

National Human–Wildlife Conflict Mitigation Strategy and Action Plan:

Common Framework for Developing State Human–Wildlife Conflict Mitigation Strategy and Action Plans

**A COORDINATED APPROACH TOWARDS MITIGATING
HUMAN–WILDLIFE CONFLICT IN INDIA**

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1. BACKGROUND AND CONTEXT

Conservation of biodiversity, including wildlife, is essential. Consequences of biodiversity loss and the resulting loss of ecosystem services have a far-reaching impact on livelihoods and overall well-being of human communities. More so because of India's cultural heritage where co-existence is the natural way of living. This situation, however, is changing. Increasing human population in India, and consequent demand for natural resources, is leading to degradation and fragmentation of natural habitats. This is creating a situation where the humans and wildlife are increasingly competing for the same resources. The shift from 'co-existence' to 'conflict' has the potential to undermine existing and future conservation efforts, and hinder achievement of both Sustainable Development Goals (SDGs) and Biodiversity Targets.

Human-Wildlife Conflict (HWC) is a human-induced phenomenon. Therefore, all HWC mitigation measures must be developed in a truly participatory manner, engaging all the key stakeholders. The welfare of wild animals involved in the conflict should be given equal importance while planning and implementing any HWC mitigation measures (The National Wildlife Action Plan of India (2017-2031)).

Recognizing that there is a need to create an enabling environment for wildlife managers as well as communities to address the conflict situation, and strengthen their capacities in the most efficient and effective manner, the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India, is collaborating with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), under the Indo-German Development Cooperation Project on "Human Wildlife Conflict Mitigation in India" (2017-2021).

The purpose of developing HWC mitigation strategy and action plans at national and state levels, is to facilitate a common understanding and consensus among key stakeholders in India, on key approaches and possible solutions for mitigating HWC in India.

For effectively mitigating HWC, it is important that there is a coordinated and synergistic effort at national and state levels. State-level HWC mitigation strategy and action plans, developed in line with a national plan, using a common framework and approach, will help in facilitating this coordinated and synergistic action.

2. INDIA'S APPROACH TO MITIGATE HUMAN-WILDLIFE CONFLICT

The National HWC Mitigation Strategy and Action Plan (HWC-NAP) for India is a guiding document. It facilitates a holistic approach to mitigate HWC, in an inclusive and sustainable manner. The HWC-NAP presents an important opportunity and framework to mainstream HWC mitigation criteria in policies, plans and programmes of the forest sector and other sectors, and at all levels of implementation – national, state and local. This ensures the achievement of overall conservation goals, leading to the continued provision of ecosystem services necessary for the well-being of humans.

The HWC-NAP is based on the following five strategic priority areas (each of which is associated with elements of a holistic approach): addressing the drivers; reducing the pressures; data and information for decision making and rapid response; reduction of impacts on humans and wildlife; and strengthening of institutional and financial structures for effective implementation. These priority areas are complemented by 24 strategic goals, several results and achievements, and further specifications and recommendations for possible interventions to achieve these results, implementation timeframes such as short-term (2021-22), medium-term (2021-2025), and long-term (to be continued in the next plan period as well); responsible implementation entities (i.e. MoEFCC, State Forest Departments, institutions, NGOs), and a robust monitoring framework with indicators of progress, output and impact levels, verifiers of indicators, and agencies responsible for assessing the indicators.

Following is the basic framework of guiding principles and approach within which the HWC-NAP has been developed:

Working towards harmonious co-existence: Wildlife, as part of our biodiversity, is fundamental to sustain ecosystem processes, functions and the continued delivery of ecosystem services. These are the foundation of livelihood security, health and overall well-being of all living beings. Therefore, both humans and wildlife should be protected from conflicts, while maintaining a balance between the needs of humans and the conservation of nature. To find a balance, and to look forward to equal importance to the welfare of animals as well as humans, viz., 'harmonious co-

existence', it is crucial to find solutions keeping in mind that the issues of HWC arise due to conflicting needs of wildlife and humans within the same landscape. Therefore, the solution lies in taking a landscape approach while formulating solutions for mitigating HWC and keeping in mind the welfare of all players involved in the conflict. This approach aims at balancing the welfare of both, humans and wildlife, to achieve a harmonious co-existence. All efforts must be made to ensure that the mitigation measures are developed, assessed, customized and evaluated through site-specific HWC mitigation instruments that are not only effective but also wildlife-friendly.

Holistic approach in addressing HWC by considering the thematic triangle of driver-prevention-damage mitigation:

HWC is a multi-faceted challenge, and thus requires an integrated and holistic approach to find solutions towards its mitigation. It is important to distinguish drivers and pressures, to correctly assess the states and impacts, while formulating the responses.

A holistic approach addresses the issue of HWC from three angles. First, by addressing the drivers and providing a conducive policy environment, through policy-making and cross-sectoral cooperation. Second, by effective use of suitable instruments, traditional knowledge and modern technology to prevent incidents of conflict. Third, by reducing the impact of HWC on both humans and wildlife by reducing the vulnerability of both, and through inclusive planning and implementation of all mitigation actions. Capacity development, structured experience and knowledge sharing, would be the foundation and continuing element of this holistic approach.

The HWC-NAP identifies the following 5 priority areas:

- Addressing the drivers and providing a conducive policy environment, through policy-making and cross-sectoral cooperation (Actions that halt or prevent the creation of new HWC situations or the escalation of existing ones).
- Effective use of instruments, traditional knowledge and modern technology, for preventing the incidents of conflict (Actions to contain, minimize or resolve existing problems).
- Putting in place a system to generate clear information and data on the status of conflicts and mitigation measures, to be able to make informed and evidence-based decisions and implement the most efficient mitigation measures.

- Reduction of impact of HWC on both humans and wildlife by using effective economic, communication and cooperation instruments (Actions that deal with the impact of any residual or unavoidable conflict incidents).
- Ensuring sustained availability of financial and human resources for effective implementation of the HWC-NAP, and to provide an institutional structure for implementation of the strategy and action plan at state and local levels, to ensure that the approach and elements of the national plan are fully operationalized. Improved exchanges on innovation in coexistence measures, and continuous capacity development of the field teams dealing with HWC situations, is essential for successfully mitigating HWC.

Participatory approach to plan, develop and implement HWC mitigation measures:

Planning, development and implementation of HWC mitigation plans and measures, must involve key sectors and stakeholders at national, state and local levels. The process of stakeholder engagement should follow a systematic approach. This will ensure that stakeholders play an effective role in decision-making, and their views should be adequately reflected in the design and implementation of mitigation measures. The HWC mitigation plans and measures should be sensitive to the special needs of vulnerable sections such as rural and urban poor, and youth. The concerns of women should be specifically addressed. Efforts should focus on addressing the capacity development needs of key stakeholders, to facilitate their contributions into implementing HWC-NAP. This includes effective communication, collaboration and partnership between the forest department and other key sectors and stakeholders, strengthening science management linkages for HWC mitigation research, as well as effective communication between field officers and policymakers within the forest sector.

A blended bottom-up and top-down approach: All measures are implemented using a blended approach. This ensures that a fair combination of views and experiences from the field as well as advice from policy level informs the mitigation measures. Key issues and measures are discussed and consolidated at the field level, to gain an understanding of the problems, capacities and good practices. The issues and challenges are then analysed to develop a framework for Guidelines and plans. The framework is then elaborated by a group of coordinators and authors consisting of scientists, forest officers, veterinary

experts, and experts in capacity development, strategic planning and disaster management. Key stakeholders are then consulted for their feedback and inputs on the draft, before it is revised and placed for further detailed consultations with multi-stakeholder groups. The feedback and inputs coming from the entire process is used to revise the draft by the group of coordinators and authors.

Alignment with other processes and plans: Efforts will be made to align the HWC-NAP with other existing and ongoing strategies, plans and processes in the development and environment sector. Processes and systems will be established and/or further strengthened for forging linkages between these strategies, to enhance synergies and eliminate trade-offs.

3. THE NEED FOR DEVELOPING STATE HWC STRATEGY AND ACTION PLAN

HWC is becoming a development issue, affecting achievement of National Biodiversity Targets and Sustainable Development Goals, and several national and state efforts, focussing on poverty alleviation and sustainable livelihoods. This makes it important to ensure that there is coherence between the planning and actions at the national, state and local levels. Further, HWC mitigation requires a coordinated effort by key sectors and stakeholders. Unless addressed in a synergistic manner, HWC may seriously undermine the development gains achieved by these sectors. Hence there is need for developing state-level strategies aligned with the HWC-NAP, for effectively mitigating HWC in the country.

Effectiveness and sustainability of all HWC mitigation strategies and plans depend on successful involvement and commitment, at all levels of decision-making. While the union government through MoEFCC provides overall enabling policy and institutional environment, state-level authorities play a crucial role in addressing HWC at the field level. In this context, to operationalise the implementation of the HWC-NAP, it is imperative that the state governments develop State HWC Mitigation Strategy and Action Plans (HWC-SAP). The state plans will aim at -

1. Facilitating state governments in providing leadership and coordination of HWC mitigation efforts at division and local levels.
2. Facilitating consolidation, analysis and dissemination of state-specific data, information

and knowledge on HWC, to support HWC mitigation planning.

3. Identifying and addressing capacity development needs for mitigating HWC in that state, in an effective and efficient manner, on a sustained basis.
4. Assessing the synergies and trade-offs of HWC mitigation with other development and environment plans, programmes and policies, and successful integration of HWC mitigation into state-level development and sectoral planning.
5. Appraising key HWC mitigation measures to prioritize the optimum measures for key scenarios, and support decision-making on effective and wildlife-friendly HWC mitigation.
6. Facilitating the monitoring, periodic review and updating of the HWC-SAP, to ensure effective implementation.
7. Effective experience and resource sharing among states: Since conflict mitigation is a continuous process, which needs to keep evolving as the animals adapt to certain mitigation measures rendering these ineffective over time, experience-sharing on the development and use of mitigation measures among different states becomes very important.
8. Contributing to the system of monitoring of HWC-NAP.

The five strategic priorities and 24 goals, along with a Supplementary Framework and Guidelines to the HWC-NAP, form the basis for further developing state-level HWC-SAPs in India. Goal 21 provides the background for developing HWC-SAP for every state and Union Territory (UT) in India.

HWC-SAPs will build on the existing mitigation policies and plans of the state government. Each HWC-SAP will take into consideration the ongoing programmes and schemes being implemented within that state, HWC-NAP, and provisions in the species-specific Guidelines. HWC-SAP will be able to achieve its purpose only when it is integrated into the state-level planning process. Only then can the resource allocation for the implementation of mitigation measures be defined, with an objective to achieve the overall development goals of the state governments, and synergies with key relevant departments can be enhanced and trade-offs minimized. This Supplementary Framework outlines the broad scope, as well as the requirements for the preparation of HWC-SAPs.

4. THE NEED FOR A COORDINATED APPROACH AND COMMON FRAMEWORK FOR DEVELOPING STATE HWC STRATEGY AND ACTION PLAN

Each state in India is currently managing the issue of HWC on its own. However, to ensure effectiveness and efficiency in the efforts and to ensure coherence at the national level, it is important to adopt a common generic framework for the preparation of each state's HWC-SAP. Although some states have already initiated the process of preparing state strategies and plans, it is important to have a common understanding about the purpose and content of these plans. There is ample scope to incorporate unique regional or landscape-level conflict mitigation concerns into relevant state plans.

A coordinated approach is required to ensure uniformity in content, as well in the methodological steps, while preparing an HWC-SAP, specifically regarding the following aspects:

1. *Situation analysis using a holistic approach:* The conceptual framework used in the HWC-NAP may be used by each state to analyse the HWC situation at the state level, to understand key drivers and pressures of conflict, current state of conflict in terms of data and pattern, hotspots, impacts, and current responses. This will facilitate formulating a holistic response for mitigating HWC.
2. *Stakeholder participation in a more cohesive manner, linking national and state priorities:* This will require multi-level deliberations with various stakeholders, including non-forest government departments and agencies, private sector, research institutions, academia, NGOs and other civil society organisations. Some of these deliberations will need to be steered at the national level. The strategy and methodology of engagement with these stakeholders at the state level may need to be aligned with the national-level strategy and instruments.
3. *Implementation of the regional plans and inter-state coordination strategies:* This will require multi-state deliberations and agreements to find solutions for mitigation of conflicts, especially in case of long-ranging species, such as elephants and tigers. Aligning state strategies and plans of neighbouring/range states and also working groups of range states, effectively coordinated under a national forum, will provide for the most effective coordination instruments.
4. *Effective implementation of the species-specific Guidelines:* Species-specific Guidelines and Standard Operating Protocols (SOPs), which complement the HWC-NAP, provide the basic content for the states to design and implement their structures and processes, for effective implementation of mitigation measures.
5. *Structure of response teams and their competencies:* The Supplementary Framework under the HWC-NAP provide a basis for establishing and strengthening a three-tiered structure of response teams in the states. This will facilitate cross-learning between states, and alignment of capacity development measures across states.
6. *Financing mitigation measures:* Additional resources, as well as adjustments in the enabling environment, will be required to implement some of the mitigation measures. States may require support and guidance from the HWC-NAP to identify potential financial resources, and anchoring points to leverage from existing budget lines.
7. *Alignment of mitigation measures in the states with the species-specific Guidelines:* All the states will be operationalizing the Guidelines and SOPs developed for mitigating human conflict (wherever applicable) with elephants, leopards, wild pigs, snakes, rhesus macaques, blue bulls, crocodiles, black bears and sloth bears, blackbucks, gaur, media engagement, crowd control, medical emergencies, and occupational health and safety. A coordinated approach will be effective in collation of feedback and inputs, for revision and update of these Guidelines. Special interest working groups under the National HWC Mitigation Forum and the State HWC Mitigation Forum, respectively, will be instrumental in ensuring uniformity – with necessary customizations – in operationalization of the species-specific Guidelines at the state level.

In view of the above, it is appropriate that the HWC-SAPs are prepared according to a common and generic framework, under the overarching HWC-NAP. This will provide enough flexibility and anchoring points for incorporating state-specific contexts and situations.

5. APPROACH AND PROCESS OF DEVELOPING THE STATE HWC STRATEGY AND ACTION PLAN:

The HWC-SAP is to be planned, developed and implemented through a participatory planning process involving all major stakeholders, using both vertical and horizontal coordination approaches. This would include government officers from various line agencies, private sector, civil society, NGOs, research and scientists, policy makers, humans's elected representatives, local communities and all those who have a stake in HWC mitigation. Field personnel of the forest department should be included in the entire process, to ensure vertical coordination. The plan should be sensitive to the special needs of vulnerable sections such as rural and urban poor, and youth. The concerns of women should be specifically addressed.

The HWC-SAP should take a 'harmonious co-existence' approach, ensuring that both humans and wildlife are protected from conflicts. This has to be achieved by maintaining a balance between the needs of humans and the conservation of nature. All efforts must be made to ensure that the mitigation measures are developed, assessed, customized and evaluated through site-specific HWC mitigation instruments that are effective and wildlife-friendly.

One Health approach should be taken, especially when planning HWC mitigation measures in the forest fringe areas, in close coordination with the public health and animal husbandry departments. A systematic joint response involving relevant departments and agencies will operationalize the One Health approach. Efforts should be intensified, to cover the frontline staff under health and life insurance schemes, to collect samples for research, and to provide early warning systems for possible zoonotic and other emerging diseases.

The HWC-SAP is to also act as a capacity development instrument. Identifying and addressing the capacity development needs of key stakeholders, to facilitate their contributions into implementing the HWC-SAP, should be central to the process.

To ensure that the HWC-SAP is owned by the state government and its subjects, its alignment with other state-specific processes and plans is critical.

The goal of this process is to develop the HWC-SAP document, including modalities for its implementation, monitoring and updating. However, various steps involved in the process will also facilitate as anchors for supplementary strategies in key areas that are required to support effective implementation of the plan itself, viz strategies for capacity development and communication.

5.1. Institutional structure to develop and implement the HWC-SAP:

At state/UT level, planning, review and monitoring of HWC mitigation measures will be overseen by a state-level Co-ordination Committee (SLCC) with Chief Secretary as chair and Chief Wildlife Warden (CWLW) as the member secretary. The committee, among other tasks, will work towards alignment of HWC mitigation plans with the relevant plans and programmes of other sectors and departments; as well as make policy recommendations for strengthening the institutional, human and financial capacity of the system to implement HWC-NAP and HWC-SAP at state and local level.

A *state HWC Mitigation Forum* will be set up, chaired by CWLW, to facilitate a broad-based dialogue among key stakeholders and discuss issues that may be beyond the scope of SLCC. The state Forum will facilitate the development, periodic update and implementation of HWC-SAP and implementation of Guidelines.

Each state will establish *HWC Mitigation Task Force*, under the HWC Mitigation Forum, to develop and periodically update their HWC-SAPs, The state coordination mechanism will comprise of -

- **A state Steering and Advisory Group:** The HWC-SAPs will be developed for overall steering by the highest decision-making authority at the state level possible, e.g., Chief Secretary/Principal Secretary for Environment and Forests. The role of the steering and advisory group would be to provide overall guidance, validate the final document, to facilitate its mainstreaming into the overall development planning, through inter-department and inter-agency coordination, for effective implementation of the plan.
- **A state-level Technical Group (STG) for developing the state HWC Mitigation Strategy and Action Plan:** This group, chaired by the Principal Chief Conservator of Forest – Head of Forest Force (PCCF HoFF) of the

state, will have nodal representatives from the State Forest Department (SFD), as well as representatives from other key line departments identified by the state through the stakeholder mapping process, research institutions, civil society organizations and individual wildlife experts, as members of the core team. STG will thus be a mix of scientists, managers (forest officers with HWC experience), civil society institutions, and strategic planning/project management experts. All this ensure that the HWC-SAP takes a scientific approach, is feasible for field implementation, and uses an effective framework for implementation and monitoring results.

The STG will work in close consultation with the National HWC Mitigation Forum steered by the MoEFCC, on the process and products, to ensure that the HWC-SAP is in alignment with the HWC-NAP.

Experts will play specialized roles in the drafting and editing process, viz. Coordinating Lead Authors, Lead Authors, and Review Editors (Annex 1).

5.2. Key steps and elements involved in the process:

Assessment surveys and synthesis to use existing information and data for developing the outline of the state Strategy and Action Plan:

The purpose is, to compile the existing information and data of key issues, to conduct an overall situation analysis, and to develop synthesis reports for key issue areas, including:

- Situation analysis of HWC in the state, including basic information on numbers and distribution of key species in conflict
- Stakeholder mapping and analysis, with special emphasis on inclusion and gender considerations
- Synthesis and analysis of existing law, policies, rules, notifications, plans and programmes for wildlife as well as for agriculture, disaster management, police, rural development and other key departments relevant to HWC in the state
- Synthesis and analysis of data for identification of the drivers and pressures of HWC in the state, taking into account differences among different landscapes
- Basic information on the conflict statistics in the state
- Understanding the dynamics and factors behind conflicts, using a mix of methodologies

The sub-zero draft of the HWC-SAP can be developed with the synthesis of the above information. Write-shops for the author groups can be organized to facilitate the process.

A clear communication strategy can be developed at this stage for engaging key sectors and stakeholders in the process, as part of Step 2.

Stakeholder meetings can be organized at the field level, followed by workshops at the state and regional levels, to prioritize mitigation strategies and actions:

Engagement with key sectors and stakeholders, including, but not limited to forest officers, local communities, media, and government departments other than SFD, private sector (the list will come from the stakeholder mapping and analysis of Step 1).

Methodology for consultation can be meetings, dialogue and bilateral discussions, workshops, questionnaires and other web-based survey methods, open meetings or any other methods that can be effective in bringing in full participation from key stakeholders. The communication material and channels to engage key stakeholders should be institutionalised in a strategic manner.

Workshops and consultation meetings can be conducted at the field level to interact with farmers, rural communities, and local institutions. A thematic focus should be kept for each location, viz., focussing on human-elephant conflict in a landscape dominated by elephant conflict, or human-leopard conflict in a location with high leopard conflict. The focus of consultations should be chosen to ensure that optimum participation and inputs are achieved.

Separate as well as joint dialogues organized with policymakers from key government departments

(including defence and paramilitary establishments, where applicable), private sector and industries, key line departments directly relevant to HWC mitigation in the state such as railways, rural development, agriculture, etc, civil society organizations, and research and academic institutions, and experts. Capacity needs assessments can be conducted at this stage, during all events, to understand the capacity gaps likely to create hurdles in effective implementation of the plan.

Stakeholder consultations should ideally result in prioritized mitigation strategies and actions for different landscapes in the state, role of key actors, financial and institutional requirements for implementing prioritized strategies and actions, and list of identified capacity gaps.

Consultation meetings of the author group should be organized with the National HWC Mitigation Forum, along with a larger group of experts on wildlife social sciences, economics, agriculture, and other relevant experts for further strengthening the technical contents of the plan: The core group of authors and coordinators should conduct separate meetings and workshops/ consultations with the subject matter experts strategic planning experts, monitoring and evaluation experts, to receive technical inputs and align the plan with global and national good practices. At this stage, the core group should also compile the capacity needs assessment report, for implementation of the plan in the state.

Final drafting of the HWC-SAP by the group of authors:

The group of authors shall consider all the discussions and inputs from the meetings, workshops and consultation, incorporate these into the HWC-SAP document, and develop the zero draft of the document, complete with monitoring and evaluation plan.

Development of the Operational Plan and a road map for effective and sustainable implementation of HWC-SAP:

SFD shall steer the process of developing a concrete Operational Plan and a road map, by establishing an institutional framework in line with the HWC-NAP, to oversee the implementation phase of the Operational Plan, establishing a monitoring and evaluation plan, and identifying anchoring points for mainstreaming the HWC-SAP into the state-level planning.

6. RECOMMENDED OUTLINE OF THE HWC-SAP: A COMMON FRAMEWORK

1.1. Chapter 1: Introduction

1.2. Chapter 2: Situation analysis in <STATE>

An overview of the historical and current situation of HWC and mitigation measures in the state, on the following lines:

Patterns and extent of HWC in <State>

(Status of HWC, key data, patterns, species, humans's perceptions, hotspots)

Drivers and Pressures of HWC in <State>

(An overview of the key drivers and pressures of HWC in the state).

Impact of HWC in <State>

(An overview of the key impacts on humans and wildlife)

Key Stakeholders in <State>

Results of HWC-related stakeholder mapping and analysis in the state)

Existing response mechanism for HWC mitigation in <State>

(An overview of the existing Guidelines, instruments, training and other measures being implemented in the state for mitigating HWC)

1.3. Chapter 3: Guiding Principles, Overall Goal and Approach to mitigating HWC in <State>

Purpose

Guiding Principles

Overall Goal

Approach

Alignment

(A detailed description of the plans and processes in the development and environment sector programmes that need to be aligned with the HWC-SAP and vice-versa. The list includes existing and ongoing strategies, plans and processes in the development and environment sector, SDG goals, other development goals and targets that the state has pledged, and measures for forging linkages between these, for enhancing synergies and eliminating trade-offs)

Process of developing the HWC-SAP

(In this section, the process as followed, will be detailed out, along with the timeline)

1.4. Chapter 4: Strategic Plan for HWC Mitigation in <State>

STRATEGIC PRIORITY A: ADDRESSING THE KEY DRIVERS OF HUMAN-WILDLIFE CONFLICT IN THE STATE

Strategic Goal 1: HWC mitigation is integrated into overall development planning as well as programmes, plans, policies and legislation of key relevant sectors

(Under this goal, states should prioritize key sectors relevant for HWC mitigation in the state analyse their processes and plan for identifying anchoring points for integrating HWC mitigation into the plans and programmes of these key priority sectors. Special consideration should be given to integrating HWC mitigation into the SDG plans, climate change and disaster Management Plan of the states)

Strategic Goal 2: All development activities are sensitive to potential human wildlife conflicts

(Under this goal, states should identify key areas that are vulnerable from HWC viewpoint, and where additional development projects may accentuate the problem. States should list methods and processes that will be implemented, to ensure comprehensive spatial planning and other relevant information is available for appropriate assessment of HWC impact of development projects)

Strategic Goal 3: Comprehensive and integrated land use planning ensures that wildlife habitats are protected from loss, fragmentation and degradation

(Under this goal, states should consider setting up a process and framework for land-use change analysis to be conducted in cooperation with key sectors and stakeholders, with regard to its impact on HWC; elaborate institutional framework for setting up joint working groups, with representation from SFD and other key departments, to facilitate a dialogue to review land-use change monitoring, its impact on HWC and agree on possible recommendations and/or solutions, and plan towards carrying-capacity assessment of HWC hotspots with integrated climate change impact models)

Strategic Goal 4: Humans are enabled in working on their risk perception, improving their tolerance and enabling co-existence with wildlife in the same landscape

(Under this goal, states should consider the development of a clear communication strategy in line with the national communication strategy, and establishment of a multi-disciplinary Working Group on communication under the state HWC Coordination Committee / HWC Mitigation Forum, for implementing the communication strategy at state level. States should consider integrating awareness and understanding of wildlife behaviour and ecosystem services it provides, into state-level educational curricula, and intensive dissemination of information on animal behaviour using innovative and effective communication tools. Long-term engagement with the media as a strategic partner in raising awareness among humans on wild animal behaviour and on mitigation measures should be considered in line with the Guidelines for Forest-Media Cooperation States should plan setting up helplines to facilitate humans during emergencies at HWC hotspots)

STRATEGIC PRIORITY B: REDUCING THE DIRECT PRESSURES THAT LEAD TO CONFLICT SITUATION

Strategic Goal 5: Critical wildlife corridors, migratory routes, and movement paths of key wildlife species in conflict are identified, assessed and secured

(Under this goal, states should consider the mapping of all wildlife corridors for key long-ranging wildlife species on a GIS platform linked to the National Database, and designate agencies and institutions for regular monitoring and reporting of the prioritized corridors. Wildlife corridor Management Plans can be planned on a model basis, that are in line with the division-level HWC Management Action Plans (HWC-MAP). Use of instruments such as memorandum of understanding with local communities, land acquisition/procuring of land by NGOs, and other innovative mechanisms can be elaborated to acquire the community-owned/private lands, to secure critical corridors. There should also be a provision of constituting Conservation Reserves and Community Reserves in the corridors, and Corporate Social Responsibility (CSR) funds/partnerships can be utilised for securing land in corridors)

Strategic Goal 6: Livelihood dependence of humans on protected areas, corridors, forests and other natural habitats is reduced

(Under this goal, the state should consider measures, through inter-departmental coordination, for creating alternative livelihood opportunities through poverty alleviation programs such as MGNREGA, support to Self Help Groups (SHGs), micro-finance schemes, etc., to enhance incomes and reduce dependence on forests, further strengthen the institutions such as Joint Forest Management Committees (JFMC)/Community Forest Management (CFM), Vana Panchayat (VP) and Eco-Development Committee (EDC), and facilitate their greater support in maintaining and monitoring mitigation measures such as maintenance work of fences, trenches, alternate crop plantation, crop guarding etc., skill development training to youth in the villages around conflict hotspots to enable these forest-dependent populations find alternate livelihood options. Improved agricultural and animal husbandry practices, facilitation of improved processing, value addition and direct marketing for NTFP products will enhance incomes of forest-dependent communities. Promotion of alternate fuel sources, instead of fuelwood, should also be encouraged)

Strategic Goal 7: Incidences of wild animals entering or co-occurring in human-dominated areas are reduced, by applying, *inter alia* technological innovations, effective and wildlife-friendly preventive measures.

(The overall strategy should be to use a systematic way of assessing the population of key species, and to set up an early warning and rapid response system, with continuous capacity development of the teams and monitoring of their effectiveness. State-wise planning for establishing barriers should be planned, taking a landscape approach, to stop incidents of wildlife entering human-use areas, and at the same time ensuring that the barriers are not creating new situations of HWC elsewhere in the landscape by hindering the movement of long-ranging species. Design and sustainable maintenance plan of the barriers should be central to the discussions. In the remaining cases, the early warning and rapid response system must be used to make quick decisions, and the local community should be engaged via awareness measures and formation of primary response teams, so that they do not harm the wild animal and let

it go back on its own. In a scenario where the damage is inevitable, humans are provided effective compensation and *ex-gratia* payments for the damages caused during a conflict. In case the wild animal does not go back on its own, the response teams drive it in a safe way or rescue it, if required. All strategies on use of barriers need to reiterate that barriers are not seen as a stand-alone mitigation measure. Crop and livestock guarding measures, suitable for state-specific conditions, should be explored and discussed. Implementer's Toolkits should be used for developing this section. It is important that states draw a clear plan to engage the local community in implementing the mitigation measures to ensure sustainability.

This section should provide details on the division-wise 'Early Warning and Rapid Response System', where early warning system using new technology and community participation, and a three-tiered system of response teams is to be established at each forest division in line with the *Supplementary Framework for Establishment and Capacity Development of HWC Mitigation Response Teams* of the HWC-NAP.

States may assess the linkages of HWC with poaching and fire, to further develop measures for mitigation)

Strategic Goal 8: Efficient and effective response teams are developed in each forest division and protected areas at the HWC hotspots in India

(Since it is impossible to prevent wildlife and humans from using the same space, the role of response teams for timely action to prevent the conflicts and to reduce the impacts due to such incidents, will remain one of the important foundation blocks of the HWC mitigation strategy in India for years to come. This section will elaborate the detailed operational plan of establishment and management of a three-tiered system of response teams at each forest division in the state, in line with the Guidelines provided in Goal 8 of HWC-NAP. A detailed annex of GIS maps indicating the area of operation and locations of each response team may be included)

Strategic Goal 9: Wildlife Habitat within protected areas and forests is restored

(Under this goal, states will discuss measures for identification of impact pathways of invasive species on HWC in different landscapes, mapping of invasive species at the HWC hotspots, and possibility of implementation of invasive species management as an activity under MGNREGA scheme. In this section, states can provide existing and new plans for restoring wildlife habitat within protected areas and forest lands in the states)

Strategic Goal 10: Sustainable waste management and HWC-safe food storage in and around protected areas, and at HWC hotspots

(Under this goal, states may consider planning for long-term studies, in cooperation with local universities and institutions, on understanding animal behaviour in relation to food waste, measures for enhancing awareness among local community and residents on waste management practices, and measures to establish and enhance cooperation with local municipalities and panchayats on waste management. States should explore the possibility of engaging local organizations for steering citizen cleanliness drives and installation of specialized waste bins that cannot be opened by wild herbivores, around protected areas and conflict hotspots)

STRATEGIC PRIORITY C: MAKING AVAILABLE INFORMATION AND DATA ON HWC TO DECISION MAKERS AND FIELD RESPONSE TEAMS, FOR EFFECTIVE MITIGATION

Strategic Goal 11: Wildlife research in the country addresses critical issues related to HWC mitigation

(In this section, states should prioritize their research needs, with the participation of field practitioners, to facilitate the national and state-level wildlife research institutions to take up research on these critical issues. A key research priority may be population estimation and dynamics of key species involved in HWC. States may develop a plan for facilitating capacity development of forest department personnel to enable them for regular monitoring and basic

research on animal distribution, conflict distribution and effectiveness of barriers. Exploring the possibility of engagement with local universities and institutions located in the landscape, for long-term monitoring and research leading to the development of a sustainable and scientific knowledge base. Feasibility of conducting studies on immuno-contraception of selected species needs to be assessed)

Strategic Goal 12: Effective and wildlife-friendly and evidence-based HWC mitigation measures are designed, implemented and customized for site specific needs

(Under this goal, states should plan measures for collecting and sharing data on the effectiveness of mitigation measures being implemented in that state, using a standard criterion, and with participation of key stakeholders, at regular intervals)

Strategic Goal 13: A national database facilitates assessment and monitoring of HWC situation and formulation of effective HWC mitigation measures in the country

(Under this goal, states should define measures for collecting and sharing data on the National Database platform, using a standardized database format. States should plan for measures to use the data for mitigation of HWC, such as the use of conflict hotspots maps and their updating, decision-making at state level and by the Rapid Response Teams (RRTs), plans to train the personnel on use of mobile applications, and enabling the field personnel to identify data gaps that need to be filled to enhance their efficiency and effectiveness in the field)

Strategic Goal 14: States, agencies and other stakeholders systematically share data, information, experiences and knowledge with each other to co-create long-term solutions on HWC mitigation

(Creation and management of a database and documentation on good practices is only the first step. Policymakers, multi-disciplinary experts and practitioners from the SFD and other key relevant sectors would need to continuously exchange information on trends, challenges and good practices, with the aim to learn from each other and to find innovative solutions together. Under this goal, states will operationalize their access and contribution to the online portal on one hand, and develop measures to motivate field practitioners – especially the field response teams – to share their experiences and knowledge)

STRATEGIC PRIORITY D: REDUCING THE NEGATIVE IMPACTS OF HWC ON HUMANS AND WILDLIFE

Strategic Goal 15: Reduced vulnerability of humans

(Under this goal, the states should identify measures to facilitate in the development of crops and cropping systems that are economically viable less attractive to wild animals and are suitable for local climatic and edaphic conditions, and the possibility of use of MGNREGA scheme to support the farmers in crop protection and setting up barriers, development of water bodies and fruit trees at the boundary of protected areas and forests. The focus should be on the use of economic instruments such as compensation/*ex-gratia*, crop and livestock insurance schemes, incentives for crop guarding, performance payments for adapting innovative cropping and animal husbandry practices, and wildlife-friendly farming strategies and actions. The specific issue of provision of compensation for crop damage due to HWC under *Pradhan Mantri Fasal Bima Yojana*, can be developed after due consultation in the state with community representatives and experts. This section should also be used to detail the measures for the relocation of settlements, and for enhancing livelihood opportunities: providing economic opportunities wherever possible to reduce humans's dependence on local resources, reducing existing anthropogenic pressure, and for community-based wildlife tourism/ community conservancies, outside the protected areas)

Strategic Goal 16: Reduced vulnerability and enhanced occupational health and safety of field teams responsible for HWC mitigation

(Under this goal, states should plan the steps to be taken to address potential risks to personal safety, and to reduce such hazards. The Guidelines on occupational health and safety form the basis of planning measures under this goal, including ensuring protective gear for all members of the response teams and other field staff engaged in mitigation operations, health insurance scheme for all the field staff engaged in HWC mitigation measures, including all members of the response teams, life insurance for all members, permanent staff and daily wage workers of the response teams, and mandatory safety training to all members of the response teams and other staff engaged in mitigation operations)

Goal 17: Reduced vulnerability of wild animals through animal welfare measures

(Under this goal, states should plan the steps to be taken to address potential risks to animal safety, and to reduce such hazards. This goal should be elaborated in close consultation with veterinary experts, wildlife biologists, animal welfare experts and organizations)

Goal 18: Most vulnerable sections of the society such as economically weaker groups, youth and women participate in planning, development and implementation of mitigation measures

(Stakeholder mapping and analysis at state level must be conducted before writing this section. Measures should be put in place, as part of this goal, to conduct stakeholder mapping and analysis in each division, which should be updated at regular intervals, and models for stakeholder engagement should be confirmed in each plan on HWC mitigation. For ensuring the inclusive approach, it is recommended to constitute “Primary Response Teams (Community PRT) at village level” as part of the overall three-tiered system of response teams. Gender sensitization and designing instruments related to the needs of women, collecting the relevant gender disaggregated data and analysis must be prioritised)

STRATEGIC PRIORITY E: EFFECTIVELY IMPLEMENTING THE NATIONAL, STATE AND LOCAL-LEVEL HWC MITIGATION PLANS, BY STRENGTHENING FINANCIAL AND INSTITUTIONAL STRUCTURES

Strategic Goal 19: Institutional capacities in forest and other key relevant sectors are strengthened, for effective implementation of HWC mitigation in the country

(Specific measures to integrate HWC mitigation in all state training institutions, regular training of trainers at all such institutions covering the thematic topic of HWC and participatory training methodology, use of e-Learning and m-Learning courses, and measures to facilitate participation of state-level officers and trainers in institutional networking among forest and other sectors’ training institutions, for implementation of impactful trainings sustainably.

To achieve this goal, states should consider creating a cadre of veterinary officers within the SFD, integration of HWC topic into the regular curricula of state-level training institutions of agriculture, veterinary, rural development and tribal development, offering internships for the wildlife-veterinary students at

selected divisions, facilitating a pool of trainers drawn from the forest, agriculture, rural development sectors at state/division level, to ensure sustained training for the primary response teams and panchayat members, implementing joint training of forest staff with other key stakeholders, and facilitating faculty exchange between forest and other sector training institutions.

States should develop and implement capacity development strategy regarding HWC mitigation in the state, ensuring a selected pool of wildlife experts within the forest department to work in HWC hotspots in each state. Plan for making provision for inclusion of non-forest service experts to cover specific issue areas, plan to contribute in the “Working Group on Capacity Development” under the National HWC Mitigation Forum)

Strategic Goal 20: Individual competencies in forest and other key relevant sectors, including frontline staff, *mahouts* and daily wage workers are strengthened

(Specific measures to motivate forest staff and other practitioners to help improve overall performance and outputs in the HWC mitigation should be put in place. There should be a system of assessing training needs based on the competency framework, ensuring availability and use of the standardized curriculum on HWC mitigation in local languages.

States should plan measures for conducting structured training for *mahouts* in local languages, strengthen *mahout* training schools within identified forest camps, and institutionalize a system of a license/certification for all *mahouts*. States with long-standing experiences in *mahout* trainings, existing *mahout* training institutions should offer training to *mahouts* of other states. *Mahouts* can be provided with hardship allowance, accident insurance and bonus for well-kept and healthy elephants)

Strategic Goal 21: State-level HWC Mitigation Strategy and Action Plans (HWC-SAP) are developed, implemented and regularly updated in all states and Union Territories of India, taking a landscape approach.

(Implementation of HWC-SAP, in line with the approach of the HWC-NAP, establishment of a State HWC Mitigation Forum, will be facilitated by the National HWC Mitigation Forum, responsible for monitoring and revision of HWC-SAP, participation in Regional Forum, facilitated by the National HWC Mitigation Forum, for neighbouring states in the same landscape, and systems for updating the plan every five years. State-level multi-stakeholder

forum, facilitated by the state HWC Mitigation Task Force, should institutionalize the mechanism for incorporation of feedback from key stakeholders (horizontal alignment), participation in the Working Group of Chief Wildlife Wardens under the National HWC Mitigation Forum, on experience-sharing towards implementing the HWC-SAPs using a common framework and approach (vertical alignment), consolidation of work related to HWC mitigation being implemented by various units and agencies in the state)

Strategic Goal 22: Division-level HWC Management Action Plans (HWC-MAP) in all states and UTs of India are developed, implemented and regularly updated

(States will elaborate the detailed strategy to develop and implement division-level HWC Management Action Plans (HWC-MAP), taking a landscape approach, developed and implemented in all forest divisions within the states. A multi-stakeholder forum at the landscape level, anchored at the Chief Conservator of Forest (CCF) level, would steer the landscape-level planning and provide feedback for implementing the HWC HWC-MAPs. The states can also consider implementing citizen science programmes to strengthen science-management linkages at the local level)

Strategic Goal 23: : Finance and infrastructure is available for implementing national, state and divisional plans.

(States will elaborate plans for establishment of well-equipped HWC Mitigation Hubs in each territorial forest division in India, support to state-level forest and wildlife training institution, to establish a well-equipped HWC Imitation simulation lab, where the participants can get hands-on training on key mitigation operational processes (such labs should also be made available to the RRTs for their training), establishment of well-equipped animal health monitoring facilities in each HWC hotspot, and if required, establishment of animal safari, to act as post-capture facilities. States should identify new financing sources and align the state measures and goals with the financial resources available for SDG and climate change processes relevant to HWC mitigation)

Strategic Goal 24: Measures are in place for fostering partnerships between key stakeholders for sustainability and greater outreach in HWC mitigation efforts

(States should identify key private and public sector organizations and companies, via the stakeholder mapping exercise, and develop measures to engage with the selected ones, to institutionalize mechanisms and instruments for promoting biodiversity-friendly production and commercialisation, plan for engagement with public and private conservation organizations for working towards specific goals and contribute to reporting of indicators. A system should be developed to provide technical advice and support to the private sector to develop and adopt innovative wildlife-based livelihood practices for enhancing the appreciation of wildlife among the rural poor and vulnerable section at the HWC hotspots)

Chapter 5: Action Plan for HWC Mitigation in <State>

(as per the strategic plans in the previous section; and taking the expected results and achievements from HWC-NAP as the starting point; goals and interventions to be prioritized for different timeframes, viz. long-term, medium-term and short-term goals)

List of measures (short- and long-term) needed to implement the strategies listed in the previous section, including timeframe and sequence for implementation

List of ongoing and planned initiatives (who is doing what? Where? how much is allocated?)

For each action, identification of budget line and cost of implementation

List of responsible agency/unit for each action, their existing capacities (link the capacity development plan with the previous section)

Chapter 6: Monitoring, review and updating the plans

(Indicators to be defined here, taking the indicator framework from HWC-NAP as the starting point .)

Assess progress, effectiveness, and capacity gaps

Plan and process for updating the HWC-SAP

Monitor the process of development of HWC-SAP

Chapter 7: Communication plan

Annex 1:

COORDINATORS AND EXPERTS FOR DEVELOPING HWC-SAP

TERMS OF REFERENCE:

Representatives from government agencies, State Forest Departments, research institutions, NGOs, international organizations, and individual wildlife experts have been identified as members of the core team.

The experts are a mix of scientists, managers (forest officers dealing/having dealt with HWC) and civil society institutions, to ensure that the State Strategy and Action Plan is balanced.

The experts will play different roles in the drafting and editing process, viz. Coordinating Lead Authors, Lead Authors, and Review Editors. Detailed terms of reference of each of these categories is provided in the section below:

COORDINATING LEAD AUTHORS (CLA)

- CLAs will be responsible for the overall steering of the writing work, based on the existing outline and approach of the documents. Key task of the CLAs is to ensure that the zero draft is developed within the given timeframe and follows the agreed approach and quality. CLAs will coordinate forward with the Lead Authors and Contributing Authors to receive their inputs and will coordinate back with the State-level HWC Mitigation Forum, who will further coordinate with the National HWC Mitigation Forum/ MoEFCC.
- CLAs will have the overall responsibility of coordinating and drafting the document, using the outline and approach, within the agreed timeline. CLAs will be responsible for actively coordinating and following up with the Lead Authors and the support group, for receiving their inputs in time and for ensuring quality of their inputs.
- CLAs will be responsible for ensuring that all the Lead Authors adhere to the approach and contribute as per the terms of reference. CLAs will be responsible to bring to the attention of the state-level HWC Mitigation Forum, in case they are not able to engage any Lead Author, for any given reason.
- CLAs will be responsible for identifying any specific issues that may delay the drafting/diminish the quality of the document and advise the State-level HWC Mitigation Forum on the possible solutions required to rectify the issue.
- CLAs will be responsible to participate in the fortnightly coordination meetings with the State-level HWC Mitigation Forum (telephonic via video conferencing /face-to-face).
- CLAs will be responsible for planning and moderate the writing workshops/meetings of authors, as and when required, for timely completion of the documents.
- CLAs will be responsible for compiling the data/information gaps received from the LAs, and identifying the experts/agencies to conduct surveys for filling the data/information gaps, in a timely manner.

LEAD AUTHORS (LA)

- LAs will work on different sections of the documents, in line with the agreed approach and timelines. LAs will work in close coordination with the CLAs, and key officials and experts listed under “Contributing Authors”.
- LAs will be responsible for writing a major section of their respective document, as identified, and agreed with the

CLAs.

- LAs will be responsible for identifying, collecting, and synthesizing relevant information, data and material from existing reports, documents, government notifications, published literature and other credible knowledge sources as appropriate, with appropriate citation and due credits.
- LAs will be responsible to identify specific data and information gaps, and communicate this to CLAs, in an agreed format.
- LAs will be responsible for ensuring that the language in the document is gender-neutral, inclusive and is in line with the harmonious-coexistence approach for HWC mitigation.
- LAs and CLAs together, will identify additional authors, if required, for specific sections and/or to field test specific sections.

CONTRIBUTING AUTHORS (CA)

- Contributing Authors is the group of experts providing the necessary guidance to and sharing crucial information and field experiences with the lead authors, during the entire process of the development and field-testing of the documents.

REVIEW EDITORS (RE)

- REs will be responsible for ensuring that the CLAs and LAs follow the agreed outline and approach in drafting the HWC-NAP, and that they incorporate the feedback received from the field-testing of the HWC-NAP, appropriately in the final draft.

National HWC Mitigation Forum /MoEFCC

- The Forum will be responsible for the overall steering and facilitating the process of drafting, field testing, stakeholder consultations and finalization of the HWC-NAP, state-level HWC-SAPs, and Guidelines.
- The main function of the Forum will be to ensure that all the plans and procedures are being developed using the common agreed approach as indicated in this document.







Ministry of Environment, Forest and Climate Change
Government of India
2021