Village Survey Report

Bandhavgarh Tiger Reserve

May 2011

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INTRODUCTION TO BANDHAVGARH

Figure 1.1: Damnar water body

Bandhavgarh Tiger Reserve is situated between the Vindhya and Satpura ranges in the state of Madhya Pradesh in central India. Part of this forest was given the status of a National Park in 1965. The current area of the park is 448.84 sq.km. Together, the National Park and the adjoining Panpatha Sanctuary were declared as a Tiger Reserve in 1993.

Bandhavgarh's hilly terrain is interspersed with some meadows that are drained by tributaries of the river Son such as Damnar, Janad and Charanganga. The forests are dominated by trees such as sal, bamboo, mahua and tendu as well as some grasses like munj and kans.

There are about 500 species of plants, 45 species of mammals, 27 species of reptiles, 299 species of birds, and 92 species of butterflies. Mammals like tiger, leopard, sloth bear, chital and sambhar are found here. Peafowl, Lesser Adjutants, Indian Rollers, Asian Paradise Flycatchers, Crested Serpent Eagles, King Vultures and Egyptian Vultures inhibit these forests.

Owing to its status as a Tiger Reserve, all these species within the reserve receive a high degree of protection. As per the National Tiger Conservation Authority (NTCA), a tiger reserve should consist of: 1) A core area which shall remain inviolate and free from human disturbance 2) A buffer area which is a multi-purpose zone where people and wildlife co-exist.

Figure 1.2: Mahua being dried in a household

Figure 1.3: An example of dependence on forest products-collection of tendu leaves

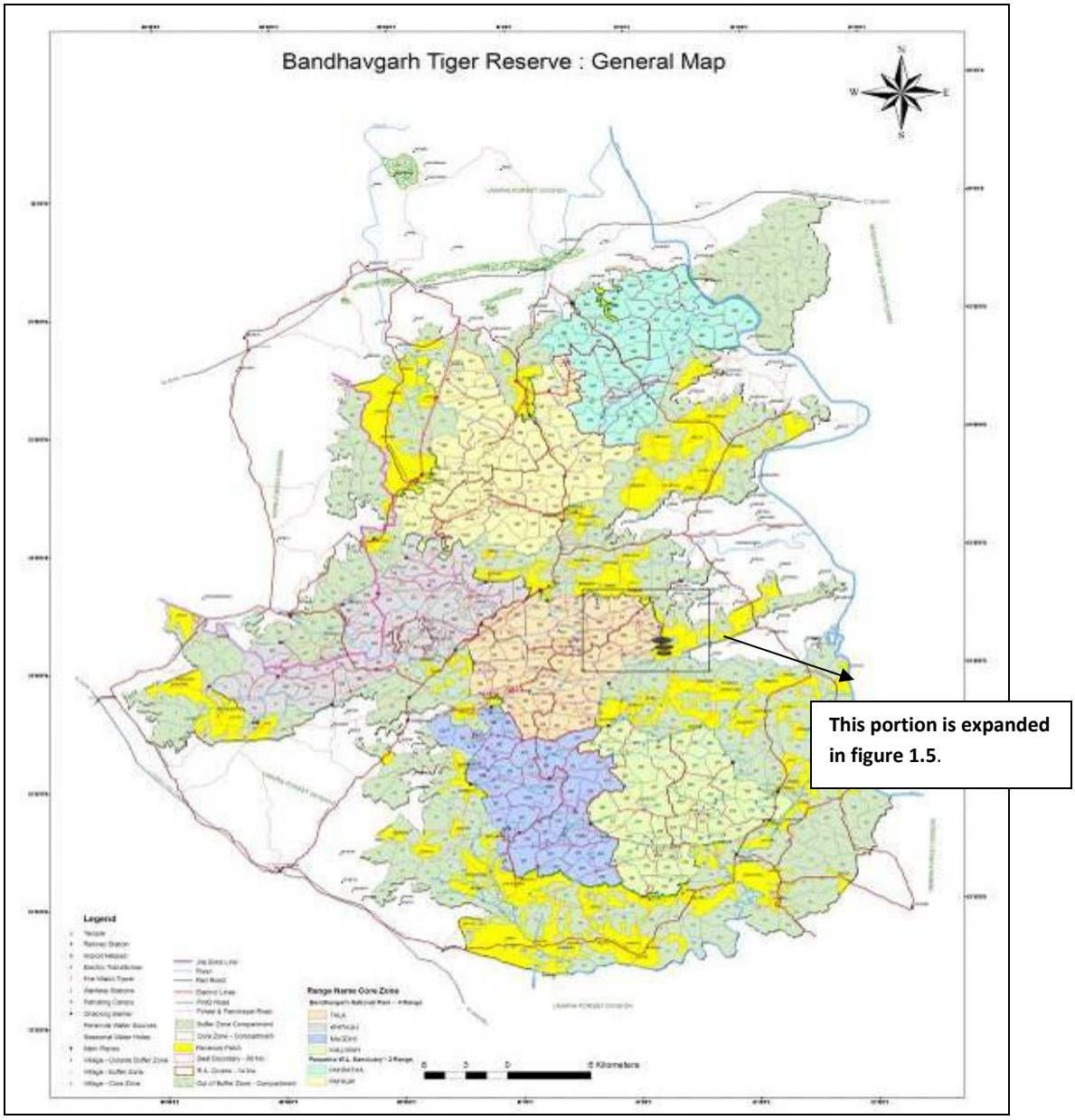

Figure 1.4: Map of Bandhavgarh Tiger Reserve

People that live within the periphery of the reserve are usually poverty-stricken and depend on the forest in a number of ways. To meet their daily needs, they collect forest products such as firewood as well as Non Timber Forest Products. While excessive collection of these is detrimental to the forest cover, it also puts the people themselves at risk from wild animals. Those that own livestock for agriculture and other purposes face threats in the form of cattle predation. This may happen when the villagers let their cattle stray into the park to graze or if a tiger enters a village lured by the prospect of easy prey. The death of their livestock obviously angers the villagers who may resort to poisoning the carcass thus killing the tiger when it feeds. Sometimes, herbivores may destroy the villagers' food-crops and may in turn, be killed.

Not only do these events cause severe economic losses to the villagers, but they also antagonize them towards wildlife and in some cases, the Forest Department. In the case of cattle-kills that take place outside the reserve, the Forest Department has a system in place wherein the affected parties are compensated. However, it must be remembered that this conflict can only be resolved to a certain extent-never fully negated. Therefore, the need of the hour is to study the socio-economic status of the villages in these areas and empower them economically and socially, so that they will be able to withstand these losses, if and when they occur.

In this regard, we identified three villages in the buffer area that are most affected by predation - Damna, Gata and Ghaghud - conducted a socio-economic survey to assess their living conditions in order find ways to address their problems.

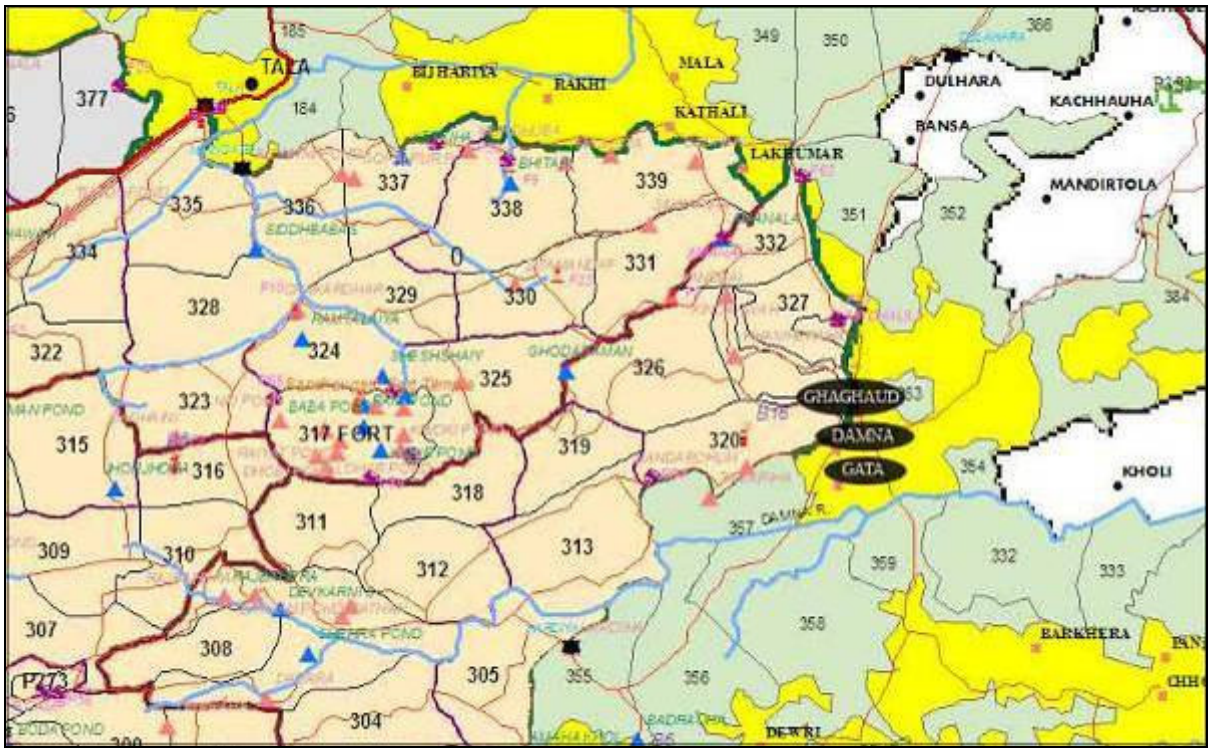

Figure 1.5: Map depicting the 3 villages surveyed

DAMNA

Figure 1.6: Landscape at Damna village

Situated at the co-ordinates 23°40' 51"and 81°6' 20", Damna lies within a radius of 0-1 km. from the National Park. It's located between Gata and Ghaghud (as shown in the Figure 1.5).

The hilly terrain is marked by an abundance of mango and mahua trees. The land here is fertile. There are approximately 100+ households in this village, 100 % of which were surveyed.

This village was chosen as part of our survey because of rampant predation of cattle in these parts.
The data has been collected under the following categories namely Household data, Land/ Property Owned data, Livestock data and the Rate of Predation data in these villages.

HOUSEHOLD DATA

Income groups:
The level of income was divided into categories as shown in Figure 1.7

The calculation was done on the basis of the total income per household per month. The main sources of income for this village included activities like mahua collection, tendu leaves collection and daily wage labour.

As per our findings, the highest percentage of people earned in the range of '501-1000' consisting of 37.37% of the population while the lowest percentage of people earned above Rs.5,000 which consisted of 1.01% of the population.

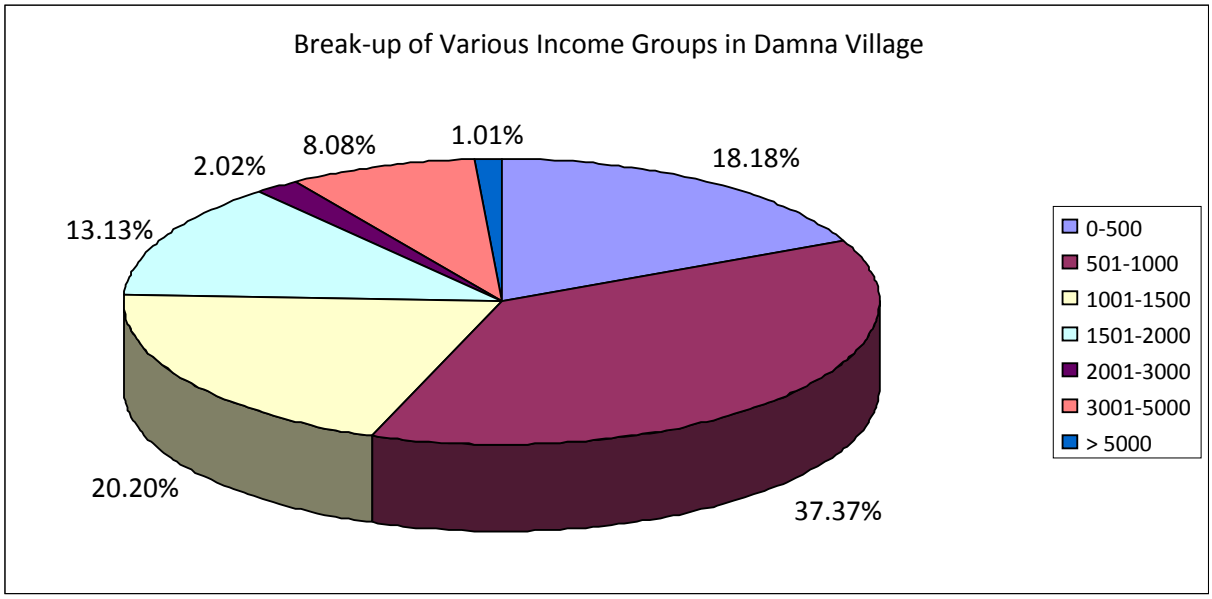

Figure 1.7: Break-up of Various Income Groups in Damna Village

The low income level is probably due to dearth of better livelihood options, unstable sources of livelihood and low levels of literacy among people. Some of these families in the low income category '0-500' also survive solely on collection and sale of forest products.

Education:

The levels of education were divided into various categories as shown in Figure 1.8

As per our findings, 5.76% of men and 5.95% women have passed the 8th standard. After this, the percentages of educated people have dropped.

This is probably due to the presence of schools in the village till the 8th standard. Proximity of schools is directly related to the enrolment percentage as well as the dropout rate. Greater the proximity of the school better is the attendance level among children.

People interested in studying beyond the 8th standard have to travel 15 kms. to Manpur, which is the nearest place with the required educational facilities. Those that cannot make the journey, drop out. The percentage of men that travel to Manpur is higher than women because of prevailing social customs that may prevent women from travelling so far unaccompanied.

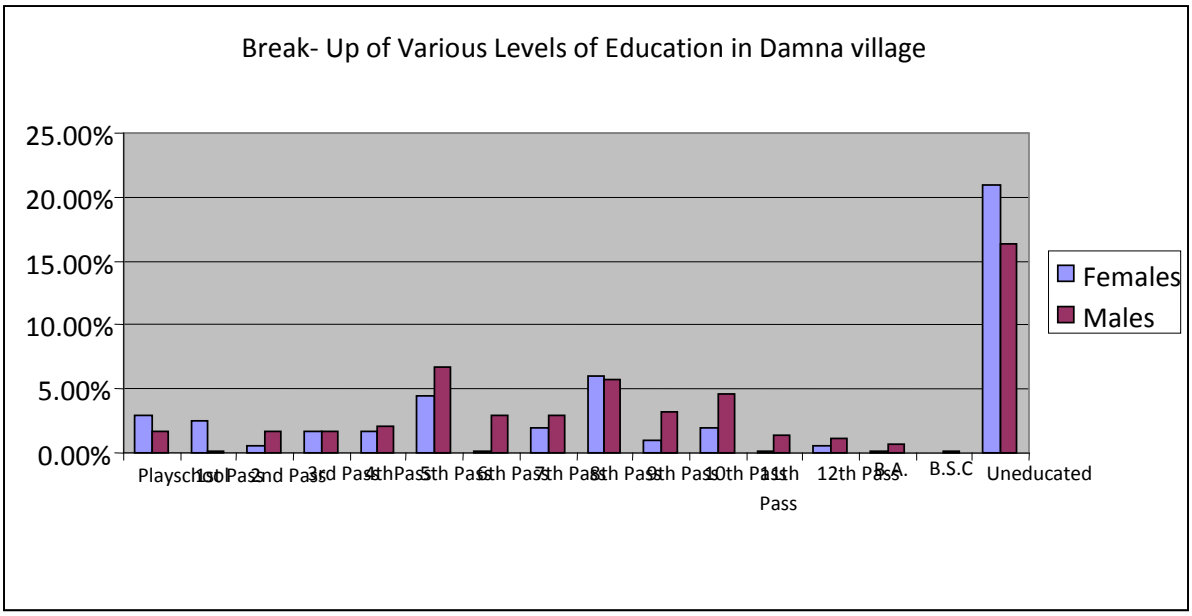

Figure 1.8: Break-up of Various Levels of Education in Damna Village

The percentage of uneducated people (16.31% men and 20.92% women) is also high either due to inaccessibility of schools or poverty levels or both.

Sources of Water:

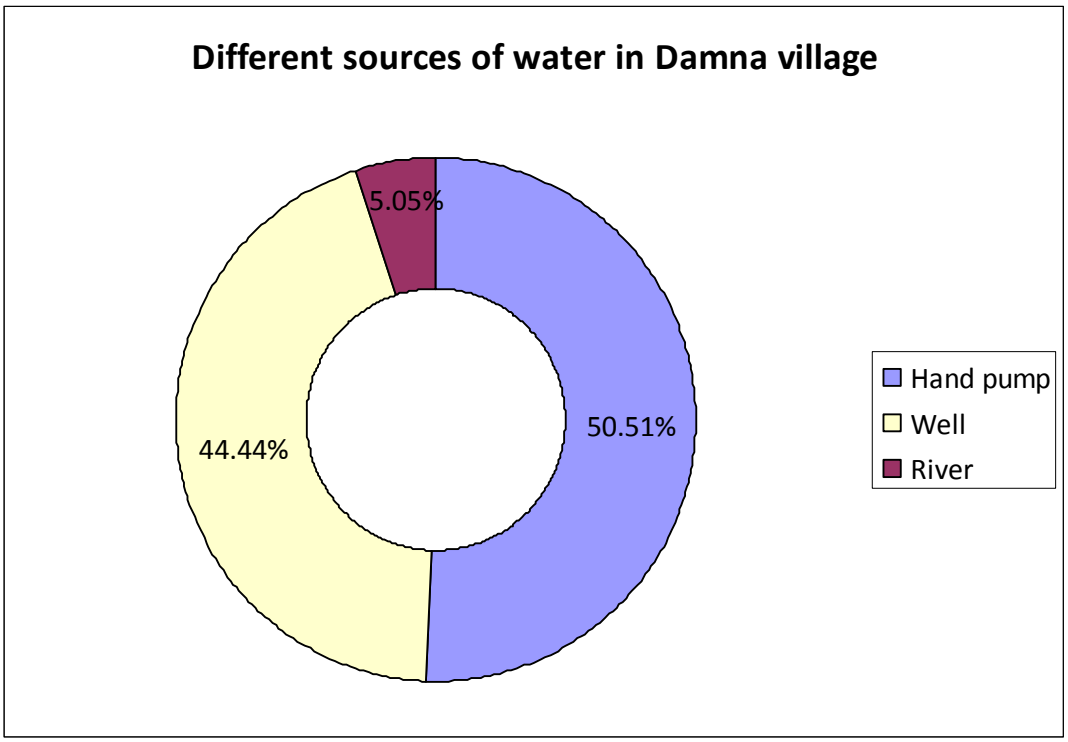

Figure 1.9: Break- up of different sources of water in Damna Village

The source of water was divided into 3 categories namely Hand pump, Well and River. The source of water was calculated based on the primary source of water for each family.

As per our findings, about 50.51% of the village households used hand pumps to meet their daily requirements of water. Those that relied on natural sources like rivers constituted the lowest percentage, about 5.05%. The usage of hand pumps is high because they are present within the village itself. Moreover, rivers are usually non-perennial; the village is situated far away from the river and hence it is inconvenient to walk.

Demographics:

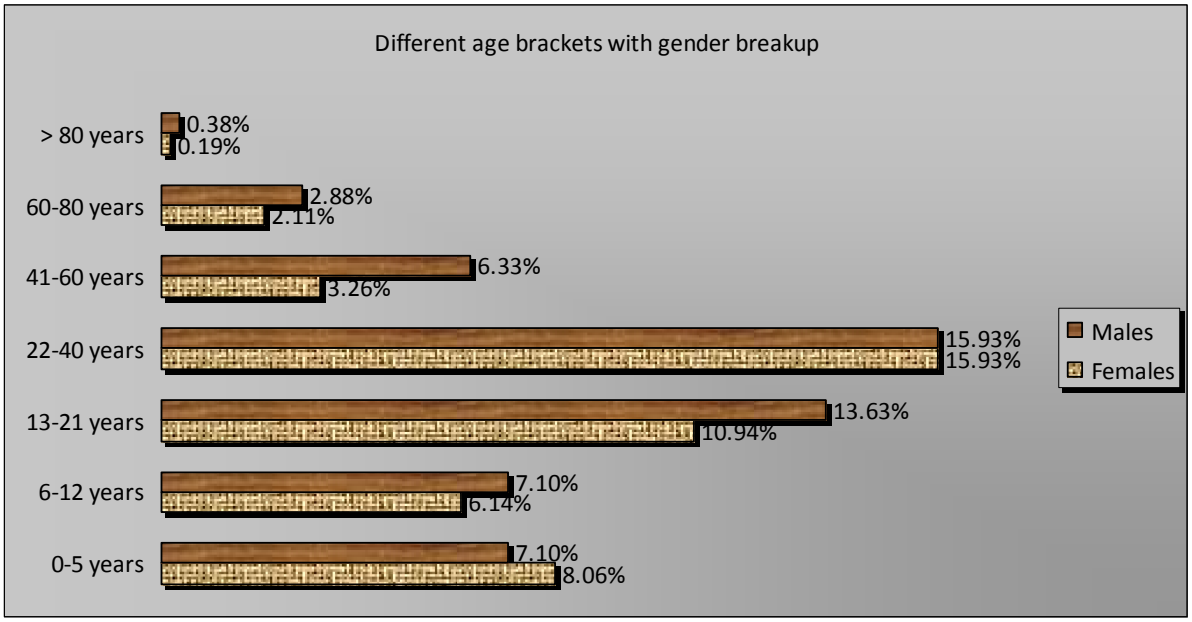

Figure 1.10: Break-up of different age brackets and gender break-up in Damna village

Age bracket was divided into 7 categories namely 0-5 years, 6-12 years, 13-21 years, 22-40 years, 41- 60, 60 - 80 years and >80years.

As per our findings, the highest percentages of people were aged between 22-40 years, with men and women constituting a total percentage of 31.86, equally contributed by men & women. The lowest percentage of people comprised of those who were above the age of 80 with males constituting 0.38% and females constituting 0.19% of the population.

The interesting thing to note here is that the ratio of men to women was well- balanced which indicates a healthy trend in population.

LAND/PROPERTY OWNED

Type of land owned:

Agriculture was divided into 3 categories namely Agricultural, Non-Agricultural and No Land. The data for 'Agricultural' was drawn on the basis of whether people owned land and whether they practised agriculture or not

As per our findings, 78.79% of the population owned agricultural land while the lowest percentage of people owned non-agricultural lands constituting to 3.03% of the population.

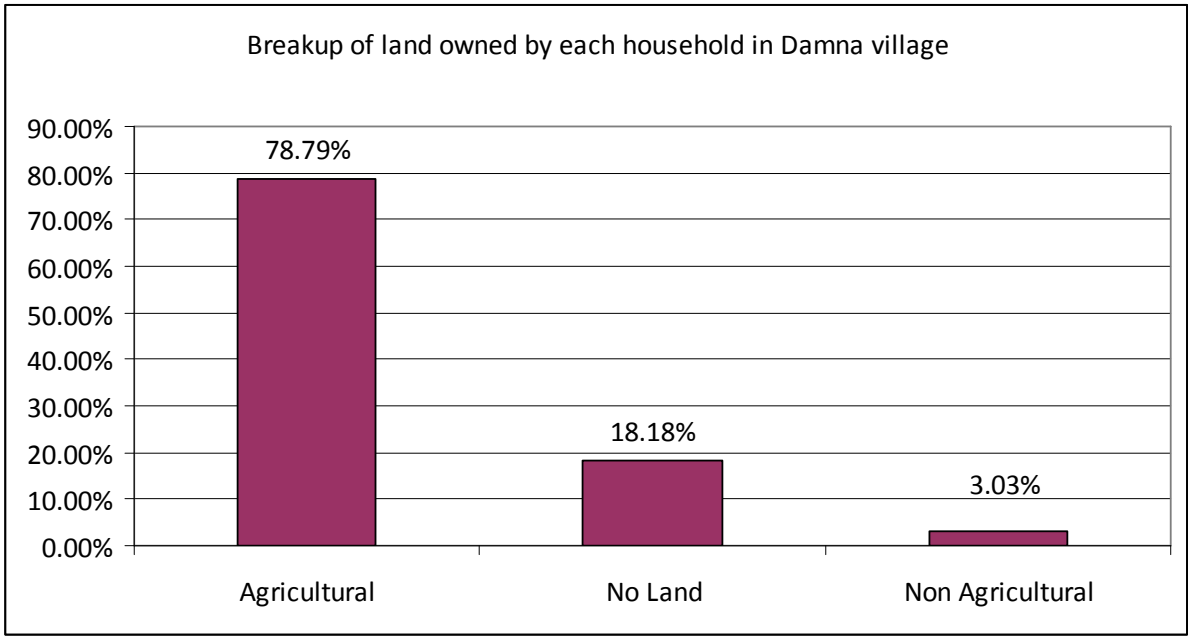

Figure 2.0: Break-up of land owned by each household in Damna village

Although the yielding crops varied between rice, wheat, millet, sesame seeds and corn, 100% of these crops were used for self- consumption and none of these households sold their produce. Their yearly yield was insufficient to meet their household needs, which compelled them to purchase additional quantities of food grain from the market.

However, lack of fertilizers, livestock or irrigational facilities could be some of the reasons for Non-Agricultural land being owned by 3.03% of these households.

Area of land owned:

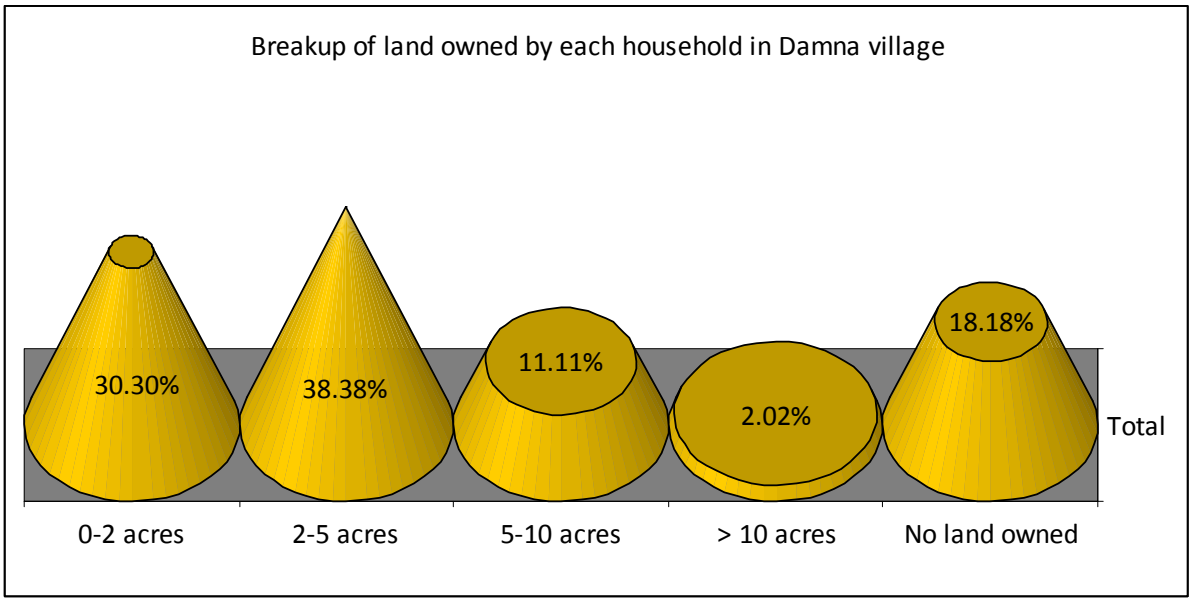

Fig ure 2.1: Break-up of land owned by each household in Damna village

Area of land was divided into 5 categories namely 0-2 Acres, 2-5 Acres, 5-10 Acres, above 10 Acres and No land owned. Area of land was calculated on the basis of size of land owned by each household

The highest percentage of people owned land in the range of '2-5 Acres' constituting of 38.38% of the population while the lowest percentage of people i.e. 2.02% owned more than 10 Acres.

18.18% percentage of people who fell within the bracket of 'No Land', either didn't own land or they hadn't received their share of land after their father's land had been partitioned.

LIVESTOCK DATA

Livestock owned:

Livestock was divided into various types of livestock such as bulls, cows, goats, buffaloes, kids. There was also a category for those that didn't own any livestock.

As per our findings, bulls accounted for the highest percentage at 43.10% followed by cows at 27.04%.

Kids accounted for the least percentage of livestock i.e. 1.41%. Bulls and cows are favoured over the rest as they are found to the most useful of the lot- bulls are utilised to plough fields while cows are milked. Their dung is used for a variety of purposes such as fuel for cooking, manure and to plaster houses.

Goats and kids are least favoured as their purpose is restricted mostly to milking.

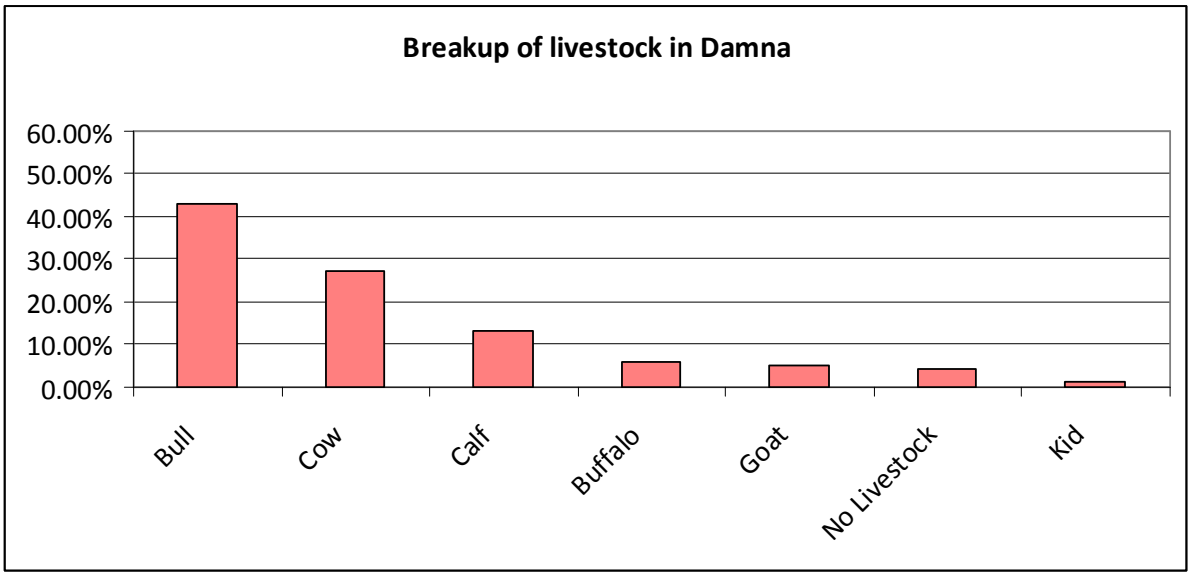

Table no. 2.2 Breakup of livestock in Damna village

In these parts, livestock also have immense cultural value. Social status is determined by number and type of livestock owned. For example, cows and bulls are a determent of a well-to-do household while hens and chickens are supposedly signs of an impoverished household. Livestock such as cows and bulls are also used as gifts that are given to the daughter of the house when she gets married.

Purpose of Livestock:

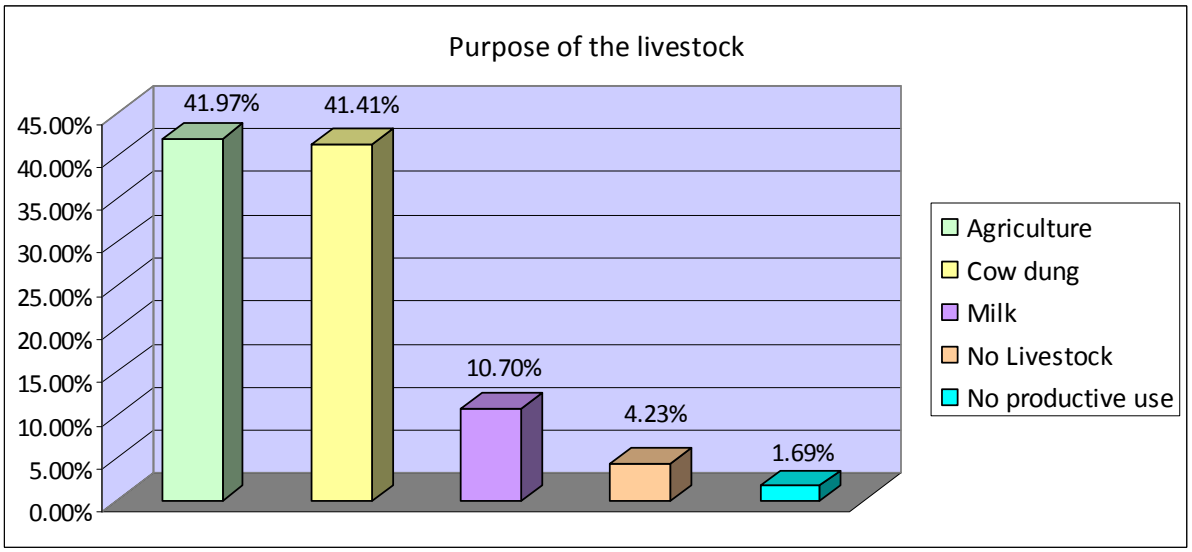

Fig no.2.3: Break-up of purpose of livestock in Damna village

***Note**: Each livestock may be used for more than one use; the data shown above thus only the primary use as indicated by the household*

Purpose of livestock was divided into 5 categories namely Milk, Cow dung, Agriculture, Not Applicable, No productive use and No Livestock

As per our findings, 41.97% of cattle were used primarily for agriculture followed by cow dung at 41.41%. Livestock is used in agriculture wherein bulls are made to plough/till the land.
The livestock here yield very little (up to 1 cup) or no milk; this output has no commercial value. Therefore, the use of livestock for milk is low. The 'No productive use' category consists of 'kid' and 'calf'.

RATE OF PREDATION

Compensation data:

Compensation given	Not Killed	Bull	Cow	Buffalo	Goat	Calf	Livestock missing	Grand Total
600.00						1		1
1,000.00		2						2
1,500.00				1				1
2,000.00		1	1	1				3
2,500.00		1						1
3,000.00		1						1
6,000.00			1					1
Not applicable	56	1*					1	58
Not Given		24	15	7	3	2		51
Compensation given, amount not available		2			1			3
Grand Total	**56**	**32**	**17**	**9**	**4**	**3**	**1**	**122**

Figure 2.4: Rate of Predation in Damna village

** This livestock was killed inside the national park, hence no compensation applicable.*

The data for predation was collected on the basis of livestock killed, type of livestock killed, and compensation amount given / not given to the parties concerned, the carcass disposal and predatory type.

As per our findings, over the past 5 years there have been about 65 cases of cattle kills in this village. Out of which 32 have been those of bulls, 17 of cows, 9 of buffaloes, 4 of goats and 3 of calves. 1 livestock was recorded as missing.
51 cases have been recorded where compensation has not been given. However, during our survey we also found that 90% of these cases were more than 1 year old. It was brought to our notice that the Forest Department has recently made changes in the procedure of disbursing the claim and the affected family now gets a sum of Rs. 2000 as compensation immediately on the say of the kill without any questions being asked. The balance claim (if any) is disbursed after the investigating team completes its enquiries and procedures.

Disposal of Carcass:

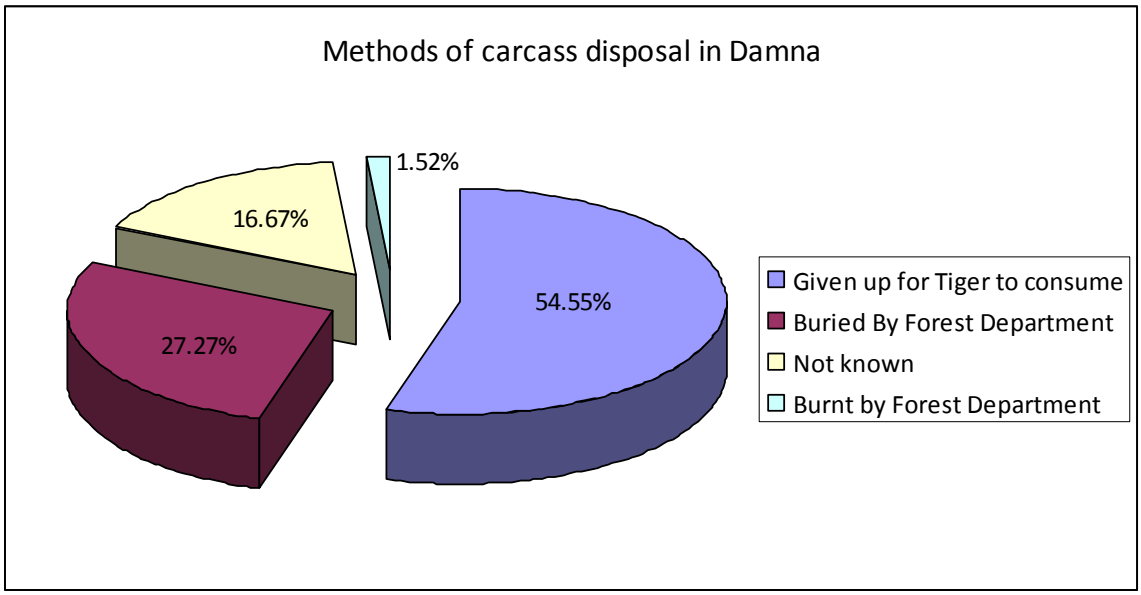

Figure 2.5: Disposal of Carcass in Damna village

The method of disposal has been divided into Given up for the tiger to consume, Buried by the Forest Department, and Burnt by the Forest department and Not Known.

Interestingly, the highest percentage falls in the 'Given up for tiger to consume' category at 54.55% while the lowest is found to be in the 'Burnt by Forest department' category at 1.52%.

GATA

Figure 2.6: Landscape at Gata village

Situated at the co-ordinates 23°40' 23"and 81°6' 12", Gata lies within a radius of 1 km. from the National Park. It's located close to the river Damna.

The hilly terrain is marked by an abundance of mango and mahua trees. The land here is fertile with wheat, corn and millet being the pre dominant crops grown. There are approximately 50+ households in this village, 100 % of which were surveyed.

This village was chosen as part of our survey because of rampant predation of cattle in these parts.
The data has been collected under the following categories namely Household data, Land/ Property Owned data, Livestock data and the Rate of Predation data in these villages.

HOUSEHOLD DATA

Income groups:

The level of income was divided into 6 categories as shown above in Figure 2.7. The level of income was calculated on the basis of *the total income per household per month*. The main sources of income for this village included activities like mahua collection; tendu leaves collection and daily wage labour.

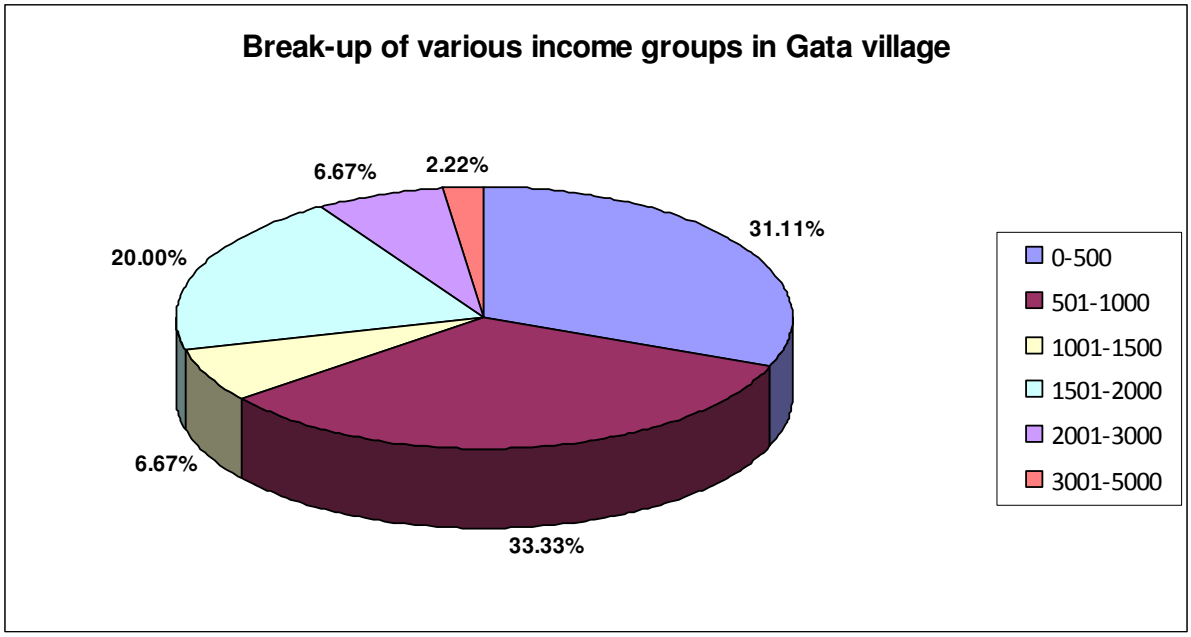

Figure 2.7: Break-up of Various Income Groups in Gata Village

As per our findings, the highest percentage of people earned in the range of '501-1000' consisting of 33.33% of the population while the lowest percentage of people earned between '3001-5000' which consisted of 2.22% of the population.

The low income level is probably due to dearth of better livelihood options, unstable sources of livelihood and low levels of literacy among people. Some of these families in the low income category '0-500' also survive solely on collection and sale of forest products.

Education:

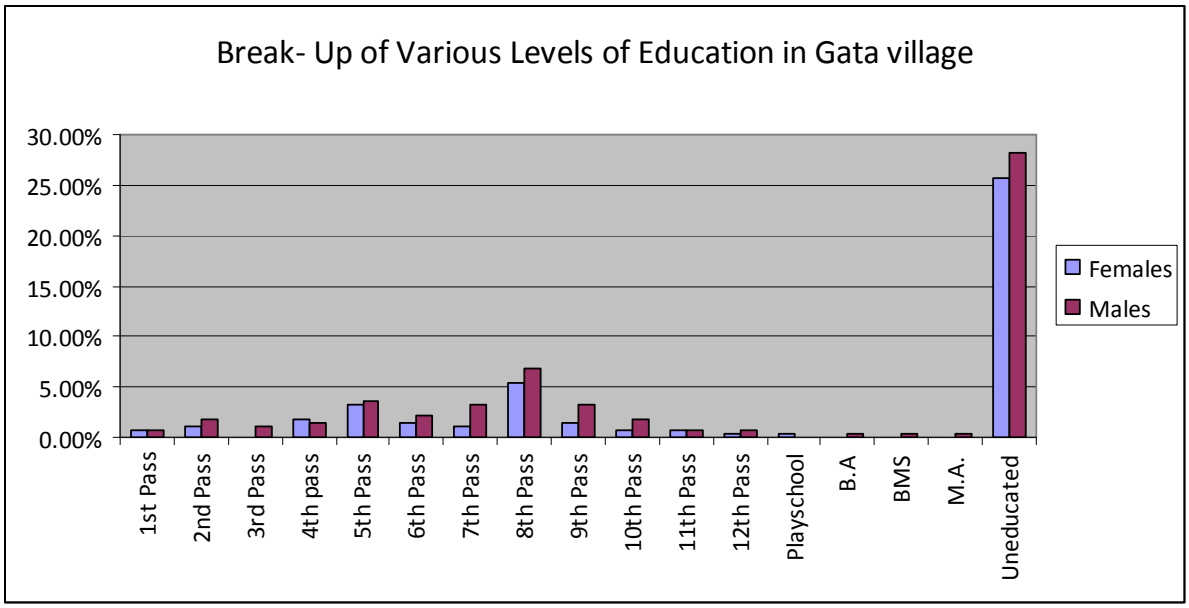

Figure 2.8: Break-up of various levels of education in Gata village

The levels of education was divided into different categories as shown in Figure 2.8

As per our findings, 6.76% of men and 5.34% women have passed the 8th standard. After this, the percentages of educated people have dropped.

This is probably due to the presence of schools in the village till the 8th standard. Proximity of schools is directly related to the enrolment percentage as well as the dropout rate. Greater the proximity of the school better is the attendance level among children.

People interested in studying beyond the 8th standard have to travel 15 kms. to Manpur, which is the nearest place with the required educational facilities. Those that cannot make the journey, drop out. The percentage of men that travel to Manpur is higher than women because of prevailing social customs that may prevent women from travelling so far, unaccompanied.

It is also interesting to note that women in the village do not enrol for higher studies as can be seen through the percentage data in the higher studies bracket.

The percentage of uneducated people (28.11%men and 25.62%women) is also high either due to inaccessibility of schools or poverty levels or both.

Sources of Water:

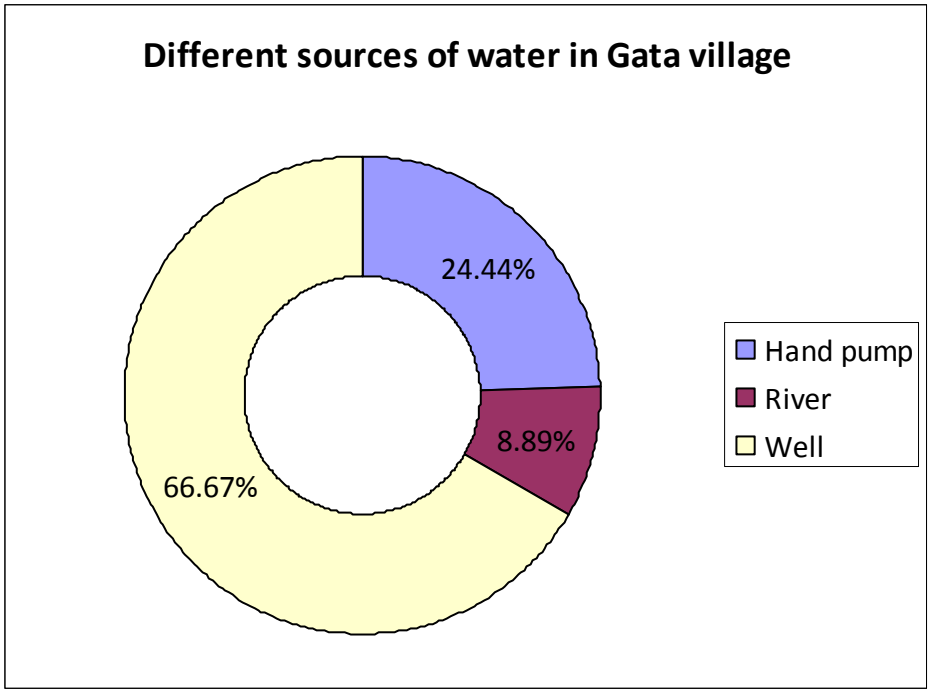

Figure 2.9: Break-up of different sources of water in Gata village

The source of water was divided into 3 categories namely Hand pump, River and Well. The source of water was calculated based on the primary source of water for each family.

As per our findings, about 66.67% of the village households used wells to meet their daily requirements of water. Those that relied on natural sources like rivers constituted the lowest percentage, about 8.89%. The usage of hand pumps is low at 24.44% because it either does not work properly or because there are less than 2 hand pumps in the entire village thereby making it an inconvenient source.

Demographics:

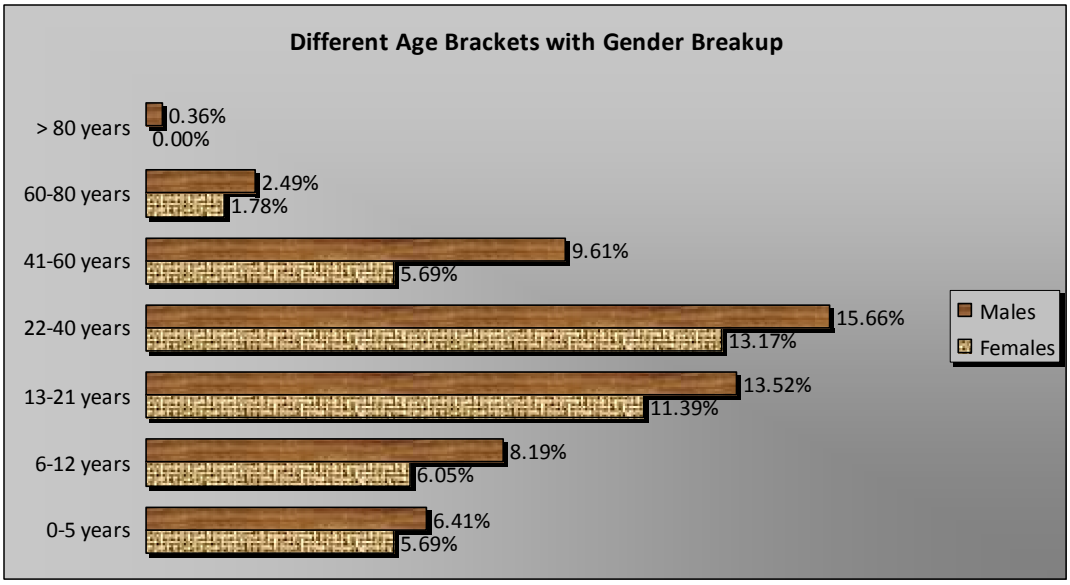

Figure 2.10: Break-up of different age brackets and gender break-up in Gata village

As per our findings, the highest percentages of people were aged between 22-40 years, constituting 28.83% of the population while the lowest percentage of people comprised those that were above the age of 80 constituting 0.36% of the population.

LAND /PROPERTY OWNED

Type of land owned:

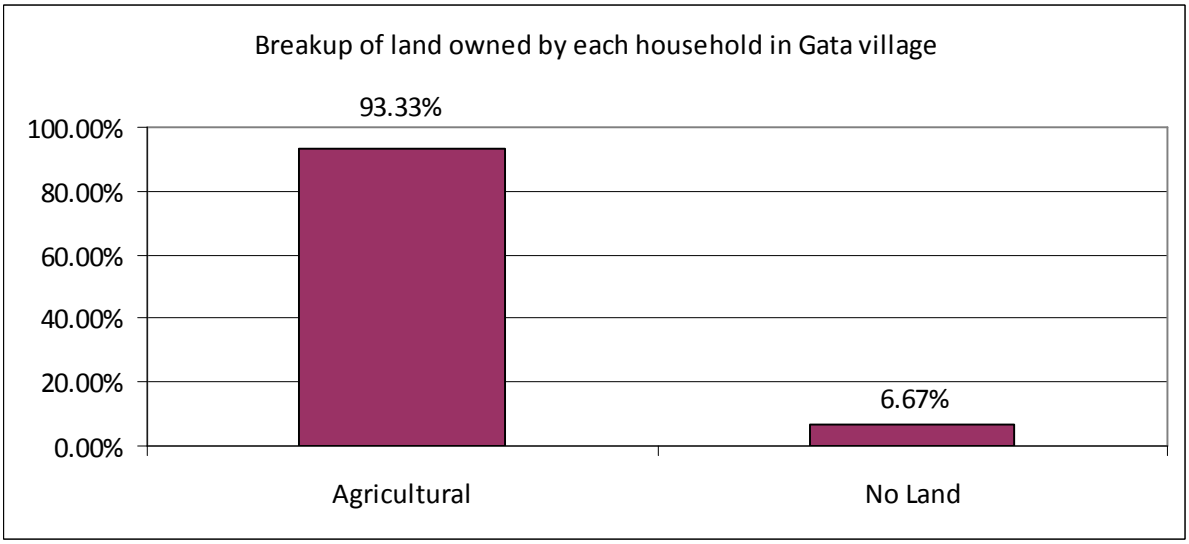

Figure 3.0: Break-up of land owned by each household in Gata village

Agriculture was divided into 3 categories namely Agricultural, Non-agricultural and No Land. The data for 'Agricultural' was drawn on the basis of whether people owned land and whether they practised agriculture or not

As per our findings, 93.33% of people owned agricultural lands while the remaining 6.67% consisted of people with no land. There was nobody in the village who owned non-agricultural land.

The percentage of people in the category 'No Land' includes people whose land is not suited to agriculture as well as those who do not own land of their own.

Although the yielding crops varied between rice, wheat, millet, sesame seeds and corn, 100% of these crops were used for self- consumption and none of these households sold their produce. Their yearly yield was insufficient to meet their household needs, which compelled them to purchase additional quantities of food grain from the market.

Area of Land Owned:

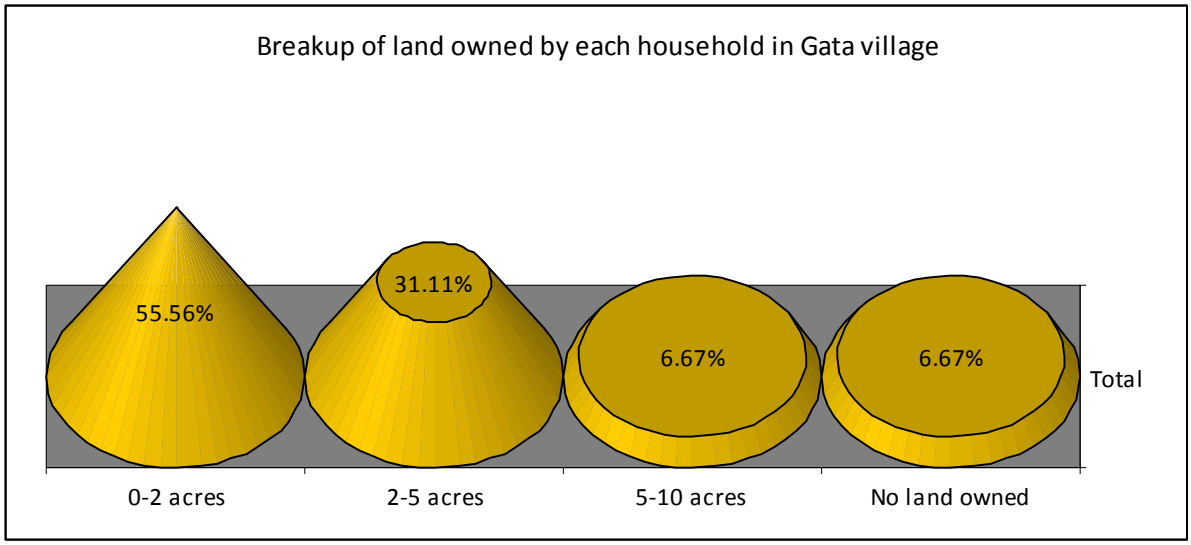

Figure 3.1: Break-up of size of land owned by each household in Gata village

Area of land was divided into 4 categories namely 0-2 Acres, 2-5 Acres, 5-10 Acres and No land owned. Area of land was calculated on the basis of size of land owned by each household.

The highest percentage of people owned land in the range of '0-2 Acres' constituting of 55.56% of the population while an equal percentage of people either owned '5-10 acres' of land i.e. 6.67% or didn't own land

The 6.67% percentage of people who fell within the bracket of 'No Land', either didn't own land or they hadn't received their share of land after their father's land had been partitioned.

LIVESTOCK DATA

Livestock owned:

Livestock was divided into type of livestock such as bulls, cows, goats, buffaloes, kids, hens and chickens. There was also a category for those that didn't own livestock.

As per our findings, bulls accounted for the highest percentage at 53.69% followed by cows at 19.21%.

Chickens accounted for the least percentage of livestock i.e. 2.96%. Bulls and cows are favoured over the rest as they are found to the most useful of the lot- bulls are utilised to plough fields while cows are milked. Their dung is used for a variety of purposes such as fuel for cooking, manure and to plaster houses.

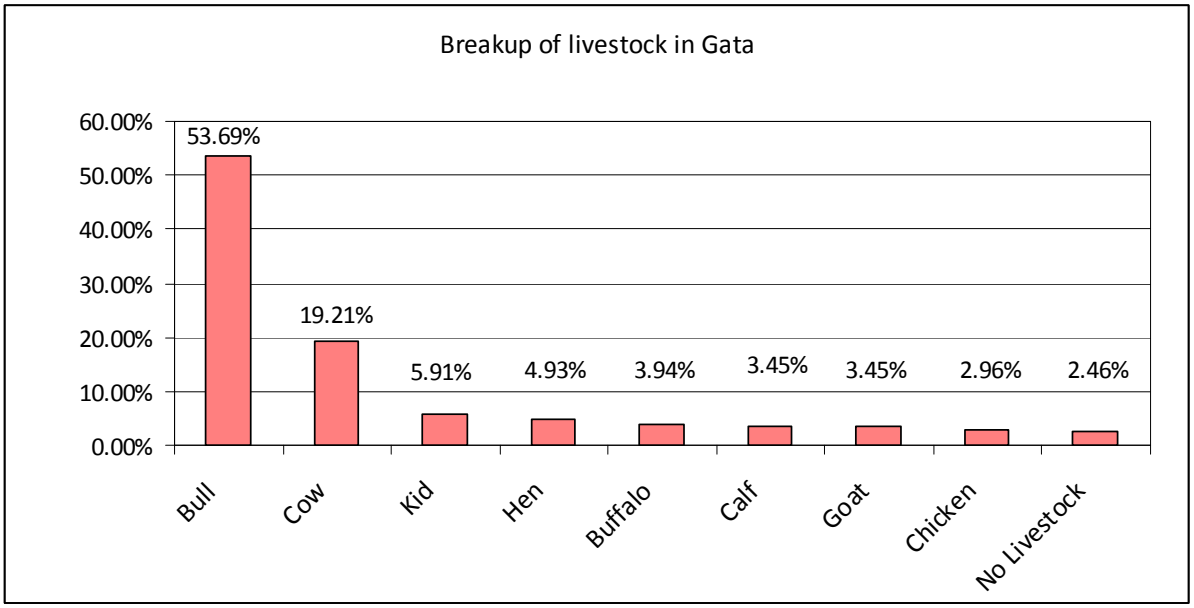

Figure 3.2: Break-up of livestock in Gata village

Goats and kids are least favoured as their purpose is restricted mostly to milking.

In these parts, livestock also have immense cultural value. Social status is determined by number and type of livestock owned. For example, cows and bulls are a determent of a well-to-do household while hens and chickens are supposedly signs of an impoverished household. Livestock such as cows and bulls are also used as gifts that are given to the daughter of the house when she gets married.

Purpose of Livestock:

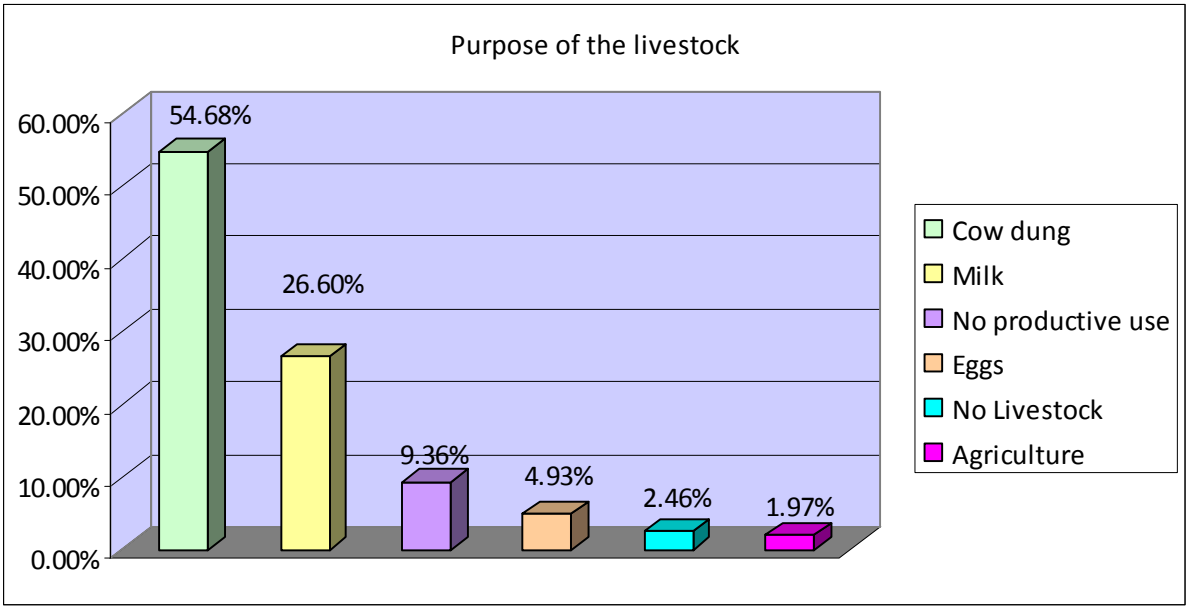

Figure 3.3: Break-up of purpose of livestock in Gata village

Note*: Each livestock may be used for more than one use; the data shown above thus only the primary use as indicated by the household*

Purpose of livestock was divided into 6 categories namely Cow dung, Agriculture, Milk, Eggs, No livestock and No productive use.

As per our findings, 54.68 % of cattle were used for cow dung, followed by milk at 26.60%. Livestock is used in agriculture wherein bulls are made to plough/till the land. Cow dung is an important product as it acts as an efficient means of cooking fuel, manure for the fields and is also used to plaster walls.

The livestock here yield very little (up to 1 cup) or no milk; this output has no commercial value. Therefore, the use of livestock for milk is low.

Eggs laid by hens are used either for self consumption or for sale in the market. The 'No productive use' category consists of 'kid' and 'calf'.

RATE OF PREDATION

Compensation data:

Compensation given	Bull	Calf	Cow	Goat	Not Killed	Buffalo	Grand Total
700.00	1		3				4
1,000.00	1						1
1,200.00				1			1
1,500.00	2						2
1,800.00			1				1
2,000.00	3		1				4
2,200.00	1						1
2,500.00	1						1
5,000.00	1		2				3
Not applicable	1				19		20
Not Given	10	1	4	3		1	19
Grand Total	**21**	**1**	**11**	**4**	**19**	**1**	**57**

Figure 3.4: Predation data in Gata village

The data for predation was collected on the basis of livestock killed, type of livestock killed, and compensation amount given / not given to the parties concerned, the carcass disposal and predatory type

As per our findings, over the past 5 years there have been about 38 cases of cattle kills in this village. Out of these, 21 have been of bulls, 11 of cows, 1 of a buffalo, 4 of goats and 1 of a calf.

19 cases have been recorded where compensation has not been given. However, during our survey we also found that 79% of these cases were more than 1 year old. It was brought to our notice that the Forest Department has recently made changes in the procedure of disbursing the claim and the affected family now gets a sum of Rs. 2000 as compensation immediately on the say of the kill without any questions being asked. The balance claim (if any) is disbursed after the investigating team completes its enquiries and procedures.

Disposal of carcass:

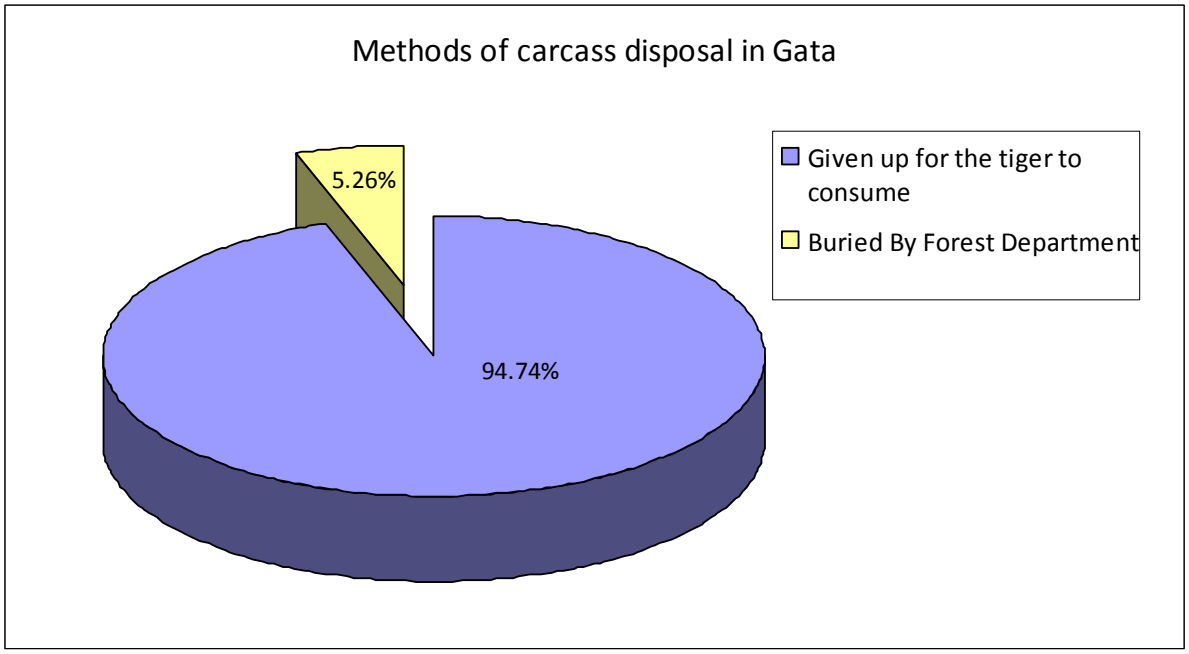

Table 3.5: Disposal of Carcass in Gata village

The method of disposal has been divided into Given up for the Tiger to consume and Buried by the Forest Department.

Interestingly, the highest percentage falls in the 'Given up for tiger to consume' category at 94.74% while the lowest is found to be in the 'Buried by Forest department' category with 5.26%.

GHAGHUD

Figure 3.6 : A cowshed in Ghaghud village

Situated at the co-ordinates 23° 41' 31"and 81° 6' 14", Ghaghud lies within a radius of 1 km. from the National Park.

The plain terrain is marked by an abundance of mango, tendu and mahua trees. The land here is more or less fertile with majority of the population owning Agricultural land. There are approximately 30+ households in this village, 100 % of which were surveyed.

This village was chosen as part of our survey because of rampant predation of cattle in these parts.
The data has been collected under the following categories namely Household data, Land/ Property Owned data, Livestock data and the Rate of Predation data in these villages.

HOUSEHOLD DATA

Income groups:

The level of income was divided into 7 categories as shown in Figure 3.7.

The level of income was calculated on the basis of *the total income per household per month*. The main sources of income for this village included activities like mahua collection, tendu leaves collection and daily wage labour

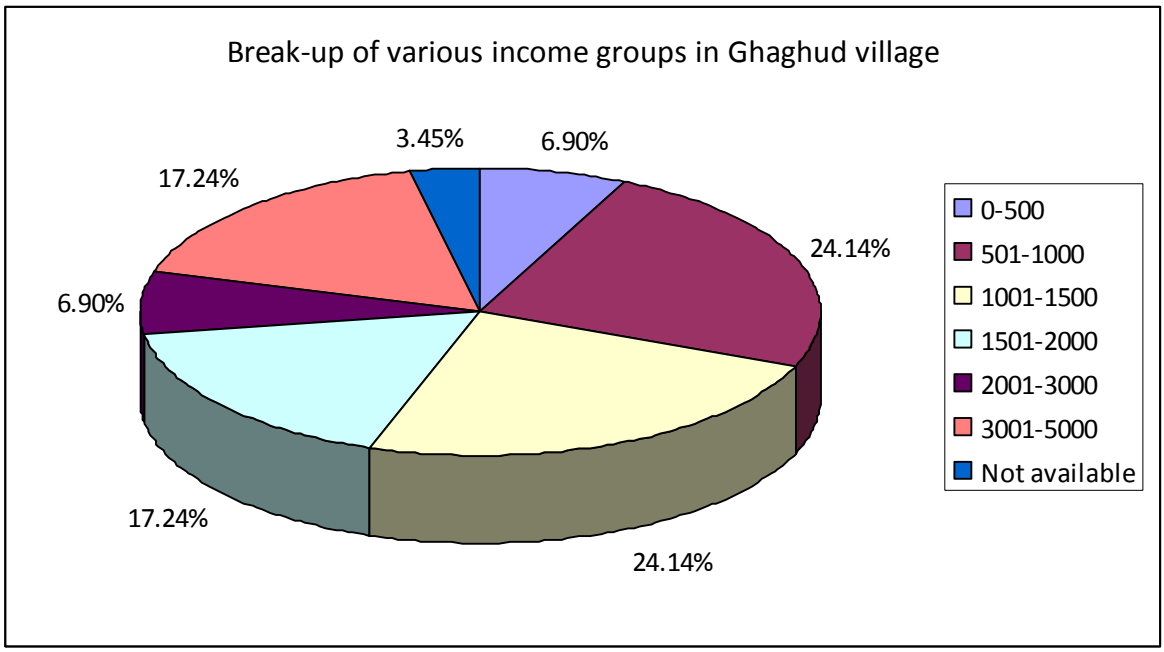

Figure 3.7: Breakup of various income groups in Ghaghud village

As per our findings, an equal number of people earned in the range of '501-1000' and '1001-1500' consisting of 24.14% of the population each; while the lowest percentage of people earned between '0-500' and '2001-3000' consisting of 6.90% each. There was one family where the income was not known by the family member.

However, an interesting point to note here is that an equal percentage of people fell within the '1501-2000' and the '3001-5000' range totalling up to 34.48% of the population.

Constant fluctuation in the monthly income is primarily due to the variety of sources; for example sole dependence on forest products like mahua and, tendu leaves, contractual labour work and agriculture make it very difficult for these villagers to have a stable income on an ongoing basis.

Education:

The levels of education was divided into various categories as shown in Figure 3.8

As per our findings, 16.67% of the population have passed the 8th standard which is the highest percentage amongst all the classes. After this, the percentage of people who have passed class 12 has dropped down to 0.62.

This is probably due to the presence of schools in the village till the 8th standard. Proximity of schools is directly related to the enrolment percentage as well as the dropout rate. Greater the proximity of the school better is the attendance level among children.

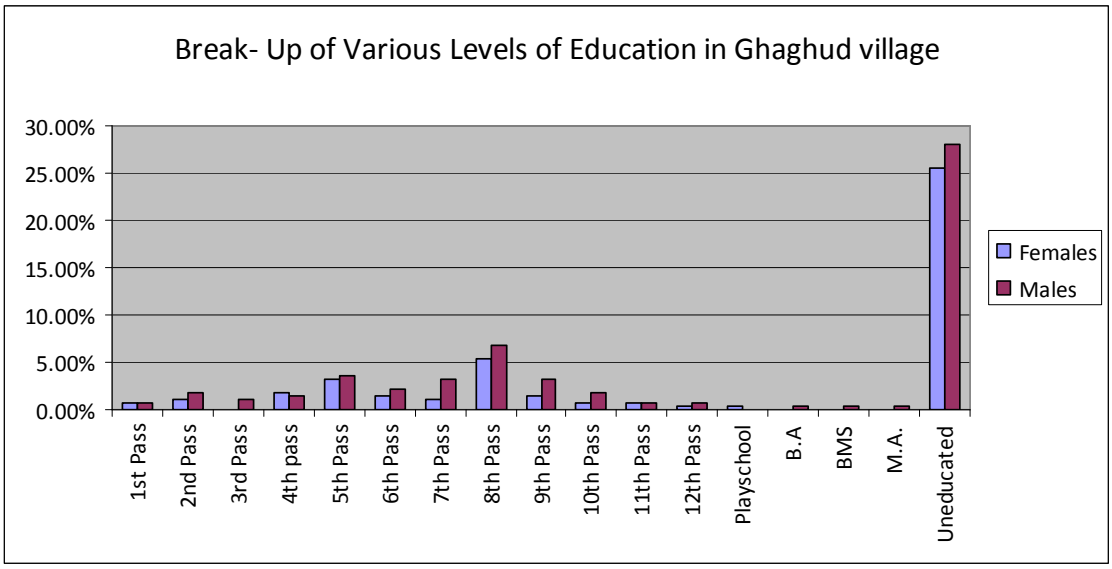

Figure 3.8: Break-up of various levels of education in Ghaghud village

People interested in studying beyond the 8th standard have to travel 15 kms. to Manpur, which is the nearest place with the required educational facilities. Those that cannot make the journey, drop out. The percentage of men that travel to Manpur is higher than women because of prevailing social customs that may prevent women from travelling so far unaccompanied.

The percentage of uneducated people is 40.74% (13.58% men and 27.16% women) is either due to inaccessibility of schools or poverty levels or both.

Sources of Water:

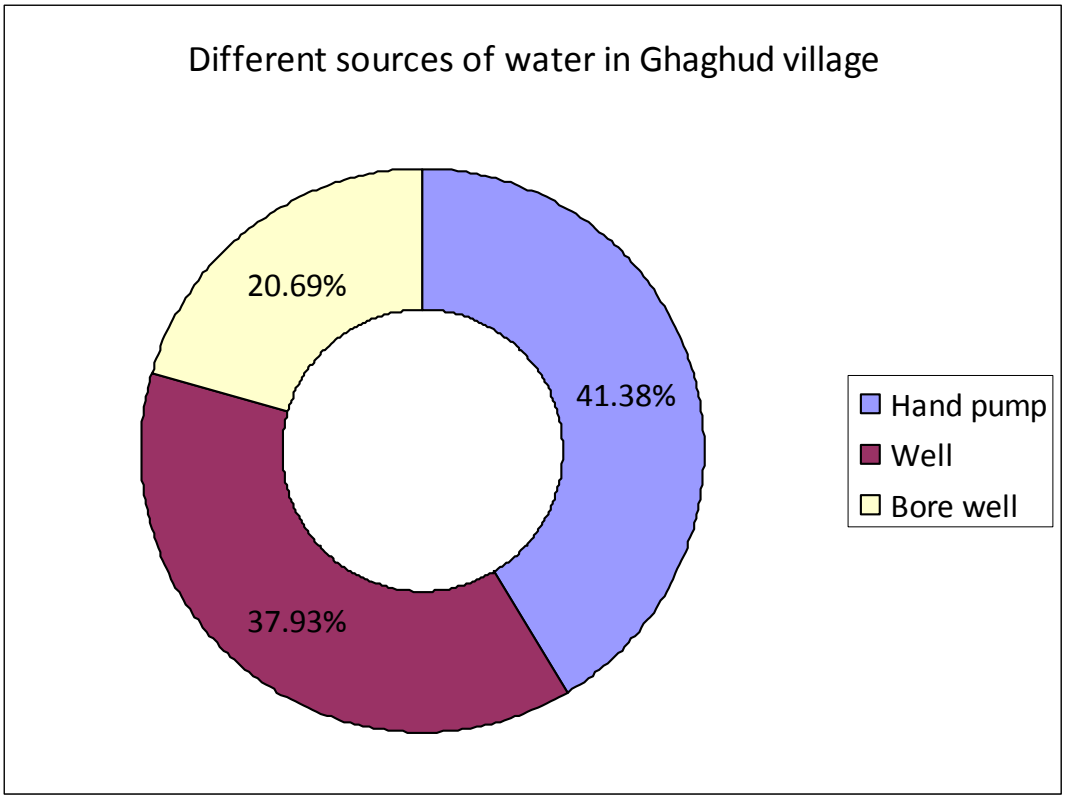

Figure 3.9: Break-up of different sources of water in Ghaghud village

The source of water was divided into 3 categories namely Hand pump, Well, Bore well. The source of water was calculated based on the primary source of water for each family.

As per our findings, about 41.38% of the village households used hand pumps to meet their daily requirements of water. Those that relied on bore wells constituted the lowest percentage i.e. 20.69%. The usage of hand pumps is high because they are present within the village itself. On the other hand, the use of bore wells is low because it runs on electricity which is not present in a large section of the village thereby rendering the existence of bore wells as an expensive source of water.

Demographics:

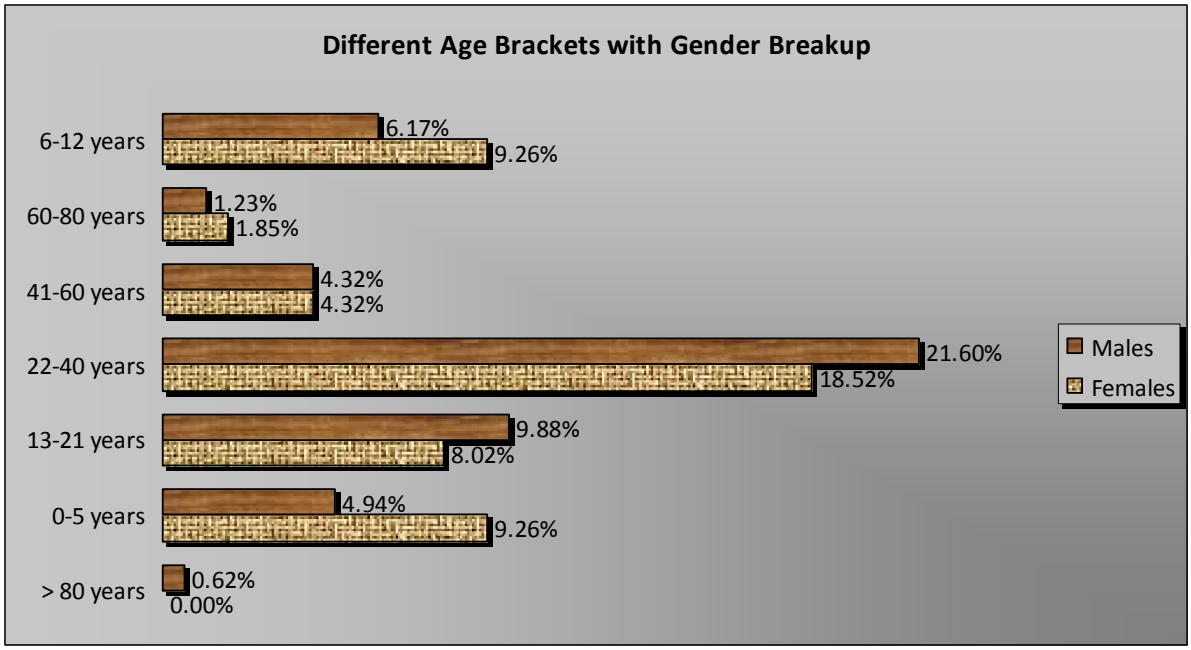

Figure 3.10: Break –up of different age brackets and gender break-up in Ghaghud village

Age bracket was divided into 7 categories namely 0-5 years, 6-12 years, 13-21 years, 22-40 years, 41- 60, 60 - 80 years and >80years.

As per our findings, the highest percentages of people were aged between 22-40 years, consisting of 40.12% of the population. The lowest percentage of people comprised of those who were above the age of 80 constituting 0.62% of the population.
The reason for lesser percentage of people living beyond 80 years could be due to dearth of medical facilities available for senior citizens residing in the village.

LAND/PROPERTY OWNED

Type of land owned:

Agriculture was divided into 3 categories namely Agricultural, Non-Agricultural and No Land. The data for 'Agricultural' was drawn on the basis of whether people owned land and whether they practised agriculture or not.

As per our findings, majority of people in the village owned agricultural lands which constituted 96.55% of the population while a mere 3.45% of people owned non-agricultural lands. There was no data point in the 'No Land' category i.e. 100% of the households owned land.

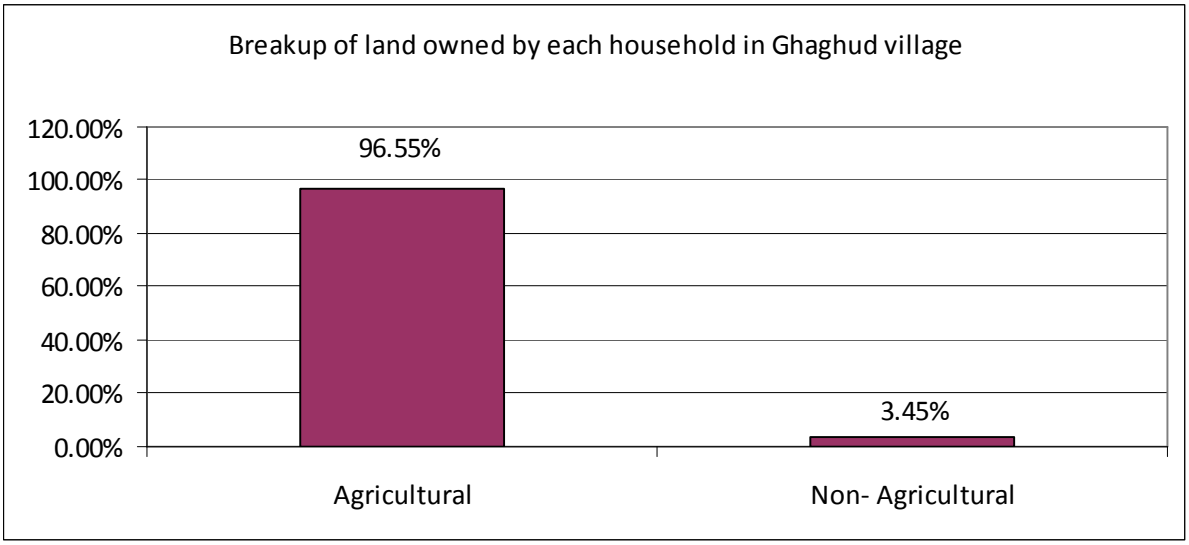

Figure 4.0: Break-up of land owned by each household in Ghaghud village

Although the yielding crops varied between rice, wheat, millet, sesame seeds and corn, 100% of these crops were used for self- consumption and none of these households sold their produce. Their yearly yield was insufficient to meet their household needs, which compelled them to purchase additional quantities of food grain from the market.

However, lack of fertilizers, livestock or irrigational facilities could be some of the reasons for Non-Agricultural land being owned by 3.45% of these households.

Area of Land Owned:

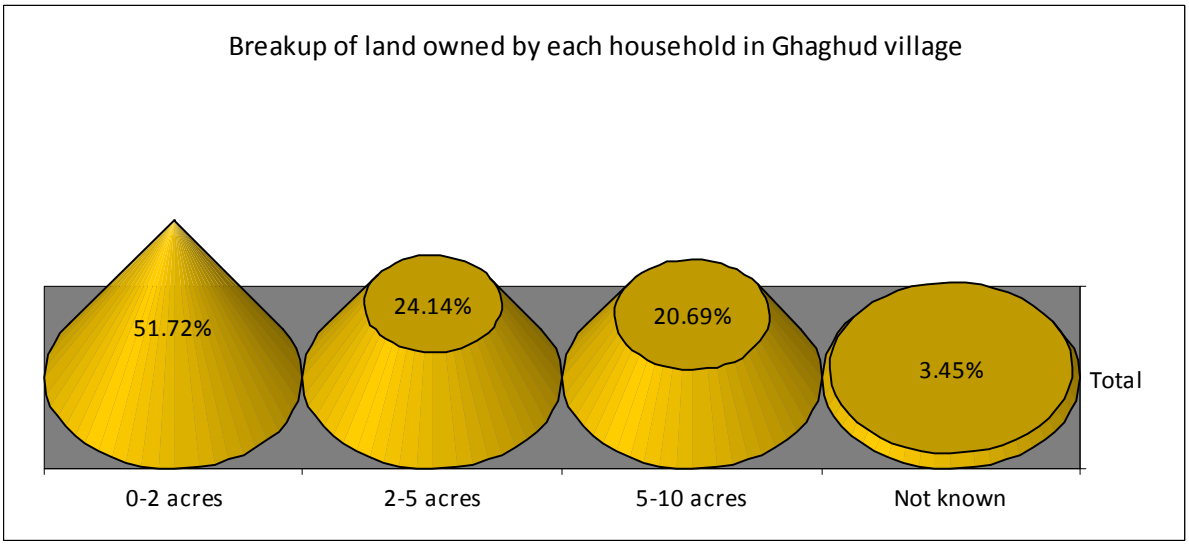

Figure 4.1: Break-up of size of the land owned by each household in Ghaghud village

Area of land was divided into 5 categories namely 0-2 Acres, 2-5 Acres, 5-10 Acres and Not known. Area of land was calculated on the basis of size of land owned by each household.

The highest percentage of people owned land in the range of '0-2Acres' constituting of 51.72 % of the population while the lowest percentage of people i.e. 20.69% owned between '5-10 acres'. One of the households did not have the specific information about the area of land owned by them.

LIVESTOCK DATA

Livestock owned:

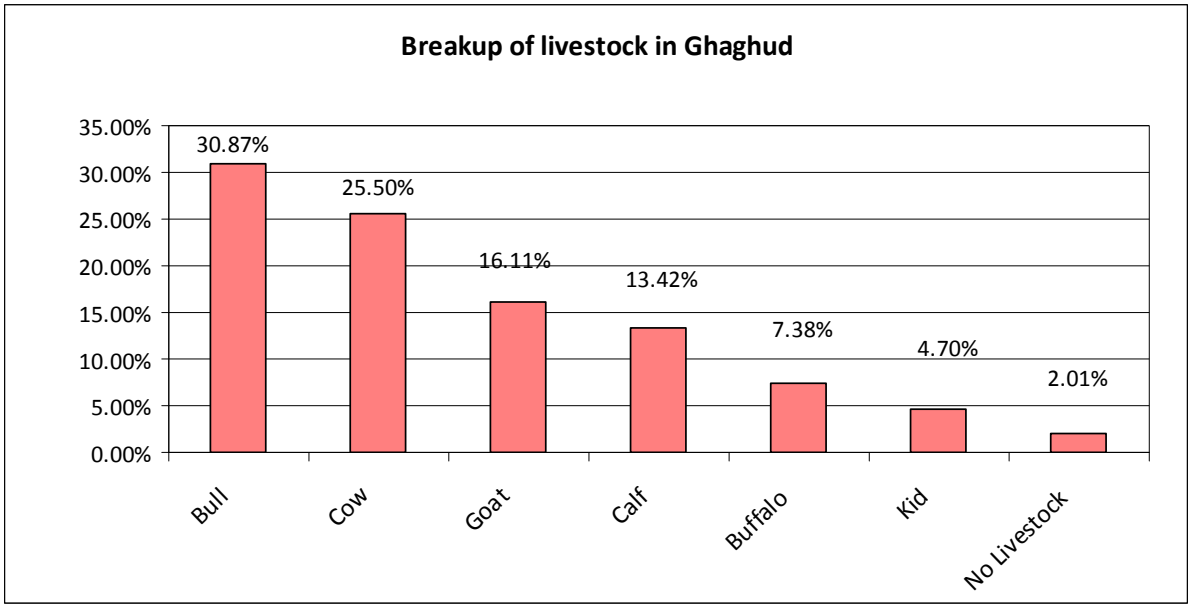

Figure 4.2: Break-up of livestock in Ghaghud village

Livestock was divided into type of livestock such as bulls, cows, goats, buffaloes, kids. There was also a category for those that didn't own livestock.

As per our findings, bulls accounted for the highest percentage at 30.87% followed by cows at 25.50%.

Kids accounted for the least percentage of livestock i.e. 4.70%. Bulls and cows are favoured over the rest as they are found to the most useful of the lot- bulls are utilised to plough fields while cows are milked. Their dung is used for a variety of purposes such as fuel for cooking, manure and to plaster houses.

Goats and kids are least favoured as their purpose is restricted mostly to milking.

In these parts, livestock also have immense cultural value. Social status is determined by number and type of livestock owned. For example, cows and bulls are a determent of a well-to-do household while hens and chickens are supposedly signs of an impoverished household. Livestock such as cows and bulls are also used as gifts that are given to the daughter of the house when she gets married.

Purpose of Livestock:

Purpose of livestock was divided into 6 categories namely Milk, Cow dung, Cow dung & Agriculture, Milk & Cow dung, No productive use and No Livestock.

As per our findings, 38.26% of cattle were used for Cow dung followed by Agriculture at 30.87%. Livestock is used in agriculture wherein bulls are made to plough/till the land. Cow dung is an important product as it acts as an efficient means of cooking fuel, manure for the fields and is used to plaster walls.

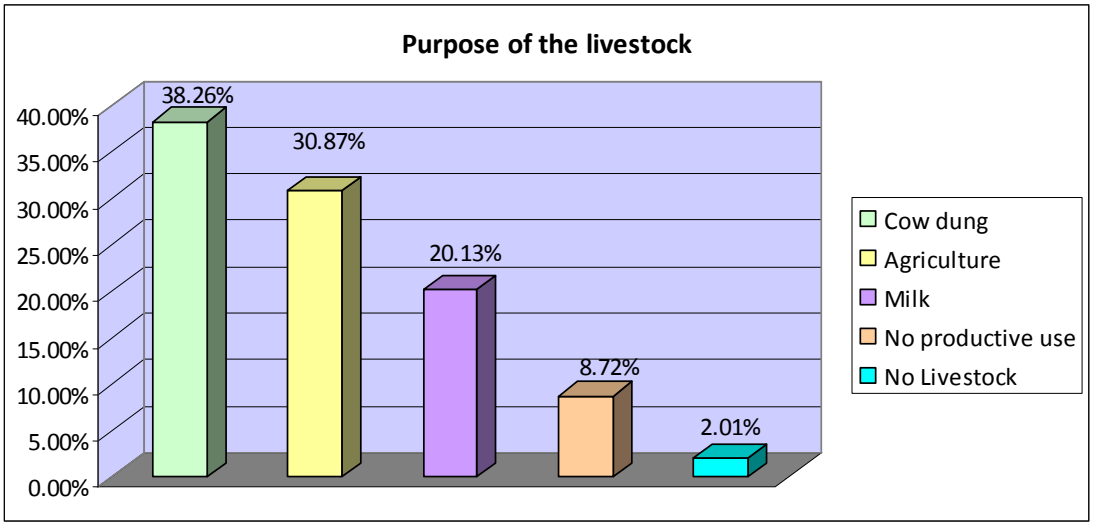

Figure 4.3: Break-up of purpose of livestock in Ghaghud village

***Note**: Each livestock may be used for more than one use; the data shown above thus only the primary use as indicated by the household*

The livestock here yield very little (1 cup) or no milk; this output has no commercial value. Therefore, the use of livestock for milk is low. The 'No productive use' category consists of 'kid' and 'calf'.

RATE OF PREDATION

Compensation data:

Compensation given	Bull	Cow	Not Killed	Buffalo	Grand Total
1,000.00	1				1
1,500.00	1	1			2
5,000.00	1				1
6,000.00	1	1			2
Not applicable			15	1	16
Not Given	5	1		2	8
Grand Total	9	3	15	3	30

Figure 4.4: Predation data in Ghaghud village

The data for predation was collected on the basis of livestock killed, type of livestock killed, and compensation amount given / not given to the parties concerned, the carcass disposal and predatory type.

As per our findings, over the past 5 years there have been about 15 cases of cattle kills, out of which 9 have been those of bulls, 3 of cows and 3 of Buffaloes.

However, the interesting thing to note here is that there are 15 houses where no kill has been made which are 52% of the village. This only goes to show that cattle kill is more prevalent in the other two villages surveyed. It probably has the least number of cattle kills owing to the fact that it is a small establishment and hence possesses lesser number of livestock.

8 cases have been recorded where compensation has not been given. However, during our survey we also found that 79% of these cases were more than 1 year old. It was brought to our notice that the Forest Department has recently made changes in the procedure of disbursing the claim and the affected family now gets a sum of Rs.2,000 as compensation immediately on the say of the kill without any questions being asked. The balance claim (if any) is disbursed after the investigating team completes its enquiries and procedures.

Disposal of Carcass:

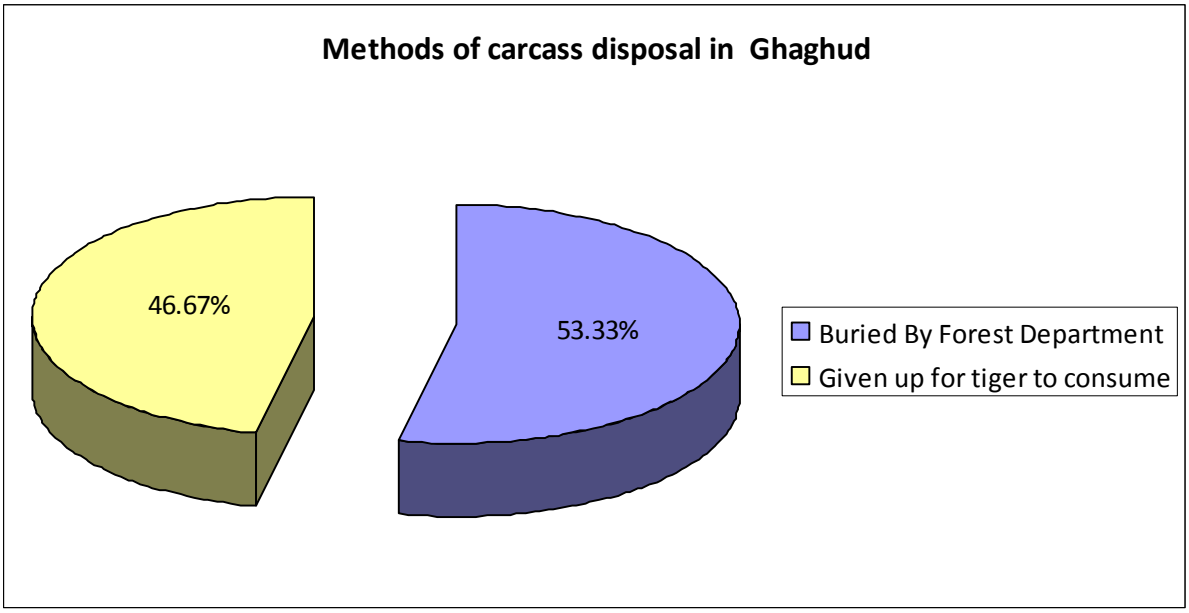

Figure 4.5: Disposal of carcass in Ghaghud village

The method of disposal has been divided into No kills, Given up for the Tiger to consume, Buried by the Forest Department.

The highest percentage falls in the 'Buried by Forest department' category at 53.33% while the lowest is found to be in the 'Given up for the Tiger to consume' category at 46.67%.

RECOMMENDATIONS

The survey was conducted to evaluate the effect that the forest and wildlife had on the people by determining and studying those factors that had a direct/indirect impact on their livelihood and lives. The following are the recommendations based on the survey conducted:

Household data

1. Alternate sources of livelihood should be provided in order to make the villagers sustain the losses incurred due to close proximity to the forest.
2. Higher education (above class 8) to be made available in each village which will encourage people to continue their education without having to travel long distances. This in particular will help increase the literacy rate and hence career opportunities.
3. Sources of water: The only complaint here in terms of water shortage is the lack of facilities to harness the water for daily use. An increase in the number of wells and hand pumps will benefit the villages in sourcing water for their daily needs.

Land /property owned

1. Adequate irrigational facilities and modern methods of farming can increase the crop output, thus can be used to generate higher revenue.

Livestock data

1. Providing the villagers with yielding cattle and teaching them the techniques of managing them will help them financially by sale of milk and milk products, being an additional source of income.
2. Poultry farming can also be used as another source of income.

Rate of Predation

1. There has been a vast improvement in the execution of the cattle compensation programme over the past 3-4 months. The upfront Rs.2000 which is being paid has been very helpful and broadly people are quite happy.
2. Having said that, the following needs to be borne in mind :
    - The process is relatively new and needs to be followed through consistently. There is still a stray incident wherein a person claims not to have received compensation, but this is bound to be there.
    - The process is again very individual-centric. In this case, Shri Pathak seems to be the key person who has driven this change for the better. There is definitely a need to institute the same process to ensure continuity.
3. We would like to suggest that there is a "Grievance Redressal Cell" whose meeting is held at a fixed time every month and is attended by Shri Pathak or Shri Patil. This will give villagers an opportunity to raise their grievances at a forum where senior park management can listen to them. Last Wilderness Foundation will be happy to coordinate this effort - we can be the first point of contact with the villagers and we will get the genuine complaint cases for the meetings.
4. Building cowsheds: LWF would be happy to sponsor one cowshed in a village on a pilot basis. All yielding cows can be kept inside this shed - we could even have compartments inside the shed

to house cows from different castes. Killing of cows which are supposed to be in this shed will not be eligible for cattle compensation.

5. There is also the possibility of insuring cattle owned by the villagers. But the payment of insurance post a cattle-death will involve the villagers having to furnish 3-4 documents. So they will need considerable handholding in this regard.

Annexure I: Bandhavgarh Village Survey form

Date of survey _____ Name of village _____

Name of the village headman (being surveyed)_____

Gram Panchayat _____ District _____

No. of families in the village _____ Closest checkpost _____

Closest school and its distance _____ kms _____

Closest Hospital/ medical facility and its distance _____ kms _____

Most important thing in the village that needs to change _____

_____

_____

Any other remarks _____

_____

_____

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_____

Initials of surveyor_____

251-B, Kewal Industrial Estate, Senapati Bapat Marg, Lower Parel (W), Mumbai-400013. Phone number: (+91) 22-24990044.

Annexure II: Bandhavgarh Household Survey form

Date of survey _____ Name of village _____ Family head _____

Source of income _____ Average monthly Income _____ BPL card _____

Source of water _____ Electricity _____ Cooking Fuel_____

A) Personal Details (of every family member): Adults _____ Children _____

Sr. No.	Name	Age	Sex	Relation with head of family	Level of education	Known skill set (traditional or acquired)
1						
2						
3						
4						
5						
6						
7						

B) Livestock

Type of livestock owned by the family (Goat, cow, etc.)	Age of the respective livestock	What is the purpose of the livestock - Is the livestock yielding /Non- yielding?	What was the market value of the livestock when purchased?	What is the current market value of the livestock if sold?

C) Land/ property owned					
Type of land - agricultural or non-agricultural	Current market value (approx.)	Which is the yielding crop (if any)	Yield value (per annum)	Any other asset owned? If yes details pls.	Current market value of the asset

D) Predation					
Has their livestock ever been killed? If yes, what was killed?	What predatory Type killed their livestock?	How much compensation given to them?	Compensation processing time?	What was done with the carcass?	Remarks (first point of contact, number, middlemen, etc.)

Any other remarks for the family: _____

_____

_____

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Initials of surveyor_____