

Participant Toolkit

# Holistic Approach to Human-Wildlife Conflict Mitigation in India

For Agriculture Sector Professionals



Implemented by  
**giz** GIZ - German Engineering  
for International  
Cooperation (GIZ) GmbH





## About the Toolkit:

*"The training programmes and courses based on this curriculum are intended to create a cadre of HWC mitigation professionals from the agriculture, veterinary and animal husbandry sector, implementing holistic approach for bringing in enhanced effectiveness and efficiency in HWC mitigation measures in India and working towards innovative crop protection and HWC-safe farming practices.*

## Capacity Development for Sustainable and Effective mitigation of Human-Wildlife Conflict

Mitigation of human-wildlife conflict is becoming a key area of concern for not only wildlife managers and local communities but also the district and state administrations. There is a need to create an enabling environment to address human-wildlife conflict holistically, with participation from all key stakeholders and sectors.

One of the most effective ways of addressing the issue on a long-term basis is to invest in capacity development of key stakeholders for facilitating them in co-creating effective and sustainable solutions for mitigating human-wildlife conflict.

A holistic capacity development system is designed under the Indo-German Project Human-Wildlife Conflict Mitigation in India (HWC) for addressing key competencies of relevant stakeholders from the forest sector, including in-service and probationary Indian Forest Service officers, in-service and probationary state forest service officers and decision-makers at the national and state levels, and agriculture sector professionals and students, who are key to developing and implementing HWC mitigation measures in India.

*Capacity development is the process of developing capacities of individuals and shaping joint learning processes so that the individuals are enabled to achieve sustainable results within their own systems of reference.*

*Capacity development facilitates change among people in three dimensions: knowledge, skills and values/attitudes. A combination of traditional and innovative capacity development measures is used to achieve the objective.*

## Competency Framework for personnel working on HWC Mitigation in India

The combination of knowledge, skills, experience and attributes that leads to consistently successful performance is known as 'competencies'. Competencies are demonstrated behaviours that lead to success. They are more enduring than job tasks and reflect the unique characteristics or behavioural attributes a person can bring to the job.

Competencies have been described in the National Training Policy (2012) of India to encompass the knowledge, skills and behaviour that are required in an individual for effectively performing the functions of a post. The policy stipulates that each government department/ministry classify each post with a clear job description and the competencies required and carry out competency mapping of all its employees.

The Indo-German project has made an attempt to define the professional competencies required for human-wildlife conflict mitigation for the forest service professionals in India and structure a competency framework. This competency framework is being used to conduct a training needs assessment that will guide the development of a curriculum and training material for training programmes related to human-wildlife conflict mitigation in India.

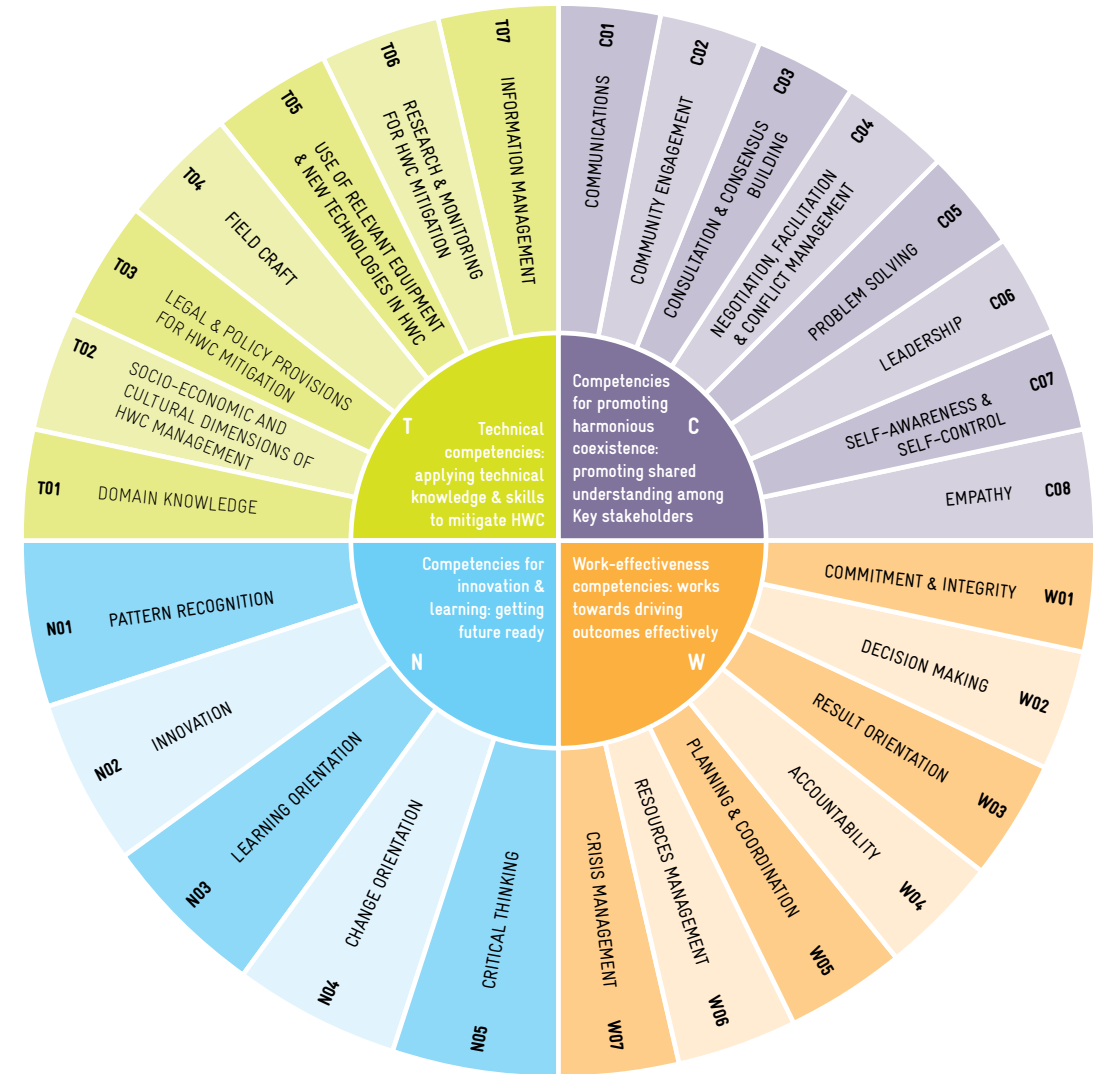
Specifically, in the context of HWC mitigation, competencies can facilitate the following processes:

- Developing capacity development approaches
- Developing training HWC curricula for national and state-level institutions
- Identifying personnel with the required expertise to be placed in relevant positions to drive HWC mitigation goals
- Efficient engagement of stakeholders, including local community members, NGO personnel, volunteers and private landowners
- Motivating staff members of forest departments and other practitioners.

A competency framework is essentially a structured compilation of competencies that are relevant for successful performance in an organisation. It defines behaviours that are required to effectively manage both current and emerging work challenges in the organisation.

The competency framework developed for HWC in India follows.

The competencies identified for personnel working on HWC Mitigation in India



Khera, Neeraj, Ahlawat Pankaj, Varma, Paayal (2023). A Competency Framework for personnel working towards human-Wildlife Conflict Mitigation in India. GIZ-Dale Carnegie India, New Delhi



## The Process of Curriculum Development

The project developed a competency framework on the basis of which training needs were identified for key stakeholders of HWC mitigation in India.

Following the first results of the competency framework, pilot testing of the training needs assessment framework was conducted in June 2018. After this, the project facilitated the process of consolidating and prioritising the training needs of key stakeholders during a national workshop on curriculum development held in September 2018. The workshop resulted in a modular curriculum framework for key stakeholders from the forest and veterinary sectors, from the media and from civil society. Three writing workshops were organized, at Haridwar, Kodagu and north Bengal, during November 20–30, 2018 to develop the modularised curriculum further.

**There was active participation at the five workshops, with 92 international and national experts. They represented the fields of capacity development, wildlife, agriculture and science, the media and communications and the social sciences.**

The workshops were facilitated using participatory facilitation methods dedicated to receiving inputs from all participants and to reaching joint agreements. The last three workshops also included field visits to selected HWC hotspots for developing a common understanding of the training needs and identifying specific topics/cases/methods for the curriculum through discussions with field-level officers.

## Competencies-Based Curriculum for Agriculture Sector Professionals

The competencies-based curriculum places a strong emphasis on hands-on exercises. Participatory methods of training and learning are used. The training material is developed by a competent team of experts drawn from the forest, wildlife, veterinary, agriculture and media sectors, who bring in a truly cross-sector perspective to the whole process of capacity development.

---

*The use of a competencies-based curriculum is a way of approaching professional training that primarily emphasises facilitating the participants to develop the competencies that are required by them for performing their jobs more efficiently and effectively. It aims at preparing people more effectively for real workplaces.*

---

## Implementation of Training Courses Using This Curriculum

**Taking a One Health Approach to HWC Mitigation with the Indian Council of Agricultural Research, May 12, 2023, Hyderabad:**

A training session on 'Taking a One Health Approach to Human Wildlife Conflict Mitigation' was organised on 12 May 2022 at Indian Council of Agricultural Research - National Academy of Agricultural Research Management ICAR-NAARM Hyderabad for 15 senior officials including ADGs and Directors of the institutions under ICAR. This session was conducted as part of the Executive Development Program on Leadership Development being implemented at ICAR NAARM.

The participants were from the domains of agriculture, horticulture, agricultural engineering, veterinary and animal science with an average experience of 25 to 30 years in the National Agricultural Research and Education System of the country. Dr Neeraj Khera, Team Leader Indo-German Project in HWC Mitigation provided the inputs and led the discussions.

The session resulted in concrete ideas towards increased forest-agriculture-veterinary cooperation on issues like the national dialogue on One Health, engagement of *Krishhi Vigyan Kendras* for HWC mitigation awareness, integrating curriculum on HWC and One Health into the curriculum of undergraduate students of agriculture universities.

<https://indo-germanbiodiversity.com/project-details-326.html>

**A two-day Training of Trainers on 'Holistic Approach to Human-Wildlife Conflict Mitigation and One Health' was jointly organized by GIZ and ICAR NAARM, in Hybrid mode, under Indo-German Project on 'Human-Wildlife Conflict Mitigation in India', on May 15-16, 2023, for the faculty and experts of the State Agriculture Universities and Krishi Vignan Kendras (KVKs). The training was facilitated by ICAR-National Academy of Agricultural Research Management (ICAR-NAARM) with participation of 31 faculty members and experts of the State Agriculture Universities, forest training and research institutions under ICAR, and Krishi Vigyan Kendras (KVKs). The TOT was organised in a way that on Day 2 of the ToT, the trainer participants had an opportunity to conduct an awareness training for the farmers and community members from the three project pilot sites on May 16.**





## About the Curriculum

The training programmes and courses based on this curriculum are intended to create a cadre of HWC mitigation professionals from the agriculture, veterinary and animal husbandry sector, implementing a holistic approach for bringing in enhanced effectiveness and efficiency in HWC mitigation measures in India and working towards innovative crop protection and HWC-safe farming practices.

This curriculum is suitable for in-service as well as probationary Agriculture Research Service (ARS) officers, scientists of the institutions of Indian Council of Agricultural Research, faculty members of the State Agriculture Universities, students of the masters and graduation courses in agriculture, veterinary and animal husbandry. The curriculum has been designed and updated, in alignment with the existing curriculum at the national and state-level training institutes in India.

This curriculum has been designed for a stand-alone intensive course to be delivered over five days. However, because of its modular structure and participatory training methods, it provides enough flexibility and can be customised for delivery over longer durations such as 15 days or one month as well as for shorter training and field expeditions.





## Possible Learning Outcomes of the Training Programmes Based on This Curriculum

### Agriculture, Veterinary and Animal husbandry professionals

At the end of the training, the participants will be able to:

- **Outline** concepts and issues in Human-Wildlife Conflict mitigation using a landscape approach
- **Differentiate** between different conflict scenarios on the basis of the landscape, location, species involved, and community perception
- **Outline** existing and potential HWC mitigation measures
- **Appraise** each mitigation measure on the basis of its effectiveness and wildlife-friendliness
- **Describe** the success factors required for cooperation with forest sector and other stakeholders in mitigating HWC
- **Analyse** legal opportunities and limitations in conflict management
- **Appreciate** their roles in mitigating HWC in their respective area of work
- **Demonstrate** (in a simulation) animal capture and rescue methods and their applicability to different species (for veterinary and animal husbandry professional only)





## Learning Outcomes for Agriculture, Veterinary and Animal husbandry students

At the end of the course, the participants will be able to:

- **Outline** concepts and issues in human-wildlife Conflict mitigation using a landscape approach
- **Differentiate** between different conflict scenarios on the basis of the landscape, location, species involved, and community perception
- **Outline** existing and potential HWC mitigation measures
- **Analyse** each mitigation measure on the basis of its effectiveness and wildlife-friendliness
- **Analyse** legal opportunities and limitations in conflict management
- **Appreciate** their future roles in mitigating HWC in the country
- **Demonstrate** (in a simulation) animal capture and rescue methods and their applicability to different species (for veterinary and animal husbandry students only)

## Learning Outcomes for Decision-Makers

By the end of the course, the participants will be able to:

- appraise HWC mitigation planning in the overall agriculture policy and planning context at national and state levels
- appraise different plans and programmes in agriculture sector for their potential leveraging and synergistic value to HWC mitigation
- Outline an action plan for HWC mitigation related research to promote HWC-safe farming practices and wildlife-friendly and effective HWC mitigation measures
- demonstrate the leadership skills required for promoting a shared understanding of HWC mitigation approaches with the forest sector







## Training Approach and Methodology

The curriculum is modularised, with the modules being delivered using different training methods over required time periods. The modularised structure provides flexibility to adapt the contents, methods and durations of different topics on the basis of the training needs of the participants. **Learning outcomes have been formulated for different groups of participants, and so the modules can be used in any combination and over different durations, for specific purposes and to fit specific training schedules.**

A unique feature of the curriculum is that it focuses on HWC using the thematic triangle of driver-prevention–damage reduction.

There are some common modules for all key stakeholders. These cover common issues and the basics of HWC. Specialised modules have been developed to deepen the understanding and skills of different training groups in their respective fields.

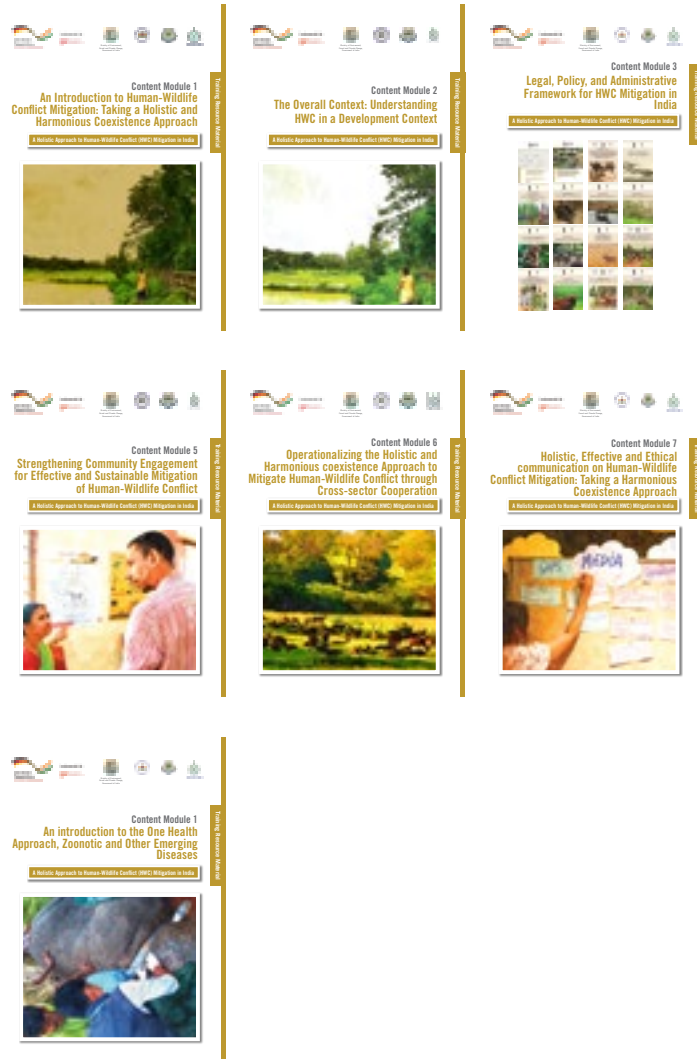
The curriculum uses a mix of conceptual and hands-on training sessions, in almost equal proportions, to facilitate the application of conceptual knowledge and skills to field conditions and the appreciation and understanding of the issue of HWC in a larger development context by the participants.

The following are examples of these methods:

- Group work and presentations
- Dialogue and brainstorming
- Knowledge Café
- Role play
- Simulation (case study simulation/video simulation)
- Online games and Mind Maps
- Case study analysis
- Fish Bowl
- Icebreakers, energisers and team-building exercises
- Simulated field exercises
- e-Learning
- Field excursions



## An overview of the modularized course



### Content Module HWC-01: An Introduction to Human-Wildlife Conflict Mitigation: Taking a Holistic and Harmonious Coexistence Approach

This module facilitates comprehension of the basic concepts of biodiversity, wildlife and ecosystem services leading to a profound understanding of the fundamentals of human-wildlife conflict (HWC), its drivers and pressures, current state and trends, impacts and current response measures. At the same time, participants will be encouraged to think and discuss a holistic approach to HWC mitigation, i.e., the drivers, prevention and reduction of impacts, traditional and indigenous measures, and the relevant sectors and key stakeholders in India. The first section facilitates the participants in getting a deeper and more comprehensive understanding of the harmonious coexistence approach, holistic approach to mitigating human-wildlife conflict and One Health. Section two of the module provides an HWC profile of selected wildlife species-in-conflict, intended to prevent accidental encounters and to design effective and wildlife-friendly mitigation measures that are aligned with animal behaviour and ecology.

### Content Module HWC-02:

#### The Overall Context: Understanding HWC in a Development Context

This module facilitates the participants in developing an understanding of human-wildlife conflict and its mitigation in the overall development context. The concepts and issues related to the holistic approach to HWC mitigation are presented using the DPSIR approach, i.e., drivers, pressures, state, impact and response. With this module, the participants explore the relevance of corridors and landscape connectivity as one of the HWC mitigation measures while appraising the impact of land-use change on HWC. The module facilitates discussions on the relevance and significance of cross-sector cooperation in addressing the issue of HWC. The training sessions will sensitise and equip the participants in designing holistic HWC mitigation measures, which also address the needs and requirements of the most vulnerable and socially disadvantaged groups.

### Content Module HWC-03:

#### Legal, Policy, and Administrative Framework for HWC Mitigation in India

This module facilitates a discussion on the conservation ethos of India in relation to its legal framework. It presents an outline and brief history of international conventions and treaties relevant to the conservation of wildlife and, in particular, to HWC mitigation. The primary aim of this module is to serve as a compendium of key regulations, policies, customary rules, guidelines and SOPs related to HWC mitigation in India. The module also provides an analysis of some relevant HWC

cases and specific learning points from these cases. The module thus provides information and guiding questions to facilitate a discussion on the application of current legal provisions to the mitigation of HWC in India.

### Content Module HWC-05:

#### Strengthening Community Engagement for Effective and Sustainable Mitigation of Human-Wildlife Conflict

The module elaborates on the interlinkages among biodiversity and wildlife conservation; livelihood needs taking a holistic approach to HWC mitigation. It appraises the participants of HWC issues from socio-economic, psychological, ecological and cultural angles. It introduces the concept of stakeholder analysis vis-à-vis HWC conflict mitigation and equips participants with the tools, methods and knowledge necessary to conduct stakeholder analysis at a micro level and eventually link it with the larger district-, state- and national-level planning and management activities for HWC. It highlights the significance of engaging with all key stakeholders and vulnerable sections of society (women and marginalised communities) and facilitates the participants to delineate the roles of various stakeholder groups, especially village-level institutions, their capacity development needs and stakeholder-specific engagement methods.



### Content Module HWC-06:

#### Operationalizing the Holistic and Harmonious Coexistence Approach to Mitigate Human-Wildlife Conflict through Cross-sector Cooperation

This module provides the conceptual background and introduction to the 'why' and 'how' of facilitating cross-sector cooperation and inter-agency coordination for effective HWC Mitigation. The module lays down a conceptual framework, using a systems thinking approach, to facilitate the participants in establishing the need for such cooperation and identifying key sectors and anchoring points for the required cross-sector and inter-agency coordination. The module facilitates the participants in discussing the institutional framework that enables effective and efficient cross-sector cooperation and possible areas of alignment with key sectors and stakeholders. The module takes the participants through examples of the National HWC Mitigation Strategy and Action Plan of India and 14 guidelines on HWC as key instruments to facilitate cross-sector and inter-agency coordination.

### Content Module HWC-07:

#### Holistic, Effective and Ethical Communication on Human-Wildlife Conflict Mitigation: Taking a Harmonious Coexistence Approach

This module sets the base by providing basic information on how media works, an indication of the challenges faced by the media and forest sector in cooperating with each other. The module further facilitates a constructive debate and discussion on holistic, effective and ethical communication on HWC mitigation among participants, in line with a harmonious coexistence approach. The module provides

the required information and case examples for the participants, from the forest as well as from the media sector, to identify the right media for the right message and the right audience, questioning and breaking the stereotypes and clichés and pitching HWC mitigation stories effectively. The central focus of the module is the ethical reporting and writing of the media regarding HWC and tools that aid ethical reporting and crisis communication.

### Content Module OH-01:

#### An Introduction to the One Health Approach, Zoonotic and Other Emerging Diseases

This module brings conceptual, analytical and contextual clarity among participants on the One Health concept and approach in the overall development context. It highlights the relevance of the One Health approach in managing the protected areas and wildlife and mitigating the human-wildlife conflict. Additionally, the module provides a thorough explanation of some critical zoonotic and other emerging diseases, including their key drivers such as ecological changes, habitat loss, wildlife trade, the increased interface between human-animal, bushmeat hunting and consumption, animal husbandry practices, impacts and prevention measures. Participants will be introduced to basic concepts of cross-sector cooperation, international and national frameworks, policy and programmes on One Health.

## Learning Journal for Agriculture Sector Professionals

To facilitate the participant's learning during and after the training, a learning journal has been designed. It will help them capture anything that is of any significance or value to them and may enhance their understanding of HWC mitigation. It is a place for participants to note their observations of habitats, species, people and events during the training programme.





## Our Partners

### Indian Council of Agricultural Research (ICAR)- National Academy of Agricultural Research Management (NAARM)



The Indian Council of Agricultural Research (ICAR)- National Academy of Agricultural Research Management (NAARM) addresses issues related to agricultural research and education management. The Academy imparts foundation training to the new entrants of the Agricultural Research Service of ICAR, research, capacity building of senior professionals of national and international NARS in agricultural research and education management, and policy and consultancy support to NARS. The Academy also renders services for building IP portfolios like patents and geographical indications to various stakeholders including farmers and scientists, and an Agribusiness Knowledge Centre.

### Indira Gandhi National Forest Academy



Indira Gandhi National Forest Academy (IGNFA) functions as a staff college for the officers of the Indian Forest Service (IFS). IGNFA is responsible for professional capacity development at the top levels of the forest cadre of the civil services in India. It has been imparting core professional training to the probationers of the Indian Forest Service. The academy has also been organising shared learning engagements for IFS officers at various maturity levels at transitions in their careers - from field execution responsibilities and supervisory functions to policy and planning roles at the state and national levels in the strategic, programmatic and governance areas. The academy also contributes to assisting a few neighbouring countries in meeting the apex-level training requirements of their forestry cadres.

### Directorate of Forest Education, Ministry of Environment, Forest and Climate Change, Government of India



**Directorate of Forest Education**  
Ministry of Environment, Forest and Climate Change, Government of India

The Directorate of Forest Education, Dehradun is a premier organisation under the aegis of the Ministry of Environment, Forests and Climate Change, Government of India that imparts training to State Forest Service Officers (SFS) and Forest Range Officers (FRO) in the country. The Directorate ensures the standard and quality of forestry training in the country and in its current form functions under the direct administrative control of the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India to take care of all aspects of training of SFS officers and FROs. There are three Central Academies for State Forest Service (CASFOS), one each at Dehradun (Uttarakhand), Coimbatore (Tamil Nadu) and Burnihat (Assam), and one Central Academy of Forest Education (CAFE), at Kurseong (West Bengal), under DFE. In addition, the technical control over the state-run Rangers' colleges also vests with the Directorate as and when induction training of FROs is entrusted to these institutions.

### Wildlife Institute of India (WII)



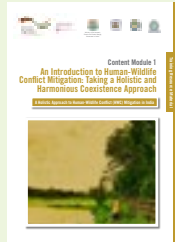
WII is an internationally acclaimed institution that offers training programmes, academic courses and advisories in wildlife research and management. The institute is actively engaged in research across the breadth of the country on biodiversity-related issues.



This material has been developed under the Indo-German project Human–Wildlife Conflict Mitigation in India, implemented (2017-2023) by the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India with the Indian states of Karnataka, West Bengal and Uttarakhand.

<https://indo-germanbiodiversity.com/projects-human+wildlife+conflict+mitigation.html>

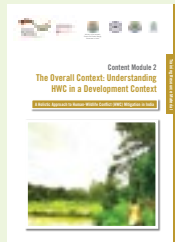
Click the cover to download the PDF or scan the QR code:



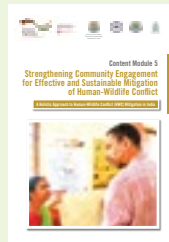
**Content Module HWC-01:** An Introduction to Human-Wildlife Conflict Mitigation: Taking a Holistic and Harmonious Coexistence Approach



**Content Module HWC-03:** Legal, Policy, and Administrative Framework for HWC Mitigation in India



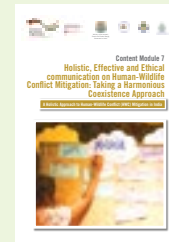
**Content Module HWC-02:** The Overall Context: Understanding HWC in a Development Context



**Content Module HWC-05:** Strengthening Community Engagement for Effective and Sustainable Mitigation of Human-Wildlife Conflict



**Content Module HWC-06:** Operationalising the Holistic and Harmonious coexistence Approach to Mitigate Human-Wildlife Conflict through Cross-sector Cooperation



**Content Module HWC-07:** Holistic, Effective and Ethical Communication on Human-Wildlife Conflict Mitigation: Taking a Harmonious Coexistence Approach



**Content Module OH-01:** An introduction to the One Health Approach, Zoonotic and Other Emerging Diseases



**Learning Journal for Agriculture Sector Professionals**







Published by:	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
	Registered offices Bonn and Eschborn
	Indo-German Biodiversity Programme A-2/18, Safdarjung Enclave New Delhi - 110029, India T +91-11-4949 5353 E <a href="mailto:biodiv.india@giz.de">biodiv.india@giz.de</a> W <a href="http://www.indo-germanbiodiversity.com">www.indo-germanbiodiversity.com</a>
Programme/project description:	Indo-German Biodiversity Programme/HWC Mitigation in India
Responsible:	Dr Neeraj Khera Team Leader, Indo-German Project on HWC Mitigation, GIZ India E: <a href="mailto:neeraj.khera@giz.de">neeraj.khera@giz.de</a>
Further Information:	Ministry of Environment, Forest and Climate Change, Government of India Indira Paryavaran Bhawan, Jor Bagh Road New Delhi – 110003, India E: <a href="mailto:igfwl-mef@nic.in">igfwl-mef@nic.in</a>
Design:	Aspire Design, New Delhi
Author:	Dr Neeraj Khera, GIZ
Photo credits:	GIZ/Dr Neeraj Khera
URL links:	The responsibility for the content of external websites linked in this publication always lies with their respective publishers. GIZ expressly dissociates itself from such content.
	On behalf of German Federal Ministry for Economic Cooperation and Development (BMZ)
	GIZ is responsible for the content of this publication. New Delhi, 2023