

# Climate Change Adaptation with Community Based Management- CBM in Komolchari Village Common Forest-VCF, Khagrachari, Bangladesh

Arif Chowdhury<sup>1</sup>, Sohag Miah<sup>2</sup>, Pedro Pardo<sup>3</sup>

<sup>1</sup>University of Chittagong, Institute of Forestry and Environmental Science, <sup>2</sup>Georg-August Universität Göttingen, Fac. of Forest Science and Forest Ecology, Germany, <sup>3</sup>Technische Universität Dresden, Fac. of Environmental Sciences, Germany

## Background

Climate change begets numerous threats to mankind. As an alternative, indigenous communities possess relevant knowledge regarding their environment.

“Community based adaptation” to climate change is a community led process, which enables people to plan for and cope with the effects of climate change on the basis of communities priorities, needs, knowledge and capacities.

## Objectives

Research was conducted in Komolchari Village Common Forest -VCF, Khagrachari, in order to assess the adaptation process to climate change, including livelihoods and forest services.

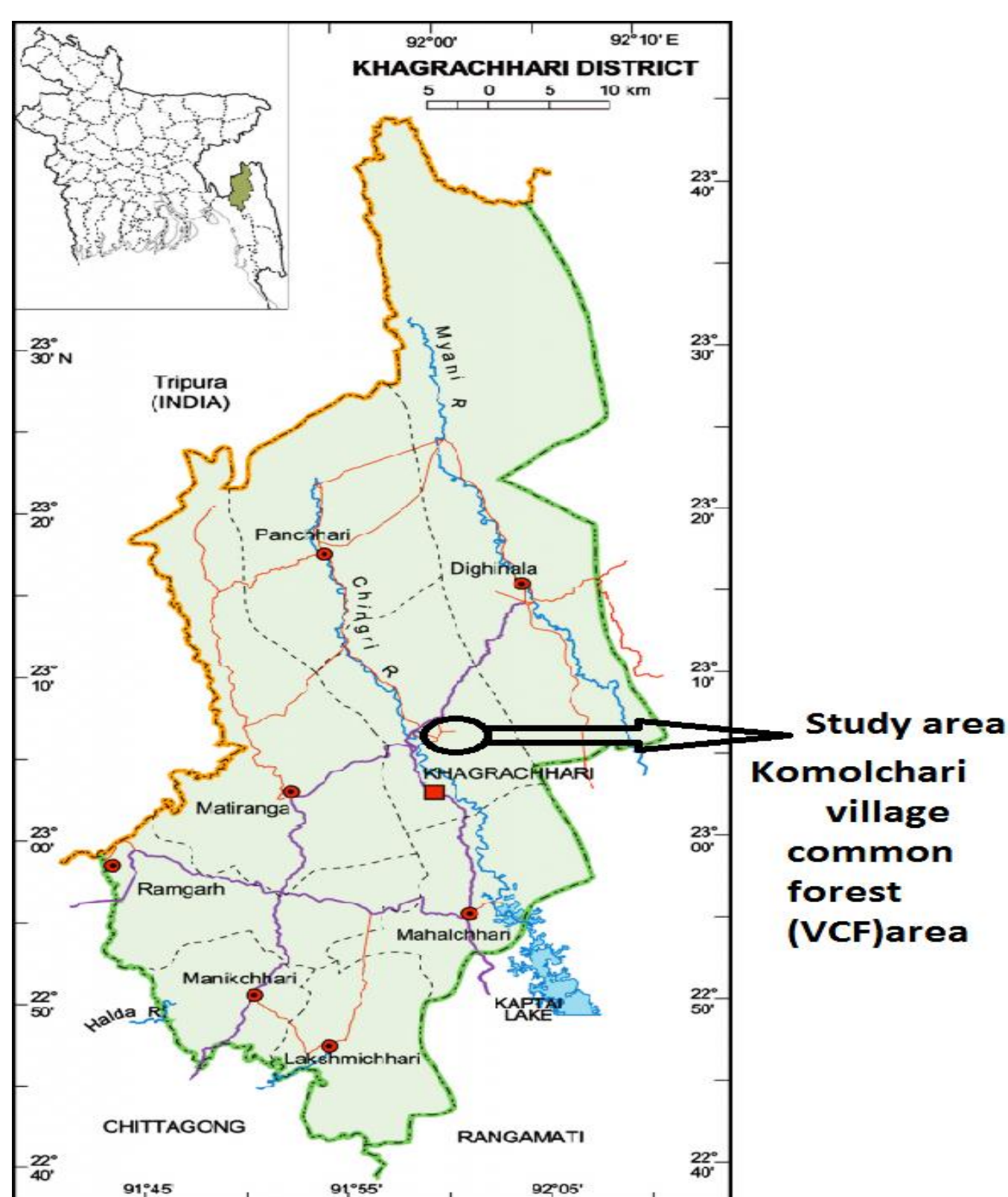


Fig. 1. Komolchari Village Common Forest (127.9 ha reserve) in Buarchari Mouza, Khagrachari Sadar, Southeast of Bangladesh.

## Practices and processes for adaptation in Komolchari Village Common Forest-VCF

- The executive committee approves the extraction of forest resources
- Efficient use of fertilizer, organic manure and water
- NGOs are promoting local participation and training the communities in different topics
- Existence of a disaster risk management
- Local people are prepared to cope against sudden fire incidents
- Settlers are always monitoring the VCF to protect against illegal extraction of forest resources

## Regulated and restricted activities in the VCF

- All types of fires
- Immature bamboo extraction (harvesting without permission with a fine of 50 Bangladeshi Taka, about 0.64 USD, per confiscated piece)
- Hunting and killing of wildlife
- Collection of medicinal plants
- Water use and collection by “Chora”



The parameters measured in the forest surveys provide an idea of the forest health in Komolchari VCF.

These parameters suggest a relative good state of conservation of the forest (table 1).

This as a result of the creation of the VCF committee and the collaborating program with a local NGO, which regulates the use of the resources in order to avoid the over-exploitation

Table 1. Density, Basal area, Shannon-Wiener index, Species Diversity Index and Index of Dominance of the vegetation in Komolchari VCF.

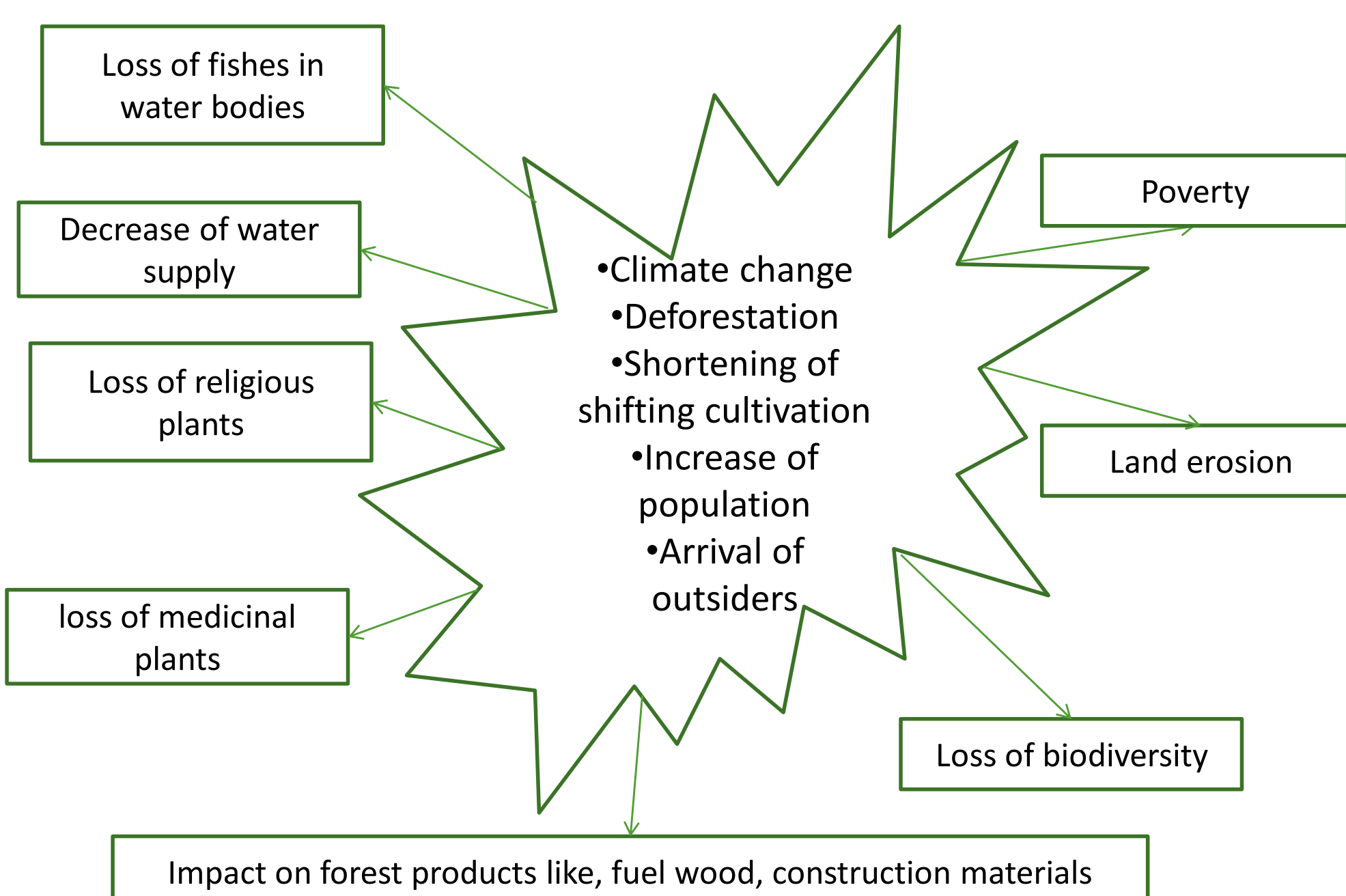
Forest Parameters VCF Komolchari	Values
Density (trees/ha)	1420
Basal area/ha (m <sup>2</sup> )	27.98
Shannon-Wiener Index	2.91
Species Diversity Index	50.62
Index of Dominance	0.09

## Conclusion

- The sustainable management approach in Komolchari VCF presents an alternative for the protection of natural resources and the communities livelihoods to cope with the effects of climate change.
- The VCF is relevant for biodiversity conservation and the maintenance of the cultural activities of people.
- Some aspects need to be taken into account in order to guarantee the long term success and permanence of this management model:
  - The management committee members should be technically qualified
  - A strong network needs to be created and maintained
  - Women’s participation should be encouraged and assured
  - People need to be informed and aware of the watershed protection in the VCF area
  - A part of the area should be allocated for the planting and protection of endangered local species
  - Government’s provision and promotion of alternative income sources, land tenure rights, health care, education and infrastructure has to be assured

## Results

### Local knowledge for the vulnerability and impact assessment



Community people were receptive to the idea of VCF conservation and the 87% of the respondents were willing to be involved in the forest conservation.

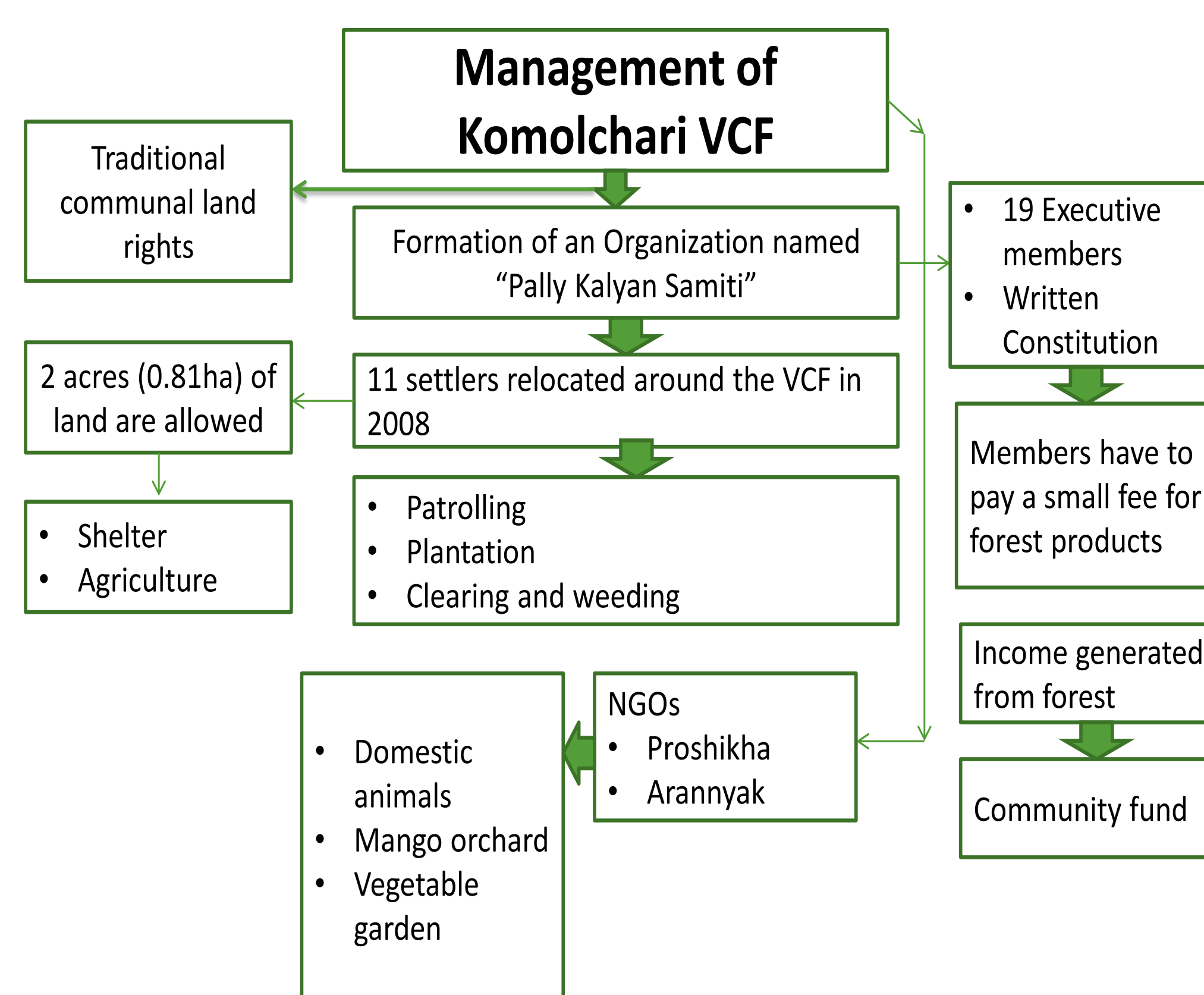
The communities report the use of various edible species of flora and fauna, timber species, medicinal plants, animal and bird species, plant species for construction and crafts, like cane and bamboo, and some tree species of religious importance like the Bodhi tree (*Ficus religiosa L.*) and bot tree (*Ficus benghalensis L.*), among others.

## Sustainable management of land, water and biodiversity



“Jhum” (slash and burn) cultivation is decreasing

Horticulural practices are increasing



## References

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