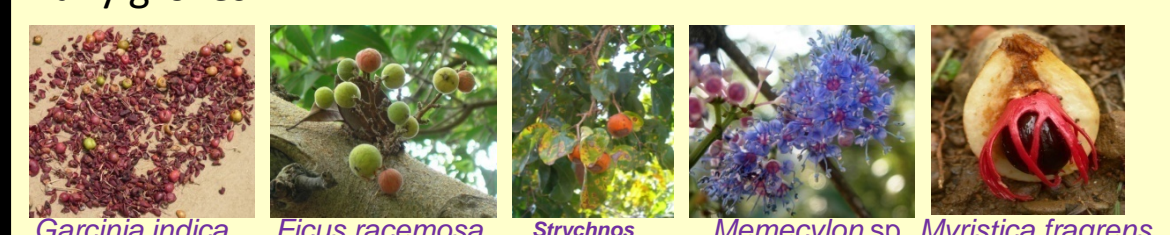
Groves facilitate infiltration of water into the soil which in course of time especially in lean season, is available to the community .



Grove associated pond Open well (groundwater) Water storage

NTFP (Medicinal plants, fruits, fuel wood etc.)

A wide range of non timber forest products have been reported from sacred groves. Although there are restrictions for biomass extraction NTFP collection is a common practice in many groves.



Supporting services

(services provided to support habitats and ecosystem functioning)

Carbon sequestration

Carbon sequestration is the process of increasing the carbon content of a reservoir / pool other than the atmosphere. A well maintained grove has great potential in this regard due to

- > having older trees with bigger stem bulk
- > presence of good number of young individuals thus ensures future carbon storage



Measurement of bigger girth trees at sacred grove

Pollination and seed dispersal

Natural pollinators like, ants, bees, butterflies, birds etc. and seed dispersers (eg. birds, bats) often use grove as shelter / resting place in humanised landscape.



Bee pollination Wasp pollination

Favourable microclimate for flora and fauna

(Biodiversity maintenance)

Restricted entry, amiable temperature and moisture and shelter produce favourable microenvironment for diverse life forms especially lower group members i.e. microbes, annelids, insects, molluscs, amphibians, fungus etc.



Regulating services

(services obtained from regulation of ecosystem processes)



Sacred grove in upstream area of the watershed

Groves have important roles in

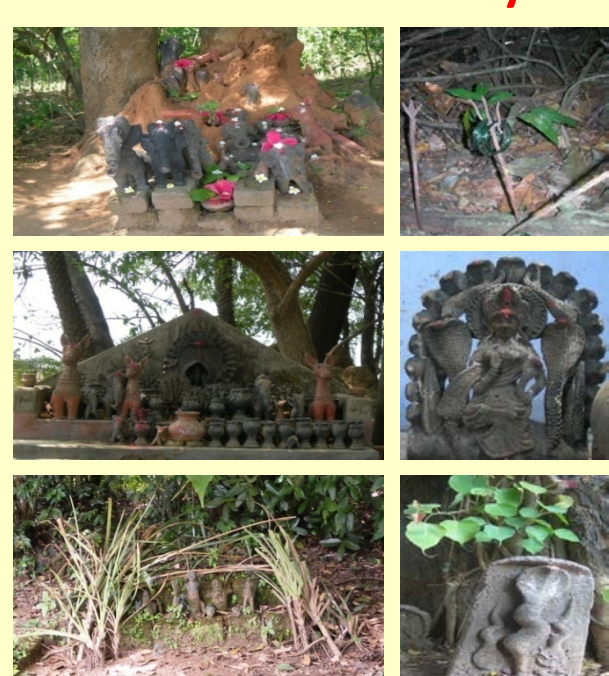
- **Hydrological flow regulation**
(eg. run off control, soil water infiltration, groundwater recharge) thus, influence the livelihood of the communities living in downstream area.
- **Mitigation of natural hazards**
(eg. flood prevention, landslide reduction, soil erosion control and fire resistance), so to avoid damage to natural resources and human life.

Cultural and Amenity services

(services related to recreation and human inspiration)

Religious, cultural tradition and ethnic identity

Sacred groves at different places act as an identity for the local community. The deity worshiped, the religious and social festivals performed, the rituals and norms followed are reflections of the beliefs of the particular community towards nature and supreme power.



Landscape aesthetics

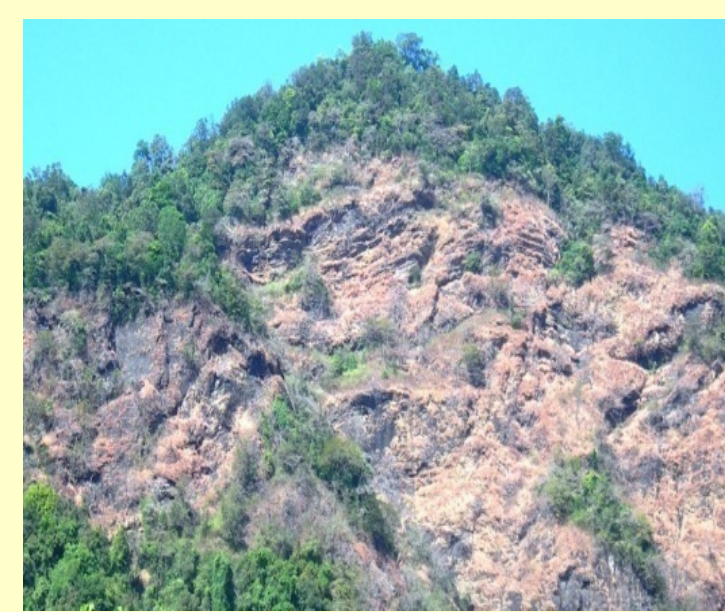
Groves represent diverse ecosystems in different landscapes. They are often subjected to landscape aesthetics due to their species diversity and characteristic physical components .



Research and education

Apart from their socio-religious importance, groves are the only bearers of original ecosystem of an area with characteristic species complex. Thus, their functional importance is always a subject of research and education.

Threats to sacred grove tradition



Deforestation



Land conversion



Invasive species



Fragmentation



Land quarrying



Sanskritisation



Developmental activities

Conservation of Sacred Groves



Participation of local people



Biodiversity documentation



Fencing the sacred groves



Reforestation/plantations



Prevention of deforestation



Awareness raising

MAJOR THREATS TO THE SACRED GROVES

1. Large-scale deforestation
2. Over-exploitation of natural resources
3. Large-scale conversion of forest lands for agriculture
4. Unplanned developmental activities
5. Invasion of exotic weeds

CONSERVATION OF SACRED GROVES

1. Strengthening the existing conservation activities
2. Restoration of degraded sacred groves
3. Landscape level approach
4. Control the excessive exploitation of natural sources
5. Formulate regulations for developmental activities in and around the groves

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