CHAPTER V

TRADITIONAL KNOWLEDGE SYSTEM AND RESOURCES MANAGEMENT

The traditional communities played an important role in generating knowledge based on understanding of their environment, devising mechanisms to conserve and sustain their natural resources and establishing community-based organisation that serve as forum for identifying problem and dealing with them through local-level experimentation, innovation and exchange of information with other societies (Warren, 1992:1). Observation of nature and through elementary reasoning based on such observation, the communities have accumulated a store of working knowledge concerning the effects of certain elementary mechanical processes, the apparent movements and functions of some of the heavenly bodies, the habits and haunts of animals and birds, the properties of plants, fruits and flowers, barn and roots, the nature and qualities of different kinds of soil and the variations of weather (Roy 1928:4). The communities living in the study villages posses highly detailed and richly complex information about agriculture, agro-forestry, pest management, soil fertilisation, multiple cropping pattern, health care, food preparation and so forth. They recognise both natural and super natural forces and agencies shaping human destiny and seeks to utilize them for their benefits according to their needs.

The traditional knowledge is historically constituted (emic) knowledge instrumental in the long-term adaptation of human groups to the biophysical environment (Purecell, 1998). The traditional knowledge of the village communities can be divided into two different domain, one that of cognitive and other that technical relating to livelihood issues. The cognitive knowledge is understood by the worldview of the communities about the society and its relationship with its outside world. The technical knowledge is information relating to understanding generated in past about nature, environment, and soil and exhibited through the practical application of it in fulfilling their livelihood activities.

In this chapter, the knowledge of the village communities on land management, agriculture, forest, livestock and health is discussed. These are generated in the immediate context of the livelihood of people; it is dynamic entity that undergoes constant modification as the needs of the communities change (Agarwal 1995:429).
5.1 Traditional land and Agriculture management Practices

Land is the basis for agriculture, the main economic activity of the communities in the studied villages. They possess elaborate knowledge on the nature of soil and quality of land needed for different types of crops to be grown. The farmers of these villages classify agriculture lands into two types, one is called Doan or low land, and other is called Tarn land, up land areas or dry land. The Doan land is mostly used for rice cultivation. It is low land; the rainwater from adjoining forest during rainy season flows into these lands providing it with lots of nutrients and increases the fertility of the soil. These lands are suitable for rice cultivation, as it needs large quantity of water. The soil type of Doan land is mainly Kariharmat, Bahal, or Bahara and most suitable for rice cultivation. The varieties of rice grown by the villagers are Lakshmbhog, Raghubar Makarkam doobrai, Jhipargi, Ramkojar, Kanakejar maghai, Jhili, Parewa, Kantha, Sela, Hasle, Buikoni and Bhurkud.

The Tarn is the upland and dry land area. The soil of these areas is of red laterite and requires long fallow period. This land is used for cultivation of crops of maize, gondli, marua, and kapas. They grow pulses like Bodi, Rahar, Barai, and Urid in this land in the season of Kharif. They grow crops of leguminous varieties important in the agriculture field on rotation basis to improve the fertility of the soil. In Echkela village on the Doan land paddy cultivation is carried out, while the Tarn land is used for growing Til or Ramtil crop. The Til grows in short time and is harvested before the harvest of paddy crop that is in the month of September. From Til, they extract oil used for cooking purposes by the farmers and also sold in the market. The farmers of the villages only take single crop i.e. in Kharif season and after that fields are left fallow and it becomes a common grazing land for the cattle of the area. The villagers apart from agriculture have no other employment activities.

Generally, farmers plan for the agriculture activities, with the help of knowledge, generated through decades of experiences, like quality of land, soil, rain and pest etc. But some of them fall in the domain of uncertainty like nature of forthcoming rain and pest attack, because of which they plan for plan for future ventures with a caution. In order to psychologically overcome the element of uncertainty and unexplainable domain, they seek the help of village deities and rituals. The agriculture in the region is totally rain fed, and it is difficult to predict the nature of rain. In order to make a prediction of forthcoming rainfall, the community has devised a ritual of
predicting nature of future rain. For the protection of crops, the village deities are propitiated to gain psychological confidence and satisfactions for the communities to cope up with the uncertainty of nature. For this, they have designed rituals and ceremonies for various activities of agriculture management linked with different occasion of the agriculture activities. In course of these ceremonies, the villagers conduct some exercises to make metrological predication like rain and future yield.

5.1.2 Rituals associated with Agriculture activities among village community

The village community by the way of precaution employs religious rites in conjunction with the normal activities of agriculture, fishing, collection of NTFP etc in order that the course of such activities may go smoothly. The agriculture season begins immediately after the celebration of Sarhul festivals. At the time of Sarhul festival, they carry out a rain prediction exercise, in the grove to assess the nature of the rainfall for the coming season. A day before the celebration of Sarhul festival, Baiga of the village along with the other elders of the village goes to the nearby stream with four new pots provided by the Kumhar of the village. On reaching the stream, Baiga cleans the pots and fills all of them, by putting them perpendicularly into water without tilting on any side. When all the four pots are filled, they carry them to the Sarhul Sarna quietly. No one speaks to any one or any person whom they meet on the way to the grove. On reaching the grove, the pots are placed on the ground. Baiga cleans a space near the main tree, in the grove. After cleaning he draws line in a shape of a square by a stick, on each corner of the square one pot is kept and it is covered with a lid. Each corner of the square represents a direction i.e. north, or south or east or west. Then all leave for village. Next day in the morning the Baiga along the some members of the village come to the grove and checks the level of water in the pots. If there is no change in the water level then it is predicted that there will be excess rain in that particular direction. If the level of water is decreased there will be less rainfall in that particular direction. Based on this prediction the villagers plan their future agriculture activities.

The celebration of Sarhul festival is basically marriage of Sun and Earth and Sarhul is considered to be the son of both. This festival symbolises that the union two will lead better productivity of agriculture. The villagers stated that after this ceremony, the mother earth is ready for production and then only agriculture work should be initiated.
The agriculture preparation for the coming seasons begins; one month after harvesting of crops is done of the previous season i.e. after Sarhul festival. The farmers plough their agriculture fields and leave it to dry off. After one and half month period the fields are again ploughed. This is termed as Dubrani in the local language, which means second or repeat of ploughing. On this occasion straws and other left over twigs and weeds are removed from the fields. The fields are again ploughed third time and it is called Tibrani and then it is left over for some times. The explanation given by the farmers for this is that the deeper rays of sun reach in the soil; the better will be the yield in future.

For the well being of the crops the villagers, perform rituals at the field. This depends and varies from family to family and it is exclusively a family affair. The agriculture rituals begin with the performance of Muthi Chodana worship, prior to planting of new crop of paddy. For this ritual, the farmer takes a hand full of seed of paddy and Agarbathi (essence smoke sticks), coconut, and flowers and goes to the field along with the plough and the bullocks. They recite the name of Mahadev and Paravati and leave a hand full of paddy seeds in the field and requests the deities that "today I am beginning my agricultural season by preparing agriculture fields, whose protection is in your hands for which you will be propitiated at the time Nawakhani (offering of new grains) festival, therefore it is your total responsibility for the safety and security of the field and its crops". After saying this he releases the seeds in the field and again says to the mother earth "I am putting seeds of paddy in your womb, whose protection and projection or growth is in your hands. Hence, please allow me to split your womb to put these seeds into it". After this ritual, farmers start their agriculture works by ploughing the field and breaking the loams into fine soil and levelled by a leveller (Patta). The field preparation work is completed by the month of May and June; this is generally done prior to coming of rain. Next, Meand Devta i.e. the deity of boundary of the field is worshipped to protect the crops. It is believed that this deity protects the crops and makes arrangement that no one causes harm to the growing crops. Generally, villagers consider that if the deity of Meand is happy, the yield would be good.

Once the rains arrive, the prepared fields are ready for paddy plantation. At first a small patch of field, is prepared and paddy is sowed in it to germinate. Fifteen days after this when the saplings are ready for transplantation, they are transplanted in the entire area. For the transplantation the family members and close relatives provide labour on the basis of reciprocity. Once the
transplants are fifteen days old, the entire region becomes green, since the transplanted paddy has attained 20-25 cm of height. Hariyali festival is celebrated at this time, which means that earth has become green. After this the weeding work is carried out. In this family collectively works and removes the weeds. Women do the weeding. The women of family and linage join in the process and complete it. The weeds are used as fodder for the cattle. The season ends with harvesting and thrashing of the paddy. The produce is collected in the storehouses and after offering the new grains to the village deity at Nawakhani festival, is brought into households use for eating.

Most of the rituals conducted by the villagers reflect their concern about the production aspect of their crops and have designed different speculative mechanisms to foretell the production in future. For this they conduct a ritual called Danda Regnala. After the crop has ripened, it is cut and brought to the Khalihan (thrashing ground). The village farmers make use of Khalihan for thrashing of the harvested crops. Khalihan is a large space cleaned near house and is used for thrashing the paddy and other crops to extract the grains. Each household has their own Khalihan. Some times families have Khalihan on the basis of lineage and joint family, since the division of house might have taken place and the agriculture fields have not been divided. Therefore they collectively harvest the crop and distribute the produce. Sometime the Sarhul Sarna is used as Khalihan for thrashing of paddy.

After entire crops are brought from the field to the Khalihan, then with the help of ox or wooden stands, the thrashing of the paddy is carried out. A pair of oxen is tied to the wooden pen fixed in the centre of the Khalihan. They walk on the paddy spread on the ground. In this process the paddy breaks of from straws, and it is separated from the straw by blowing process using the wind. Til is extracted by beating it on a wooden platform. When the entire grains are extracted, two fists full of grain tied in a cloth is tied to the wooden pen in the centre. Then the whole produce is kept in the store, and ritual is offered to the Meand deity in the Khalihan. A coconut is offered to him. Thereafter the grain tied to the central pen is removed and used in the rituals kept in a safe place and at the time of Muthi pujan in the month of April.
5.2 Vegetable Gardens in the studied villages

In Baghima village, only Sukhdev Oraon has vegetable garden, where he grows vegetables and has planted some fruit trees. In Echkela village six people have vegetable gardens, of which one belongs to Sukhura Nagesia and other owners are respectively Ramakishun, Mohan, Jaydev and Bagchand, who belong to the Raotia community. In these gardens the owners grow vegetables like potatoes, tomatoes, chilli, Cauliflower, cabbages etc. To irrigate the gardens they have dug wells in the garden, and have installed electric motor to pump out the water from it. The size of these gardens ranges from three quarter of an acre to one acre.

These vegetables are used for household consumption and also sold in the market. Most of the vegetables grown in the garden could not be sold in the market, because they are generally grown in winter season. Due to high altitude zone winter here is very severe, therefore the vegetables are affected by the frost, and are spoiled. This makes them unsuitable for marketing. They also grow vegetables in the summer season, but during this period water level in the wells goes down, and creates problem of irrigation and it results in low yield, the vegetables are only sufficient for household consumption.

5.3 Belief associated with livestock Management in the studied villages

In the Echkela and other villages it was observed that the villagers do not extract milk from the cows and do not give much importance to milk and its product. The calf is allowed to consume all the milk from its mother. General belief is that by consuming all the milk the He-calf will be strong and will be able to take the strain of agriculture work. According to the veterinary doctor of centre in the village, even after series of requests and demonstrations on the benefits of artificial breeding techniques to the villagers and good yield of milk and hybrid quality of young calves, the villagers are not ready for artificial insemination activities. The villagers oppose the artificial insemination programme, with the belief that by this processes will result in substandard quality of calf and they will not be strong enough to take the strain of the agriculture work. The quality of ox is basis for their agriculture work; since they primarily depend on them for agriculture work like ploughing and thrashing. This inhibition prevents them from experimenting with hybridisation process.
5.4 Forest species used in rituals and other activities of the village community

The villagers of the villages consider number of tree species as sacred. They use their parts in the ritual celebration. Besides number of trees are of economic, societal and medicinal values for the community. Certain tree species and its parts play an important role in the rituals and life of the village community. Sal (Sohrea robusta) is a tree, which is found to be present in each grove as this is the dominant tree species growing in this region. The sacred site in the grove is mainly located under one such Sal tree. Different parts of this tree are used in the ritual of Sarhul festival. The branches are used for decorating the places of ritual. Leaves are used for making plates and cups used in offerings made to the deities and later on for distribution of sanctified food. The Sal tree is also elaborately used by the villagers in construction of houses, sheds and boundaries of the courtyard. The fruits are collected and sold to the forest department.

Bhelwa (Semicarpus anacardium), tree is used in celebration of Danda Katta ceremony and Kadleta Festival. The twig of this tree is used in warding away of evil eye. The deity of Mahadani is believed to reside on the Saja (Terminalia tomentosa) tree in the grove of Ghamhaniya village and Semal (Semalia malabarica) in Echkela village. The Karam (Adina cardifolia), tree is considered sacred by the villagers and is used in celebration of Karama festival of the village. Similarly Pipar (Ficus religiosa) tree is considered to be sacred. The woods of these trees are not burnt or otherwise desecrated by the members of the village communities. The tree of Erandi or Castor plant is cut down and is used on Holi. The trees like Bael (Aegle marmelos) Pipar, and Gulaichi (Plumeria acutifolia) are planted but are not cut down by the villagers.

The trees of economic importance to the villagers are Mahua (Madhuca indica), Bahera (Teriminalia bellirica), Tendu or Kendu (Doispyrus meanoxylon), Achar (Bauchenanialenzen), Kulu (Sterculia wrens) etc. The produce of these trees like flowers, fruits and leaves are collected and used by the villagers and even sold in the market. The villagers plant number of fruit bearing trees like Mango (Manginera indica), Jackfruit, Karanj (Pongamia pinnata), Guvua and Jamun (Syzygium cumini). The villagers celebrate the marriage of some trees like mango, jackfruit and Karanj on the occasion of their first flowering. They consider that unless this ceremony is
conducted the fruits are not suitable for usage. **Sarhul** festival is celebration of marriage of Earth and Sun symbolising the union of the two resulting in good yield. So also marriage of trees will bears fruits. After the conduction of marriage ritual, the **fruits** of these trees are consumed. The branches of **Bhelwa**, Tendu and Sindur (*Vitex Negundo*) are planted in the agriculture fields to **ward** of evil eye.

The Sindur (*Vitex Negundo*) found in the sacred groves is used at the time of childbirth. This shrub is boiled in water and with that the mother is given bath to prevent her from catching cold. Its leaves are put into the fire to generate smoke to clean the air in the room where the mother and child live.

5.5. Traditional Healers (Holdes of traditional knowledge of species use)

The villages have three types of traditional healers. One is called *Mali Ojha* and the other *Nag Ojha* and the third *Ojha*. For illness, the general belief among the members of communities is that they happen due to some misdeed of the past birth. In this region people suffer from heart and cancer problems. The villagers explain that the person who had killed his parents by giving poison in the previous birth suffers from heart problem in the present birth and those who had abused and had kicked their parents and disrespected them in the past birth suffer from different types of cancer in the present birth. These are the diseases, which are incurable, and the person has to pay for his misdeed of past birth, in the present one with such a severity.

In Baghima village, Dhaniram Oraon is the **Mati Ojha** of the village; he is lame with one leg. Whenever any person of the village falls sick, he/she visits the **Ojha** for diagnosis to know the cause of the problem. **Ojha** feels the pulse of the right hand of the patient and from it he is able to diagnose the cause of illness. He comes to conclusion after that whether is it due to illness or ill effect of any spirits. Based on his inferences he suggests the remedy to the person that he should either go to the **Baiga** of the village for warding of the effect of the village spirits or for other spirits. For this generally he has to perform rituals to ward of the effect of evil spirit by sacrificing a cock to the spirit. If it is illness then traditional medicines made of herbs collected from the forest are given to the patient to cure his illness.
Sukhdev Oraon of the Baghima village is the Ojha of the village. The difference between Ojha and Mati Ojha is that Mati Ojha treats human patient whereas Ojha treats the cattle. To cure the animals from illness, the Ojha make the cattle drink a Kadda (a drink prepared from the herbs collected from the forest). This drink is made up of Neem (*Azadirachta indica*) leaves, bark of the Mahua and Babul (*Acacia nilotica*) tree, boiled in a pot. When the solution becomes thick, then it is left to cool, and rinsed and then given to cattle. According to the Ojha if animals like cow or buffalo or goat or ox, suffer from Baydo disease, then they go to the Sarna and offer cock to the Sarna deity. Later on the sick animals are made to eat the flesh of the sacrificed cock. They believe that this disease of Bayado is related with the high quality spirit. Once the flesh of low animal (pig) is offered, the spirit leaves the cattle body. After this the animal is cured.

The villagers take precautionary measures when they here that a disease of cattle is spreading in any neighbouring village. The villagers take some eggs of hen and bury them on the route by which the cattle go out of the village for grazing. Secondly each animal is made to eat one egg mixed with rice. Simultaneously with the help of Maharajah (Brahmin), they get bow and arrow drawn on a plane white paper and twelve times the name of Arjun (Mythological character of Mahabharat, the Indian epic) written on it. This paper is hung on the door of each cattle shed in the households, from where the cattle come out of the house. The Brahmin does not take any money for this service.

The third Ojha is Nag Ojha, a person who cures the snakebites. This region is famous for Krait Snake and every year number of persons dies because of snakebite. In Echkela village Nag Ojha is Madan, who belongs to the Nagesia community. He lives in Sindhwar toil. When a person is bitten by snake and is brought to the Nag Ojha for cure. Nag Ojha starts reciting mantras; through which he calls the snake that has bitten the person and makes it extract the poison inserted in the person. But if the snakes does not turns up then he takes a cleaned cloth and while reciting mantras starts tearing the cloth into two parts. This is considered to have a sympathetic effect on the snake and which feels being torn into two parts, starting from the tail end. The furtherer the cloth is torn, it has similar effect on the snake. The Nag Ojha continues doing this as long as the snake does not turn up to the place where the Nag Ojha along with the affected person and other villagers are sitting. The moment the snake reaches the place, the Nag Ojha stops tearing the cloth. Then he calls for two utensils filled with approximately five litres of cow

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milks in each. The *Nag Ojha* orders the snake to stick to the sick person. If snake does not obey him he then again starts tearing the cloth, by which the snake again starts feeling the pain of being torn up. This forces him to start sticking to the affected person. He keeps his mouth to the places where he had bitten the person and starts sucking the poison out and puts it into one utensil with the milk and washes his mouth in other utensils with the milk and continues the process of sucking the poison out up till the entire poison is extracted out of the affected person. When the snake washes his mouth in the milk it turns into black colour for a short while duration, before again becoming white in colour. After the entire poison is extracted, the person starts regaining his consciousness. At this juncture when the snake washes his mouth in the milk it does not turns black indicating that the entire poison is extracted out of the bitten person.

Thereafter the *Nag Ojha* by means of his mantras again joins the torn up cloth, which has sympathetic affect on the snake. It also feels relieved of the pain of being torn up. Then the snakes drinks stomach full of milk and is made to take an oath of not again biting any person or livestock of the village in future. Once the person is cured, and then *Nag Ojha* takes material required for the rituals from his family and performs the worship to the deity; and distributes the *Prasad* to the gathering. The *Nag Ojha* does not take the Prasad or any material offered to the deity. It is considered that by doing this *Nag Ojha* keeps the deity happy and who has given him knowledge and power to cure. If the *Nag Ojha* eats the *Prasad*, then he will loose the knowledge and power of curing.

Madan *Ohja*, believed that a person in reality does not die due to snakebite. Instead an element of life (*Pran Vayu*) remains in the brain and it remains in the brain for duration of six months. Therefore a knowledgeable *Nag Ojha* can retrieve snake bitten person after a gap of five months. Because of this reason the snake bitten person is not cremated, but is buried in a safe place so that in required time if any competent Ojha is available, then he can be treated. According to the *Nag Ojha*, after burying the dead body inside the earth, the body is secure for a period of one year and does not decay if it does not come in contact with air. Generally decaying takes places when the dead body comes into contact with the air. Because of this the dead person of any age class is buried, if dies of snakebite.
According to the *Ojha*, if the snake bites any cattle or livestock then the animal starts rolling on the back and violently kicks its legs. When it is taken to the *Ojha* for diagnosis, he holds the hair of the tail of the animal; it breaks and comes into his hand by *itself*. Then he comes to know which snake has bitten the cattle. But, if the hair breaks by pulling it out, then animal is sick due to some other reason and *Ojha* specialized in animals is asked to cure the animal. If snake bites the animal, then *Nag Ojha* called to treat the animal.

A person can become *Ojha*, either learning hereditarily from his Father (The Ojha) or by becoming disciple of the any *Ojha*, who accepts him and imparts the knowledge of the *Ojha*. Generally it is considered that *Ojha* does not impart complete knowledge to his disciple but only a portion of it and keeps some secrets with himself. Such knowledge is being gradually lost due to this tendency.

The villagers consume liquor regularly and also offer it to the deities; on all the rituals they perform. The process of making *Handia* (traditional liquor) in the villages is very *elaborate*. A pot is taken filled with rice and water. It is closed with a cover and sealed. For four to six days, the pot is heated. When this water starts boiling, the vessel is kept aside to cool down. This left for twenty-four hours duration for fermentation. After this duration it is completely fermented and becomes suitable for drinking purpose.

### 5.6. Dhumkariya: An Institution Lost

The communities of Baghima, Ghamhariya, Komodo and Echkela had an institution called *Dhumkariya*, a youth dormitory, in the past about hundred years ago, where the young unmarried boys and girls used to assemble in the evening and spent the night in the *Dhumkariya*. According to the villagers this institution existed in the past, now it has become defunct, and no longer exists in any village. This was an institution to train the children of the *Oraon* community about their culture, customs, norms, and values.

*Dhumkariya* was big spacious hut constructed in the centre of the village, which could accommodate all the children of a particular age class. The children of age about seven to eight were initiated to be members of *Dhumkariya*, and were members till they got married and settled...
as a couple in the village. The girl and boys used to have common Dhumkariya. An old man and woman who had good knowledge about customs, culture and resources of the community managed this institution. These two individuals acted, as instructors of Dhumkariya. Their role was to inculcate discipline and train the members about the knowledge of the community.

At the onset of evening, every member after having evening food assembled in Dhumkariya. The instructors came there for one to two hours, recited stories, mythology and riddles of Oraon community. Along with this they were told about the man and woman relationship, there after they used to leave for their houses. The aim to have such a system was to have collective learning centre, under the guidance of community members about once own culture. This centre also acted a learning centre for sex, where the girls and boys where allowed to spend night together, away from their home. It aimed at training the members, prior to entering the society, about every thing a member supposed to know and to contribute constructively to the community.

All the children of above seven years and until married were allowed to be the members of Dhumkariya. A person after marriage had to leave the Dhumkariya and stay in the house established by him. Both the girls and boys after the sunset used to reach Dhumkariya. This dormitory has a leader based on age and seniority for both girls and boys respectively. The assembled members spent their night in the Dhumkariya. The boys and girls were allowed to choose a partner of opposite sex and spent the night together and had freedom to have physical relationship and the community approved this practice. This right was not given to an individual but to members of the institution.

The seniors had binding to teach and instruct their juniors about the relationship of man and woman, values and norms of the community and dormitory. Besides this a hierarchical relationship was built up which lasted through out the life and assisted in the functioning of the society. If any dispute emerged among the members or between the partners, the senior most members had the right to settle the dispute and some times imposed a fine. But if the senior breaks the rules or had dispute on some matter, it was reported to the instructors, who on the basis of their experience and norms for punishment gave the judgment.
Dhumkariya has number of punishments for violation of norms by its members. There are two types of punishments for violation of norms. For breaking a rule or minor violation of norms, the member was punished to be awake for either half night or full night. This called as simple punishment and the violator a boy or a girl has to be awake that night. Secondly, if the nature of violation of rules and norms was of severe nature, then they were punished with expulsion from the Dhumkariya for a day or two. The boy or girl was debarred from entering the Dhumkariya and also are not allowed by the parents to stay in the home. Mostly they spent the night outside the Dhumkariya. This punishment was known as expulsion punishment. If the senior member of the Dhumkariya violated norms or rules then the mater was reported to the instructor of the Dhumkariya, who only had the right to punish the senior member. The senior of the Dormitory could only give minor punishments like staying awake in night, which was to be given to the members inside the dormitory. The instructor only could give the punishment of expulsion.

In the daytime each member had to assist their family in the household work and agriculture activities and after sunset, they used to assemble in the Dhumkariya. Every member used to take food in his or her house; therefore it was necessary to work in one's own house as per instruction of the head of household. Dhumkariya was only a residing place for the night for the unmarried children of the village, were they were also taught the rules of the community. The members on rotation basis were assigned duties to keep the Dhumkariya clean. They were divided into pairs of boy and girl, who on rotation basis were given the duty of cleaning the Dhumkariya and its surroundings. While making units of boy and girl, freedom was given to the members to choose their partners.

If a boy and girl of the Dhumkariya decide to marry one another, then both went to the instructor and put forth the proposal to allow them to marry. The instructor then consulted their parents. The parents of the boy and girl after consultation and clarification of the rules of the society, allowed the boy and girl to marry. The instructor performed the marriage ceremony. After marriage they were respectfully given a send off from the Dhumkariya and thereafter they were not allowed to enter the Dhumkariya. The marriage of this type was called Dhumkariya marriage. But if the parents of boy or girl reject the proposal, then marriage was negated and the proposal was dropped.
The Dhumkariya of one village did not give membership to the boys and girls of another village. Every village had its own Dhumkariya and only the community members by birth had right to be the member after attaining certain age. Non-tribal children were not given admission in the Dhumkariya. Only the tribal children were given admission in the dormitory. If the number of the entrants is too large, a new dormitory is established to meet the demand. Simultaneously if the number of members is low then the villagers used to leave them in their relatives places where they had dormitory, and the children were totally at the charge of the relatives. This way the needs of the community was fulfilled and the tradition was kept alive.

Gradually the institution of Dhumkariya decayed due to the internal as well as external factors. The internal factors were the increase in numbers of unmarried members in the Dhumkariya. As the custom of choosing partners was prevalent in the dormitory and they were allowed to keep physical relationship, which became intimate. In some cases, even after the marriage the members continued with their physical relationship, which was against the family values and they were not able to sustain a healthy family system. Secondly the families’ work was affected, as the youth did not participate in the work of the family and flouted the rules of family. If the Dhumkariya marriage proposal was rejected then both the boy and girl remained unmarried and continued to maintain relationship as members of Dhumkariya. Sometimes this kind of relationship of unmarried pair of Dhumkariya resulted in childbirth, to which the community did not give recognition because of which the couple had to leave the place, and had to go to another place. In some cases they resorted to elopement and getting married, which created rift in the family of the boy and girl. These factors gradually led to community loosing faith in the system and not properly following it. The external factor was the impact of Christianity on this institution. The missionaries were spearheading the mission of spreading the Christianity in the tribal areas of the country. In this area they observed that Dhumkariya was an institution, which acted as the heart of the society. This institution was the culture of the community. In order to spread their mission they targeted this institution by converting it into modern school, which imparted the education that benefited in spread of Christianity. Any move to challenge it was suppressed by the help of administration (Sahay, 1976). Gradually the institutions in the region were converted into modern schools were Christianity was taught. This subverted the traditional institution that kept the culture of the community alive.
5.7 Need for Integration of the Formal Management with Traditional Management

The traditional knowledge and management systems are undermined because of pressure of modernisation and cultural homogenisation, under the auspices of modern, nation-state and international trade system, threaten lifestyle, practices and culture of nomadic population, small agricultural producers, and indigenous people (Agarwal, 1995:431). The understanding of traditional practices of resources management and implementation has become a need of the time. The sacred grove of the region are embedded in the culture of the village community. It governs and regulates the economic as well as social system of the village. In the era of rapidly decreasing biodiversity and natural resources, such traditional practices of the communities needs to be acknowledged and integrated into management principles of the formal system.

5.7.1 Conservation of Sacred groves: Local Biodiversity zones

The practise, attitude and interaction of the communities with the groves show the level and frequency its association. The entire protected belief system of the community revolves around the groves. If the groves are lost, it will be a loss of naturally conserved zone, which has many endangered species of plants and insects in other parts of the country as well as in this region (Pushpangadan et al 1998, Chandran et al 1998, Patnaik and Pandey 1998, Tiwari et al 1998). Apart from threat of cultural dissociation of the community after the loss of these groves, it may also create problems in the value system of the community in coping with the uncertainties of the environment. The government most of the time is unable to provide the needed security and protection to the cultural loss. These groves are also natural repository of local biodiversity as they have been conserved for long time with little disturbance. If properly managed, they can act as seed bank for some endangered species as well as for those species, which cannot be grown in nursery.

The diversity of plant species in the groves like Kadamara, Mahadani and Pat is much more than the surrounding areas. This is because of lesser disturbance by peoples and animals owing to social prohibitions and social fencing. The diversity in Sarhul Sarna is less as it is used for various social functions and occasions. The sizes of the other three Sarna are large and human interface is only on selected occasions. Presently community management approaches are applied in the different parts of the country to the situation were resource degradation is taking
place, to encourage the communities to manage the resources around it. Due to this, the cost of management of the resources by the government has come down and it has resulted in improvement in the quality of resources as well as benefits reaped by the communities. The best examples are in the case of joint forest management and community forest managements. This approach should be extended to the management of sacred groves and the communities interacting with it should be given the control and clear-cut ownership right over these groves. This empowerment of people will result in better biodiversity conservation and effective management of these groves.

5.7.2 Linking sacred grove culture with agriculture management

The culture of Sarna has created a whole web of social network and system of management, which is interlinked with their social, economic, political and religious life of the village communities. The Sarna is the entity and symbol of social cohesion for these communities. The economic activities are undertaken after the collective choice agreement arrived at, after due consultation and during the celebration of different festivals in the groves. If the agriculture scientists use these occasions of festival celebrations for dissemination of information relating to agriculture management, among the village communities, it will bear good result in transmission of information.

As seen in earlier chapters, that through out the year the community interacts collectively for celebrating various festivals associated with the agriculture activities. These celebrations are used for collective decision making agreement on the procedure and precaution to be taken for carrying out the agriculture works in the forth-coming season. During these occasions, specific information are can be disseminated related to agriculture activities. For example, at the time of Sarhul festival, the community can be informed on the metrological prediction about forth coming monsoon, type of seeds the farmers should use for sowing. But here, precaution must be taken that the seeds preferred by the community and suitable for this particular region should only be recommended. At the time of Hariyali festival, the issue of pest control and management can be told to the communities. The organic pest control devices prevalent in the communities should be mixed with the advantageous modern ones for better management of the crops. The traditional management practises should not be discarded as they are time tested and
are of low risk inputs. Therefore a judicious mix of the formal knowledge with the traditional knowledge will yield better result for the community. The study shows that the cattle are presently only nurtured for agriculture requirement, but the use of cattle for dairy purposes is missing, the advantages of dairy to supplement the household economy should be harnessed by the villagers.

This region is located on an altitude of 700-900 Mts. The average rainfall is 1600 mm, yet it has water shortage and scarcity for irrigation purpose. This region has intermittent rain throughout the year. If watershed activities like harvesting of rainwater are initiated through community management efforts, water can be made available for the whole year. This will also generate more fodder as well as fuel wood. The demand for fuel wood is more in this area, if such sustained supply of fuel wood is available from other sources, stress of the natural forest can be reduced.

5.8. Threat concerning protection and management of sacred groves

The sacred groves have been under constant threat from the internal as well as external system operating in the villages and in the surrounding areas. The effects are change of government, education system, impact of great tradition and interest of different stakeholder in area. The protection and management of sacred groves is a gigantic task in such a diverse environment. The threat ranges from the communities living in the villages to policy of government and interest of stakeholders in the region. The threats from communities are due to decreasing forest cover in vicinity and restriction on use of forest, traditional ritual practices, change in outlook due to external influences and government intervention with the traditional management system. Due to decrease in forest cover and restriction on the use of forest, the communities are forced to use the groves for grazing and extraction of NTFP.

The community follows some undesirable practices, while performing rituals in these groves. These practise are burning of the waste materials left over in the grove, after the ritual is over. They leave the place after lighting the fire to the waste. The fire lighted destroys the ground cover and spreads to the entire area of the grove and some times even cause damage to the trees in Mahadani, Kadamara or Pat Sarna. The fire lighted in these groves some time extends to forest area and causes extensive damage to the forest. The communities should be informed
about the ill effect of fire and encouraged to remain in the grove as long as the fire has not extinguished. This will help in protection to the groves trees and ground cover. Conservation ethical values related to sacred habitats and ecosystem need to be capitalised upon for promoting conservation of biodiversity.

The government viewed these groves as a common property under its control. The policy of the government is to construct various infrastructures like school, primary health centres or Aganwari centre facilities under different government development schemes in these common lands. This creates confusion in outlook of the communities towards these groves due to difference in approaches of macro-world and micro world about the purposes and use of sacred groves. Secondly, these infrastructures lead to increase in human intervention in these groves, to a large extent, resulting in impact on the diversity of the groves. In future, government should provide land for such works from the other common land of the village, which are not a part of sacred groves. The government should not have uniform policy for the management of commons. It should first study the way common is used by the community then take a decision for any developmental intervention.

The interests of different stakeholders also are a threat to the trees in the sacred groves. The taboos against cutting of trees in the groves are sometimes violated by offering some sacrifice to the saran deities. In some cases the interested and influential persons connived with the Baiga of village and managed to cut few dried trees of Sal. Such incidences provide incentives to other free riders to cause damage to the trees of the groves. The groves located at a distance from village are prone to theft by the outsiders living in town. The trees of these groves are cut and taken away in night. The villagers cannot take any action on such miscreants. The forest department and police only can check this problem.

For effective management of these groves, the community management approach should be brought into implementation. Already the communities are interlinked in the culture of Sarna. Revival of the decaying institution will enhance the management of the village and its resources. The recognition of the role of Baiga and other functionaries in the management of sacred groves only needs formal approval. Traditionally they are still functioning and are paid for their services by the communities. These villages also have formal institutions like panchayat, functioning in
these villages. These panchayat have various sub committees looking after the management of various development activities at the panchayat level. The integration of traditional and formal institutions will lead to better management of the village social system and disbursement of development benefits to the communities living in the villages. A sub-committee on sacred groves management should be created with the traditional functionaries giving them proper place to play their role in management and conservation of the groves. By this formal recognition of the sacred groves, it will lead to better protection of the sacred groves areas and resources in it. Apart from this, the confusion in the communities over the control on the sacred groves will be clarified, as it will get a formal recognition by the government through the local institution of governance. The integration of the two systems will provide a solution to present day conflict over the management of such resources in the villages.