

Available online @ www.iaraindia.com

SELP Journal of Social Science - A Blind Review & Refereed Quarterly Journal

ISSN: 0975-9999 (P) 2349-1655 (O) Impact Factor: 3.655 (CIF),

2.78(IRJIF), 2.5(JIF), 2.77(NAAS)

Volume XVI, Issue 62, July - September 2025

Formally UGC Approved Journal (46622), © Author

JANA JAGRATHA SAMITHI: A PARTICIPATORY ENDEAVOUR IN HANDLING HUMAN-WILDLIFE CONFLICT IN WAYANAD WILDLIFE SANCTUARY, KERALA

RAMSEENA P.P

Research Scholar

Department of Gandhian Thought & Peace Science

The Gandhigram Rural Institute (Deemed to be University)

Dindigul, Tamil Nadu, India

ABSTRACT

As a result of the recent trends and escalations in human-wildlife conflict, which is causing damage to crops, livestock, and properties as well as the deaths of forest dwellers, the state government has decided to initiate a collaborative effort between people, local self-government bodies, and the forest department. To address this issue at the panchayat/municipality level and the State Government issued a final order to form Jana Jagratha Samithi (People's Vigilance Committee) in February 2017, with the intention of making the conflict mitigation process more inclusive. Therefore, this study aims to investigate, how far the Jana Jagratha Samithi can act as an active agency that allows both the people and local self-government bodies to engage in conflict resolution. Thus, this study was conducted in the areas of five local self-government bodies which all comes under the boundary of Wayanad Wildlife Sanctuary, Kerala and it covers the period from 2017 to 2023. The qualitative data collected through in-depth interview was analyzed by using thematic analysis for preparing this paper. An inductive approach was used for the identification of the themes which has linked with the data itself helps in analyzing the relationships dimensions, themes and sub-themes emerged. This study suggests reasons for enhancing the grass root democracy/participatory governance by changing the structure of the Jana Jagratha Samithi with a greater number of stakeholders and giving more powers to local self-government bodies as well as to local communities in handling human-wildlife conflict.

KEYWORDS: Human-Wildlife Conflict, Conflict Resolution, Jana Jagratha Samithi, Local Self-Government, People Participation, Grass root democracy

INTRODUCTION

Human-wildlife conflict continues to become more acute, more frequent, and persistent in Kerala, despite of all the attempts to handle, reduce, and resolve the conflict by the responsible authorities. The Forest Department is considered as the first and foremost important agency which has legal mandate in planning and implementing strategies and methods to deal with the issues. But for a variety of reasons, such as, the lack of human and other physical resources in the forest departments and short of well-coordinated efforts among various departments in the forest areas, they are unable to address the growing conflict between humans and wildlife adequately and effectively (Govind, et al, 2021). In the forest fringe villages of Kerala (who are most affected by human-wildlife conflicts), there is a great deal of community resentment towards the forest department since the escalations of the conflict and the measures to tackle them exclusively by the forest department are not at the required scale (Jayson; 2016 & Kumar; 2020). Damages to

agriculture, livestock, other properties and human death and casualties affect humans just as much as it affects wildlife that is affected by habitat degradation, mortality, and biodiversity loss (Ameja, et al, 2016; T. Surya, et al, 2017; Conover, 2022).

Even if the government and the forest department have initiated numerous efforts to reduce the conflict, there is an argument to be made that local people who are affected by the issue must be involved to find a solution. Every conflict situation and incidence of wildlife attacks is a unique occurrence which is based on the features of the area, the local community and the wildlife involved (Kansky, et al, 2016 & Kumar, 2020). But adopting and applying uniform policies and measures continuously in mitigating human wildlife conflict leave the conflict unresolved (Morzillo, et al, 2014 & Govind, et al, 2021). Therefore, distinctive and inclusive approaches with participatory management strategies and methods are indeed considered as the need of the hour (Konig, et al, 2020). This includes decentralized and bottom up initiatives, that involve the perspectives, opinions, knowledge, and experiences of the local communities involved in the conflict, and it may replace the centralized and top to bottom approaches with decentralized and bottom up approaches to tackle these issues (Vinoth, et al, 2020 & Kansky, 2022). Studies have observed that mitigation strategies implemented unilaterally and uniformly cannot solve this problem (Morzillo, et al, 2014). Since there was no platform to communicate with the people and involve them, there was a situation where the people turned against the forest department when the conflict escalated (Treves, et al, 2006). Therefore, it is essential to take part in the procedures that mitigate human-wildlife conflict, just as Forest Protection Committees (Vana Samrakshana Samithi/VSS) and Eco Development Committees (EDC) were established to encourage local people to join in forest conservation initiatives (Forest and Wildlife Department, 2005). Conflict mitigation can be successful locally only with the cooperation and participation of the local people that this is a problem that directly impacts people (Ramakumar, 2021). According to the data obtained from Kerala Forest Department, there are 114 people were died and 758 people were got injured in the attacks by the elephants, wild boar, wild guar, tiger, leopard, snakes and by others. 514 cases of cattle loss and 6580 incidents of crop damage and property losses were reported in 2022 and the number of incidents were increasing day by day. As a result of the recent trends and escalations in human-wildlife conflict, which is causing damage to crops, livestock, and properties as well as the deaths of forest dwellers, the state government has decided that a collaborative effort between people, local self-government bodies, and the forest department is necessary to address this issue at the panchayat/municipality level and finally issued an order to form *Jana Jagratha Samithi* (People's Vigilance Committee) in February 2017. Since 2017, almost 204 *Jana Jagratha Samithi* have been formed in all the local self-government bodies that were acute to human-wildlife conflict in Kerala, with the intention of making the conflict mitigation process more inclusive (Government of Kerala, 2019). It has been observed that the purpose of the committee is to serve as a forum for mutual communication and collaboration and to promote more inclusive and successful conflict mitigation initiatives. In relation to forest governance and wildlife conflict mitigation, the fact that the forest department did not have a system that could work hand in hand with the people had already resulted in the formation of a friction between the people and the forest department (Wilcox, 1994; Gillingham, 2001; Naughton & Treves, 2005; Raik et al., 2005 & Dickman, 2010). The researcher could not track down any studies on the *Jana Jagratha Samithi* as a strategy for resolving conflicts between people and wildlife. This study tried to find answer to the questions "whether human-wildlife conflict can be lessened with more decentralized initiatives and community participation"? "Is this extremely important as this is an intractably complex problem to handle singly?" Thus, the researcher assumed that is it a time to assess what kind of changes have to be made in the forest governance process related to conflict mitigation through the *Jana Jagratha Samithi*?, and how the activities of *Jana Jagratha Samithi* have to be carried out with the support and active participation of local government bodies? Therefore, this study aims to investigate, how far the *Jana Jagratha Samithi* can act as an active agency in handling and transforming the conflict, a system that accommodates both the people and local self-government

bodies to engage in conflict resolution. This study was conducted in the areas of five local self-government bodies including four Gram Panchayats namely; Thirunelly, Noolppuzha, Poothady, Pulpally and one municipality called Sulthan Bathery, which all comes under the boundary of Wayanad Wildlife Sanctuary, Kerala and it covers the period from 2017 to 2023.

The findings of the study advocate for making immediate re-evaluation, re-organization and modification in the existing body of the *Jana Jagratha Samithi*. This study itself attempts to develop a conceptual framework based on the empirical evidences collected from the field, which the researcher assumes that it can enhance participatory democracy in dealing with human-wildlife conflict. The researcher suggests that the Government of Kerala and the Forest and Wildlife Department have to make changes in the current structure of *Jana Jagratha Samithi* as per the order of February 2017 and recommend the authorities to issue a new order to establish a structure with more participatory in nature and with more powers to Local Self Government Institution in planning and implementation process. A suitable system or body for monitoring and evaluating the activities and functions of *Jana Jagratha Samithi* should also be promptly made within the government system. The researcher presented framework which demonstrates the possible outline for the modification of the structure of *Jana Jagratha Samithi* and it also advocates measures for expanding the powers and responsibilities to all the stakeholders.

THE OBJECTIVES OF THE STUDY

1. To examine the functions and activities of Jana Jagratha Samithi,
2. To explore its strengths and weaknesses, and
3. To suggest the possible ways to improve and modify Jana Jagratha Samithi and its effectiveness in handling human- wildlife conflict.

MATERIALS AND METHODS

STUDY AREA

Wayanad Wildlife Sanctuary is a protected area established in the year 1973 for the protection of forest resources and biodiversity in Wayanad district of Kerala. It is come under the administration of the North Wayanad, South Wayanad, and Wayanad Wildlife Sanctuary Divisions, which together cover a major part of the Nilgiri Biosphere Reserve. As the Wayanad Wildlife Sanctuary that shares its borders with Nagarhole and Bandipur tiger reserves of Karnataka and Mudumalai tiger reserve of Tamilnadu, the potential for conflict here is much higher as compared to other places.

According to the recent data from Kerala Forest Department in the Wayanad wildlife sanctuary, 43 people were died, 120 were injured, and 13,414 cases of crop loss, 1,141 cases of livestock cases and 249 cases of property losses were reported from 2000 to 2022. Compared to other districts of Kerala, Wayanad district is seem to have the highest number of wildlife conflicts. The researcher decided to conduct this study in Wayanad Wildlife Sanctuary based on the information available from the Forest Department and other secondary sources. Information about the activities of *Jana Jagratha Samithi* in all the local government bodies inside the Wayanad forest area and its fringes is collected here. Any local government body that shares the boundaries of the sanctuary is not excluded from this study.

DATA COLLECTION

An explorative research design is followed in this study. The qualitative data collected through in-depth interview was analyzed by using thematic analysis. A structured interview was carried out among the 50 respondents by using the same interview checklist and asked them to respond accordingly (**Annexure 1**). Among the total number of members of *Jana Jagratha Samithi*, the researcher tries to identify 10 members from each. To identify these samples the researcher visits the President of Panchayats and the Municipality chairperson directly and asked him/her to find out the wards/councils which are most affected by wildlife attack. Then the researcher selects the wards according to the intensity of the conflict and purposively selects the people's representatives of the particular wards/councils as the respondents of the study. The other respondents were also selected with the help of the Panchayat/ Municipality authorities (**Table 1**).

Table 1: Profile of the Respondents

| Characteristics of Interviewees | No. of interviewees | Total |
|---|---------------------|-----------|
| Panchayat President/ Municipality Chairperson | 1 | 5 |
| Representatives from each Panchayats/Municipalities | 4 | 20 |
| Farmers from each Jana Jagratha Samithi | 2 | 10 |
| VSS/EDC President/ Members | 2 | 10 |
| Officials from Forest department | 1 | 5 |
| Total Respondents | | 50 |

Source: Computer (The Author)

Thematic Analysis

The timings of the interview were carried out for one and half hours maximum. The researcher was recorded the interviews and also took notes while conducting the interviews. At the primary phase of the interview, the researcher tried to know the trends and escalations of the conflict happened for the past few years in each local self-government bodies. They were also asked to respond on the recent incidents of wildlife attack and their past experiences of wildlife encounters. The responses regarding the functions, responsibilities, strengths and the limitations of *Jana Jagratha Samithi* were also collected. At the final stage of the interview, they were also asked to explain their views and opinions on ensuring their participation in transforming the conflict and asked to give their suggestions to strengthen the possibilities of *Jana Jagratha Samithi* in transforming the conflict. For this study data, documents and study reports and reviews from various existing journals, and newspapers were collected and analyzed for getting the information on the intensity and the frequency of the conflict happened in Kerala as well as in the study area and the researcher also went through the minutes of the meetings to know about the activities and functions of *Jana Jagratha Samithi*.

The interviews taken in Malayalam (mother tongue of the respondents) were transcribed and translated into English by the researcher for the purpose of research. The opinions collected from the respondents were organized according to the objectives of the study, from which the researcher tried to understand the functions, activities, potentialities and the limitations of *Jana Jagratha Samithi* in transforming human-wildlife conflict. Then the researcher explores the codes and themes from the translated data by reading and re-reading them and later identifies three major dimensions and related themes. An inductive approach was also used for the identification of the themes which is linked with the data itself helps in analyzing the relationships of the dimensions, themes and sub-themes emerged. The researcher re-examined the dimensions three times in order to ensure the reliability and validity of the data. Three patterns of dimensions were finalized and presented in the

Table 2: Codes, Themes and Dimensions generated from the thematic analysis

| Codes (Description of Codes) | Sub-themes (Clustering of Codes) | Themes (Creation of Dimensions) |
|---|---|---|
| Structure of the JJS Pattern of meetings Activities of JJS Role of local self-government institutions Role of forest department Role of people | Structure Functions & activities Roles & responsibilities | Structure & Functions of Jana Jagratha Samithi |

| | | |
|---|---|--|
| Community participation Discussing different local issues Decision making power Capacity building Sharing responsibilities and duties Transparent platform for different opinions Empowering grass root democracy Improving self-reliance | Strengths Benefits Possibilities | Strengths & Potentialities of Jana Jagratha Samithi |
| Lack of financial resources Lack of support from state and central governments Lack of powers in implementation process Lack of people participation/involvement in implementation process Authoritative outlook of forest department Inadequate policy interventions Inefficiency of the existing strategies Lack of monitoring and evaluation Lack of proper strategic planning | Weaknesses Barriers Limitations Challenges | Limitations & Challenges of Jana Jagratha Samithi |

Source: Computer (The Author)

The NVivo Software was used to do analysis for word cloud and most frequent words from the transcription (**Figure 1 & Table 3**). With the help of thematic analysis, the researcher explores a need for strengthening participatory governance in addressing the conflict between human and wildlife while developing this conceptual framework. Therefore, this study suggests for enhancing the grass root governance/participatory governance by changing the structure of the *Jana Jagratha Samithi* with a greater number of stakeholders. It also explores the need of giving more powers to local self-government bodies as well as to local communities.

Figure 1: Word cloud generated with NVivo software



Source: Computer (NVivo)

Table 3: Most frequently used words by the respondents

| Si. No. | Word | Length | Count | Percentage |
|---------|------------------------|--------|-------|------------|
| 1 | Participation | 13 | 14 | 0.47 |
| 2 | Representatives | 15 | 12 | 0.40 |
| 3 | Implementation | 14 | 9 | 0.30 |
| 4 | Responsibilities | 16 | 9 | 0.30 |
| 5 | Possibilities | 13 | 7 | 0.23 |
| 6 | Participatory | 13 | 5 | 0.17 |
| 7 | Afforestation | 13 | 4 | 0.13 |
| 8 | Local Self Governments | 14 | 4 | 0.13 |
| 9 | Interventions | 13 | 3 | 0.10 |
| 10 | Responsibility | 14 | 3 | 0.10 |
| 11 | Collaboration | 13 | 2 | 0.07 |
| 12 | Human-wildlife | 13 | 2 | 0.07 |
| 13 | Participating | 13 | 2 | 0.07 |
| 14 | Rehabilitation | 14 | 2 | 0.07 |
| 15 | Strengthening | 13 | 2 | 0.07 |
| 16 | Administration | 14 | 1 | 0.03 |
| 17 | Decentralization | 16 | 1 | 0.03 |
| 18 | Traditionally | 13 | 1 | 0.03 |

Source: Computer (NVivo)

Results and Discussions

The results of the study provide a critical analysis about Jana Jagratha Samithi by identifying its limitations and the possibilities in handling human-wildlife conflict. It also identifies that still there is huge gap between the authorities who are addressing the issue and the real conflict. The findings show that there is an immediate need for strengthening the grass root democracy to formulize plans, policies and strategies to deal with problem. This gap has to be filled with giving more powers to the local government bodies and to the people. Their responses were organized under the following themes.

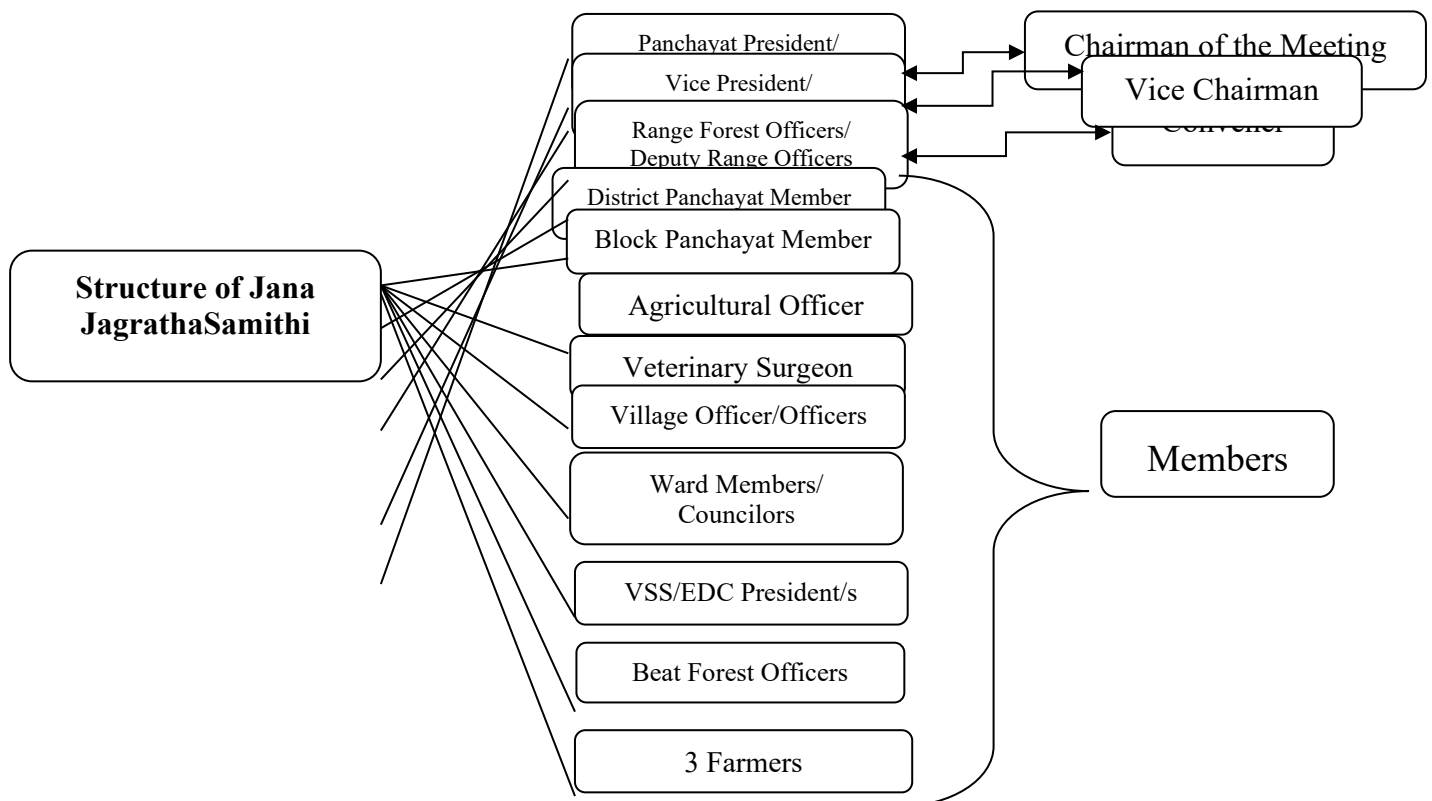
1. The structure and the major activities of Jana Jagratha Samithi

1.1. The structure and the patterns of the meetings

The meetings of the *Jana Jagratha Samithi* should be held under the chairmanship of the Panchayat President or Municipality Chairperson. The convener will be the Range Officer or the Deputy Range Officer in charge of the forest area under the jurisdiction of the Gram Panchayat/Municipality. The vice presidents of Panchayats or vice chairman of the Municipality will be the vice chairman of the committee. The structure is quite inclusive and it further includes every people's representatives of the respective panchayats/municipalities, the agriculture officer, the veterinary surgeon, their village officer, presidents /members of the VSS/EDC, beat forest officers of the forest department, and three farmers as local community representatives (**Figure 2**). The order directs that, this committee has to meet once in three months without fail. However, based on arising necessity or emergency situation, the issues of human-wildlife conflict in that area shall be discussed and adequate intervals measures have been evolved as it warranted.

All members of the local self-government bodies will be the members of *Jana Jagratha Samithi*. It is peculiar to note that farmer members and representatives from VSS/EDC who participate in the committee got changed from meeting to meeting, but it is not in the case of people's representatives and forest department officials. Farmers and VSS/EDC members will be selected from the wards with the highest number of wildlife attacks in each panchayats/municipality in the respective months. The respective Forest Range Officer will be responsible for selecting the VSS/EDC members and the Divisional Forest Officer will be responsible for nominating 3 farmers to attend the meetings. The farmers believe that the committee members chosen from the region where the wildlife attack is occurring, makes prompt, pertinent, and serious involvement of members in this problem. Furthermore, it leads ward members in those regions to become more aware of the issue and question the administration and insist them to take action.

Figure 2: The Structure of Jana Jagratha Samithi



Source: Computer (The Author)

1.2. Roles and responsibilities of the committee members

The committee meetings are primarily held to discuss the situation of wildlife attacks in the area and to share the necessary suggestions to solve the situation. However, these committees are supposed to act as the public face of the Forest Department in areas where wildlife attacks are frequent. The following are the major roles and responsibilities of the *Jana Jagratha Samithi*.

- Inform the forest department authorities on mitigation strategies needed for each area after discussing and analyzing them in the meetings.
- Evaluate the damages and deficiencies of currently implemented mitigation strategies such as erecting walls, fencing, trenches etc.
- When there is damage happened, the committee discusses it and recommend future course of action to be taken by the concerned range officer.
- Take part in the tasks like assisting the Forest Department officials in accompanying them to the spot where wildlife attacks happen.
- Create public awareness among the people about wildlife attack and the need to adopt new farming practices on forest borders that do not draw wildlife in.
- Build communication network system like sending SMS alert to inform the local people about the entry of wildlife from the forest to the settlements and ensure all supports in the of operations of the Forest Department which are impeccable.

Although the committee meetings are convened under the shared leadership of the local government bodies and the forest department, the main responsibilities are given to the forest department itself. Many respondents feel one thing very positive is that the farmers, VSS/EDC members and public representatives who are facing wildlife attacks and well aware of their area and the nature and patterns of wildlife attacks openly interact with each other about the problem and its solutions. People who know the geographical, ecological and sociological characteristics of each region sit together and think about the solutions according to them.

2. Strengths and Potentialities of Jana Jagratha Samithi

Majority of the respondents believe Jana Jagratha Samithi has many strengths and potentialities in dealing human-wildlife conflict. The major themes identified from the dimension of Strengths and potentialities of Jana Jagratha Samithi includes, (1) Community participation, (2) Discussing different local issues, (3) Decision making power, (4) Capacity building, (5) Sharing responsibilities and duties, (6) Transparent platform of different opinions, (7) Empowering grassroots democracy, and (8) Improving self-reliance. The below table 4 shows the percentage of the people's opinion about the strengths and possibilities of the Jana Jagratha Samithi.

Table 4: Responses on the strengths and possibilities of Jana Jagratha Samithi

| Strengths & Potentialities | Responses | Percentage |
|---|-----------|------------|
| | 50 | 100 |
| Community participation | 32 | 64 |
| Discussing different local issues | 28 | 56 |
| Decision making power | 22 | 44 |
| Capacity building | 30 | 60 |
| Sharing responsibilities and duties | 29 | 58 |
| Transparent platform for different opinions | 18 | 36 |
| Empowering grass root democracy | 34 | 68 |
| Improving self-reliance | 30 | 60 |

2.1 Community participation

One important thing that emerged from collating the views of most of the interviewees was the opening up of the potentialities of community participation in handling human-wildlife conflict. It is a very positive thing that farmers and people's representatives are speaking openly about their local problems on the same platform. 64% of the respondents were identified community participation as a major strength of the committee and they also indicate the importance of the role of local community in solving their local problems. It seems that people are not forced to attend these meetings; they come voluntarily to speak on behalf of people on issues related to wildlife

attacks. They prioritize their problems one by one and discuss them with the authorities. People are able to openly talk about the issues related to wildlife attacks and also give necessary suggestions to handle them.

Many respondents believe that through community participation, it is possible to evaluate the currently implemented mitigation strategies which point out mainly its limitations and put pressure on the Forest Department to overcome those shortcomings. People from different social backgrounds participate in the meetings, as human-wildlife conflict is a problem that affects the people of different strata alike, here they all come together for the same cause. It has been observed that people perceive the *Jana Jagratha Samithi* as a genuine opportunity to solve their problems. **"It is a system where people can participate in conflict mitigation. In such platforms, we are very motivated to hear different opinions on the issue. It makes us realize the need to work together for the same goal. We are often able to mobilize people as they are equally experiencing the intensity of the conflict. All those who live in forests are facing wild animal attacks on a daily basis. It is a relief to have such a platform for us who are facing so much hardship due to wild animals"**, says Johny (names are not real), a farmer from Noolppuzha Panchayat.

The collected data reveals that the gender equality in the committee was really motivating. In all these meetings and in the decision-making process, the participation of women is also very high. The main reason for this is that half of the people's representatives in each panchayat are women. **"These meetings help in gaining in-depth knowledge about human-wildlife conflict along with other issues in the panchayats. More knowledge about human-wildlife conflict is gained during the discussions in the committees. Instead of looking at this problem from the human side, we are getting more ideas about wildlife conservation and the reasons why wild animals are leaving the forest and entering into and human settlements. The changes in the behavior of wild animals and the problems of their habitat destruction were all understood. That way, the issues discussed in the committees can be also discussed with the people of the wards"**, says Radhamani, a female representative of Poothady Panchayat.

The committee meetings also recommend its members to act as the Primary Response Team in case of wildlife attacks happens. The members of the committee are also responsible for informing the forest department about the presence and attack of wild animals. People's representatives and local people often intervene in such cases until the Forest Department officials arrive. Therefore, in many places, all *Jana Jagratha Samithi* members are working as the primary response team during wildlife attacks. Another farmer also pointed out that involving the local people in the activities of cutting down the undergrowth plants will help in ensuring people's participation in conflict mitigation. **"If there is a situation where people get jobs and wages in all the activities required to prevent wildlife attacks, people's perception against the forest department will change and people will have a feeling that they should try to eliminate human-wildlife conflict. Since all the existing mitigation activities are done by the forest department alone, there is a feeling that the forest department is responsible for all the conflicts. But by ensuring these kinds of involvements such feelings will be changed and people will also have a sense of feeling of ownership regarding the conflict mitigation"**, Manoj added.

A representative of Thirunelly panchayat suggested that the local people should be included in the measures to carry out natural afforestation by uprooting the invasive plants such as *Senna spectabilis* and *Lantana camara* which has spread widely in the wildlife sanctuary. This seems to be a very sensible and appreciated recommendation. He continues: **"Such a decision can be taken as a part of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). As it affects the survival of local species, the quality of soil and underground water, and it also affects the ecosystem, we have decided to remove them from our Panchayats. Recently the government has allocated funds for the removal of Senna, which spread largely in the sanctuary. By allocating more working days and funds for this purpose**

only in these areas, the Senna can be removed and uprooted from the area by MGNREGA Workers. Not only in uprooting the Senna, but also upkeeping the fence or trench which needs maintenance. This will help in mitigating the human-wildlife conflict and will also help in getting more working days for the MGNREGA Workers of the panchayat”, Suresh suggested for ensuring more people participation.

2.2 Discussing different local issues

Most of the respondents (56%) reveal that people in different localities of a Gram Panchayat can discuss their problems with others. They consider this statutory body is an effective way to solve local problems in an area where the people of that area have to discuss among themselves in an open platform. People discuss the causes and nature of human-wildlife conflict, its impacts on people and the need to solve the conflict. Along with discussing the wildlife attacks in the area, there also do evaluations of the mitigation strategies that have been put into place under the direction of the Forest Department. At each meeting, the efficacy of the fencing, stone walls, trenches, and other measures put in place to deter attacks by wild animals is assessed. The committee also discusses the failure of interventions which needed to be identified to initiate corrective actions. It helps the members, to find places that need maintenance and submitting that information to the Forest Department, since failure to maintain the already established infrastructures might become the sources of significant disturbance from animals. The researcher herself verified the minutes of the meeting about the maintenance works carried out in wire fences and trenches. **“I am a farmer who is constantly attacked by wild animals. Wildboar, deer and monkeys have been destroying my crops for the past five years. I have applied for compensation, but it is often received very late. I am very much disappointed when I face continuous attacks. I have often thought of giving up farming. I have been a farmer representative since last year in the Jana Jagratha Samithi. When I started participating in the Jana Jagratha Samithi, I felt very happy for discussing our issues there. There was no such platform to talk like that before. It gives me a hope that there is a platform to discuss by all those who have lost their crops, livestock, lives and livelihoods due to wildlife attacks”,** George commented.

The study finds a major discussion that always comes up in the meetings is related to the relocation of the people. The members were discussing about relocating people from conflict-prone forest areas to well protected area under rehabilitation strategy could be a suitable and better solution. But people feel that technically this is a scheme (The Government have already started Voluntary Relocation Scheme in the district) with many limitations and it has to consider many different factors while relocating people from the forest. It has to be noted that the Government has to give better compensation for the resettlement as well as for any other losses (Government of Kerala, 2017). **“Relocating people is not an easy or simple matter. The resettled families get a very meager amount of compensation. Even those who have five cents of land or five or ten acres in the forest get Rs 10 lakh as compensation (later increased up to 15 lakhs). Today it is difficult to get land elsewhere in the district and build a house for this rupee. Not only that, it is also difficult to find new livelihood outside the forest for the communities who have been living dependent on the forest for ages. The entire human settlement in Ammayal and Golor and few from the Kurichiat and Chettiyalathoor areas of Noolppuzha Panchayat is relocated. However, there is also a situation where many people return to their native without finding a livelihood in their new resettled areas. It is a very effective scheme if done with proper compensation and proper planning. People should be relocated from the most conflict-prone areas to other places adjacent to the forest”,** says the forest official. (Similar rehabilitation has also taken place in Narimundakolli, Gottiur and Puncha Wayal areas of Thirunelly Panchayat)

In many meetings, it was found that discussions about many actions that have been taken at the initiatives of Jana Jagratha Samithi, especially the procedures to distribute the compensation to the victims of wildlife attack easily and quickly. **“Compensation for crop and livestock damage**

and loss of life is often delayed when we have to follow the conditions of the law. Even those who have lost their homes are getting paid very lately. The compensation amount itself is very low. This amount paid is not sufficient to cover the damages incurred. Non-receipt of loss compensation amount and delay in receiving it is very distressing for the farmers who suffer crop damage also. The government has to assess the losses incurred, prepare report and provide the appropriate amount for them. This is the reason why people often get angry towards forest department in many places. We discuss all such situations in the committees. Even though no action has been taken on it yet, the discussion itself is very comforting. We have a platform to talk about our problems. Hope the compensation process will be made smooth soon”, a VSS member responded.

Another EDC President states, “Discussions regarding wildlife attack incidents in their area are highly comforting and hopeful since the creation of Jana Jagratha Samithi. We share the views and opinions emerge in the discussions and decisions of the meetings with other EDS/VSS members. None of the activities seem to have been done as per the decision of the Jana Jagratha Samithi. Although many decisions are taken, not all of them are implemented. It is difficult and challenging to implement everything by the Forest Department. Still, there is a hope that local issues could be collaboratively addressed by the Forest Department, people's representatives, and the local people in future”.

But the opinion of a representative of Pulppally Panchayat is slightly different and like this “The involvement of EDC/VSS members as participants in the activities of the forest department is considered that it would affect the authority of the forest department. People are not involved in the implementation process of conflict mitigation by the forest department. EDC/VSS members were only doing many activities with the involvement of the villagers such as prevention of forest fire, undergrowth cutting, minor maintenance of fencing and trenching etc. The conflict can be mitigated effectively, only by expanding the powers of the Jana Jagratha Samithi further, to the EDC/VSS members, farmers, women and children. There should be a very inclusive structure created with equal participation”.

2.3 Decision making power

People are able to propose solutions and suggestions to their problems however taking decisions in an appropriate manner was so far in the hands of government officials. But **Jana Jagratha Samithi** has a structure that enables the committee members to assess their problems and take important decisions with an open mind. 44% of the respondents argued that “it encourages committee members to engage in mitigation activities responsibly and in a participatory manner as they are given the right and freedom to make decisions”. These meetings also serve as a place to share their local knowledge, experiences and opinions. The knowledge and practices traditionally used by people to cope with wildlife attacks are being discussed and they are considered, at least to some extent as a way/tool in the conflict mitigation process.

Many discussions happened about the introduction of artificial afforestation with teak, acacia and eucalyptus plantations that affects the local ecosystem and consecutively the wildlife because they are causing drought and resource scarcity for wildlife. In most of the meetings, there were discussion about the removal of such invasive plants and provide room for natural afforestation. They also insist to take urgent action in this regard. In Thirunelly Panchayat, the committee has decided that 5 hectares of forest land have been allotted for natural afforestation as per the latest decision of the people’s opinion and it has been decided to bring it to the notice of the superior authorities.

One of the major decisions taken in the committee in all the local self-governments is related to establishing hanging fencing in the conflict-prone areas. Hanging fencing is considered as the most effective conflict mitigation strategy in all Jana Jagratha Samithi. In some panchayats like Thirunelly, Noolppuzha and Poothady have started the implementation works. It has been observed that the funds needed for addressing the conflict is being allocated to MLA's local

development fund and to other funds of the three-tier panchayats. All the members of the governing committee who were chosen as respondents expressed the opinion that the local self-government bodies do not have the fund of its own for executing such projects, probably this may cost huge amount in crores.

2.4 Capacity building

According to the 60% of the respondents, through the activities of the committee, all the members are enabled to gain more self-confidence and understand the problems in their own area. Many expressed the opinion that it gives the committee members a great deal of self-confidence and leadership quality when their opinions are being properly heard in the meetings. Awareness gained on how to respond to wildlife attacks and what to do next are learned from each other. The experience of a representative from Poothady Panchayat makes it very clear: **“Discussing such issues in the committee as a people's representative has helped me to go to my own wards and work with confidence. Last month (December, 2023), a young man was killed in a tiger attack in my ward. He was attacked when he went to graze his cattle. It was a tiger-free area before. There were no earlier recorded attacks or presences of the wild animals. All the people were scared and panicked. No one came out after five o'clock in the evening. Many were afraid to send their children to school. There was no peace until the forest department caught the tiger. It was after ten days that the tiger was caught. I could not sleep till then. I felt a lot of pressure from the people. This was the first time that such an incident had happened in my ward. It was very difficult to face the entire situation at those days. But since I had attended all the committee meetings after I became a panchayat member, I had the strength to face all those situations. It was a very difficult task to calm the impatient people and allay their fears. It was the Jana Jagratha Samithi that helped me face it all with self-confidence”**, she shared her experience with confidence.

2.5 Sharing responsibilities and duties

Most of the respondents (58%) suggested that efforts are being under way to collectively implement all the issues discussed in the committee. They are sharing their duties with the forest officials, panchayat members and farmers where they sit together to evolve plans and share responsibilities of each stakeholders in dealing with the problem. After assigning what responsibilities each one has to perform, efforts and sub plans are being made to carry them out. Some of their responsibilities and actions include:

1. To communicate information about wildlife attacks in each area with the forest department,
2. To share information about wildlife presence with people,
3. To make people aware of changes in agricultural practices and its patterns,
4. To inform committee members about damaged fencing and trenches,
5. To work with the forest department when people get angry or panic,
6. To engage in activities of forest department in a very complicated situation to deal with the situation calmly,
7. To identify areas where mitigation strategies are needed and discuss this information in the committee,
8. To listen the problems of the victims of wildlife attacks,
9. To help the victims in getting compensation quickly,
10. To create awareness among the people about the immediate actions to be taken in a
11. conflict situation, and
12. All the members of the committee have to work hand in hand with Rapid Response Team (RRT) which is formed by the forest department to deal wildlife attacks.

It is observed that the outcome of the meeting enabled every local government institution to decided and designate special watchers as temporary employees in regions where agricultural damage has taken place regularly. Paddy watchers are also employed in such urgent cases as there is an increase in wild animals entering the fields during the harvesting time of the crops. Such

temporary watchers are appointed on daily wage basis. **“It has been noted that wild animals come out of the forest everywhere during the summer and harvest seasons. As local residents themselves are appointed as such guards, it is possible to ensure employment opportunities for some people through the work of Jana Jagratha Samithi. In this way, the forest department, local government bodies and people are involved in wildlife conflict mitigation activities with the feeling of shared responsibility. It was understood that everyone needs to work together with mutual cooperation, collaboration and sense of responsibility in preventing human-wildlife conflict”**, another representative from Sulthan Bathery Municipality said.

2.6 Transparent platform of different opinions

A small number of respondents (36%) expressed that the committee seems to be transparent in its nature of conducting meetings. According to them, all the matters discussed in the meetings are recorded in the minutes of the meeting and the implementation plans related to these decisions are discussed in the same or next meetings gives more hope in the Jana Jagratha Samithi. The committee is trying to ensure that everyone's opinions are accurately recorded and decisions are made based on the opinions of the majority of the members. This transparency helps in integrating different opinions and makes appropriate decisions.

2.7 Empowering grassroots democracy

Majority of the respondents (68%) were told that the committee has been working as an agency which has the power in empowering the grassroots democracy even though the participatory democracy has been facing many challenges in the modern world. As an electoral body and governing system that acknowledges the fact that people are the ultimate source of power. The lack of power and capacity of the governing body and the representatives chosen by the people to safeguard the well-being of the people at large is a criticism leveled on participatory democracy.

Unlike the traditional model of representative democracy, where only representatives participate in the governance, the grassroots democracy gives more opportunity to its citizens to participate in the governance process and it makes citizens more accountable at the local level. **“I could say that the Jana Jagratha Samithi is designed to strengthen grassroots democracy. This operating paradigm is highly effective in minimizing conflict between humans and wildlife and empowering grassroots democracy because it guarantees the participation of local governments and people in conflict mitigation”**, a representative said.

2.8 Improving self-reliance

60% of the respondents declared that **“Jana Jagratha Samithi can improve the self-sufficiency of all the Panchayat Raj Institutions when it is able to address its own problems and find solutions at grass root level. Consequently, when all of these panchayats/municipalities’ entities begin participating in conflict resolution, they become self-reliant by strengthening all agencies (Local Self Governments, Forest Departments, and the community) to successfully fulfill their tasks. This platform empowers all parties involved and increases self-reliance when they collaborate with government administrative bodies to resolve a conflict”**.

3. Limitations and Challenges of Jana Jagratha Samithi

The respondents also expressed opinion that when Jana Jagratha Samithi has many strength and potentials, it also has and face many limitations (**Table 5 Figure 3**). Majority of the respondents (96%) opined that lack of financial resources as a major problem and impediment for the effective functioning of Jana Jagratha Samithi. They also added that additional funding ought to be given to the affected panchayats to help them in resolving conflict between people and wildlife.

72% of them also expressed the fact that they are also facing the lack of supports from the state as well as the central governments in term of direct fund and other support. **“More funding should be allotted in the category of panchayats that are dealing with the highest levels of**

conflict. The current own-funds are only adequate for meeting out other welfare and development initiatives in the panchayats/municipalities. Every local self-government bodies should have the capacity to utilize such funds effectively which can be utilized in the wards and panchayats which face wildlife attacks frequently. Both people and local governments can engage in a wide range of useful activities. The Panchayats now have the responsibility to secure funding for mitigation initiatives. Since such are the areas which need desperate actions, extra funds have to be invested there. However, that is not a long-term fix. Many of the practical decisions taken by the Jana Jagratha Samithi cannot be implemented due to the lack of funds. We need additional assistance from both the state and central governments in this respect. Not only in allocating funds, but also in all forms of support to the local administration. Governments should try to solve this issue that affects both people and wildlife by giving more powers and funds to the respective local government institutions”, says one of the representatives of Noolppuzha Panchayat.

Table 5: Limitations and Challenges of Jana Jagratha Samithi

| Limitations and Challenges | Responses 50 | Percentage 100 |
|--|-----------------|-------------------|
| Lack of financial resources | 48 | 96 |
| Lack of support from state and central governments | 36 | 72 |
| Lack of powers in implementation process | 46 | 92 |
| Lack of people involvement/participation in implementation process | 44 | 88 |
| Authoritative outlook of forest department | 37 | 74 |
| Inadequate policy interventions | 38 | 76 |
| Inefficiency of the existing strategies | 28 | 56 |
| Lack of monitoring and evaluation | 35 | 70 |
| Lack of proper strategic planning | 25 | 50 |

Source: Computer (The Author)

Figure 3: Limitations and Challenges of Jana Jagratha Samithi



Source: Computer (The Author)

The main criticism is that local people and local governments are not involved and kept out from the implementation process, beyond being able to sit together and discuss various actions needed to mitigate human-wildlife conflict. The Forest Department is assuming authoritative power and consider itself as the only agency responsible for putting wildlife conflict mitigation into practice since it holds the ultimate authority as per the existing forests and wildlife act. 92% of the respondents said that the lack of powers to the local self-government bodies act as the major limitation of the committee and they also opined that the decentralization of conflict mitigation activities should be done by giving more powers to Local Self Government Institutions. Although community participation is ensured within the structure of the Jana Jagratha Samithi and its meetings, the lack of people involvement (88%) in activities to mitigate human-wildlife conflict

is a setback to the very objectives of these activities. Jana Jagratha Samithi has only a reflective face to act as the public face of the Forest Department.

Currently, they are unable to work for the people on this issue as they have no equal authority to devise or implement schemes to prevent wildlife attacks in their areas. The total scope of intervention of local self-government bodies in dealing with human-wildlife conflict is limited to Jana Jagratha Samithi only. **“There are people in each region who have ideas to solve problems for people and wildlife as well. But it can be said that the Jana Jagratha Samithi does not have the power to effectively use their knowledge or experience. The local government bodies do not have the funds to implement all these. Even if funds are allocated in any way, no decision can be taken by the Panchayats alone without the permission of the Forest Department. The permission of forest department is required for any activities such as fencing or road construction in forest areas. It takes a lot of time to follow all the procedures and conditions of the law and to get approval. Sometimes we don't even get permission. We are unable to address the issues faced by those living in and around the forest as a result”**, one of the councilors from Sulthan Bathery Municipality said.

Majority of the respondents (74%) have assessed that the main limitation of the Jana Jagratha Samithi is that the forest department takes the final decision on the issues that are considered in committees. The issues are being discussed on a public and open platform; yet, the forest department considers that it is the only responsible body to carrying out the actions that are required. Except for the representatives from the forest department, every other committee member brought out this point.

The majority of respondents raised the point that the forest department treats the people's body as agency and it must be considered as a serious issue and the department of Forest should involve both the local community and the local self-government institutions in the decision-making and implementation process. **“People's views are given due consideration and are taken into consideration at the planning stages. But we have no role in the implementation process. Forest department is acting as the only responsible agency for implementing those plans. What I am suggesting is that involving more people in its implementation stages also required. We need to end up this authoritative approach of the Forest Department in dealing with human-wildlife conflict. They could not solve this issue alone; it needs a wider range of collaboration between all the stakeholders. I strongly believe that people can contribute more in all the process”**, a representative from Thirunelly Panchayat says.

Another major limitation pointed out by 76% of the respondents is lack of adequate policy interventions and very few of them specifically commented on the need for well-timed changes in existing laws and policies related to forest and wildlife conservation. Existing forest laws do not have a space for participatory wildlife conflict mitigation. As a result, the existing laws and policies are inadequate to transfer more powers to a participatory system like the Jana Jagratha Samithi. Since Forest Department being a Government agency, it cannot go beyond/breach the existing common policies, laws and regulations which governs the Indian forestry and wildlife, thus they are constrained to act with much restraint. Even if they wish to involve the members of peoples' body, the present laws have restrictions for this.

Most of the respondents (56%) of them have expressed that the currently implemented mitigation strategies have to be revised periodically and human-wildlife conflict can be mitigated effectively only when they are reviewed, evaluated and suitably modified at regular intervals. Half of the respondents said that the Jana Jagratha Samithi should also be given the task of identifying the deficiencies of existing strategies and monitoring them at times. For such monitoring and assessment, the Forest Department should also supply the required supplies and infrastructure. **“Aside from any damages and its maintenance, every strategy should be assessed for appropriateness in its context. Each strategy should be prepared with a number of considerations, including the type of the forest and the wildlife, the nature and behavior of the wildlife presence, the frequency of the attacks, the density of the population, and the type**

of agricultural patterns, etc... Unscientific perspectives or implementing same strategies in many places without having any social, ecological and geographical considerations make the whole process unsuccessful. Such projects will not even address human-wildlife conflict. Mitigation strategies implemented through Jana Jagratha Samithi should also be monitored properly. They should be updated if necessary”, a VSS member added.

According to 70% of the respondents, there is also a lack of monitoring and evaluation system about the currently implemented strategies. One of the representatives of Thirunelly Panchayat says that, **"the crores of rupees have only been spent on conflict mitigation measures so far. The conflict between humans and wildlife does not seem to be lessened in proportion to the amount spent when compared to the severity, frequency and the level of the issue. Neither the amount spent nor the initiatives carried out are adequately monitored as there is no system in place to assess this. The activities implemented by Jana Jagratha Samithi should also be properly monitored. The people should have a right to evaluate and monitor them. The strategies being implemented in each area and the funds used for them should be monitored by the local people themselves. It would be really beneficial if Jana Jagratha Samithi is able to achieve this"**.

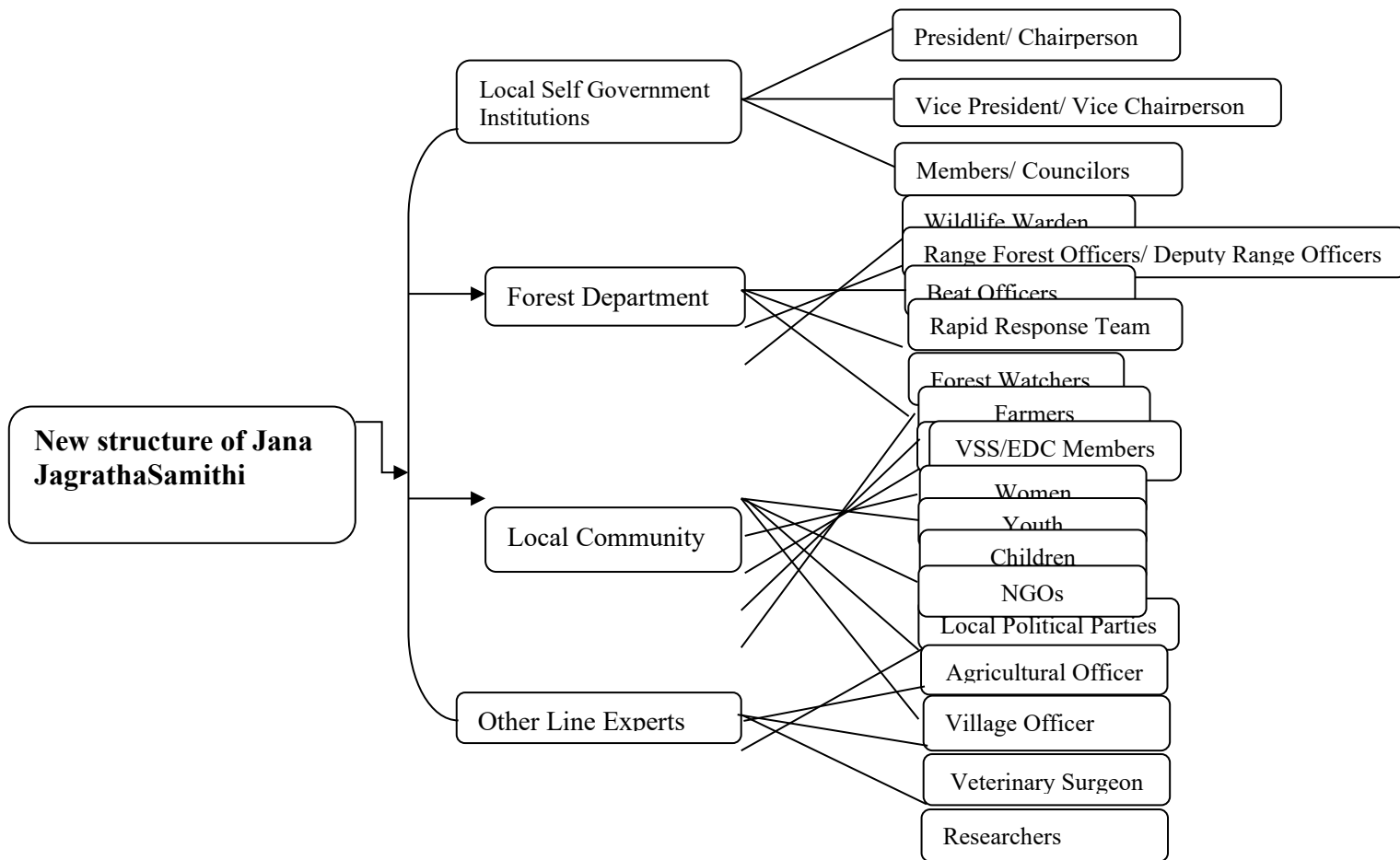
Half of the respondents (50%) commented that the proper and long-term strategic planning is missing in addressing human-wildlife conflict. When the department concern could not give such assurance to the people, they become dejected and frustrated and their anger turned on wildlife and they insist and agitate for driving out wildlife deep inside the forest. **"It is also clear when we look at the activities of the Jana Jagratha Samithi itself, that it lacks an adequate strategic planning. It seems that many of its activities are being done to give temporary consolation to the people when they get angry and panic in conflict situations. The forest department is not in a position to suggest permanent and strategic solutions for the common people who are suffering due to wildlife attacks."** a VSS President from Pulppally Panchayat expressed.

SUGGESTIONS AND CONCLUSION

This study mainly finds out that Jana Jagratha Samithi as a platform to discuss local issues together, it is being well received by the members of Jana Jagratha Samithi. Even though people do not get much role beyond participation at the initial stage of discussion, the full responsibility and authority for implementation of the respective decisions is vested in the Forest Department. This study explores that local governments must have equal authority with the forest department to participate in conflict mitigation initiatives. The findings of the study show that the inclusion of farmers and the VSS/EDC members in the committee as representatives of the local community is strength, furthermore, this structure ought to be changed into more inclusive. Based on the study made, it attempts to develop a conceptual framework based on the empirical evidences collected from the field, which the researcher assumes could enhance participatory approach in dealing with human-wildlife conflict.

The presented framework (**Figure 4**) demonstrated here is the possible outline of the structure of Jana Jagratha Samithi to be considered by the government before doing any modification. It also advocates for expanding the powers and responsibilities of all the stakeholders. Thus, the findings of the study ultimately suggest for providing equal powers to the people, local self-government bodies and to the forest department equally. This suggested framework could be effective when the structure and the powers of the committee can be elaborated with more community participation including tribal heads, farmers, women, youth, and children. And it also suggests for ensuring the participation of Non-Governmental Organizations and the political parties working in the respective areas. The researcher assumes that the participation of experts from the field such as revenue officers, agricultural officers, village officers, veterinary surgeons, and the researchers could also contribute more in developing and implementing plans for conflict mitigation.

Figure 4: Conceptual framework of the new Jana JagrathaSamithi



Source: Computer (The Author)

The researcher concludes that the best conflict mitigation is possible when a system is evolved in which the involvement of local people of a village in formulating and implementing a solution to a problem which they face in their locality. Therefore, the researcher advocates for re-evaluation, re-organization and making immediate appropriate changes in the existing body of the Jana Jagratha Samithi. This study strongly believes and concludes that the human-wildlife conflict can be addressed only by improving grass root democracy and by ensuring the participatory governance of all agencies. For ensuring this, the researcher respectfully advocates and suggests to the Government of Kerala and the Forest and Wildlife Department to view this matter with at most urgency and make changes in the current structure and functions of Jana Jagratha Samithi which comes into existence with the order issued in February 2017. The researcher earnestly urges the authorities to issue a new order which provides larger scope for participatory and shared roles in mitigation process with adequate powers to Local Self Government Institutions in the implementation process as well.

Author's contribution: Corresponding author is contributed in the whole process of the research including conceptualization, investigation, research design, research administration and data collection, data analysis and writing the original draft.

Financial Support: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The researcher would like to register gratitude to the people who voluntarily extended the financial and other support and help in my difficult times.

Acknowledgement: The author would like to thank the study participants for sharing their experiences and opinions. The author also like to acknowledge her supervisor **M. William Baskaran Ph.D.**, Former Professor in the Department of Gandhian Thought and Peace Science,

Gandhigram Rural Institute (Deemed to be University) Gandhigram, Tamilnadu, India for his valuable guidance and support to complete this study.

Data Availability Statement: The data that support the findings of this study are not publicly available due to privacy restrictions as the participants are still the members of their respective local government institutions, but may be available from the corresponding author upon reasonable request.

Conflict of Interest: There is no conflict of interest in this study.

Ethical Considerations: This study was conducted as part of the researcher's PhD work; the study design and methods were approved by the Doctoral Committee. All necessary efforts were taken to maintain the ethical standards throughout the study, particularly when the research involves human subjects. This includes obtaining informed consent from the research participants and providing the option to withdraw from the study if they are not interested.

REFERENCE

1. Ameja, Leta & Feyssa, Debela & Gutema, Tariku. (2016). Journal of Ecology and the Natural Environment Assessment of types of damage and causes of human-wildlife conflict in Gera district, south western Ethiopia. *Journal of Ecology and the Natural Environment*. 8. 49-54. 10.5897/JENE2015.0543.
2. Conover, M.R., & Conover, D.O. (2022). *Human-Wildlife Interactions: From Conflict to Coexistence* (2nd ed.). CRC Press. <https://doi.org/10.1201/9780429401404>
3. Dickman, Amy. (2010). Complexities of Conflict: The Importance of Considering Social Factors for Effectively Resolving Human–Wildlife Conflict. *Animal Conservation*. 13. 458 - 466. 10.1111/j.1469-1795.2010.00368. x.
4. Gillingham, S. (2001). Social organization and participatory resource management in Brazilian ribeirinho communities: A case study of the Mamiraua Sustainable Development Reserve, Amazonas. *Society and Natural Resources*, 14, 803–814.
5. Government of Kerala, 2017, order issued by Principle chief conservator of forests & chief wildlife warden, Kerala.
6. Government of Kerala. (2017). Report of the Working Group on Forestry and Wildlife, Thirteenth Five-Year Plan 2017-2022, State Planning Board, Thiruvananthapuram.
7. Govind, Suresh & Jayson, Eluvathingal. (2021). Human-wildlife interactions and people's attitudes towards conservation: a case study from Central Kerala, India. *Animal Biodiversity and Conservation*.
8. Jayson, Eluvathingal. (2016). Assessment of human-wildlife conflict and mitigation measures in Northern Kerala.
9. Kansky, Ruth & Kidd, Martin & Knight, Andrew. (2016). A wildlife tolerance model and case study for understanding human wildlife conflicts. *Biological Conservation*. 201. 137. 10.1016/j.biocon.2016.07.002.
10. Kansky, Ruth. (2022). Unpacking the challenges of wildlife governance in community-based conservation programs to promote human–wildlife coexistence. *Conservation Science and Practice*. 4. 10.1111/csp2.12791.
11. Konig, H. J., Kiffner, C., Kramer-Schadt, S., Furst, C., Keuling, O., & Ford, A. T. (2020). Human–wildlife coexistence in a changing world. *Conservation Biology*, 34(4), 786-794.
12. Kumar, Sanjeet. (2020). *Human Wildlife Conflict: A Case Study in Kerala*.
13. Morzillo, A. T., de Beurs, K. M., & Martin-Mikle, C. J. (2014). A conceptual framework to evaluate human-wildlife interactions within coupled human and natural systems. *Ecology and Society*, 19(3). <http://www.jstor.org/stable/26269619>
14. Naughton, Treves, L., & Treves, A. (2005). Socio-ecological factors shaping local support for wildlife: Crop-raiding by elephants and other wildlife in Africa. In R. Woodroffe, S. Thirgood, & A. Rabinowitz (Eds.), *People and Wildlife, Conflict or Co-existence?* (Conservation Biology, pp. 252-277). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511614774.017

15. Progress report of Pinarayi Vijayan Government. May 2016 to May 2019. Information-Public Relations Department, Government of Kerala.
16. Raik, D. B., Lauber, T. B., Decker, D. J., & Brown, T. L. (2005). Managing community controversy in suburban wildlife management: Adopting practices that address value differences. *Human Dimensions of Wildlife*, 10, 109–122.
17. Ramakumar, R. (2021). Public Policy and Human-Animal Conflicts: Elephant Deaths in Kerala. *Review of Agrarian Studies* vol. 11, no. 2.
18. Surya, T., & Selvi, S.C. (2017). A literature review on analysis of cause and impact of human wildlife conflict and the preceding techniques implemented to avoid conflict. 2017 IEEE International Conference on Smart Technologies and Management for Computing, Communication, Controls, Energy and Materials (ICSTM), 455-459.
19. Treves, Adrian & Wallace, Robert & Naughton-Treves, Lisa & Morales, Andrea. (2006). Co-Managing Human-Wildlife Conflicts: A Review. *Human Dimensions of Wildlife*. 11. 10.1080/10871200600984265.
20. Vinoth, P., Rajeev, T.S., Jiji, R.S., Senthilkumar, R. and Gleeja, V.L. 2020. Constraints in participatory management perceived by the inhabitants of human-wildlife conflict (HWC) affected areas in Kerala. *J. Vet. Anim. Sci.* 51(2): 123-127.
21. Wilcox, D. (1994). *The guide to effective participation*. Brighton, UK: Delta Press.