

## Tool 2: Baseline Information

[information with (\*) and (\*\*) must be gathered, as these are reporting requirements for divisions/ States for every five years, and each year, respectively, based on the indicators under the Draft National HWC Mitigation Strategy and Action Plan]

**Method for data collection:** Information on this tool will be compiled by dedicated team of experts engaged by the project

**Frequency of data collection:** Once at the beginning of implementation of guidelines

### A- General Information on the division- PART-I

State
Division
Ranges with frequent/ high conflict
Beats with frequency/ high conflict
Villages with frequent / high conflict
Key species in conflict in the division
Key species in conflict in the neighbouring divisions/ landscape
What are the existing reporting processes ?What all reports are being generated on HWC mitigation topic? For whom?

### B- General Information on the division- PART-II\*

(in context of the HWC and focusing on Ranges that are facing conflict)

<p><b>Background information and Attributes of the landscape</b>  <i>[specific information and maps of the landscape features, biodiversity, and people in relation to human wildlife conflict is to be presented in a usable digital format for analysis. This information and analysis will serve as the basis for further detailing the strategy for designing HWC mitigation measures for the division and adjoining landscape]</i></p> <ul style="list-style-type: none"> <li>- The landscape</li> <li>- Climate  <i>[In this section, specific information on the historical climate data, and the predicted climate variability and change is to be presented, as the basis for analysing the threats that climate change will pose via changing the dynamics between wildlife, their required habitats and people].</i></li> <li>- Topography  <i>[In this section, specific information on the topographic features that influence animal distribution and determines the requirement of barriers and other forms of mitigation measures. This information can also help us in assessing the existing mitigation measures and their suitability vis-à-vis animal movements, hydrology and local people's access to natural resources].</i></li> <li>- Landscape hydrology  <i>[In this section, specific information on the water distribution and how it affects animal distribution and conflict]</i></li> <li>- Land-use and landcover; forest cover, land use change  <i>[In this section, information will be provided on land-use patterns leading to different scenarios that affect human wildlife conflict. Digitizing the vegetation type-animal densities maps, and to identify habitat refuge outside forest areas. Linking population estimation data for different vegetation types]</i></li> </ul>
<p><b>Biodiversity</b></p> <ul style="list-style-type: none"> <li>- Habitat quality  <i>[historical and current status: canopy cover, bare soil, grass cover, invasive species density]</i></li> <li>- Wildlife species  <i>[status and population dynamics, distribution]</i></li> </ul>
<b>Brief socio-economic synthesis; livelihood pattern</b>
<p><b>Resource dependency</b>            Resource dependency assessment, how different line-departments can facilitate to reduce resource dependency and vulnerability of local communities in high-conflict areas/ representative villages</p>
<b>Synergies and trade-off among various land-use/ livelihood pattern</b>

**C- Information on the Drivers and pressures of HWC in the division? what do we know? (pl provide species-specific drivers, if possible)**

Parameter for documentation	Rating (scale of 0-10) with explanation
Trends in human population, life-style and land-use change at the district levels, and village-level along the forest fringe and enclaves inside the division	
Status of habitat loss, degradation and fragmentation	
Are there any development activities/ policies of other sectors that are inhibitory for HWC mitigation, or escalating HWC in the division? E.g. Linear infrastructure, Mining, Electricity transmission lines, MGNREGA work, Tourism, Religious congregations	
Any other pressures? such as Grazing, biomass removal, water and forage stress (deficiency) fire and development works etc	
Has a Land-use change analysis conducted, with regard to its impact on HWC? Cooperation with key sectors and stakeholders on this?  Trends in change in land-use/ land-cover*	
Trends in risk perception of inhabitants towards wildlife species*	
Are there critical wildlife corridors*? Are there cases of disruption of traditional corridors?	
Livelihood dependence of people on forests	
Carrying capacity assessments done? Linkage to climate change? Are there PAs in the landscape integrating climate change models into carrying capacity assessments?*	
Natural and man-made disasters present in the landscape, and trends? E.g. Cyclone, Tsunami, Heat Wave, Landslide, Urban Floods, Floods, Earthquakes, Chemical, Biological- epidemic, pandemic, Nuclear	
Waste management situation	
Situation of invasive species in the division/s and landscape (Matrix of species- area under impact) (if possible beat-level information)	

**D- Information on the current mechanism and status of data on HWC in the division?**

Do we have enough data to implement mitigation measures recommended in the guidelines?

Parameter for documentation	Rating (scale of 0-10) with explanation
How are we collecting the data? Details on the mode of data collection (hard copy formats/ mobile app- which mobile app), frequency and scope of data- what parameters are being collected?	
How are we consolidating, analysing and using the data?	
Have Hotspots been identified? Provide hotspot maps	
Are time-series data (records and maps) on HWC available, and trends of conflict analysed?	
Are the animals causing conflict identified and being monitored? Method of tracking and monitoring employed?	
Trends in number of conflict animals over years	
<b>Trends<sup>1</sup> in number of conflict incidents in the division* (provide actual numbers and trends)</b>	
<b>Species 1</b> <ul style="list-style-type: none"> <li>- Number of deaths of people</li> <li>- Number of injuries to people</li> <li>- Number of livestock death</li> <li>- Number of livestock injury</li> <li>- Property damage</li> <li>- Crop damage</li> <li>- Impact on overall loss of livelihoods</li> <li>- Number of animal deaths due to inhibitory/ harmful elements in the landscape</li> <li>- Number of animals injured due to inhibitory/ harmful elements in the landscape</li> <li>- Number of animal death due to retaliation*</li> <li>- Number of animal injuries due to retaliation*</li> <li>- Number of animals captured for captivity</li> <li>- Number of accidental animal deaths due to snares</li> <li>- Number of accidental animal injuries due to snares</li> <li>- Number of animal deaths during mitigation operations*</li> <li>- Number of animal injuries during mitigation operations*</li> <li>- Number of accidental animal deaths due to mitigation measures</li> <li>- Number of accidental animal injuries during mitigation operations</li> </ul>	

<sup>1</sup>Information on a spatial and temporal scale. Spatial- at Beat/ range/ division level, if available.

**Species 2**

- Number of deaths of people
- Number of injuries to people
- Number of livestock death
- Number of livestock injury
- Property damage
- Crop damage
- Impact on overall loss of livelihoods
- Number of animal deaths due to inhibitory/ harmful elements in the landscape
- Number of animals injured due to inhibitory/ harmful elements in the landscape
- Number of animal death due to retaliation\*
- Number of animal injuries due to retaliation\*
- Number of animals captured for captivity
- Number of accidental animal deaths due to snares
- Number of accidental animal injuries due to snares
- Number of animal deaths during mitigation operations\*
- Number of animal injuries during mitigation operations\*
- Number of accidental animal deaths due to mitigation measures
- Number of accidental animal injuries during mitigation operations

**Species 3**

- Number of deaths of people
- Number of injuries to people
- Number of livestock death
- Number of livestock injury
- Property damage
- Crop damage
- Impact on overall loss of livelihoods
- Number of animal deaths due to inhibitory/ harmful elements in the landscape
- Number of animals injured due to inhibitory/ harmful elements in the landscape
- Number of animal death due to retaliation\*
- Number of animal injuries due to retaliation\*
- Number of animals captured for captivity
- Number of accidental animal deaths due to snares
- Number of accidental animal injuries due to snares
- Number of animal deaths during mitigation operations\*
- Number of animal injuries during mitigation operations\*
- Number of accidental animal deaths due to mitigation measures
- Number of accidental animal injuries during mitigation operations

## Our current response to HWC in the division

*Our response in the form of addressing the drivers and pressures, establishing preventions measures, efforts towards establishing and maintaining a database and information system, response teams, capacity development measures, infrastructure and mobilization of financial resources*

### E- Emergency response

Parameter for documentation	Rating (scale of 0-10) with explanation
What are the typical emergency situations in the division? And in the neighbouring landscape?	
How is the preparedness for emergency situations managed?, e.g. Is there any emergency response plan/ circulars and guidance document, Strategy for “preparedness”, Mock drills? Maintenance of equipment and vehicles etc?	
How these emergency situations are handled? E.g. What is the emergency response mechanism in the division? How is the intra- and inter-agency coordination and cooperation managed during an emergency? Key actions at the onset of emergency? Key response actions during an emergency? Post-emergency reflection and assessment?  Use <a href="#">tool 05</a> to reflect on these questions	
Overall well-being of captured and translocated animals? Information on capture operations, Post capture management, Collaring, Release, Rehabilitation Well-being index of captured and translocated animals* (to be recorded with support from Veterinary Officer)	

### F- Policy and management response

Parameter for documentation	Rating (scale of 0-10) with explanation
Does the State have a State HWC Mitigation Strategy and Action Plan, developed in line with common framework*?	
Has the Division formulated the HWC Management Action Plan to mitigate HWC? Copy of the working plan and management action plan? Has it been integrated into the working plan? Has it been integrated into the existing PA management plan? Has it been integrated into the existing Tiger Conservation Plan? Other plans? Has it been integrated into the district level plans?*	
What other plans exist in the division and neighbouring landscape? Circulars, advisories issued to be included	
How are the existing plans being integrated into the block and district level development planning?	
Are there any legal and policy impediments from Forest sector, other sectors, hindering the implementation of HWC mitigation measures? Are there institutional mechanisms and mandates that are prohibiting the mitigation work?	

## G- Addressing the drivers and pressures of HWC

Parameter for documentation	Rating (scale of 0-10) with explanation
Are there any zones delineated for conflict management?	
Is the HWC due to recent habitat loss, fragmentation and degradation being monitored ?	
Are the wildlife corridors identified and action taken to secure them? Is a corridor management strategy in place?* Ares of land brought under conservation in the wildlife corridor?*	
What is the level of dependence of people on forests? How the dependence of people on forests is being reduced? Cooperation with state rural development training institutions? Cooperation with panchayats? Measures under JFM and ecodevelopment activities? Convergence with MGNREGA and other schemes? Microcredit revolving fund and development of SHGs.	
How far the impact pathways and mechanisms of change, with regard to the impact of projects and other development activities on HWC are documented and recommendations formulated?	
Which good practices are available in the division/ neighbouring landscape on use of EIA for HWC mitigation? Number of cases where HWC Mitigation was integrated into EIA report* Are there any new HWC conflict hotspots in the division/ neighbouring landscape, which have resulted due to development projects?*	
Are the small forest patches, encroachments, and resumed lease lands and compensatory afforestation lands under FCA, ecologically restored? Trends in restored wildlife habitat in the division?* And in neighbouring landscape	
What is the status of invasive species, and their impact on HWC situation? Area covered by invasive species?* Measures to eradicate invasive species? Trends in results?	
How is the local overabundance of species in conflict being managed?	
What is the situation of solid waste and its impact on HWC? How is the pressure due to waste being reduced? Are there some studies available on waste and its impact on HWC? Which local organizations work on waste management issues? Is there a functional waste management plan for the division?*	
What are the safeguards/ assessment framework being used to ensure that mitigation measures are effective	
How is the risk perception of people being addressed? Communication strategy of the division? By the State? Awareness communication measures for key stakeholders? Number of educational institutions with 'holistic approach to HWC mitigation' integrated as part of their curriculum?* Details on the institutions.	
HWC helplines available? Are they also providing awareness and communication services, or only information services in emergency situations?	
How is the cooperation with Media? Trends in number of media reports with holistic approach towards HWC?*	
Any other measures to address drivers and pressures	
Are there cases of linear infrastructure affecting HWC ?	

## H- Communication and Coordination

Parameter for documentation	Rating (scale of 0-10) with explanation
Are the HWC stakeholders identified? And analysed for their potential role? How the engagement with local communities and other stakeholders is being operationalized? communication strategy ? types of communication and awareness measures?	-
How is the local community being engaged for prevention and prediction measures? Number of representatives form civil society and community-based institutions at the division level for a/ working groups?*	
How does the vertical coordination between CWW and field teams? Is it effective in mitigating HWC? Mechanism? Effectiveness?	
How does the horizontal coordination – between forest department and other departments and agencies work? Mechanism? Effectiveness?	
What is the mechanism for coordination between divisions and between different States, in the same landscape? Between different divisions of the same landscape? Between neighbouring states?	
What is the mechanism to engage with the stakeholders from the private sector? Any existing good practices in joint efforts?  How can it be institutionalised and strengthened? Is there a felt need to do so?	
What is the mechanism for cooperation with NGOs? Any existing good practices in joint efforts?  How can it be institutionalised and strengthened? Is there a felt need to do so?	
How are women being engaged in HWC mitigation? Trends in number of women as part of the decision-making structures?*	
Trends in number of women in response teams?*	
Other measures to strengthen participation of women?	

## I- Predicting and preventing HWC Existing prevention measures- what is being done?

Parameter for documentation	Rating (scale of 0-10) with explanation
<b>Early Warning and Rapid Response System</b>	
- Status and details on the early warning system in the division*	
- Status and details on the HWC Mitigation Hub/ a control room, its infrastructure, personnel, and its purpose, scope* Use <a href="#">Tool 06</a> to provide details	
- Response teams- occupational health aspects, formation and role clarity Use <a href="#">Tool 06</a> to provide details on number of response teams, their location, their availability- full/part, permanent/ Daily wages etc) (If No, how do you manage mitigation work; and when is it likely that the teams will be established)	
- Clarity on jurisdiction? (Jurisdiction map and criteria for delineating the jurisdiction)	
- Training (Use <a href="#">Tool xx</a> for competency mapping, and tool xx for training needs assessment)	
- Equipment and vehicles (Use <a href="#">Tool xx</a> for checklist of equipment)	
- How many animals have been radio collared in the division? How is the data being collected? Analysed and used by the response teams for monitoring high-conflict individuals?	
- How often the species-specific experts are required? (for constituting a panel of experts)	
- Trends in public perception of the impact of response teams?*	

<b>Monitoring of conflict animals</b>	
- Is real-time monitoring and documentation of animal behaviour and movement done for managing HWC? is data on population dynamics of key conflict species in division available*	
- How are the high conflict individuals being addressed (as preventive measure)?, identification database on individual animals-in-conflict? aversion conditioning? removal of the animal by way of Translocation	
<b>How the barriers and other exclusionary measures being used in the landscape?</b>	
- What type of barriers are being used? data on length of the barriers, their maps and areas covered. - How is this being ensured that long-ranging animals are not confined to a single habitat patch - How is this being ensured that barriers are only used at the interface between human use areas and forests and do not cut through forests - Participatory approach in designing and maintaining of barriers - Rate the Quality of construction and maintenance. How the barriers are being maintained? By whom? - What has been the impact of existing barriers on animal movement in the target area?	
- Which exclusionary measures are being used? E.g power fences and trenches around villages to prevent entry of wild animals	
- Which other preventive measures are being used, such as Street lights, toilets	
<b>Effectiveness of mitigation measures</b>	
How is effectiveness and wildlife-friendliness of existing mitigation measures is being assessed before, during and after implementing a measure?	
<b>- Mitigation measures by local communities</b>	
- Which crop guarding methods are being used by local community? - Which are the other local mitigation measures being used by local community for protection of property and human life? How is forest department supporting them? - How are other department and schemes such as MGNREGA supporting crop guarding methods? - How much area (hectare) has been protected due to effective crop guarding ?	

## **J- Data, information and knowledge management**

<b>Parameter for documentation</b>	<b>Rating (scale of 0-10) with explanation</b>
What type of data is being collected? Data on drivers, Data on pressures, On status, Data on effectiveness of response measures	
How is the HWC related data being collected, compiled and analysed? Input methods- Mobile Application? Physical formats, any other tools? Compilation- frequency of compilation and consolidation of information? Reporting? Use of the data and information for HWC mitigation work by DFO, RRTs	
What are the key topics where research is required to facilitate the HWC mitigation work in the division and the neighbouring landscape? Trends in research being conducted on HWC*	
In-house research and monitoring capacities?	
What is the mechanism used to assess the effectiveness and wildlife-friendliness of the mitigation measures?	-
Traditional and local knowledge in the division on various aspects of HWC mitigation? What type of knowledge exists? How is it being utilized currently? What could be done?	-
Is systematic research and monitoring conducted to get deeper understanding of drivers	-



and pressures of HWC and to facilitate effective mitigation? Do we have the population estimate of the key conflict species Do we have information on their behaviour pattern?	
What is the mechanism to engage with research and extension institutions of agriculture and veterinary sectors?	

### K- Reduction of impact on people

Parameter for documentation	Rating (scale of 0-10) with explanation
Do we have an assessment of vulnerability of people in relation to HWC? People's perception of their vulnerability*	
Are there settlements inside forest areas, with people getting affected by conflict situations?	
What kind of agricultural practices are prevalent in the division and neighbouring landscape? Situation of crop raiding? Which species, for which crop? Any cases of success with use of non-palatable crops? Any success with use of change in cropping pattern? How is the cooperation with the agriculture department? KVKs? How many ICAR institutes are there in the division? Trends in number of women and farmers practicing HWC-safe livelihoods* Trends in sustainable, climate and wildlife-smart agricultural practices in the division?*	
How is the crop and property damage assessed and addressed?	
How is the health and overall well-being of people affected?	
How is the loss of crop and livestock assessed and addressed? What has been the result so far?  Crop insurance options and mechanism, area/ people insured livestock insurance options and mechanism, livestock insured	
How is the loss of human life and injuries addressed? What is the system of providing ex-gratia and compensation? Is there any system of long-term hand-holding for the victims? Is emotional trauma recognized, assessed and addressed?	
Have the loss of livelihood opportunities recognized, assessed and addressed? Community based ecotourism measures being tried? (How many families are into ecotourism? How much they generate from ecotourism (average annual income)) Community conservancies? Value chain analysis? Measures to support value-chain?	
How is the cooperation with health department, fire brigade and other such departments that can help the victims in emergencies situations	

### L- Occupational health and Safety and disease prevention for the response teams and forest personnel

Parameter for documentation	Rating (scale of 0-10) with explanation
How the occupation health and safety measures for response teams are being taken care of?	
What is the status of Occupational health and safety trainings?* Protective gear and equipment? Are there mock-drills on emergency operations to enhance the competencies of the response teams? Status of Health and life insurance schemes?*	
How is the COVID response? And other zoonotic and emerging diseases? Mechanism? Specific measures? Good practices	
Status of One health initiative? How is it linked with HWC mitigation measures in the division?	

### M-Reducing the Impact on animals, and Animal Welfare measures

Parameter for documentation	Rating (scale of 0-10) with explanation
Awareness to local people and institutions on animal welfare measures?	
Any incidents of people using means that are harmful to animals, such as throwing burning tyres and crackers, setting snares, electrocuting animals	
Awareness of the response teams and other forest personnel engaged in HWC mitigation operations, on animal welfare issues?	
Training of response teams on humane , ethical and professional and scientific handling and management of animals during HWC mitigation operations?	
Status of wildlife veterinary expert in the division and the landscape?	
Number of veterinary experts in committees/ working groups on HWC Mitigation*S	
Availability of a full-time wildlife veterinary expert in the division?*	
Are there any specific ethical and religious issues in the division	
Have there been any incidents in retaliation due to ethical and religious considerations of local people?	

### N- System to support Mahouts, assistants, Daily wage workers, snake-rescuers

Parameter for documentation	Rating (scale of 0-10) with explanation
<b>Mahouts and assistants</b>	
<ul style="list-style-type: none"> <li>- Training</li> <li>- Health insurance</li> <li>- Life insurance</li> <li>- Other measures</li> <li>- Availability, health, training, maintenance of Camp elephants</li> <li>- Level of satisfaction of mahouts and assistants with their job and working conditions?*</li> </ul>	
<b>Daily wage workers</b>	
<ul style="list-style-type: none"> <li>- Training</li> <li>- Health insurance</li> <li>- Life insurance</li> <li>- Other measures such as provision for relief grant/ compensation in case of injury and death</li> <li>- Level of satisfaction of daily wage workers with their job and working conditions?*</li> </ul>	
<b>Snake rescuers</b>	
<ul style="list-style-type: none"> <li>- Certification by an accredited institute?</li> <li>- Availability / accessibility</li> <li>- Cooperation mechanism with the forest department?</li> <li>- Level of satisfaction of snake rescuers with their job and working conditions?*</li> </ul>	

### O- Capacity Development measures

Parameter for documentation	Rating (scale of 0-10) with explanation
What is the capacity development strategy of the State and division? Have the existing capacities and required competencies mapped? Use Tool xx to map capacity needs assessment Use tool xx to map competencies*	
Trends in staff trained on HWC mitigation in the past 1 year?	
Are there any training courses for veterinary experts from the animal husbandry department?	

What is the mechanism for knowledge and experience sharing on HWC mitigation with neighbouring divisions? Use of web-based platform? Dialogue platform?	
What is the mechanism for conducting trainings and workshops for panchayats, community-based institutions and Primary Response Teams on HWC mitigation? Use of digital technology, mobile applications? Use of social media?	

### P- Infrastructure and finance

Parameter for documentation	Rating (scale of 0-10) with explanation
Is the required infrastructure for effective and efficient mitigation of HWC in the division available?	
Details of the veterinary unit support? Details of special vehicle/communication/trapping cages/ machines/ kumkis used for mitigation	
Availability of financial resources?* Are the financial resources sufficient for mitigating conflict and how additional funds can be resourced for effective response? Revolving fund at division? Leveraging funds from other plans within forest department? Convergence with other departments?*	

