



Community Level Discussion For Biodiversity Management



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Bonai Forest Division,
Sunadargarh , Odisha

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SUMMARY

Loss of biodiversity and forest fire is alarming issues throughout the world. Both issues together are creating lots of negative impacts globally in all aspects of life on earth. The issues could be reduced and solved only with communities under long-term strategy. Keeping this in view, an attempt has been taken to interact with community and discussed on the issues at Barsuan range of Bonai. It is rich with floral and faunal diversity and unique landscapes along with mining activities. Seven villages (Lassi, Kemsila, Sarkunda, Batagaon, Bhutuda, Siliguda and Badamba) were selected for the pilot research works. Set of semi-structured questionnaire is used in the form of PDF to gather the issues and informations to mitigate the problems related to community and forest. Results revealed that, community make fire to get livelihood, collection of NTFPs (Non-timber Forest Produces) and food. The report highlights the causes of forest fire & biodiversity loss and suggests the mitigation measures to make a long term strategy for the conservation of biodiversity and management of wildlife. There is also an agreement in the Convention of Biological Diversity that Biodiversity-Wildlife Management and community engagement programme should be integrated. Therefore, the development of livelihood opportunity could minimize the dependence of forest, forest fire, illegal activities and wildlife trade. The proposed model on Forest fire will be helpful to minimize the problems related to forest fire and also brings attention towards need of appropriate actions as soon as possible for implementation in the field. The models and suggestions are provided to mitigate the impacts of biodiversity loss and forest fire in study area.

INTRODUCTION

Management of wildlife & biodiversity conservation are important activities for which different panaceas, surveys, case studies, scientific and blueprint approaches have been widely promoted. It became more important when making strategy for the areas having rich flora-fauna along with mining activities, forest fire, shifting cultivation & trade-hunting of wildlife (Berkes 2007). Wildlife management & biodiversity conservation can be treated as utmost problems throughout the world. The problems could be solved through local communities and also World Conservation Union's Protected Areas Categories- V and VI suggest the same for management of wildlife and conservation works (Andrade and Rhodes 2012). If the conservation activities and implementation in Reserve forest or Protected areas do not have any social-political controversy, State Forest Department could be able to manage under low-cost solution in better way with local communities through community conservation. Community conservation is an approach to biodiversity conservation & wildlife management which have to focus on community need, connect people with place (Robert et al. 2015), connect people with Forest Department, create opportunities for people to get involved, energize the community. The local communities involved in conservation should

be in multilevel works from village to the state or national level.



Ministry of tribal affairs, Govt. of India, classify about 84 million people belonging to 698 communities under Scheduled Tribes (ST) in India. Odisha, a culturally sound state, occupies a unique space in the tribal map of the country having largest number of tribal communities (62 tribes including 13 primitive tribes) (Jana & Ghosh 2015). The Eastern Ghats region of Odisha are highly concentrated with many tribal communities. Considering the spatial distribution of ST population in Odisha's 30 districts, census figures of India for 2011 recorded that Malkangiri district has the highest proportion followed by Rayagada, Mayurbhanj and Sundargarh. Present study was conducted in Sunadrgarh district of Odisha, having around 51% of tribals (Dungdung & Pattanaik 2020). Major communities in this area are Munda, Ho, Dehuri, Bhuian etc (Figure 2 & 3). livelihood of these tribal communities depend upon the landscape,

availability of forest, land, water etc. For a large number of tribal the major occupation is from the forest like food, fiber, fuel wood, fodder, medicine and timber as well as various

incentive for local communities to conserve biodiversity and natural living resources because of the economic benefits from such conservation (Tisdell 1995). Conservation of



minor products. Despite of many complexities and challenges local communities are driving their own initiatives to conserve wildlife and biodiversity in general to generate sustained livelihood (Mishra 2010). Conservation of biodiversity has always been a part of their life. The engagement of local people in the conservation of biodiversity represents a win to win situation. Tribes have their own way to preserve the biodiversity and to maintain the sustainability like sacred groves, temple trees, joint forest management etc (Hussain et al. 2017). From hundreds years ago or even from pre historical times there are many evidences have been documented on the participation of community in biodiversity conservation (Singh et al. 2000). There is often little

communities represents the sustainable model of community development. It creates sustainable employment opportunities for the local inhabitants of the community and the surrounding region. In our state, we can find many communities, actively engaged in protecting and conserving forest patches thereby helping in the conservation of biodiversity (Mohanty 2011). Keeping the importance of community conservation in minimizing the forest fire, wildlife trade, hunting and how they will provide the information for making a long term wildlife management & conservation plan, an attempt has been taken to do a case study in Bonai Forest Division, Sundargarh, Odisha (Kaleka & Bali 2020).

**Batagoan**

MATERIALS AND METHODS

Study area: Bonai Forest Division is situated in the Sundargarh district in North-western boundary of Odisha ($21^{\circ} 39'$ to $22^{\circ} 8' N$ and $84^{\circ} 30'$ to $85^{\circ} 23' E$; Figure 1). The study area is spreaded in 2934.21 Km^2 and enjoying the vegetation of moist deciduous forest, dry deciduous forest and semi-evergreen forest. The mean annual rainfall of study area is 1400 mm and means annual temperature ranges between 10° C & 44° C (Kumar & Kumr 2021; Palei et al. 2017; Mandal et al. 2017; Debata et al. 2017). For the present study seven villages were selected for interaction with community come under Barsuan range of Bonai Forest Division, Sundargarh, Odisha.

Survey works: Survey works has done in seven selected villages (Lassi, Kemsila, Sarkunda, Batagaon, Bhutuda, Siliguda & Badamba of Barsuan range of Bonai Forest Division, Sundargarh, Odisha. To collect the information and opinion on forest fire, forest canopy, collection of NTFPs (Non-Timber Forest Produces), wildlife, medicinal plants, eco-tourism, participation in eco-tourism programme and how shifting cultivations will be minimized, Pre-designed Passport Data Form (PDF) was used. Semi-structured questionnaire method was adopted to complete the survey works (Figure 2).

Data interpretation: The questionnaire was done through the Passport Data Form (PDF) and the collected information were analyzed using cross questionnaire in tabular form. From the table, illustrations were made to show the results of the present study.

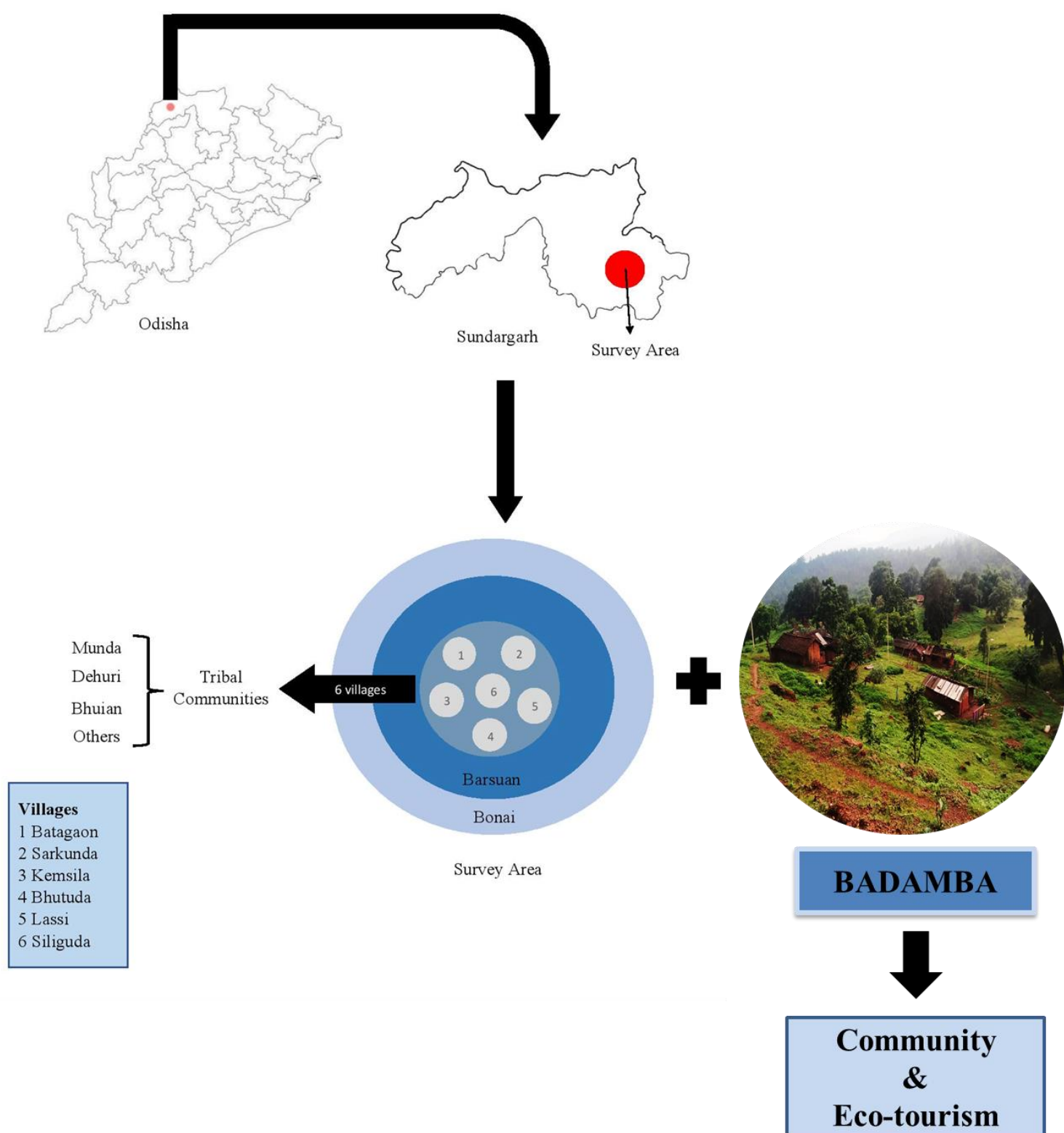


Figure 1: Geographical map of study areas



Figure 2: Survey works in study areas

RESULTS AND DISCUSSION

The survey results revealed that Barsuan range of Bonai Forest Division is rich with floral & faunal diversity having socio-cultural values. Authors interacted with major three

communities staying in selected seven villages of Barsuan range of Bonai Forest Division, Sundergarh, Odisha.

Opinion & activities of Community

BATAGAON





Mahula Flower

Leaves of *Colocasia esculenta*



They also collect the NTFPs (Non-Timber Forest Produces) for personal use like fruits of Chara (*Buchanania lanzan*), Sal leaves (*Shorea robusta*), flower of mahula (*Madhuca longifolia*), leaves of saru (*Colocasia esculenta*), mushrooms and fruits of Kusum (*Schleichera oleosa*). It was noticed that there is declination in the population of Peacock, Barking deer, Wild boar, Monkey, Sloth beer and other wildlife as per their opinion. They have also noticed that the population of Sarpagandha (*Rauwolfia serpentina*) is reduced in last 10 years. During the discussion, it was noticed that they would like to leave the shifting cultivation if they get other opportunities of livelihood (Table 1).

BHUTUDA



It was examined that the major occupation of the community of Bhutuda village is mainly labour. They are mainly munda tribe and engaged in mining works. It was noticed that some people of this village do make fire for poaching and collection of the flowers of Mahula (*Madhuca longifolia*).



They also collect the fruits & seeds of Kusum (*Schleichera oleosa*), fruit of Rai (*Dillenia pentagyna*), some medicinal plants (*Cissampelos pareira*, *Centella asiatica*) and some edible mushrooms for personal use from nearby forest. As per their opinion on wildlife and forest, they have noticed a declination of forest cover, population of

Amla (*Phyllanthus emblica*), population of Jungle hen and population of Barking deer.



Awareness programme on forest fire & bio-wealth of Bonai Forest Division

In Kemsila village, it was noticed that the main occupation of the community is shifting cultivation and they have idea about the harmful impacts of it. Hence, they are looking an optional livelihood. They make the fire for

shifting cultivation. They collect the wild edible plants (leaves of *Shorea robusta*, fruits of *Schleichera oleosa*, flowers of *Madhuca longifolia*, fruits of *Buchanania lanzan*, shoots of Bamboo, fruits of *Diospyros melanoxylon*, leaves & flowers of kanchana (*Bauhinia vareigata*) for personal use. They also collect the medicinal plants (*Cissampelos pareira*) for therapeutic practices (Table 1). Sometimes they collect the resin (Jhuna) of *Shorea robusta* and sell in local markets.

KEMSILA



In Lassi village, it was noticed that they belongs to Dehuri and Bhuian community and do shifting cultivation, labour works in mines and poultry farming. However they fail in poultry farming may be due to lack of training and market facilities. It was observed that sometimes they make fire to collect the flowers of Mahula (*Madhuca longifolia*). As per their opinion, the population of Fanfana tree (*Oroxylum indicum*) is declined along with Sloth bear and Wild boar. They would like to do some

others work like mushroom cultivation and need trainings on poultry farming. They also collect the day-to-day needs from forest like Sal (*Shorea robusta*), Mahula (*Madhuca longifolia*), Kendu (*Diospyros melanoxylon*) and Siali (*Bauhinia vahlii*).

LASSI



SARKUNDA

It was observed that in Sarkunda village, there are numbers of community staying and engaged in mining works. They do not make fire but they collect the leaves of Sal (*Shorea robusta*), fruits of Kendu (*Diospyros melanoxylon*), some mushrooms, tuber of Pita alu (*Dioscorea bulbifera*), tuber of Kanta alu (*Dioscorea pentaphylla*), fruits of Amba (*Mangifera indica*), fruits of Chara (*Buchanania lanzan*), flowers of Mahula (*Madhuca longifolia*), tuber of Suta alu (*Dioscorea wallichii*) and flowers of Giliri (*Indigofera cassoides*) for personal use and also flowers of Mahula (*Madhuca longifolia*) for selling in local markets. They gave the information on declination of forest cover and wildlife. As per their opinion, the population of medicinal plants (Sarpagandha- *Rauwolfia serpentina*) is reduced and the population of peacock is declined in last 10 years. The old age people (40 - 65 years) were interested to participate in eco-tourism programme (Figure 3).



Sacred Sal tree

In Siliguda village, the community belongs to Munda tribe but they later converted to Christianity. They are mainly mines workers and do not make fire but do hunting of Barking deer and collect the fruits of Chara (*Buchanania lanzan*), fruits of Harida (*Terminalia chebula*), fruits of Bahada (*Terminalia bellirica*), fruits of Sal (*Shorea robusta*) and flowers of Mahula (*Madhuca longifolia*). They have observed a sharp declination in the population of barking deer and wild edible plants in

SILIGUDA



nearby forest areas. They have also observed that truck drivers are also responsible for forest fire. Details are listed in Table 1. There are lack of research activities on community

conservation for the management of forest fire and wildlife in Bonai Forest division, hence the present study is the first report on Barsuan range of Bonai Forest Division, Sundargarh, Odisha.



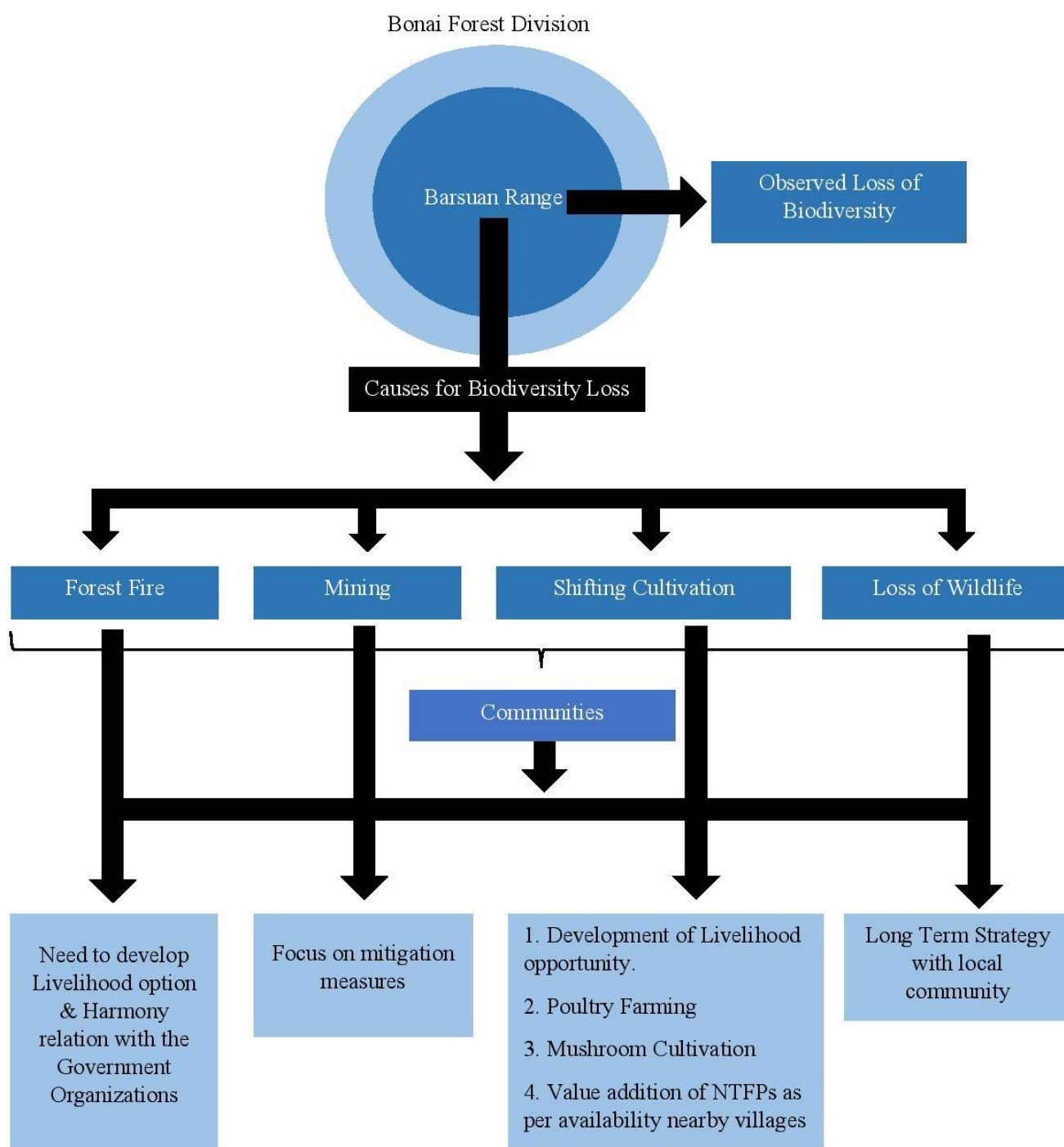


Figure 3: Causes of Biodiversity loss and recommendation for restoration

Forest fire

Forest fire is common in Bonai Forest Division during February to April. It has been a problem since centuries. The communities make fire for personal use(s) and knowingly or unknowingly they became the factors of biodiversity & wildlife loss. In the year 2021, it started in the month of February and became a serious hazardous problem to the division. During the survey and interaction with communities, authors observed many causes and explained in Table 1. As per the causes, the present study proposes a model for reducing the problems of forest fire in future. The model is illustrated as Figure 4. In model, the total budget on forest fire of any division or range could be distributed in five parts (20 % for early burning or other activities, 50 % for community, 20% for forest fire, 5 % for awareness, 5 % for documentation). The 50 % of total budget for community can be distributed in five parts (10 % in February, 20 % in March, 30 % in April, 20 % in May, 20 % in June). First 10 % of 50 % budget can be given to the community before or on February and inform the community that if there is no further forest fire, 20% to be given at the end of March and the process continues but if there is any remarkable forest fire happened, the rest amount will not be given to the community and will spent the rest amount of budget in the other activities to stop forest fire from the 50 % of total budget. Details are illustrated in Figure 4.



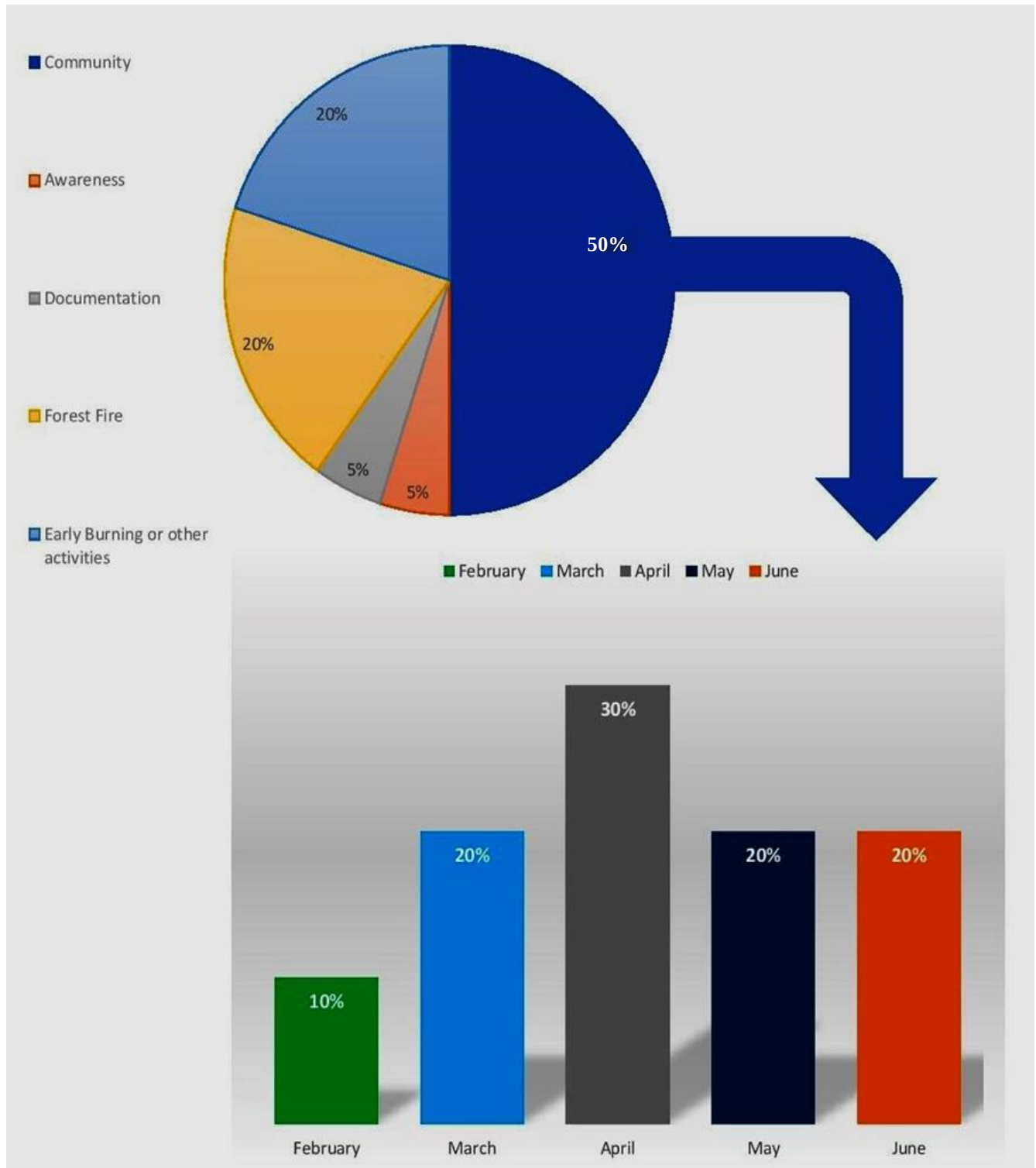


Figure 4: Proposed model on forest fire for study area

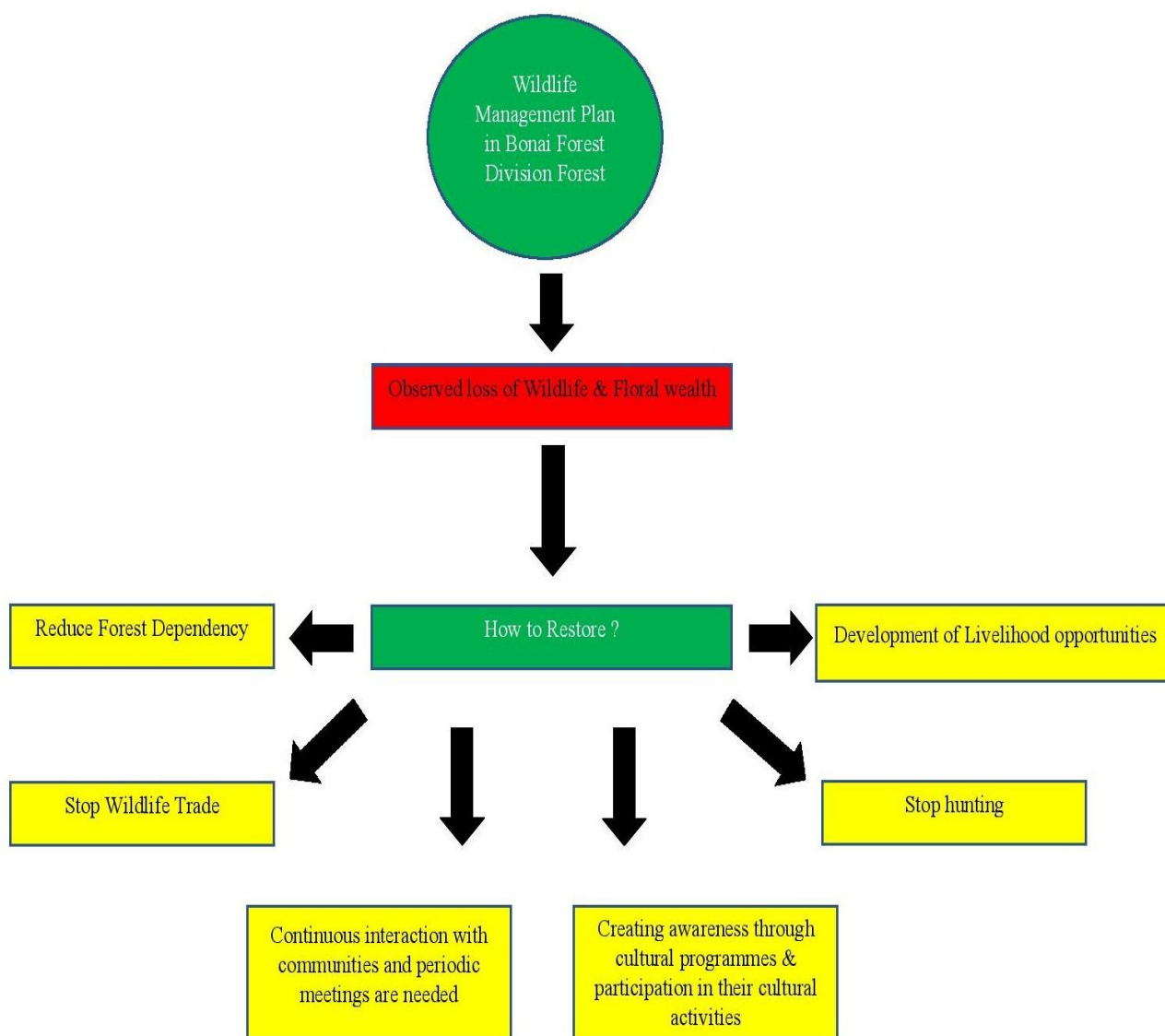


Figure 5: Long term strategy for wildlife management in Bonai Forest Division, Odisha

Shifting Cultivation

Shifting cultivation is defined as any agricultural system in which the fields are cleared by burning the area and cultivated for shorter periods than they are fallowed. Shifting cultivation has been the backbone of livelihoods for many hill tribes across the globe (Singh et al. 2016, Panda et al. 2017). This is one of the most ancient system of agriculture, also known as "Field Forest Rotation" or "Slash and Burn" agriculture. Shifting cultivation is practiced in some form or other in almost all the tribal areas of Odisha (Dash 2006).



Crops cultivated in Bonai Forest Division in shifting cultivation include Bajra (*Pennisetum glaucum*) Jowar (*Sorghum vulgare*), Maize (*Zea mays*), Green gram (*Phaseolus aureus*), Cow pea (*Vigna unguiculata*), Black gram (*Phaseolous mungo*) etc.

According to the tribes statement **“if we don’t start fire, how will we do cultivation?”** because this is the major source of their livelihood. They said that the burnt area takes minimum 10 years to be like before fire.



Shifting cultivation is cyclical, and its cycles encompass an array of land use activities. The specific stages and features of each cultivation cycle vary and are sometimes difficult to distinguish. The cycle of shifting cultivation comprised of six stages: site-selection and clearing, burning, planting, weeding and protecting, harvesting, and succession. Sometimes the stages do not follow such a clear pattern. In this process of shifting cultivation, the original fertility of land along with the burnt ashes makes it possible to raise a good yield of crops for a year or two. After that all the nutrients of the soil will become exhausted and thus yields falls drastically. This will force the farmers to shift into a new area leaving the previous land as fallow land for gaining fertility and follow the same process of slash and burn in a new area.

BAHAMDA



People of Bahamda village mainly depend upon forest products.

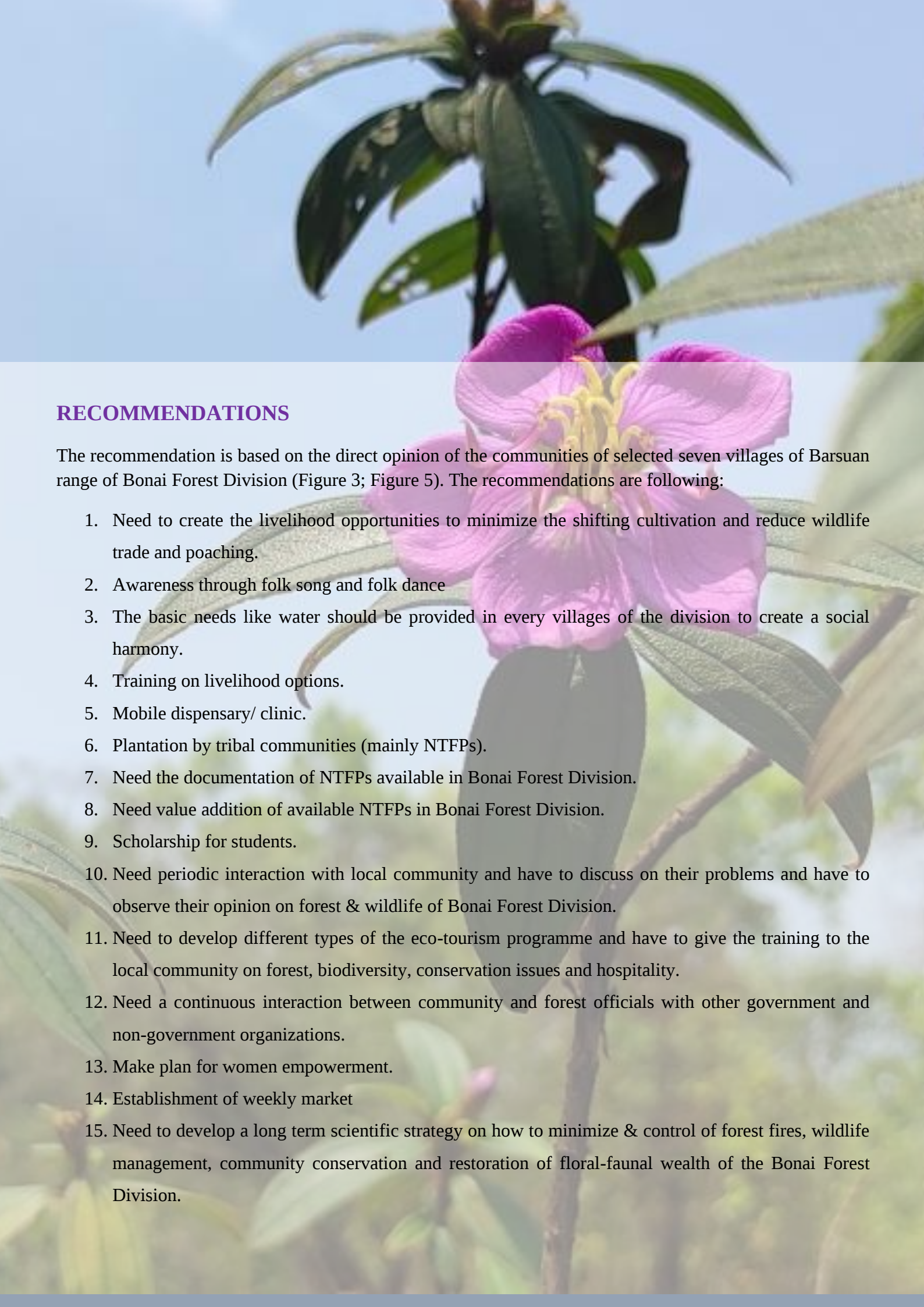


They sell woods (per bundle 50 rupees), fruits, seeds and other NTFPs. There is no streams and other water sources, only a tank is there and water is provided once per a day by SAIL. Due to scarcity of water villagers can't do any farming for their livelihood.



Children are not getting proper education due to lack of communication and awareness. They are not getting any medical facility in time if any emergency condition is there, they have to climb the mountain to reach the market, school and also for hospital. Their main problem is they don't have any source to earn money.





RECOMMENDATIONS

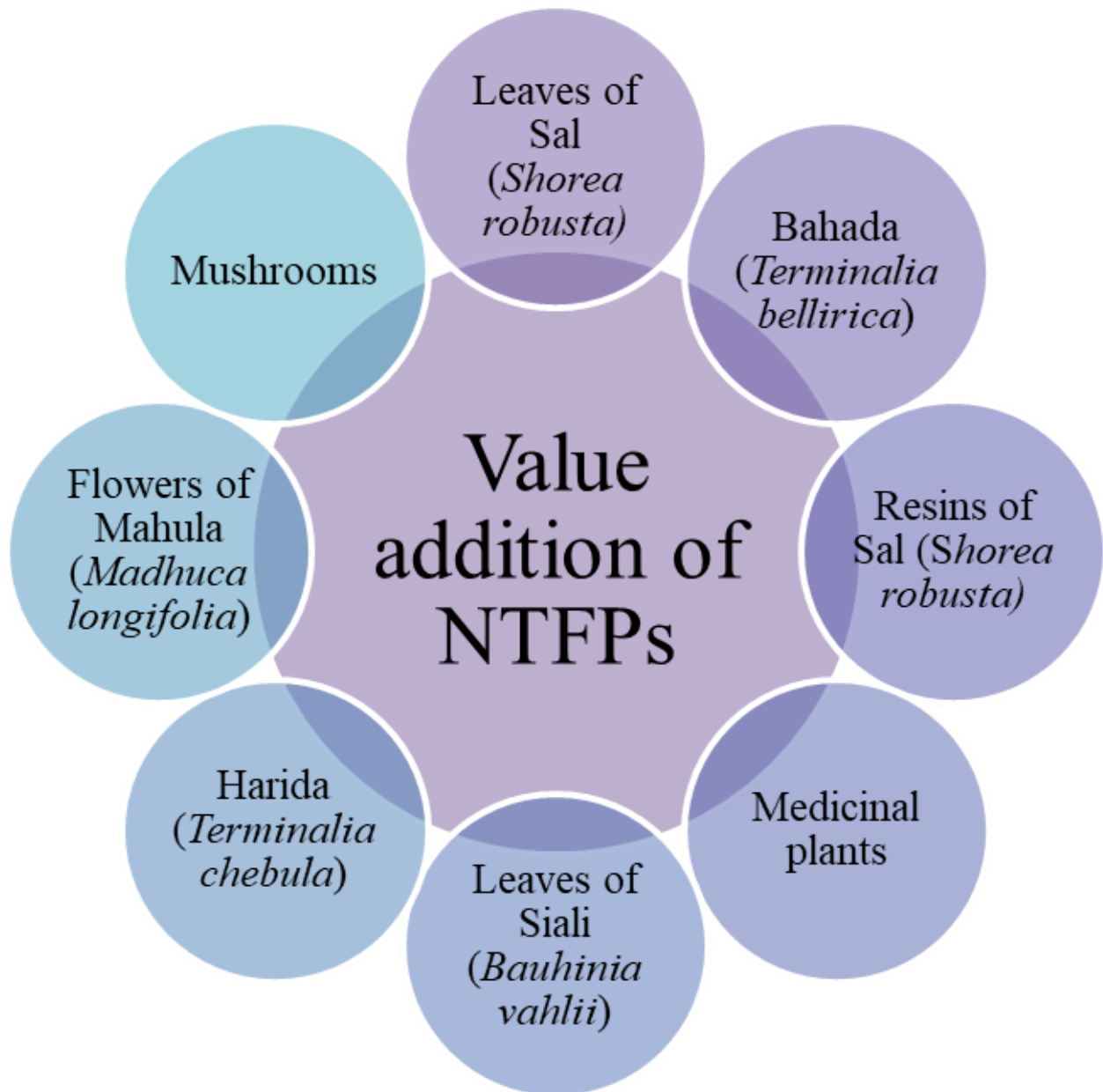
The recommendation is based on the direct opinion of the communities of selected seven villages of Barsuan range of Bonai Forest Division (Figure 3; Figure 5). The recommendations are following:

1. Need to create the livelihood opportunities to minimize the shifting cultivation and reduce wildlife trade and poaching.
2. Awareness through folk song and folk dance
3. The basic needs like water should be provided in every villages of the division to create a social harmony.
4. Training on livelihood options.
5. Mobile dispensary/ clinic.
6. Plantation by tribal communities (mainly NTFPs).
7. Need the documentation of NTFPs available in Bonai Forest Division.
8. Need value addition of available NTFPs in Bonai Forest Division.
9. Scholarship for students.
10. Need periodic interaction with local community and have to discuss on their problems and have to observe their opinion on forest & wildlife of Bonai Forest Division.
11. Need to develop different types of the eco-tourism programme and have to give the training to the local community on forest, biodiversity, conservation issues and hospitality.
12. Need a continuous interaction between community and forest officials with other government and non-government organizations.
13. Make plan for women empowerment.
14. Establishment of weekly market
15. Need to develop a long term scientific strategy on how to minimize & control of forest fires, wildlife management, community conservation and restoration of floral-faunal wealth of the Bonai Forest Division.

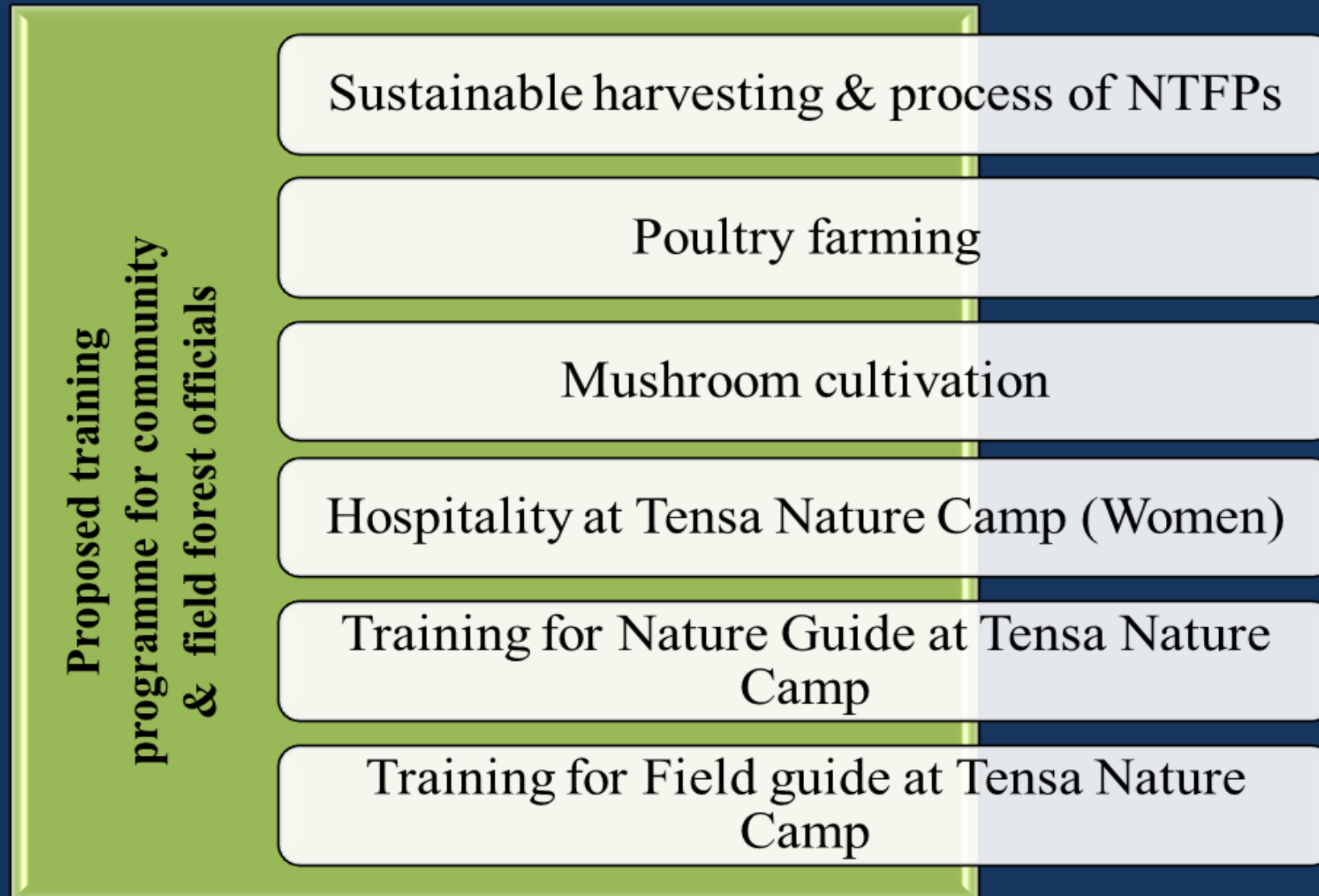
General Recommendations



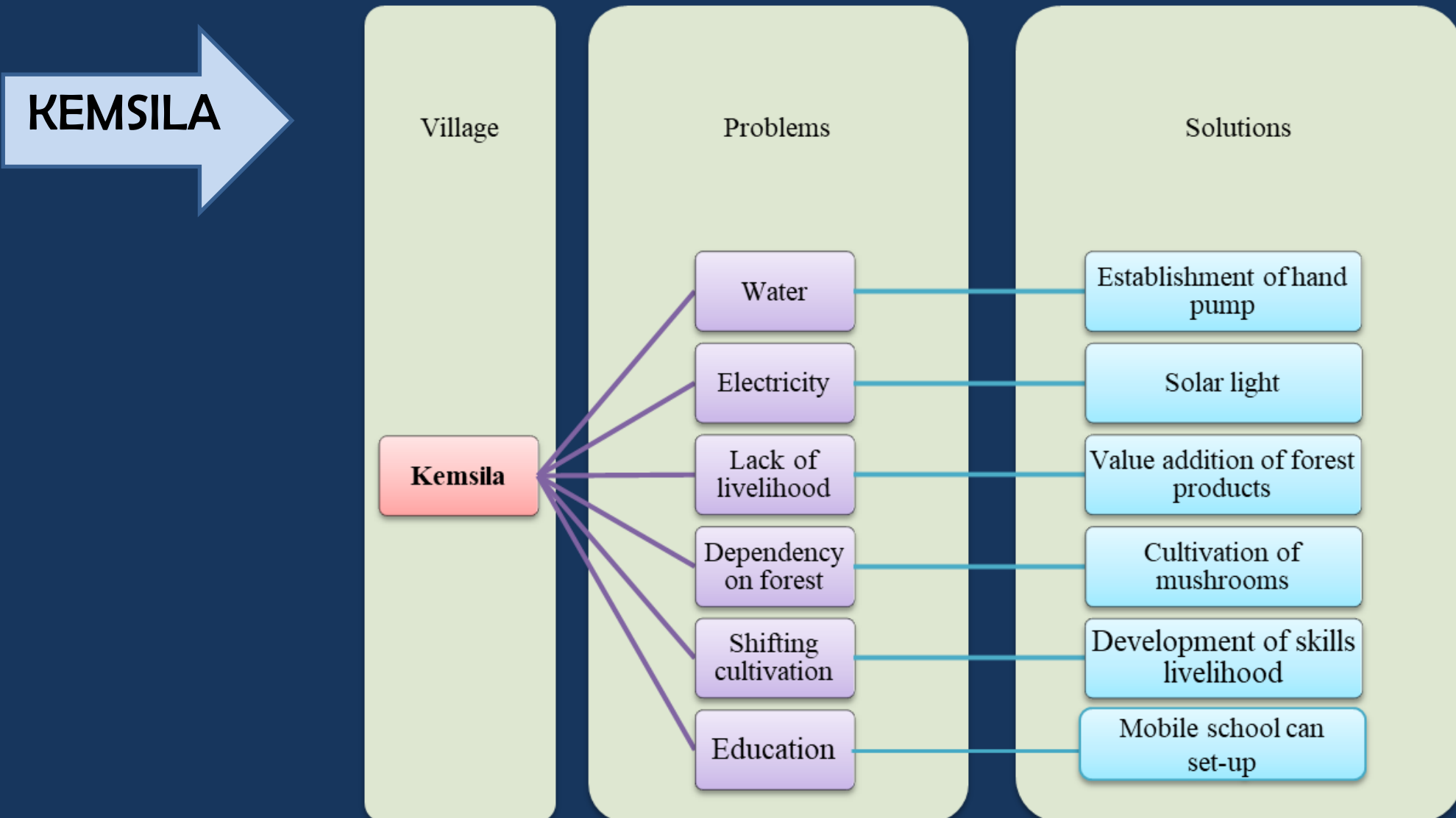
Proposed for value addition of available NTFPs



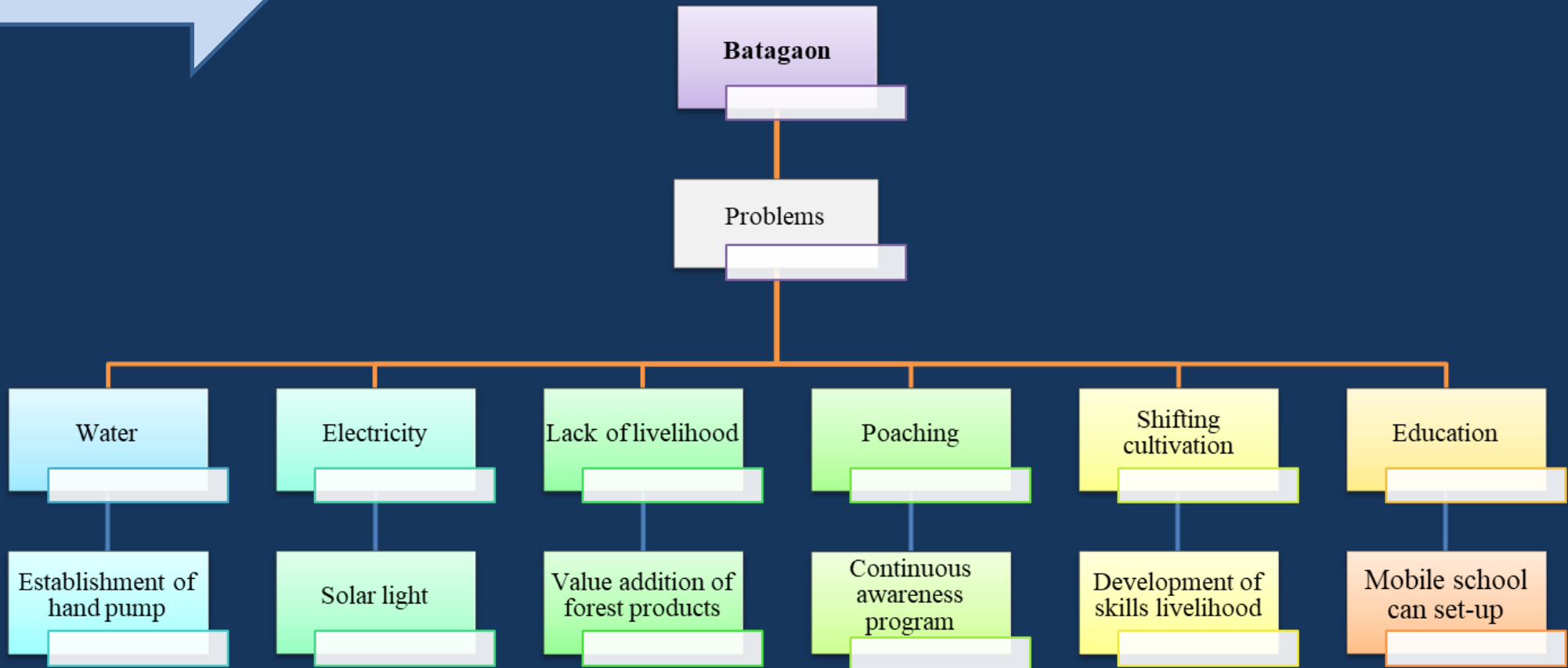
Proposed training programme for community & field forest officials



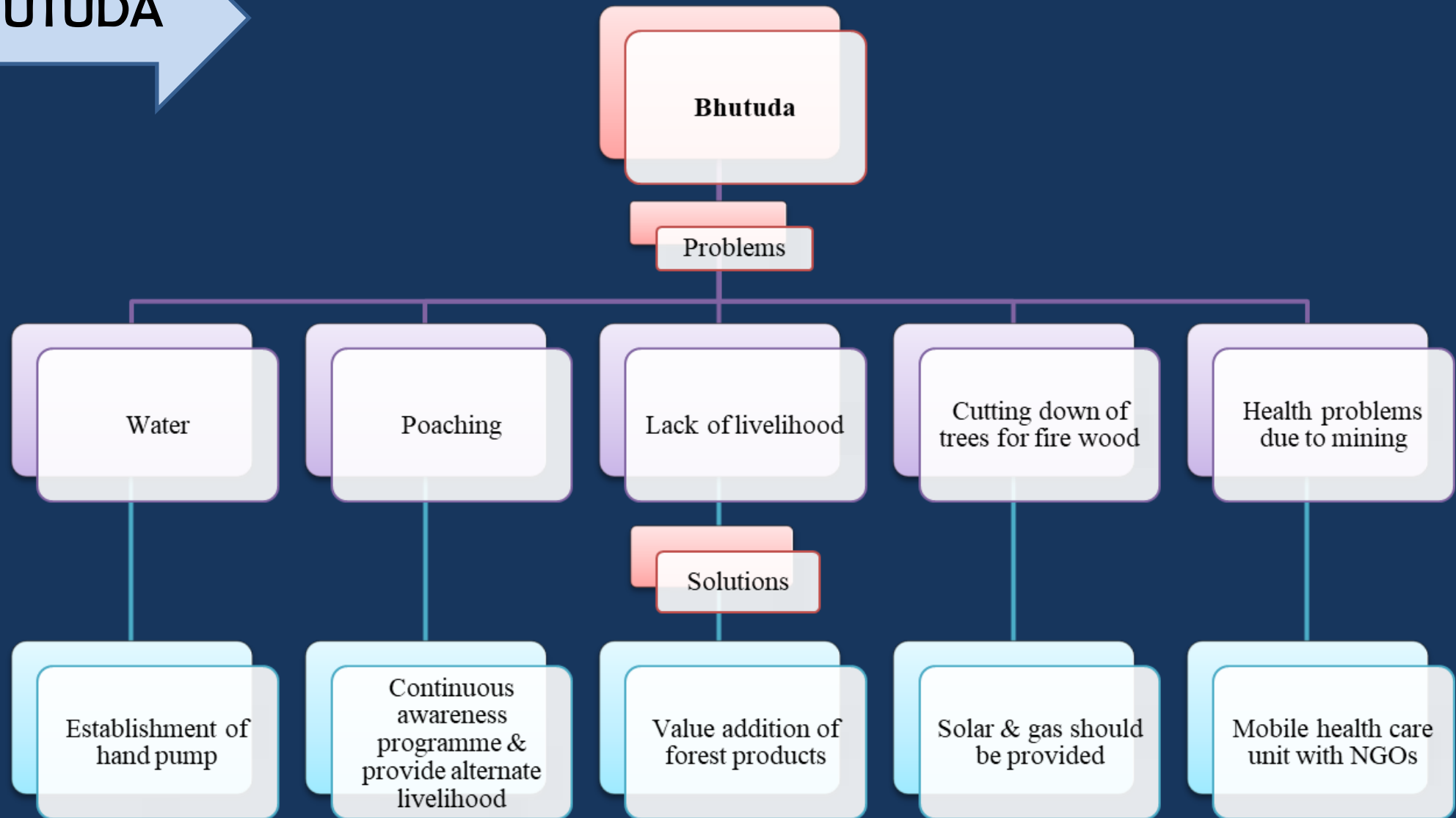
Recommendations for villages



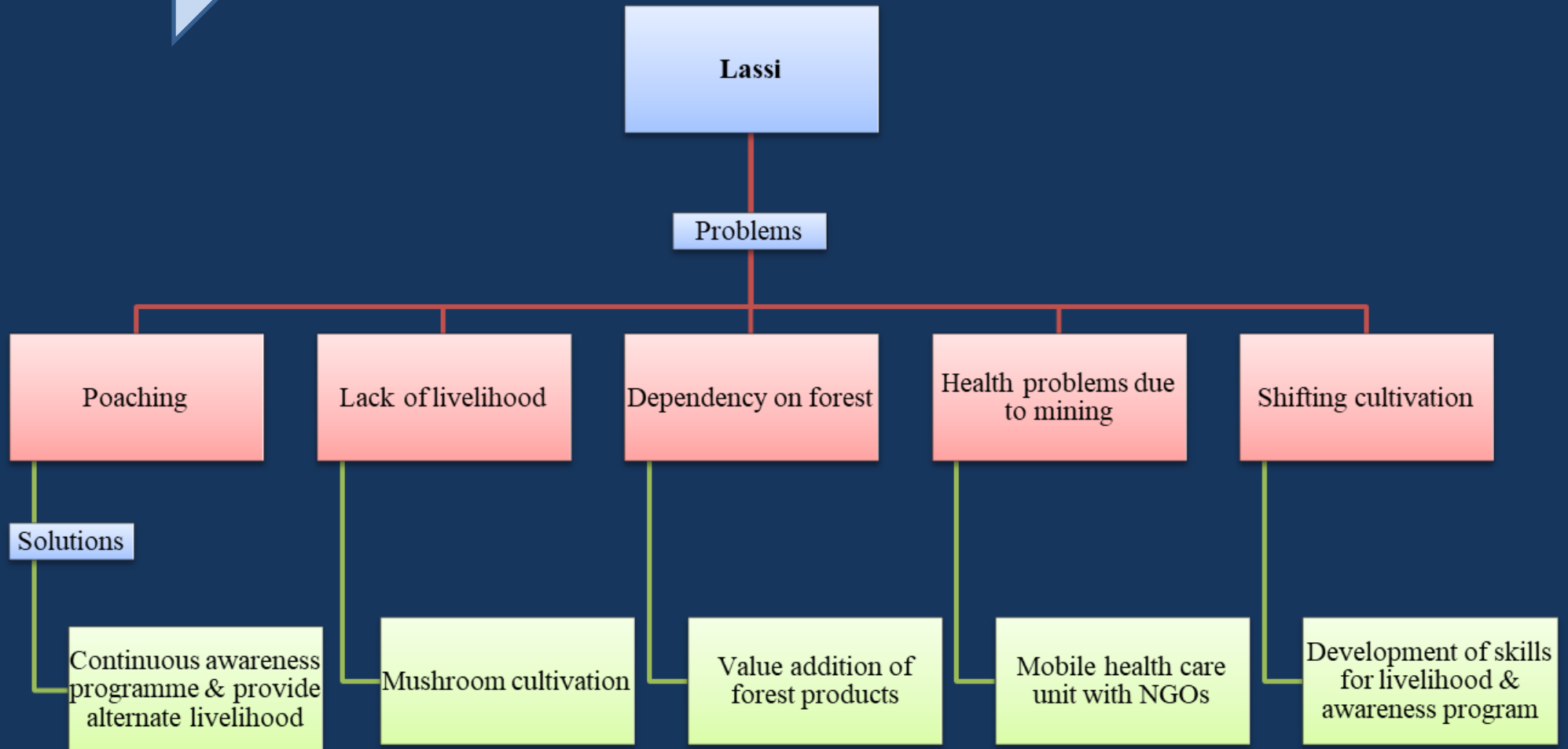
BATAGAON

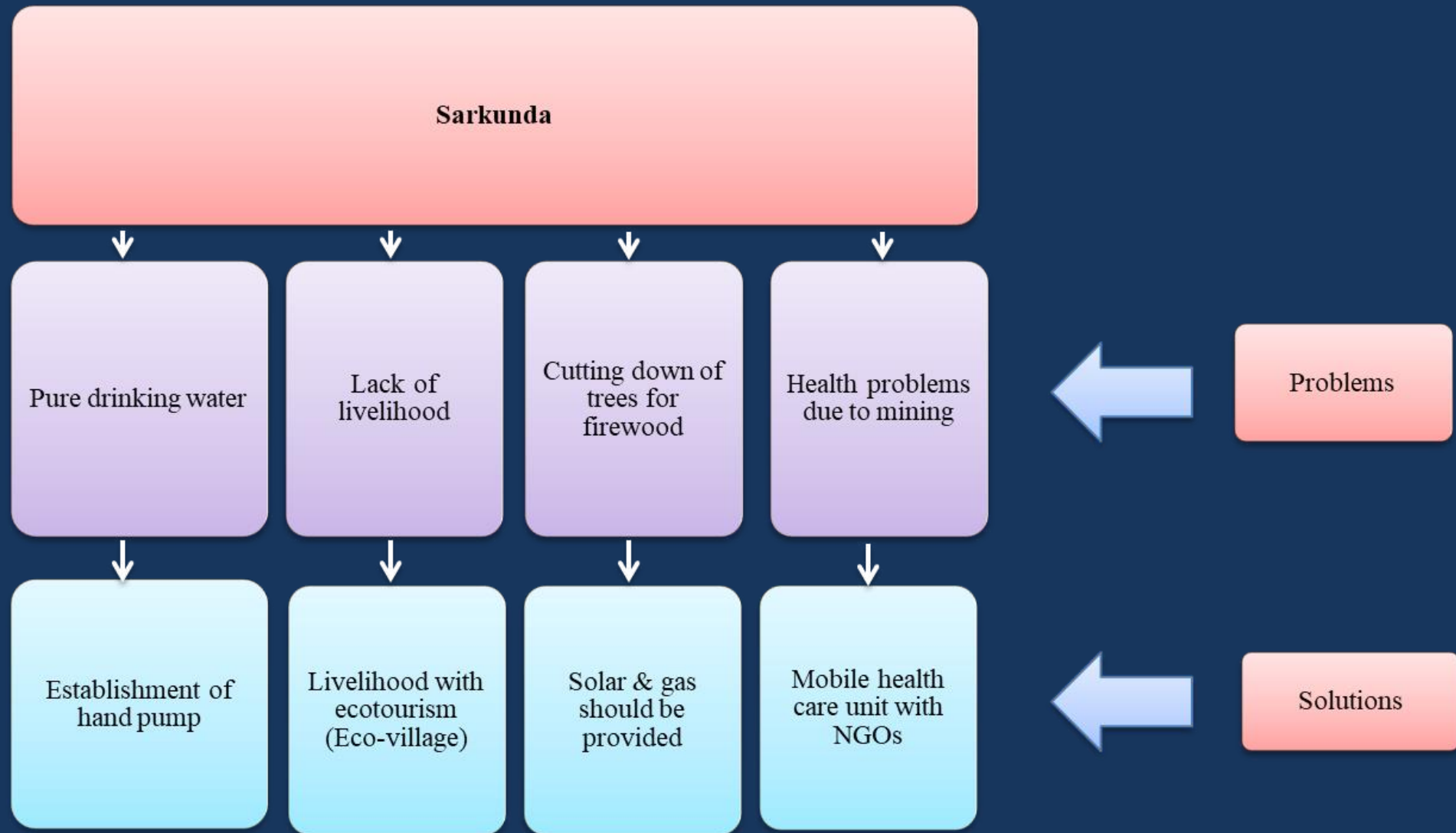


BHUTUDA

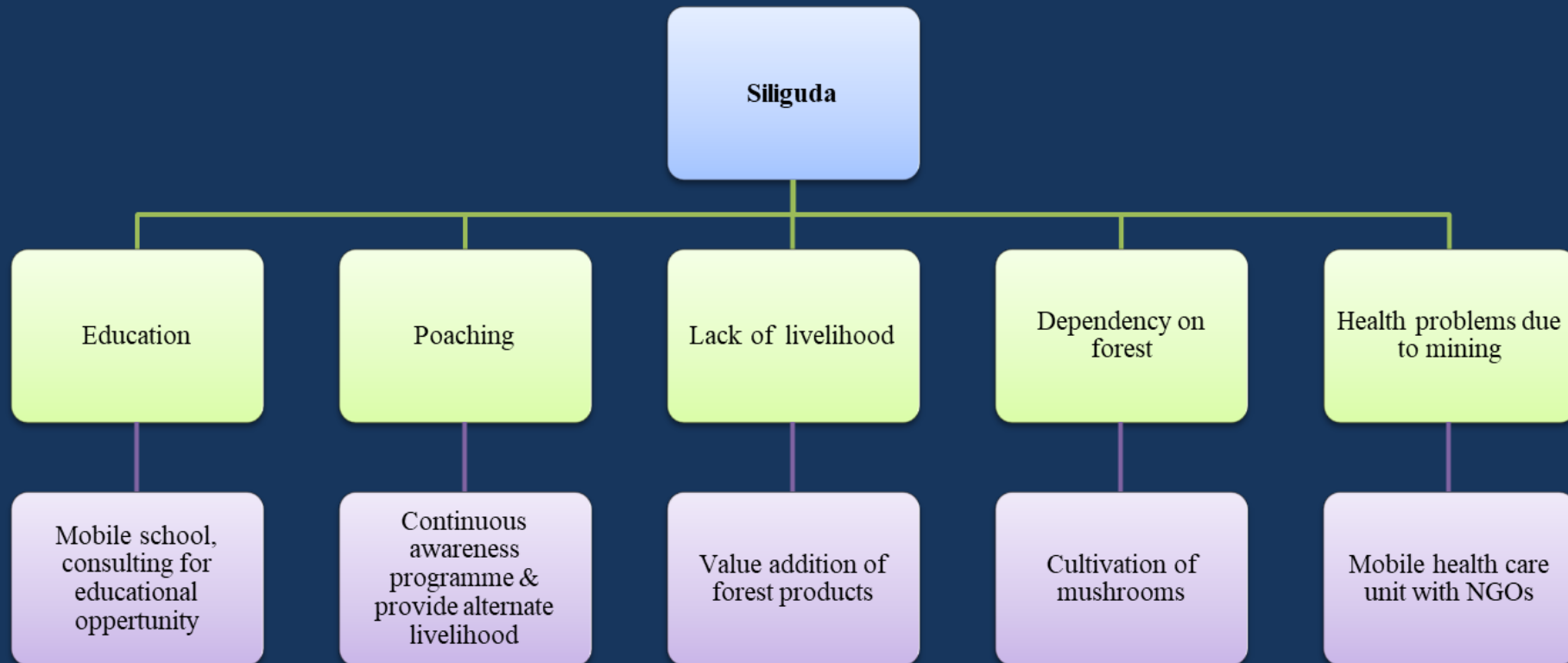


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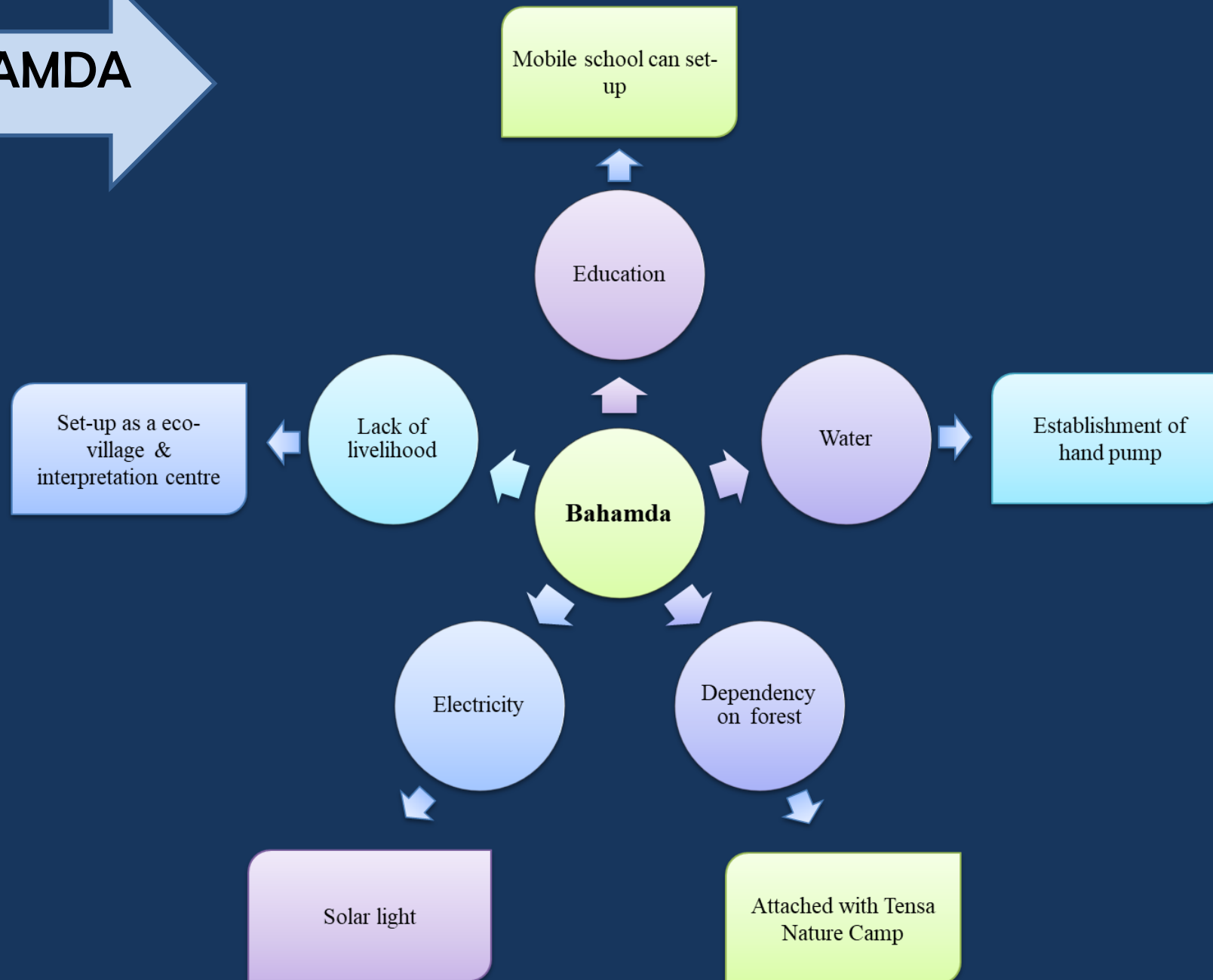




SILIGUDA



BAHAMDA



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WORK ACTIVITIES









PASSPORT DATA FORM



Bonai Forest Division, Odisha

PASSPORT DATA FORM Community Level Discussion For Biodiversity Management

Name: Andhar Dehuri

Age: 35

Village: Batagaon

GPS: 21°78' 80.88" N; 85°20' 48.42" E

Occupation: Agriculture (Shifting)

1. Do you visit forest? If yes why?

Yes, for firewood

2. Do you collect firewood?

Yes

3. How many days per week go to collect firewood?

2-3 times per week

4. Do you collect Mahula? If yes in what amount you sell?

No

5. Do you make fire to collect Mahula?

No

6. Do you make fire to make forest easy way?

No

7. Do you collect other products from forest? Fruits, flowers, bark, resin? If yes, why? If sell how much cost?Yes, Chara (*Buchanania lanzan*), not for sell**8. Do you make fire for hunting?**

No but for shifting cultivation

9. Have you seen the animals in forest? If yes which animals?



Bonai Forest Division, Odisha

Yes, Bear, Monkey

10. Do animals harm or you kill the animals for meat? If yes which animals?

No

11. Do you collect plants for medicinal purpose?

Yes,

- a. Musakani
- b. Patala garuda

12. Which plant is used for?

- a) **Skin infections:** The root of Musakani (*Cissampelos pareira*) is collected from the near forest and washed. The root part is macerated and applied externally till cure.
- b) **Diarrhoea:** Pasaruni leaves are collected and make juice. The juice is taken 3 times per day till cure.
- c) **Stomach pain:** Small pieces of root of Patala garuda is macerated and a small amount is diluted in about 500 ml water and consumed one cup in empty stomach.
- d) **Fever:** Musakani leaves are consumed against fever.



Table 1: Information on Informants & their opinion on Forest fire, wildlife and livelihood of Barsuan Range, Bonai Forest Division, Odisha

Name	Race	Occupation	Opinion on Forest Fire	NTFPs	Opinion on Wildlife	Opinion on Forest	Desire	Village
Andhar Dehuri	Dehuri	Shifting cultivation	Make forest fire to do shifting cultivation	Fruits of Chara (<i>Buchanania lanzan</i>)	Wildlife has reduced in last 10 years	Forest has reduced in last 10 years	Would like to do Mushroom cultivation to minimize shifting cultivation	Batagaon
Benu Dehuri	Dehuri	Mines worker	Do not make fire	Sal (<i>Shorea robusta</i>), Kendu (<i>Diospyros melanoxylon</i>), Mushrooms, Pita alu (<i>Dioscorea bulbifera</i>) and Kantaalu (<i>Dioscorea pentaphylla</i>)	The population of wildlife is reduced	The Forest Cover is reduced	Would like to participate in Eco-tourism programme	Sarkunda
Buduhu Dehuri	Dehuri	Shifting cultivation	Make fire for shifting cultivation	Kai (Red ant), Sal leaves (<i>Shorea robusta</i>), Kusum seed (<i>Schleichera oleosa</i>) and Mahula (<i>Madhuca longifolia</i>)	Elephant destroy the houses and consumed the fruits of <i>Artocarpus heterophyllus</i> (Pansa)	Forest Cover has reduced	Would like to get drinking water and mushroom cultivation	Kemsila
Desha Dehuri	Dehuri	Shifting cultivation	Make fire for shifting cultivation	Chara (<i>Buchanania lanzan</i>), Kendu	Elephant destroy the houses and consumed	The population of Kusuma	Would like to do some work	Kemsila

				(<i>Diospyros melanoxylon</i>) and Jhuna (Gum of <i>Shorea robusta</i>)	the fruits of <i>Artocarpus heterophyllus</i> (Pansa)	(<i>Schleichera oleosa</i>) is reduced	under village based small scale industry	
Firinga Munda	Munda	Mines workers	Make fire for hunting (3 days per year) and collection of Mahula flowers (<i>Madhuca longifolia</i>)	Mahula (<i>Madhuca longifolia</i>) and Kusum (<i>Schleichera oleosa</i>)	The population of Jungle hen is reduced	The population of Amla (<i>Phyllanthus emblica</i>) is reduced	No Comments	Bhutuda
Gadei Dehuri	Dehuri	Shifting cultivation	Make fire for shifting cultivation	Sal leaves (<i>Shorea robusta</i>) and Kusum (<i>Schleichera oleosa</i>)	The population of Barking deer and Wild boar is reduced	Forest cover has reduced in last 10 years	Need old age pension only	Batagaon
Guru Nayak	Bhian	Shifting cultivation	Do not make fire	Sal (<i>Shorea robusta</i>), Kendu (<i>Diospyros melanoxylon</i>) and Mahula (<i>Madhuca longifolia</i>)	Population of wild boar is declined	The population of Fanfana (<i>Oroxylum indicum</i>) is declined	Need livelihood option	Lassi
Hadu Dehuri	Dehuri	Shifting cultivation	Make forest fire to do shifting cultivation	Fruits of Chara (<i>Buchanania lanzan</i>) & Kusum (<i>Schleichera oleosa</i>)	No idea	Big trees has cut from forest areas	Would like to do some work based on small scale industry	Batagaon
Jagannath Dehuri	Dehuri	Shifting cultivation	Make forest fire to do shifting	Sal leaves (<i>Shorea robusta</i>), Kusum	Population of Monkey is reduced	Forest is reducing	Some works on Mushroom	Batagaon

			cultivation	(<i>Schleichera oleosa</i>) and Chara (<i>Buchanania lanzan</i>)				
Juel Kerketa	Munda	Labour	Do not make fire	Collect Mahula (<i>Madhuca longifolia</i>) and Fruit of Sal (<i>Shorea robusta</i>).	The population of wildlife is reduced	The population of wild edible plants is reduced	No Comments	Siliguda
Kadu Nayak	Bhuiyan	Shifting cultivation	Make fire for collection of NTFPs and Shifting cultivation	Sal (<i>Shorea robusta</i>), Siali (<i>Bauhinia vahlii</i>), Mahula (<i>Madhuca longifolia</i>), Kusum (<i>Schleichera oleosa</i>)	The population of Beer is declined	The population of Fanfana (<i>Oroxylum indicum</i>) is declined	Need training on Poultry farming	Lassi
Kala Dehuri	Dehuri	Shifting cultivation	Make forest fire to do shifting cultivation	Kusum (<i>Schleichera oleosa</i>)	Population of Beer is reduced	Medicinal plants has reduced (Sarpagandha- <i>Rauwolfia serpentina</i>)	Would like to do work on Saal (<i>Shorea robusta</i>) leaf	Batagaon
Kastu Dehuri	Dehuri	Shifting cultivation	Make fire for shifting cultivation	Chara (<i>Buchanania lanzan</i>), Baunsa (<i>Bamboo</i> Sp.), Mahula (<i>Madhuca longifolia</i>) and Kanchana (<i>Bauhinia vareigata</i>)	The population of Barking deer is reduced	Forest Cover has reduced	Would like to do Mushroom cultivation	Kemsila

Krishna Patra	Patra (Schedule Caste)	Mines worker	Do not make fire	Sal (<i>Shorea robusta</i>), Kendu (<i>Diospyros melanoxylon</i>), Amba (<i>Mangifera indica</i>), Chara (<i>Buchanania lanzan</i>) and Collect flowers of Mahula (<i>Madhuca longifolia</i>) for sell.	The population of wildlife is reduced	The Forest Cover is reduced	Want to participate in Eco-tourism programme	Sarkunda
Mansid Barjo	Munda	Labour	Do not make fire but do hunting of Barking deer	Collect Mahula flowers (<i>Madhuca longifolia</i>)	Do hunting of Barking deer for meat	The population of wild edible plants is reduced	No Comments	Siliguda
Mohan Nayak	Bhuiyan	Mines worker	Do not make fire	Sal (<i>Shorea robusta</i>), Kendu (<i>Diospyros melanoxylon</i>), Chara (<i>Buchanania lanzan</i>), Giliri (<i>Indigofera cassoides</i>), Mushrooms, Pita alu (<i>Dioscorea bulbifera</i>), Kantaalu (<i>Dioscorea pentaphylla</i>) and Sutaalu (<i>Dioscorea wallichii</i>)	The population of wildlife is reduced	The Forest Cover is reduced	Want to participate in Eco-tourism programme	Sarkunda
Netra Barik	Gauda	Shifting cultivation	Do not make fire	Collect the flowers of	The population of	The population of	No Comments	Sarkunda

				Mahula	peacock is declined	medicinal plants (Sarpagandha) is reduced		
Palana Dehuri	Dehuri	Shifting cultivation	Make fire for shifting cultivation	Collect Sal leaves (<i>Shorea robusta</i>), Kusum (<i>Schleichera oleosa</i>) for personal use	Collect the eggs of Peacock and after hatching used to sell the chick. The population of monkey is reduced	Population of Sarpagandha (<i>Rauwolfia serpentina</i>) & other medicinal plants is reduced	Would like to do work on Saal leaf	Batagaon
Phulmani Munda	Munda	Mines workers	Do not make any fire	Rai (<i>Dillenia pentagyna</i>) and Kusum (<i>Schleichera oleosa</i>)	Barking Deer population is reduced	The population of Amla (<i>Phyllanthus emblica</i>) is reduced	No Comments	Bhutuda
Rahul Munda	Munda	Mines workers	Make fire for hunting of Barking deer	Kusum (<i>Schleichera oleosa</i>) & some medicinal plants (<i>Cissampelos pareira</i> , <i>Centella asiatica</i>) for personal use	The population of wild animals are reduced	Forest Cover has reduced	No comments	Bhutuda
Ranjit Dehuri	Dehuri	Shifting cultivation	Make fire to collect flowers of Mahula (<i>Madhuca longifolia</i>)	Sal (<i>Shorea robusta</i>), Mahula (<i>Madhuca longifolia</i>), Kendu (<i>Diospyros melanoxylon</i>) and Siali	No Comments	Forest Cover is declined	Interested in Mushroom cultivation	Lassi

				(<i>Bauhinia vahlii</i>)				
Saba Munda	Munda	Mines workers	Make fire for hunting and collection of Mahula flowers (<i>Madhuca longifolia</i>)	Yes, Rai (<i>Dillenia pentagyna</i>), Kusum (<i>Schleichera oleosa</i>) and Mahula (<i>Madhuca longifolia</i>)	The population of peacock is reduced	Forest Cover has reduced	No comments	Bhutuda
Samara Nayak	Bhuian	Shifting cultivation	Do not make fire	Sal (<i>Shorea robusta</i>), Mahula (<i>Madhuca longifolia</i>) and Kendu (<i>Diospyros melanoxylon</i>)	No Comments	Forest Cover is declined	Interested in Mushroom cultivation	Lassi
Sambada Dehuri	Dehuri	Shifting cultivation	Do not make fire	Sal (<i>Shorea robusta</i>), Siali (<i>Bauhinia vahlii</i>) and Kusum (<i>Schleichera oleosa</i>)	No Comments	Forest Cover is declined	Interested in Mushroom cultivation	Lassi
Sukru Dehuri	Dehuri	Shifting cultivation	Make fire for shifting cultivation	Sal leaves (<i>Shorea robusta</i>) and Kusum (<i>Schleichera oleosa</i>)	The population of Jungle hen is reduced	No comments	Need old age pension only	Batagaon
Sumitra Dehuri	Dehuri	Shifting cultivation	Make fire for shifting cultivation	Kendu (<i>Diospyros melanoxylon</i>), Kusum (<i>Schleichera oleosa</i>), Leafy vegetables, Mushrooms and Girli flowers (<i>Indigofera</i>)	The population of wildlife is reduced	The population of Bamboo species is reduced	Would like to do Mushroom cultivation	Kemsila

				<i>cassioides</i>)				
Thomas Kerketa	Munda	Mines workers	Do not make fire	Harida (<i>Terminalia chebula</i>) and Bahada (<i>Terminalia bellirica</i>)	The Population of Barking deer is reduced	The population of medicinal plants is reduced	Would like to do some work under small scale	Siliguda
Tora Nayak	Bhuiyan	Labour	Make fire to collect NTFPs	(<i>Shorea robusta</i>), Siali (<i>Bauhinia vahlii</i>) and Mahula (<i>Madhuca longifolia</i>)	Population of Elephant is declined	Forest Cover is declined	Interested in Mushroom cultivation	Lassi
Yakub Topro	Munda	Labour	Do not make fire	Collect the fruits of Chara (<i>Buchanania lanzan</i>)	The population of wildlife is reduced	The population of wild edible plants is reduced	No Comments	Siliguda



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