

**KNOWLEDGE, ATTITUDE AND
PRACTICE SURVEY FOR HUMAN
ELEPHANT CONFLICT IN ELEPHANT
CORRIDORS**



Grameen Foundation India

This report has been created for Wildlife Trust of India by Grameen Foundation India to document the Knowledge, Attitudes and Perceptions prevalent among communities living in the vicinity of elephant corridors, often in conflict with them. The results detailed in this document will be used by WTI to design their communication strategy to increase awareness, willingness to participate and participation itself in activities that will promote harmony between elephants and humans.

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Client Insights for Impact team at GFI is dedicated to providing advisory support to pro-poor organizations in the research, collection and application of easy to understand client/beneficiary level data that can be used as intelligence to provide services that are based on empirical evidence and can help organizations establish impact in the long run. Grameen Foundation's global research experience has helped the team to put together a suite of technical advisory products that cater to various needs of a pro-poor organization across the life span of a project. With the core experience of Grameen Foundation nestled in financial services, the team has been able to come up with research frameworks that can, among other things, help stakeholders determine the following:

1. Profile of clients being served including segments that interact best with products and services offered by the organization
2. Benchmarking quality of life, socio-cultural status of end beneficiaries
3. Tracking progress over time for select indicators at end client level to measure changes and establish program impact
4. Monitoring and Evaluation of the projects

Wildlife Trust of India (WTI) is a leading Indian nature conservation organisation committed to the service of nature. Its mission is to conserve wildlife and its habitat and to work for the welfare of individual wild animals, in partnership with communities and governments. WTI's team of 150 dedicated professionals work towards achieving its vision of a secure natural heritage of India, in six priority landscapes, knit holistically together by nine key strategies or Big Ideas.

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CONTEXT

Existence in isolation is a tragedy facing the Asian elephant today. The habitat of the elephant is at best fragmented today and lack of movement between habitats has caused concern, not just for the endangered elephant but also for the human settlements that often come into conflict with these animals. WTI, along with its partners, has been actively trying to secure the identified elephant corridors in India that can help reduce human-elephant conflicts, facilitate free and unhindered movement of elephants between habitats, rehabilitation of human settlements in the corridor area to safer environs with a supportive ecosystem, identify individuals/Community Based Organizations as Green Corridor Champions to enforce best practices to keep the passage secure, among others. In order to replicate this approach in about 100 elephant corridors in India, WTI wishes to engage local communities and the public at large through a communications campaign called Gaj Yatra. The program will bring together different stakeholders that affect the elephant and its habitat to influence them towards a pro-elephant approach and endorse the well tested, grounded models of engagement as propounded by WTI. To ensure that the communications campaign is based on empirical evidence gathered from the root of the problem itself- the elephant corridors, WTI engaged Grameen Foundation India's Client Insights for Impact team to collect data around the behaviours, attitudes and awareness levels of different stakeholders.

Accordingly, GFI conducted a survey across 12 elephant corridors in 7 states with an aim to capture the following:

1. **Knowledge** of the community around HEC
2. **Assessment of human-elephant conflict (HEC)** including sightings, encroachments, loss of life and assets.
3. **Economic dependency on elephant corridor** including poverty levels in the community.
4. **Awareness and perceptions of the community** about elephants including policy thrust on significance of elephants
5. **Awareness and perceptions of the community on the current initiatives** undertaken by the GCC in their geography.
6. **Identification of communication infrastructure** that works best for the community.

CHARACTERISTICS OF HOUSEHOLDS THAT PARTICIPATED IN THE SURVEY

The total quantitative survey sample size was 728 across 12 elephant corridors. Along with the qualitative surveys, the exercise was carried out from May 2017 to September 2017 and covered 7 states of West Bengal (2 corridors, 246 sample, 35%), Assam (2, 122, 17%), Odisha (2, 120, 17%), Tamil Nadu (2, 99, 14%), Uttarakhand (2, 49, 7%), Karnataka (1, 42, 6%) and Arunachal Pradesh (1, 22, 3%).¹

¹ Refer to Annex II for more details

The survey was designed to test attitudes equally amongst adults and children (individuals between the age of 12 and 18) separately. As a result, the sample design was divided into two parts separately covering 368 households and 360 children².

In addition, the quantitative survey was supplemented by focus groups in the community. To build an effective communications campaign it was important to understand perspectives of individuals in position of authority and significance who have a direct or indirect bearing on the changes which occur along the elephant corridors. Accordingly, one-on-one in-depth interviews were conducted with key employees at Government ministries & departments that directly influence the ecological design of the elephant corridors mainly through large-scale infrastructure projects including National Highway Authority of India, and the staff of Forest Departments.

RESPONDENT PROFILE:

Gender and age:

Of the total adult (above the age of 18) household members surveyed, 62% were male and 38% were female. Nearly 60% of these respondents were between the age group of 18 to 40 (with 30% each between the age group of 19 to 30 and 31 to 40), 20% were between 40 years to 50, 15% between the age of 50 to 60. Typically the households had between 2 to 4 members with only a fourth of households having more than 4 members. Out of the 360 children surveyed, 203 (56%) were male and 157 (44%) were female. The sample was approximately evenly distributed through the age bracket of 13 to 18 years.

Housing:

Nearly 90% of households surveyed along the elephant corridor owned their homes with only 8% being tenants. However, over two-thirds of the households were either kutchra or semi-kutchra. A small percentage of households (3.8%) that owned their homes had also had them mortgaged. A reasonable majority of households (72%) had access to a toilet, which was most likely to be a closed-pit one. 28.8% of households on the other hand had no access to a toilet, with open-field defecation being a common practice. Nearly 45% of households had to travel to fetch drinking water.

Caste and religious affiliations:

Over two-fifths of the households identified themselves as belonging to the General caste and a fourth as Scheduled Tribe (ST). The balance third were evenly distributed between Scheduled Castes (SC) and Other Backward Castes (OBC). The religious identity of 80% of the sample households was Hindu with 12% as Christians. The caste and religious characteristics of the children's sample more or less mirrored those of the adult sample.

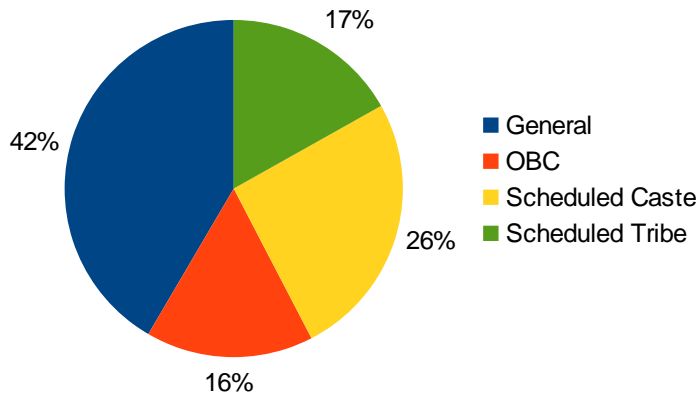


Figure 1: Caste Distribution of Adult Respondents

Education:

The education levels on the whole were low across the sample with nearly half the adults surveyed cited their education as being primary level or less or not literate and only 22% of the adult population having completed secondary or higher education. Three-fourths of the sample was school-going.

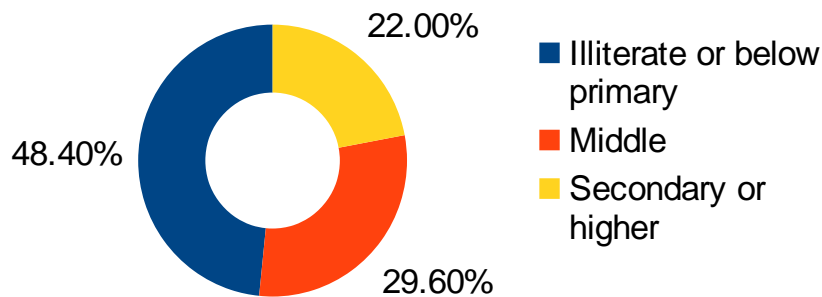


Figure 2: Education Level of Adult Respondents

Poverty and economic status:

In terms of economic profile of the households, the survey showed that 16% of the households fell below the National Poverty Line (NPL) while 28% of households earned between the NPL and \$4 per capita per day at 2011 PPP. More than half the sample households (56%) were above the \$4 poverty line³. Typically, in a household, the number of earning members were one (55%) to two (28%). “Wage labour” emerged as an important source of occupation for over a third of the households (35%) followed closely by agriculture (30%). A smaller fraction (11%) of the surveyed households had salaried employment and an equally small but significant number of households (7%) had no earning member.

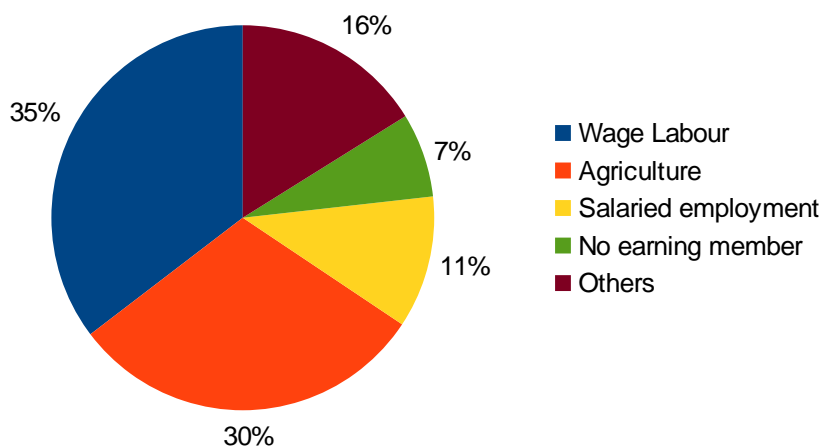


Figure 3: Primary Source of Household Income

KNOWLEDGE, PERCEPTION AND ATTITUDES OF HOUSEHOLDS

The Gaj Yatra communications campaign is intended to understand and influence the knowledge, practices and attitudes of different stakeholders along the elephant corridor towards elephants. Knowledge, practices and attitudes are a result of how elephants impact lives of individuals and people's understanding of this impact, what people hear, see and read about elephants from other sources.

Thus the findings of the survey are grouped into four heads:

- How elephants have impacted the lives of households – both in terms of direct experience as well as people's understanding from other sources;
- Secondly, how people interpret and understand the causes behind these effects and their impact as well as the behaviour of elephants;

- Thirdly, how both the impact and its understanding has shaped the attitudes and behaviours of individuals towards elephant and conservation;
- Fourthly, what can bring about a positive change in the attitudes of households and other key stakeholders, towards conservation of elephants and their corridors?

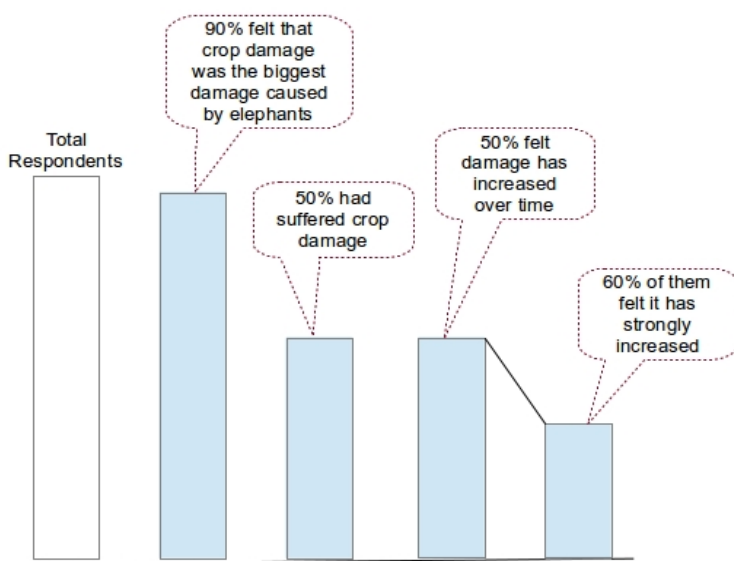
IMPACT OF ELEPHANTS ON HOUSEHOLDS

The conflict of humans along the elephant corridors with elephants and their perceptions towards the elephant can be broadly thought to be triggered by three factors:

- Their reliance on forest produce and hence the need to have uninterrupted access to forests;
- The direct impact on economic assets and human life;
- and to a very limited access, how human-elephant interactions inconvenience day to day practices.

Conflict because of dependence on forest produce and agriculture:

Nearly half the households surveyed had access to nearby forests. Firewood was the



primary item for which households relied on forests (41%) followed by timber (24%), food (24%) and non-timber forest produce (15%). 81% of households had access to electricity and the ones that did not, were reliant more on kerosene than any other source. As a result, firewood is primarily being used for the purpose of cooking as only 48% of households surveyed had a LPG cylinder with almost all the rest

Figure 4: Crop Damage due to Elephants

using firewood as the primary energy source of cooking. The continuing dependence on forest produce for energy for cooking and other items was an important consideration. However, the most significant factor appeared to be direct impact (or perceived direct impact) of elephants on **agricultural cultivation**. To begin with nearly 90% of households cited damage to crops as the single biggest damage caused by elephants with nearly half the households having directly suffered crop damage on account of elephants. Over half the surveyed households felt that there has been an increase in damage to crops over the recent past and that this has been a trend for the past 15 years. 60% of these

respondents were more emphatic that the damage has not only increased but highly increased over these time frames. In a limited number of cases the households have even changed their cropping pattern on account of damage to crops.

This strong response of households around damage to crops may correlate to some degree with the fact that while only 30% of household cite agriculture as the main household occupation, nearly 45% of the surveyed household owned one or other piece of agricultural land and also regularly cultivated it. **Thus, even while not all the households relied on agriculture, a fair number of them were participating in some kind of agricultural cultivation and were bound to be affected by any factor which impacted cultivation.**

Conflict due to human infrastructure in forest vicinity:

Second to agriculture, damage to property emerged as an important factor that seemed to drive household perceptions. 70% of households stated that elephants caused property damage with

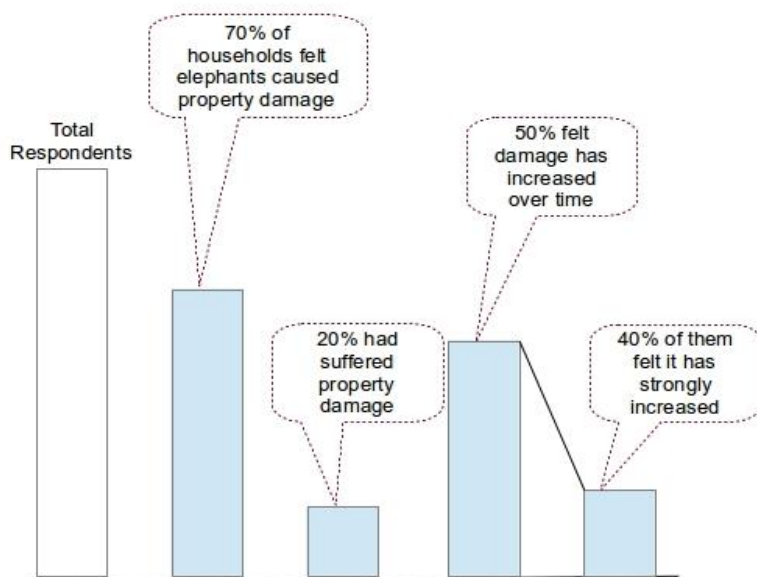


Figure 5: Property Damage due to Elephants

fact been consistently increasing over the past 15 years. A majority of these same households (60%) felt that there was certainly an increase but not a very high degree of increase. In general, the opinions of household with respect to damage to property was slightly restrained compared to their response damage to crops, but nonetheless a key influence on how they are likely to relate to elephants in general.

Notwithstanding the above responses to agriculture and property, it is worth noting that there was a significant constituency which felt that the damage due to elephants to agriculture (29%) and property (25%) has actually declined over time. Of these

over 20% of households having suffered a property loss on account of elephants. Half the households felt that the damage to property on account of elephants has increased, like agriculture, over the past 5 years with a slightly greater percentage feeling that the damage has in

households, nearly half of them felt that in fact the overall damage has materially decreased. *Thus, from the perspective of a communications strategy, it may be critical to understand how circumstances and background of this group of households differs from the group that holds a stronger contrary position.*

Conflict due to injury or loss of human life:

The positions were reversed when it came to how people felt about impact of elephants on human injury and loss of human life. A dominant majority (70%) felt that the impact due to elephants on these aspects has either remained stable (33 ~ 35%), or been gradually declining over time (35%). In fact there was a reasonably strong sentiment that this decline has been very significant (30%). This accords with the fact that human injury emerged as an important impact of elephants amongst a third of respondents and human death amongst a tenth of respondents as compared to damage to crop and property which were dominant concerns by a far greater degree.

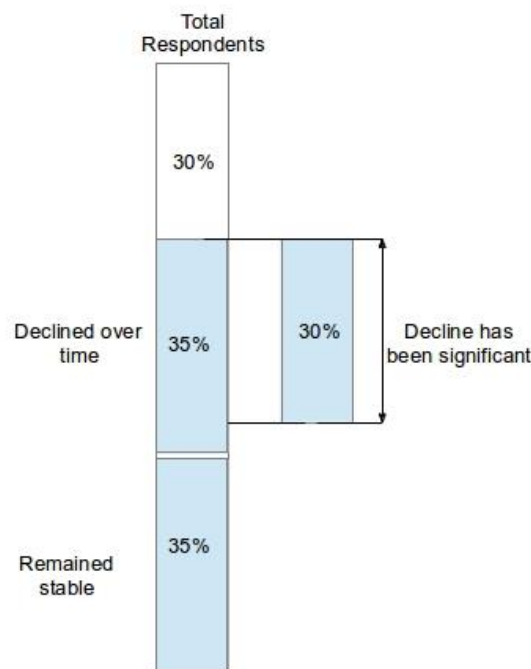


Figure 6: Human Injury and Death due to Elephants

The fact that a vast majority of household did actually feel a decline in injury and death due to elephants would signal the fact that in reality the frequency of incidents of HEC leading to injury and death may actually be lessening, and / or their impact may be less severe than before. From the perspective of a communications campaign, it would be useful to inquire into the causes behind this and feed this information into any future communications strategy. If an important reason for this decline may be attributed to adoption of better conservation practices and change in behaviour of individuals then it is possible to educate households to apply a similar lesson when it comes to dealing with

issues around crop-loss and property damage- the dominant reasons for conflict, at least for the areas that were covered under the current phase of survey.

Conflict due to compromise on human ‘convenience’:

Finally, elephants also had an impact on a somewhat less important but yet noteworthy dimension of people's lives: convenience. The biggest complaint of the households (65%) seemed to be the fact that elephants restricted their mobility. Being forced to go in groups for reasons of safety and changing sleeping patterns emerged as other visible inconveniences. An important reason behind all these would be the fact that the most likely time the elephants caused crop damage, property damage or human casualty was actually night-time (72% of households) followed by dawn and dusk (over 30%). Further there was no seasonal pattern to these damages and according to four-fifths of the households these damages occurred across the year. One consequence of this was that 40% of households felt that deploying human guards was an effective response strategy.

In summary, damage to crop & property dominate people's concerns around elephants and these are supplemented by restrictions on ability to access forest resources and certain adjustments people have to make in their daily routine. However, at the same time, there is also an understanding amongst a critical mass of households that over both the near and the longer term there has been a decline, at times very significant, in the damage that elephants have caused, particularly when it comes to the very sensitive and critical aspect of human injury and death.

PREFERENCE TOWARDS DIFFERENT MITIGATION MEASURES ADOPTED BY HOUSEHOLDS

What did the households believe was an effective response strategy? *The emphasis to a large extent was on responding to HECs as opposed to preventing one.* In responding to HECs the tendency was to use traditional measures such as bursting crackers (58%) and lighting a fire (46%) and avoid harsher measures like throwing hot water (11%) or capturing problematic elephants (18%).

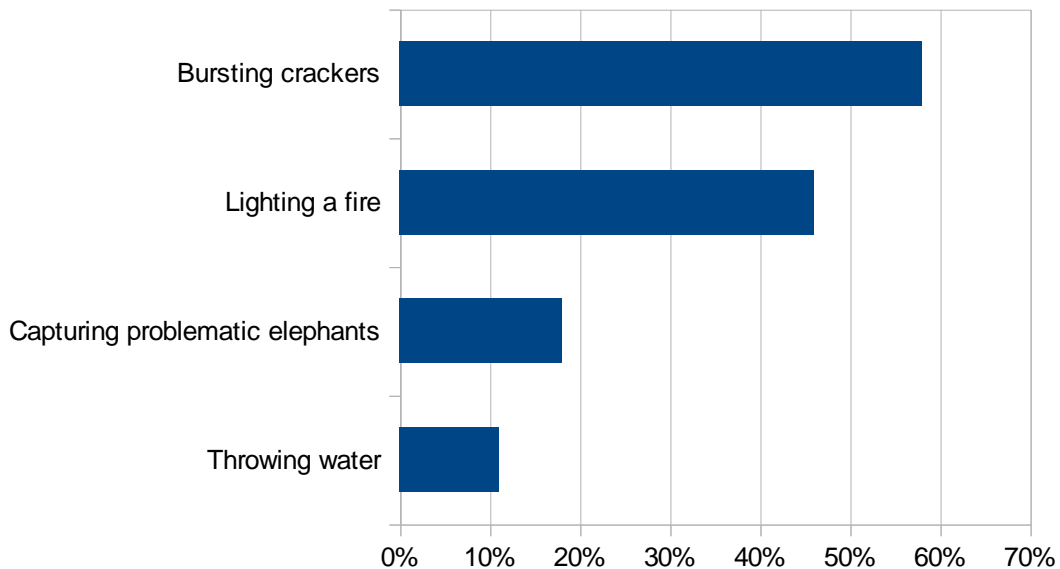


Figure 7: Most Effective HEC Mitigation Measures (According to Households)

On average **less than a fifth of households** felt strongly that **physical preventive measures** were important. Amongst preventive measures deploying security guards or deploying a electric fence ranked higher than erecting a physical barrier (14%). However, measures that involved maintenance, such as solar fencing provided by government, tended to lose their efficacy as many of them lie defunct in absence of a continuing service & maintenance support. The second aspect was that elephants were able to identify ways to circumvent many of such preventive measures. For example, households reported elephants using trees to break solar fences or filling up Elephant Preventive Trenches (EPTs).

Only 17% of the households felt that **awareness and training around conservation** could act as an important preventive tool. There were interesting initiatives observed within communities that had decided to use this measure to good effect which emerged when doing in-depth interviews and focus-group discussions with the community.

For example, in Valaprai division of Tamil Nadu, the community used technology as a means to disseminate information about elephant and elephant conservation. These included Bulk SMS, Voice calls, displaying stickers on local channels, elephant alert indicators et cetera. Households confided that there was a decrease in HECs in the area after introduction of these local awareness building measures.

There was also a tendency to use participative methods such as crop-protection committees or village-level squads which served as local self-defense mechanisms. However, this was not reported during the questionnaire-based survey but emerged

during in-depth interviews. A reason could be that it could be such a common-place practice that households fail to report it unless specifically probed or in some cases, such that emerged during the FGD in Odisha, the community confided that such committees tend to become defunct in the absence of a strong direction/guidance.

CAUSES BEHIND HEC: ROLE OF HUMANS

In testing the understanding of households it is *useful to test both systemic understanding and proximate understanding*. That is, it is useful to assess whether households grasp the more structural and underlying longer term causes that can potentially give rise to HECs as well as the more immediate causes which drive a change in the frequency and pattern of HEC conflict.

The three structural factors which the survey tested were around:

- Changes in population of elephants and human,
- Degradation or loss of elephant habitat and
- Proximity to elephant corridors.

Amongst the adult population it emerged that there was greater awareness of the fact that *loss of habitat* for elephants is the motivating factor behind HEC in general. Over 50% of the households attributed this as a critical cause. This was backed by over a third of households also recognising the role that *habitat degradation and*

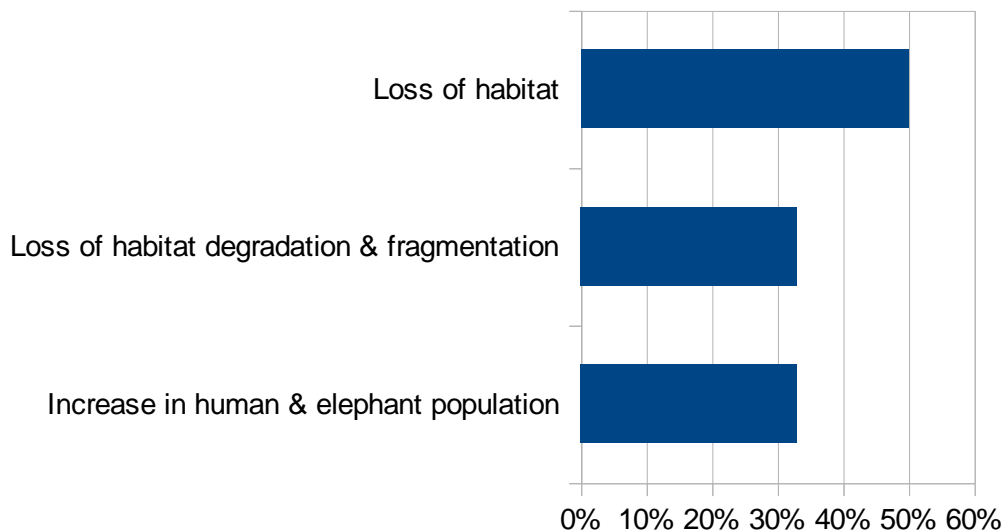


Figure 8: Reasons for HEC (as perceived by the adults surveyed)

fragmentation played on HECs. Only one-third of respondents felt that *increases in elephant and human population as well as proximity to forests* are really **critical** contributing factors.

This understanding of the structural factors was not mirrored when people were asked to identify reasons for an increase in HECs. There was a far greater appreciation of the fact that human factors seemed to have played a more influencing role in the increase of HECs with 27% of respondents citing increase in human population, another 24% of citing human activities and 9% citing inadequate preventive measures taken by communities and political leadership alike to manage conflicts as important proximate causes. At the same time, there was a group of households (30%) which felt that increase in elephant population was an important cause and a tenth of respondents felt that this could be attributed primarily to “*behaviour*” of elephants.

Thus, households do seem to understand that there are structural factors beyond elephant behaviour that seem to drive HECs alongside the fact that more recent human-generated concerns (increase in population, nature of activities and not taking proper mitigating and preventive actions) have an increasingly greater bearing on HECs.

ATTITUDES TOWARDS ELEPHANTS

While at some level households may refrain from attributing causes of HECs to elephants alone and maybe willing to take a more reasoned perspective, there may still be ingrained attitudes towards elephants. Hence, it was important to test how strong these attitudes are, and to what extent, if at all, are they consistent with the more reasoned perspective that these households hold.

On the positive side, amongst the adult respondents, there was a consensus that elephants do not approach human settlements to attack humans (90%) and three-fourth of the respondents also agreed that elephants, are intrinsically, not problematic. At the same time there was not adequate appreciation of the fact that if villages stand in the way of elephant passages (only 43% agreed to this) or block their traditional routes (only 30% agreed to this) can lead to increased chances of elephants approaching human

settlements more frequently.

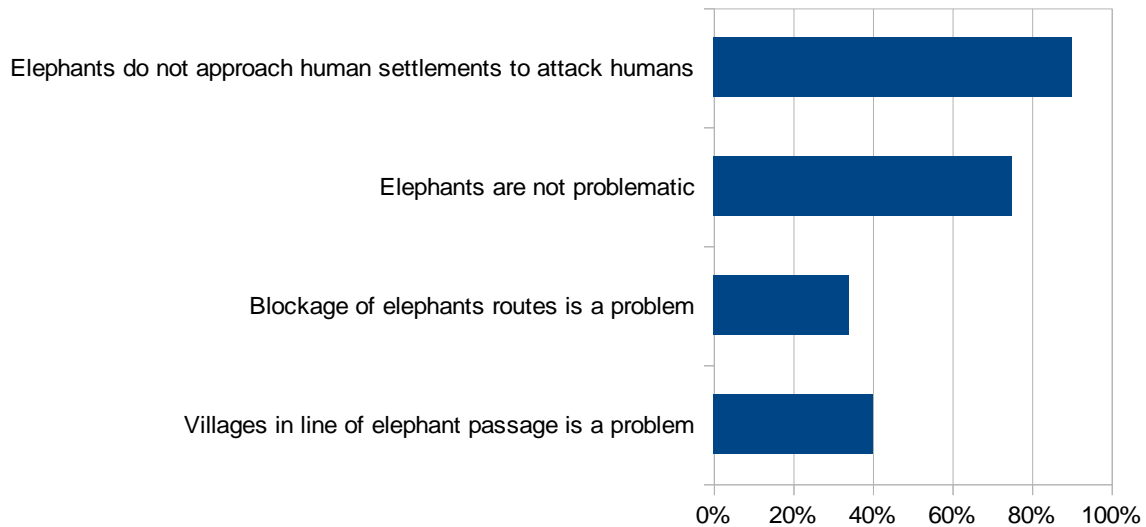


Figure 9: Reasons for Elephants entering Human Settlements (as perceived by adults surveyed)

As discussed in the previous section, there seemed to be a well-entrenched view that elephants approach human settlements in search of crops and grains. Part of the reason the households could be drawing this linkage could be due to the fact that damage to crop also happens to be the highest ranked impact on account of HECs to households. But at the same time, surprisingly, there was not a corresponding recognition of the fact agriculture being close to elephant habitats may be one of the contributing factors with only 40% recognising it as a factor.

HEC- through the eyes of children:

Children, on the whole, were able to draw connections between human activity and elephant behaviour. **34% of children felt that people and their activities do lead to increased elephant-human conflict**, while 53% of children cited an increase in elephant population as the cause of increased frequency of HECs.

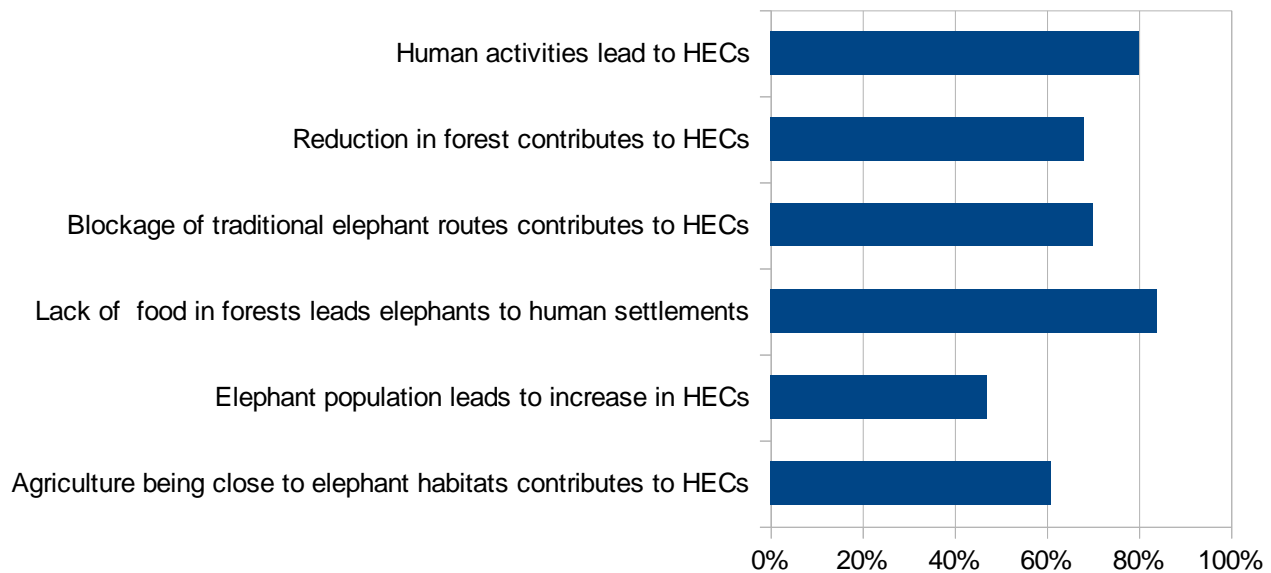


Figure 10: Cause of Increased Frequency of Elephant Visits to Human Settlement Areas (as perceived by children)

Children also differed in one another important aspect: when asked whether elephants approach human settlements primarily for crops and grains there was a strong view that they did not. This was in sharp contrast to adults where most adults felt that crops and grains was the most important factor. **In fact, the significance that adults attached to food and grain children seemed to attach to liquor with three-fourths of them under the impression that elephants approach humans due to availability of liquor.**

From the above it would seem that children seem to hold a more balanced view on the behaviour of elephants and its relation to HECs compared to adults. However, when asked questions, outside a specific context, about behaviour of elephants, **61% (23.3%) of children felt that elephants come to human settlements because they are problematic and that elephant behaviour has contributed to increased HEC (75%). In particular, there was a strongly entrenched sense that that elephants come to attack humans.**

Thus, there are greater inconsistencies in the views of children: on one hand they are able to link changes in individual factors on elephant behaviour, but on the other hand they still continue to hold a certain image of elephant behaviour in their minds and sub-consciously continue to strongly attribute behavioural aspects of elephants to HECs.

In general, at a cognitive level, adults and children hold an understanding that HECs is caused by non-elephant related factors. At the same time, the perception of elephants held by adults and children are, at times, contradictory to this understanding. This ambivalence shapes the broader attitude of the community towards elephant conservation.

ATTITUDES TOWARDS ELEPHANT CONSERVATION AND THEIR DRIVERS

Over half of adults (58%) and children (54%) felt that conserving elephants is important and 45% of adults and children felt that *human and elephant coexistence is possible*. From the elephant conservation perspective, this is not the most hopeful of answer but it is a starting point. A positive factor that can aid any conservation effort amongst this kind of a sample is the fact that a majority of both adults and children had an appreciation for the environmental aspect. 80% of adults and children felt that forests are necessary for environment and that elephants are equally important for both forests and environment. Secondly, many of the adults (53%) felt that youth do understand the importance of preservation of wildlife.

Charting the course between awareness and participation: Baseline values

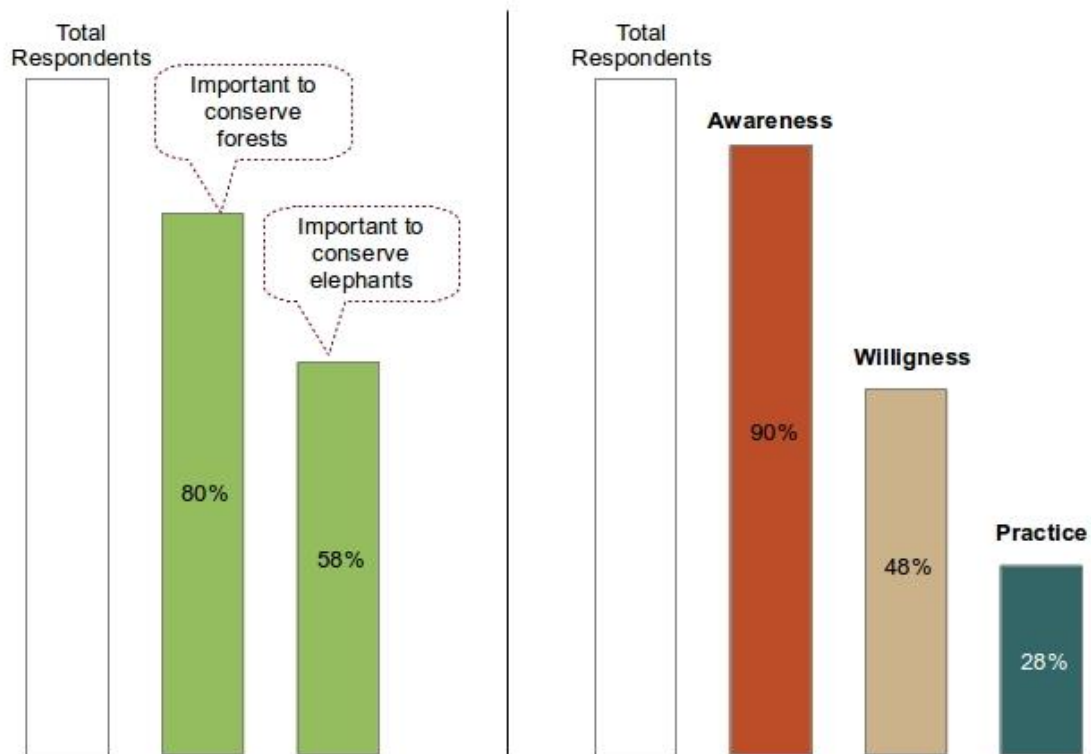


Figure 11: Elephant Conservation - Awareness, Willingness and Participation

While the above is an aggregate attitude towards elephant conservation, when this is broken down into *awareness of conservation, willingness to conserve and actual practice of conservation* differences emerge between different types of households and respondents. On the whole, awareness levels around elephant conservation were very high within the sample (90% of the sample). Against this broad-based awareness, only under half of the households displayed a moderate to strong willingness towards

elephant conservation. The practice of elephant conservation was even lower with less than a third of respondents stating that they participated in elephant conservation activities. **Thus, on the whole, a high level of awareness does not translate to a willingness to conserve and an even poorer practice towards conservation.**

Reasons for low levels of “willingness” to conserve:

To infer what can be the possible reasons for willingness being on the lower side it is useful to compare characteristics of those who showed a clearer preference for it versus those who did not. The analysis is done along the lines of gender, caste, education, status of land-holding and poverty levels.

By gender:

Males showed a more pronounced willingness to conserve over females with 53% of males respondents showing a moderate to high willingness to conserve compared to 41% for females. Indeed, 70% of respondents affirming their willingness to conserve were male.

By caste:

There were no major differences with respect to the nature of the caste of the household. However, compared to all other castes, OBCs (54%) and Scheduled Castes (50%) displayed a stronger tendency towards conservation compared to General Caste (47%) and Scheduled Tribe households (43%).

By education levels:

An important characteristic of the sample was that nearly 50% were either illiterate or had received education upto the primary level. Thus, understanding differences in willingness to conserve linked to level of education becomes important. *Those respondents who had crossed secondary grade or possessed higher levels of education showed a distinctively greater willingness towards conservation.*

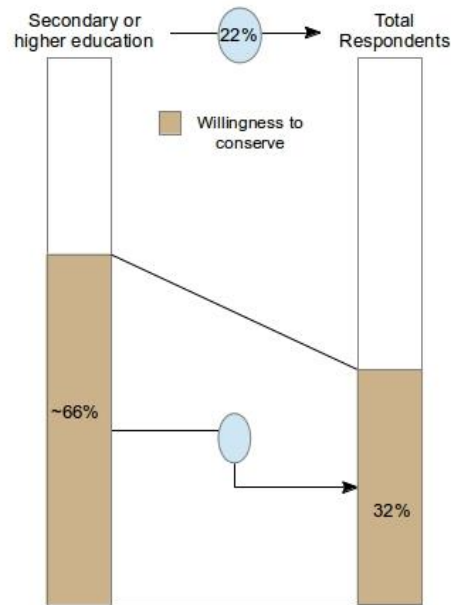


Figure 12: Willingness to conserve is higher among the more educated respondents

Respondents with this educational qualification comprised of 22% of the overall survey sample; however they constituted a third (32%) of respondents who articulated a stronger willingness to conserve. Specifically, over two-thirds of households with higher education exhibited moderate to excellent levels of willingness towards conservation compared to just over two-fifths of other households. That is, more individuals in this group were likely to make an effort towards elephant conservation compared to others.

By economic status:

The poverty analysis of the survey respondents found that poverty levels of households, like education, correlated with their extent of awareness and willingness to conserve. Amongst households that showed excellent levels of awareness, 33% fell below the \$4 poverty line compared to households that showed poor levels of awareness amongst which 53% were below the \$4 poverty line. Similarly, amongst households that showed excellent levels of willingness to conserve 38% were below the \$4 poverty line compared to households that showed very poor levels of willingness to conserve amongst which 52% were falling below the \$4 poverty line.

While economically better off households showed a higher willingness to conserve in the qualitative interview it also emerged that at the same time they perceived elephants as a menace and thought that the elephants are owned by forest department officials. This contradiction can be explained through two factors. On one hand, their own need to

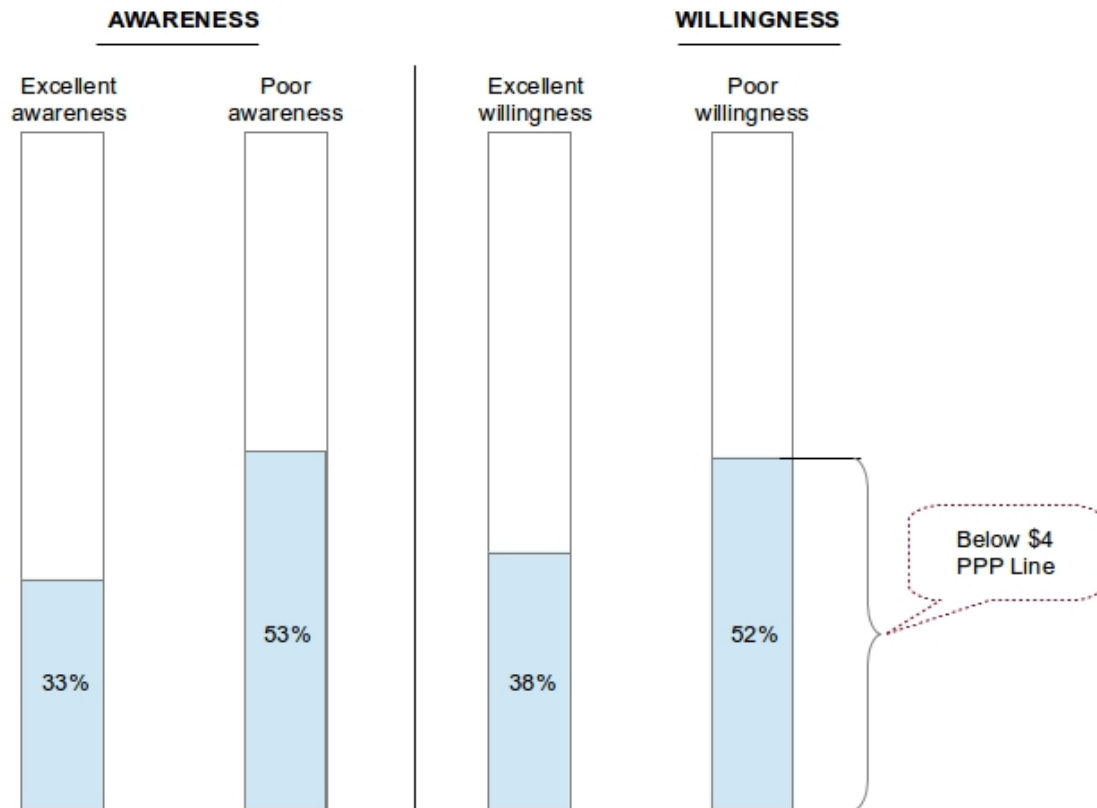


Figure 13: Awareness & Willingness with respect to Poverty Levels

secure their own economic self-interest and protect their property and land forced them to see elephants in more antagonistic terms. This could be reinforced through economic damage these households may have personally suffered. On the other hand, as a group they showed a better understanding of some of the factors which underlied HECs, and thereby their overall awareness and understanding of the need for forest and elephant conservation was likely to be higher.

By ownership of land:

A surprise was that ownership of land did not appear to play a material role in shaping household attitudes and willingness towards elephant conservation. The percentage of households that owned land and favoured elephant conservation (45%) was actually lower than those who did not own land yet were willing to make an effort towards

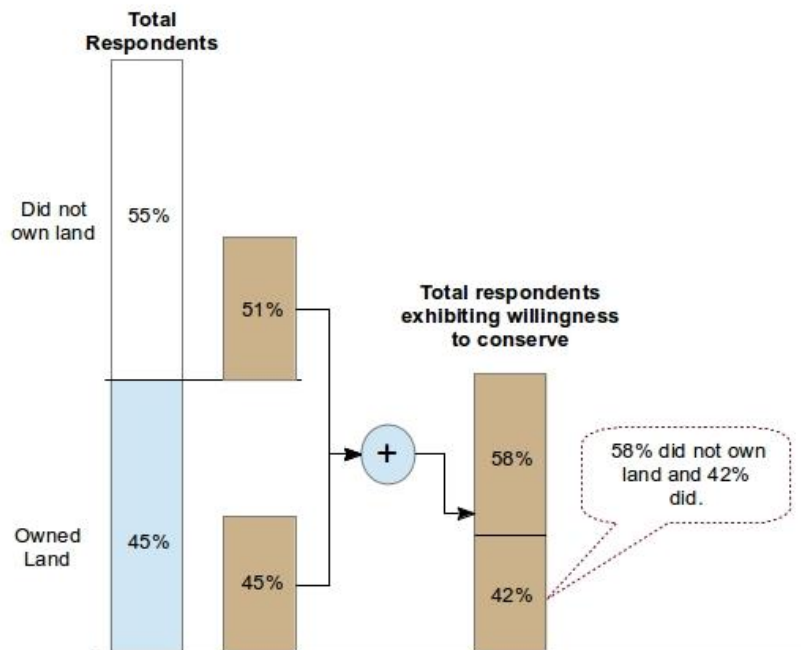


Figure 14: Awareness & Willingness with respect to Agricultural Land Ownership

conservation (51%). This result was that of the total number of households who exhibited a willingness to conserve, a majority of them (58%) did not own land.

This behaviour is not consistent with some other aspects of the behaviour of households. Individuals and families that owned land were significantly more likely to report damage to crops compared to those that did not own land. The group with land ownership was also materially less likely to ascribe human-induced activities as an important cause of increase in HECs.

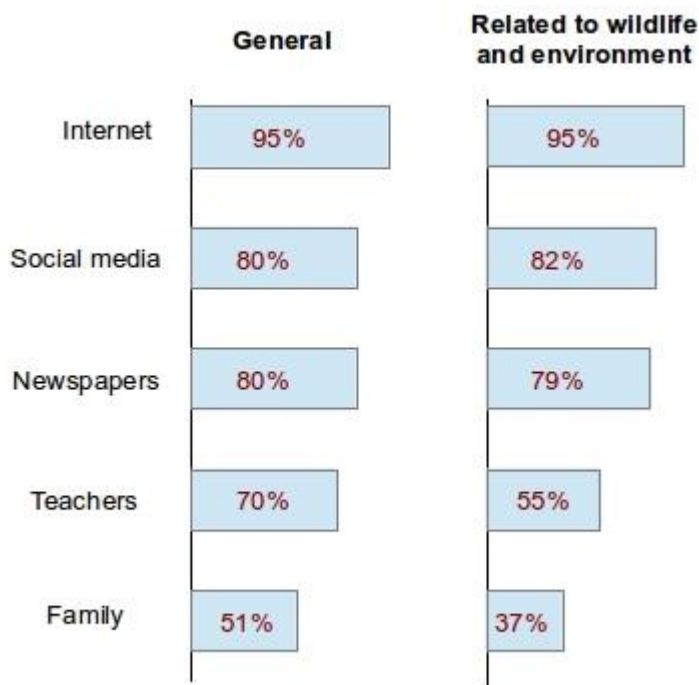
In summary, as we saw earlier there is an ambivalence between the cognitive understanding which individuals hold on HECs and their perceptions about elephants. This ambivalence, in turn, translates to higher levels of awareness around need to conserve and practice conservation but a much lower appetite when it actually comes to making the effort. Thus, if the practice to conservation has to increase there is a need to work upon the community's willingness to conserve. In doing so, it will be important to bear in mind that gender, higher educational qualifications and income earning capacity of households play a more important role than caste and land-holding.

RAISING THE SOCIO-POLITICAL SIGNIFICANCE OF THE ISSUE OF ELEPHANT CONSERVATION: A CRITICAL DRIVER

From a communications campaign perspective, the characteristics of different types of households provide a way to segment the community and create more finer and targeted messages. *However, are there insights that can be pulled to develop broad-based communication campaigns?*

There were sharp differences in sources which influenced the opinions of adults and children.

In the case of children, use of internet was widely prevalent amongst children to access information current affairs as well with over 95% of respondents citing its active use. Following the internet, children tended to actively consume both newspapers and social media⁴ platforms in equal measure with nearly 80% of respondents citing their use (for both current affairs and wildlife). **An interesting observation that emerged was that teachers, as a source of information, ranked on par with newspapers and social media** when it came to current affairs with 70% of respondents citing them as a distinct source of information. Importantly, teachers held more significance than family members (51%) and friends (49%).



However, the tendency to rely on teachers was relatively subdued (55%) when it came to news about wildlife and environment where the Internet (95%), Newspapers (79%) and Social Media (82%) played a more defining role. In particular, the survey found that family members also did not actively influence

Figure 15: Children's Source of Information

4

Refer to Annex 3 for data around ownership of mobile phones.

children on issues related to wildlife with only 37% of children citing family as a source of their views on wildlife conservation.

Over three-fourth of the children's sample showed a willingness to engage with street-plays and movies, tools used in communication campaigns like the Gaj Yatra. Nearly half the sample actually had watched a street-play in the previous week (of the questionnaire being administered) and another 15% over the past month.

On the other hand, adults tended to rely predominantly on local language newspapers and television in equal measure (60%). While the reliance on social media was much lower, with only a third of the adult sample being aware of whatsapp and facebook, it is worth noting that it ranks on par with radio as a source of information (25%). All the adults who were aware of social media cited the ability to keep in touch as an important benefit of social media and as an important tool to find information. Like in the case of children, adults were also willing to watch street-play or movie and 46% had in fact watched on in the previous month.

Thus, as a source of information children were more likely to rely on social media, teachers, friends and to some extent parents while adults drew most of their information from traditional media. Some of them did use social media but saw more functional benefits to it. The question is that can these sources of information also act as critical sources of influence?

Correlation between factors that influence and behaviour change:

When it came to the issue of elephant conservation, the analysis of the response of survey participants revealed a more direct pattern: broadly speaking, ***both adults and children gave far greater weight, or were far more likely to be positively inclined towards conservation, if the community and political leaders gave a greater mention to this issue and were perceived to be serious about it.***

Other ways in which we found the significance of the issue could be raised was through shared stories. ***The willingness to conservation was found to be much higher amongst those adults and children who recalled specific instances when community came together to participate in conservation efforts.*** Similarly, viewing street-plays and movies was also likely to have similar effect on both adults and children. ***In the specific case of children, hearing stories on conservation from adults and family members was found to have a direct and statistically significant bearing on their awareness as well as willingness towards elephant conservation.***

Earlier, it was observed that education has a bearing on willingness to conserve. Those who were either illiterate or having studied only till the primary level have limited access and uptake for newspapers, radio, television or social media. In their case, it may be assumed, community and political leaders were likely to be of even greater sources of influence. Given that nearly 50% of the sample has limited or no education the use of personal means to reach out to community acquires an even greater force.

Role of community and political leaders in influencing behaviour change:

Given that households give much weightage to the mention of conservation efforts by leaders and other key influencers, what is the attitude of these influencers regarding conservation? We spoke to both the households as well as the influencers including officials from Project Elephant, officers of the Forest Department, community leaders, civil society members and other relevant stakeholders through FGDs and In-depth interviews.

As far as the households were concerned, ***they felt that community and political leaders were did not give enough importance to the issue of elephant conservation.*** Less than a third of respondents recollected the community leader talking about the importance of elephant conservation and even a lower fraction of respondents (24%) felt that the community leader was genuinely interested in elephant conservation. ***The views towards the political front were even more subdued with less than a fifth of households feeling that the local political leaders were interested in elephant conservation*** or had talked about its importance when interacting with the community.

This also found an echo in discussions with external stakeholders. ***They felt that communities are not engaged extensively in existing communication campaigns and the messages don't reach them.*** Increasing touch points for community members was felt to be important by most of them. Few of them suggested making Panchajayati Raj Institutions (PRIs) an integral part of this exercise by emphasising traditional methods of personal interactions such as community meeting, word of mouth communication, localised campaigns et cetera. However, the above is in direct conflict with our findings from the community interactions where households have reported local committees set up by different agencies as defunct or slow to operate due to lack of guidance or direction. This is a classical bottleneck where the individuals holding relevant office look to institutionalize mechanisms to promote harmony between elephants and human settlements but fail to monitor the actual outcomes of such committees in practice- as has been made evident through household surveys.

Some also felt that more frequent use needs to be made of the school education system. This ties well with two observations that have emerged in the course of the analysis: one that teachers are an important source of information for children on general issues. Secondly, those who have had higher levels of education seem to have greater inclination towards willingness to conserve elephants. Thus, the schooling system too could play an enabling role if more frequent use was made of the school education system including the medium of curriculum and exposure visits.

In general, raising the socio-political profile of the conservation issue is likely to yield tangible increase in people's awareness and willingness to conserve. ***Traditional and social media are useful tools but to really get the issue into the limelight it was found that personal touch points mattered much more, be it leaders talking about it, street-plays or positive reinforcement received from the family itself.*** In fact, the positive

reinforcement received through these channels was found to have greater effect than the negative reinforcement felt by households due to personal loss they may have experienced on account of HECs.

SUMMARY OF KEY FINDINGS FROM THE COMMUNITY SURVEY

1. Damage to crop & property dominate people's concerns around elephants and these are supplemented by restrictions on ability to access forest resources and certain adjustments people have to make in their daily routine. However, at the same time, there is also an understanding amongst a critical mass of households that over both the near and the longer term there has been a decline, at times very significant, in the damage that elephants have caused, particularly when it comes to the very sensitive and critical aspect of human injury and death.
2. During qualitative interviews, it also emerged that those living next to forests perceived elephants as part of their own ecosystem but crop loss was the main issue for them. They were gladly willing to accept co-existence with elephants if well compensated for the crop loss.
3. The strategies employed by communities to deal with HECs are in nature of reaction as opposed to being preventive. Amongst preventive strategies, households tend to give more emphasis on physical measures such as solar fencing but at the same time recognize that their maintenance and upkeep is a challenge. Other preventive measures such as forming local self-defense groups are common but others such as using awareness and training to modify community behaviour are yet to reach acceptance amongst a critical mass of households. However, where these types of measures have been deployed communities are showing ingenuity in their use, including use of technology.
4. Households do seem to understand that there are structural factors beyond elephant behaviour that seem to drive HECs along side the fact that more recent human-generated concerns (increase in population, nature of activities and not taking proper mitigating and preventive actions) have an increasingly greater bearing on HECs. While at some level households may refrain from attributing causes of HECs to elephants alone and are willing to take a more reasoned perspective, there still remain ingrained attitudes and perceptions towards elephants which are not necessarily consistent their more cognitive understanding of HECs and their causes.
5. Specifically, the survey tested the linkage between elephant behaviour and changes to environment. Secondly, it tested the actual perceptions of respondents towards elephants. Most adults held a more benign view of elephants. They recognized that elephants do not approach human settlements to intentionally harm humans or because they are problematic by nature. However, there was an overwhelming feeling that elephants are drawn to human settlements in search of crops and grains. However, they were not able to bring into the conversation their

- understanding of causes behind HECs such as shrinking forest cover, fragmentation of forests, expanding human population or conducting agricultural activities closer to the forests.
6. Children displayed an opposite trait. They were more consciously aware of the link between elephant behaviour and human activities. But unlike adults many of them held a slightly harsher view of elephants feeling that elephants are problematic and are a cause of increase in HECs and that they come to attack humans, and somewhat surprisingly, in search of liquor. Accordingly, they also tended to favour harder measures towards protecting themselves from elephants.
 7. This ambivalence between the cognitive understanding which individuals hold on HECs and their perceptions about elephants was also visible in attitudes towards conservation. There was high levels of awareness around need to conserve and practice conservation (90% of households) but a much lower appetite when it actually comes to displaying a willingness to conserve (53%) and an even lower rate of participation in conservation activities (28%). Thus, if the practice to conservation has to increase there is a need to work upon the community's willingness to conserve. In doing so, it will be important to bear in mind that gender, higher educational qualifications and income earning capacity of households play a more important role than caste and land-holding.
 8. From a communications campaign perspective, the single biggest source to influence attitudes and perceptions of households was the importance to the issue of conservation given to by community and political leaders and people's perception of how serious were the leaders about this issue. This point acquires added significance given the fact that nearly half the sample was either illiterate or was educated upto primary level. For these households it was found that newspapers, radio, television or social media were not likely to be effective means of improving their willingness to conserve. Personal touch points could be more critical.
 9. Thus, in general, raising the socio-political profile of the conservation issue is likely to yield tangible increase in people's awareness and willingness to conserve. Traditional and social media are useful tools but to really get the issue into the limelight it was found that personal touch points mattered much more, be it leaders talking about it, street-plays or positive reinforcement received from the family itself. In fact, the positive reinforcement received through these channels was found to have greater effect than the negative reinforcement felt by households due to personal loss they may have experienced on account of HECs.
 10. This received a recognition also with external stakeholders we spoke to who also felt that far more needs to be done to design last-mile communication strategies and campaigns and that personal touch-points are essential.

VIEWS OF FOREST DEPARTMENT OFFICIALS

Forest department officials are a critical stakeholder that Gaj Yatra intends to influence. From the in-depth interviews with department officials it was clear that they recognized that the HEC was largely on account of human-related actions and that efforts have to be direct at maintaining continuity of corridors was an important factor.

A department official in Odisha opined:

‘Why do we say problematic animal? This is a problem only because we created problems for them. All these problems can be minimized through temporary and permanent measures.’

Another official in Ooty highlighted:

‘There are two aspects- one is the blockage of routes that elephants come in and other aspect is water during drought. The forest department fails to keep water and fodder inside the forest.’

Another official mentioned:

‘The leaner constructions are forcing the elephants to live in the same habitation in which elephants have already lived in and they are therefore unable to move for food and water.’

At the same time there was also a recognition that the community alone is not to be held responsible for the conflict with elephants . They recognized that people were aware of conservation and wildlife issues but there were other concerns which occupied their attention.

One official clearly stated:

‘Many people are aware of wildlife issues. But what can they do? Unless their economic conditions are not improved, their children are not raised and educated, this is not a priority. It’s not that people are not keen to do this, but the pace of conservation is not at a desirable level. Unless the bigger issues (of poverty etc) are tackled, we cannot talk about conservation issues.’

But there was a recognition that ultimately, whatever be the reasons, these activities are leading to obstruction of elephant path-ways:

‘We create fragmented corridors instead of continued corridors. Wherever there’s continuity there is no conflict.’

However, as far as specific solutions were concerned there was lack of a coherent

direction amongst the responses. A group of responses emphasized at a more pro-active role for the Forest Department. The official in Odisha cited previously mentioned that

'We have plenty of government schemes, but they are not focused. My suggestion is that specifically for these villages in and around protected areas, these schemes and programmes - instead of being coordinated among many departments - are taken up for implementation by the forest department, entirely. I think it could have a very positive impact.'

There was also discussion that the Government may explore the option of relocation the people and give them proper facilities.

In other quarter, there was a recognition that moving people is not an option as those areas then see one or another development project. An official in Coimbatore was of the view that

'They (people) have to tolerate elephants. If they leave agriculture that land becomes a potential residential area. For this what we suggest is that at least a kilometer from the fringes there should be no developmental project.'

There were other solutions proposed such as

'Our priority is to drive the elephants away to other areas so that the loss and damages are distributed. They cannot live in one place and totally devastate the area and leave the people at a loss. That's the thing. Till date, we do not have a specific mechanism to drive away elephants from an area; that is not the priority for any research organisation or the government – to see if there is any chemical or sound. We are trying to look for a solution. Whatever methods are available right now do not provide a complete solution.'

IMPLICATIONS FOR GAJ YATRA

Speaking to community members it is obvious that elephants hold high mythological significance. They are seen as an avatar of Lord Ganesha and are seen as part of the culture and heritage of the community. However, at the same time, damage to crop and property is an important consideration which weighs strongly in people's mind. There is an understanding of the broader factors which influence HECs but it is also coloured and contrasted by personal experiences of individuals, misunderstandings and biases individuals harbour and most importantly, the diminished importance accorded to the matter of conservation by local and political leadership.

Hence, despite high awareness around conservation, the willingness to conservation stands at 48%. Thus, the overarching objective of the Gaj Yatra will be to build on this high level of awareness and increase the willingness to conserve towards 70% if feasible.

In our opinion, the communications strategy could operate at two levels.

The first level, which will be broad-based, will need to raise the socio-political profile of the issue of conservation. It would involve identifying ways to get community and political leaders to talk about conservation more frequently. It would need to support this through setting up personal touch-points through a variety of community-level groups or bodies to improve recollection of positive stories around elephants and conservation efforts, rely on increased use of street-plays and engage other community-level stakeholders such as teachers who are seen as key influencers. Overall, deploying this strategy it could expect a two to four-fold increase in the willingness of people towards elephant conservation.

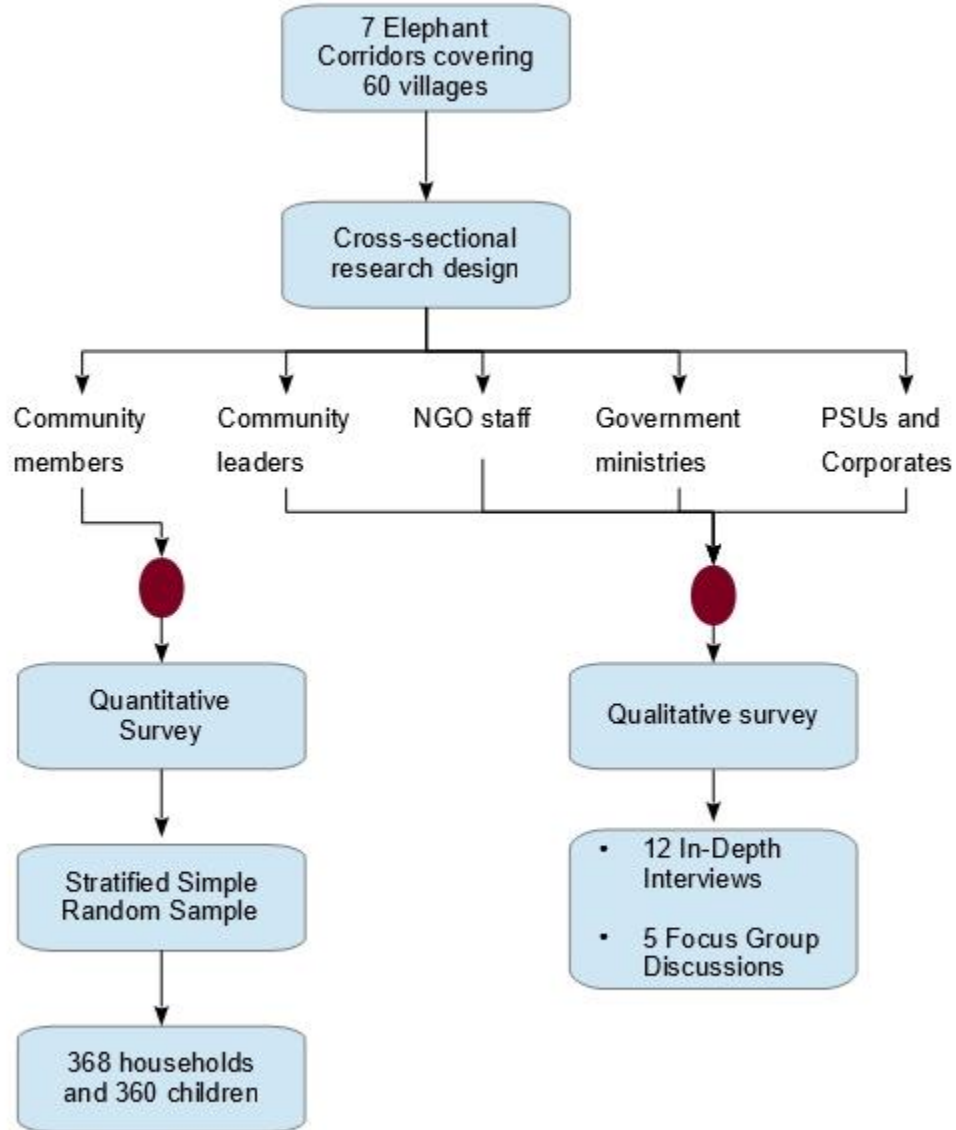
A second plank of the strategy will need to focus addressing concerns or characteristics unique to different groups. In particular, it would need to look at raising awareness of women, addressing misconceptions about elephants amongst children and address economic concerns of lower-income households, in particular improving their ability to seek compensation for the losses they suffer on account of HECs.

This second plank of strategy would also need to focus on influencing the attitudes of economically better off households that also happen to have secondary or higher education. As a group they showed a greater willingness to conserve. However, it was also observed that their attitude was one of ambivalence between their cognitive understanding of importance of conservation and their perceptions & attitudes towards HECs and elephants. Any communications campaign will need to address this ambivalence.

ANNEXE 1: ELEPHANT CORRIDORS THAT WERE PART OF THE SURVEY

State	Corridor	Villages (Households)	Total Sample to be covered
West Bengal	Apalchand – Kalimpong at Mal Block (via Sylee) corridor	12 (Population ~ 12,000)	246
	Buxa – Titi (via Beech & Bharnobari Tea Estate) corridor	10 (Population ~ 6,000)	
Assam	Kaziranga-Karbi Anglong at Haldibari corridor	7 (270-280)	122
	Upper Dihing East- Upper Dihing West Block at Bogapani	3 (1,400-1,500)	
Odisha	Baula-Kuldilha Corridor	6 (Not available)	120
	Tal-Kolgarh corridor	4 (Not available)	
Tamil Nadu	Kalamalai-Singara at Avarahalla	5 (150-160)	99
	Vazhachal – Anaimalai via Sholayar corridor	4 (Not available)	
Uttarakhand	Chilla-Motichur	3 (130)	49
	Malani Kota	1 (38-40)	
Karnataka	Chamarajanagar- Talamalai at Punjur corridor	3 (680-700)	42
Arunachal Pradesh	Pakke Doimara at Dezling corridor	2 (670-680)	22

ANNEXE 2: RESEARCH METHODOLOGY



ANNEXE 3: MOBILE PHONE OWNERSHIP

Given the ubiquity of mobile phones as a communications tool the survey specifically collected data on ownership and types of phones across both the adult and children's survey sample. Across the children's survey sample, in 258 instances (72%) the child's family owned a mobile and out of these in 104 instances (40%) the child also owned a phone for himself or herself. In the adult population a similar proportion of households (70%) owned a phone with nearly 38% of households owning more than one phone. In the sample it was found that four out of ten households were likely to have a smart-phone.

ANNEX 4: Variables that influence awareness and willingness to participate in elephant conservation activities:

HOUSEHOLD:

Variables affecting change in awareness levels:

Expected change (X times)	Metric
1.7	If the household has a feature phone
2	If household hears community leaders talking about conservation
2	If household hears political leaders talking about conservation
3	If household attaches importance to the conservation of elephants
1.05	If household believes that co-existence is possible
1.99	If household believes that forests are important for the environment
2.53	If household believes that elephants are necessary for the existence of forests
-1	If the household members' education levels are below primary or illiterate

Variables affecting change in willingness to participate:

Expected change (X times)	Metric
-1	If any household member has been injured due to HEC
3	If the household perceive that the cause of HEC is elephants' search for grains
3.59	If the household hears community leaders solicit participation in conservation activities
5.65	If the household hears political leaders solicit participation in conservation activities
2.99	If the household believes co-existence with elephants is possible
10.28	If the household watches a street play/movie on the subject of elephant conservation
8.77	If the household recalls an incident where the community got together to mitigate HEC

CHILDREN:

Variables affecting change in awareness levels:

Expected change (X times)	Metric
1.07	If children think forests are necessary for environment
3.73	If children regularly come across relevant content on traditional media and social media
1.87	If children attend school
2.64	If children watch a relevant street play or movie
1.11	If children believe co-existence is possible
1.65	If school curriculum includes lessons on conservation
1.96	If school organizes events on the importance of elephant conservation
2.62	If children seek conservation related information through social media
-1	If children do not attend school/are illiterate/below primary levels
2.88	If children hear relevant stories from family or village members on the importance of elephants
2.39	If child recalls incidents when the community came together to mitigate HEC

Variables affecting change in willingness to participate:

Expected change (X times)	Metric
-1	If newspapers are used as mediums to reach out to children
1.5	If children attend school
1.92	If children have access to personal mobile phones
-1	if a child's household has experienced damage/injury/loss of life due to HEC
4.8	If children recall an incident where the community got together to mitigate HEC
2.86	If children hear relevant stories from family or village members on the importance of elephants
2.44	If children's households have access to forest produce and live in the proximity of forests

ANNEX 5: About Progress out of Poverty Index

What is the PPI?

The Progress Out of Poverty Index® (PPI®) is a poverty measurement tool for organizations and businesses with a mission to serve the poor. With the PPI, organizations can identify the clients, customers, or employees who are most likely to be poor or vulnerable to poverty and integrate objective poverty data into their assessments and strategic decision-making.

How does the PPI work?

The PPI was designed with the budgets and operations of real organizations in mind; its simplicity means that it requires fewer resources to use. The PPI is a set of 10 easy-to-answer questions that a household member can answer in 5 to 10 minutes. A scoring system provides the likelihood that the survey respondent's household is living below the national poverty line and internationally-recognized poverty lines.

The PPI is country-specific. There are PPIs for 55 countries, and a similar poverty scorecard with a different creation methodology exists for use in China. All together, Grameen Foundation has developed poverty measurement tools for the countries that are home to 90 percent of the people in the world who fall under \$1.25/day 2005 PPP.

The PPI serves as a poverty score to measure poverty outreach in a given population. When it is used to capture data over time, it serves to measure potential changes in poverty level-or “progress out of poverty.”

More information about the PPI

Please visit www.progressoutofpoverty.org for more information about the PPI, FAQs and resource documents.