

**Indo-German project
Conservation and Sustainable Management of
Coastal and Marine Protected Areas (CMPA)**

KEY ACHIEVEMENTS IN GUJARAT

October 2017



About the Project

In the global context of India's commitment towards achieving the Convention on Biological Diversity's Aichi Targets, the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India has entered into a Technical Cooperation agreement with the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), Government of Germany on the project entitled "Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas" (CMPA). The funds by BMUB are provided under the International Climate Initiative (IKI)

The CMPA Project, jointly implemented (2012-17) by the MoEFCC and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of BMUB, aimed at contributing to conservation of biodiversity through participatory approaches in the management of existing and potential coastal and marine protected areas in India. The project measures are implemented on the following three pillars:

- Participatory management approaches for conservation of sites
- Capacity strengthening system for supporting participatory management of MPAs
- Information, communication and awareness raising

The project was implemented at the National level as well as in selected coastal states of Gujarat, Goa, Maharashtra and Tamil Nadu.

Project Partners in Gujarat



Gujarat Forest Department, Government of Gujarat

Gujarat Forest Department undertakes specific activities including the conservation of terrestrial, coastal and marine habitats, the scientific management of habitats for wildlife species, the creation of buffer zones in and around parks and reserves for sustainable management of resources, the organization of eco-tourism to improve socio-economic conditions of local communities and awareness raising on importance of biodiversity conservation through conservation education, supporting active participation of the local people in protection and conservation of forest with special emphasis on tribal, poor and women.

Website:

www.geerfoundation.gujarat.gov.in



GEER FOUNDATION
Gujarat Ecological Education and Research Foundation

Gujarat Ecological Education and Research (GEER) Foundation

GEER Foundation works towards ecological education and research, creating public awareness and sensitizing people about nature and environment, carrying out ecology, ecosystem and environment related studies, and promoting the cause of conservation. It is an autonomous body, set up in 1982 by the Forests & Environment Department, Government of Gujarat. The Foundation has been registered as a Society under the Indian Societies Registration Act, 1860, and as a Public Trust under the Bombay Public Trust Act of 1950. The Foundation is governed by a Board of Governors chaired by the Hon'ble Chief Minister of Gujarat.

Website:

www.giz.de/en



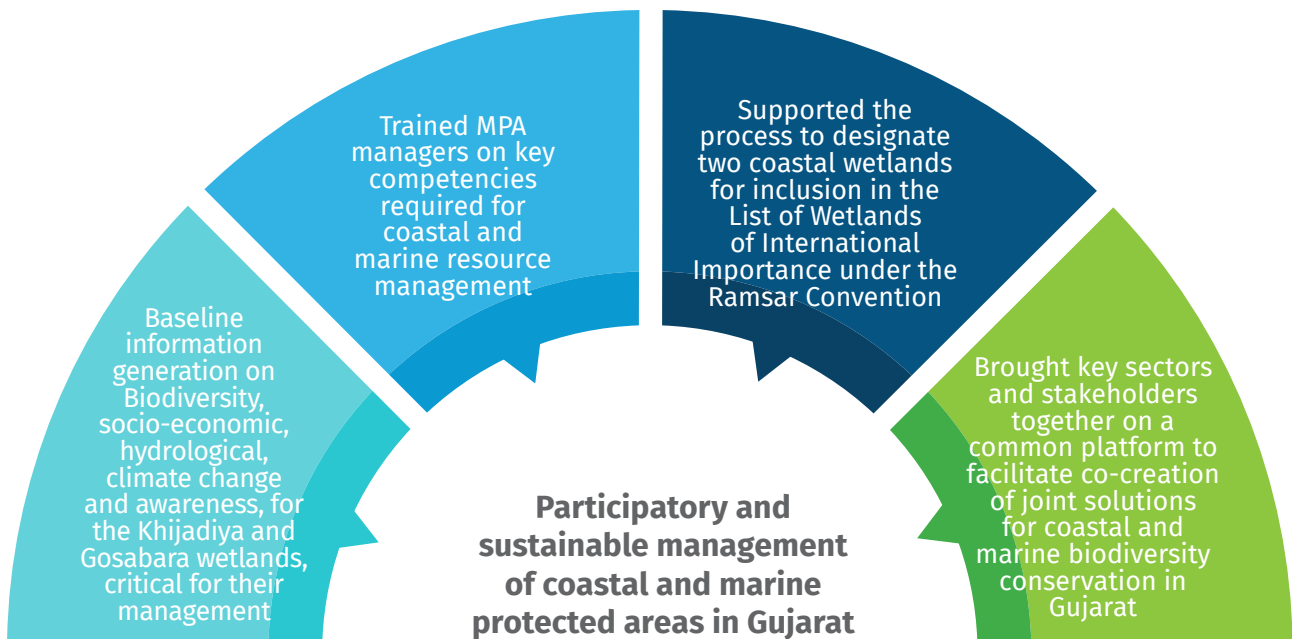
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, India

GIZ is an enterprise owned by the German Government. GIZ implements sustainable development through international cooperation, on behalf of Germany and other partners. With a global footprint in over 130 countries, GIZ leverages its regional and technical expertise for local innovation. GIZ India has a team of over 300 staff. The Biodiversity Programme of GIZ has an overarching goal of sustainable use of biological diversity to support livelihoods for future generations. The Programme addresses the challenges of biodiversity conservation in two complementary areas: Incentives for Sustainable Management of Biodiversity and Ecosystem Services (ISBM) and Sustainable Management of Coastal and Marine Protected Areas (CMPA).

Website:

<https://forests.gujarat.gov.in/>

Key Achievements in Gujarat



Project duration in Gujarat: Two years (2015-17)

The Gujarat Government invited the Indo-German Biodiversity Programme to enter into a strategic partnership on the topic of Environment and Forest, during the Vibrant Gujarat event in January 2015.

Subsequent to this, a Memorandum of Understanding (MoU) was signed between GIZ, GEER Foundation and the Gujarat Forest Department on July 21, 2015, after which the project activities commenced.



Project sites in Gujarat:

Khijadiya Bird Sanctuary is a dynamic and complex wetland ecosystem spread over 604 ha with a mosaic of habitats providing ecosystem services and supporting about 257 species of birds including red-listed species. This wetland is of International importance owing to the fulfilment of water bird specific criteria of the Ramsar Convention. CMPA project supported multi-disciplinary scientific studies on the wetland, and the Ramsar Information Sheet (RIS) for this wetland with support from the Wetlands International South Asia. The project has supported design and establishment of an Interpretation Center on coastal and marine biodiversity, designed by the Archimedes Germany.





Gosabara wetland complex, in the Porbandar district, is one of the major wetlands of Saurashtra, Gujarat. It is a complex habitat and the existing habitat is a result of construction of salinity control bund on a natural lagoon. One of the most important places for migratory birds and other water birds, this wetland is a potential Ramsar Site owing to the fulfilment of water bird specific criteria of the Ramsar Convention, as it regularly supports much more than 20,000 birds. CMPA project supported multi-disciplinary scientific studies on the wetland, and developed the Ramsar Information Sheet (RIS) for this wetland with support from the Wetlands International South Asia.



Madhvapur turtle conservation area, located 60 kms southwest of Porbandar, is one of the most beautiful sandy beaches and tourist attractions in Gujarat, and is home for two endangered marine turtle species - Green Sea and Olive Ridley turtles. The beach has a hatchery established by the State Forest Department. The turtle eggs are collected from nests along the Madhvapur beach, kept in incubators, in a bid to save them from stray dogs, pigs and jackals, and released at appropriate time. CMPA project has supported design and establishment of an Interpretation Center of coastal and marine biodiversity, designed by the Archimedes Germany.





Work Area 1:

Management Planning for Protected Areas

Strategic planning for wetland management based on global good practices and keeping in mind the future challenges due to climate change, invasive species and other threats.

Baseline studies in Khijadiya Wildlife Sanctuary and Gosabara Wetland Complex

Baseline studies were carried out to inform the wetland management plans in line with the principles adopted by the Ramsar Convention on Wetland, and also to facilitate long term monitoring of the two wetlands.



Complete **hydrological study of the wetland regime** for the two wetlands, including delineation of catchments, hydrological & inundation regime. The studies were conducted by experts from Wetlands International South Asia. Experts from the National Institute of Hydrology and IIT Delhi were also engaged via KPMG. The study on assessing climate change vulnerability of the selected coastal areas of Gujarat assessment, helped in understanding wetland's sensitivity and adaptive capacity to multiple pressures, potential impacts. This is useful for identifying adaption options that can be explored further by the wetland managers.



Socio-economic assessment was carried out at the two wetlands by a team of experts from Unnati- an NGO in Gujarat. The results underscore the importance of engaging with people through participatory processes. The study, while seeking to assess the current socio-economic situation for wetland conservation, also sought to develop, in the process, an understanding among the communities dependent on the wetlands about its 'wise use'.



The project implemented an intensive and well-planned **awareness baseline assessment** covering the two wetlands. The awareness baseline study systematically analyses the current awareness and information levels among key stakeholders, and their perceptions on biodiversity, and their differential needs when it comes to targeted communication and awareness measures. The results can help various agencies in Gujarat for developing impact oriented information, education and communication (IEC) strategies for the coastal wetlands in Gujarat.

The project supported detailed **floral biodiversity monitoring surveys** on the two wetlands, over key seasons, for key plant communities. The surveys also resulted in identification and marking of permanent monitoring plots, that can be used by the wetland managers for ecological monitoring in the wetlands. Experts from M S University Baroda were engaged by the project to conduct the studies to facilitate capacity development on this topic in Gujarat and to ensure long term sustainability of the biodiversity monitoring in these wetlands.



Faunal Biodiversity Assessment by the project gathered detailed information on species diversity of the two wetlands, over key seasons, including fish and other aquatic species, water birds, terrestrial birds and insects in the nearby areas, reptiles and amphibians. The studies also assessed the current threats to the key species, and listed key invasive species in the wetlands. The detailed ecological analysis provides insights into the species interactions and their ecological significance for maintaining the wetland.



An in-depth study was conducted by the project, to analyse the **potential of nature-based recreational tourism** in the selected sites in India, including the two wetlands of Gujarat. The study assessed the feasibility, market potentials, gaps and needs of sustainable tourism around the two wetlands. The study resulted in an overview about the current status, future development, market potentials as well as gaps and needs of sustainable tourism development, feasibility of sustainable tourism development as well as sustainable use and valorization of biodiversity through tourism, and recommendations on sustainable tourism development around the two wetlands.

The project adopted a participatory approach for generating baseline data on the two wetlands. While the individual baseline studies focused on different disciplines, and were conducted by experts from that discipline, it was coordinated in a fashion that the results obtained reflected cross-disciplinary knowledge. Methodology and efforts were streamlined by conducting regular joint workshops and field visits of various experts conducting these baseline studies, to develop a common understanding of the purpose of baseline studies and for avoiding information gaps and duplicate efforts.

All these reports can be downloaded from the following link
<http://indo-germanbiodiversity.com/publications.html>

Ecological characterization of two wetlands

Ecological character is the sum of ecological components, processes and services that characterize the wetland at any given point in time. Assessment and reporting on ecological character and ecological character change provide the basis of understanding the state of wetlands, thereby informing policy development and priority setting.

Ecological characterization helps in deepening our understanding of the wetland, with the following specific outputs:

- Clarify management objectives
- Help define a feasible ecosystem state and livelihoods interlinkages commensurate with management objectives, and identify tradeoffs if any
- Prioritize ecological character elements, in line with management objectives and assessment findings
- Identify limits of acceptable change to ecological character
- Assess threats and the risk of adverse change in ecological character
- Identify management needs



Utilizing the baseline information, together with the expertise and experiences available with the scientific experts, wetlands managers and decision-makers, the project supported development of “A comprehensive ecological character description of Khijadiya Wildlife Sanctuary and Gosabara wetland complex” based on the available ecological, hydrological and socioeconomic information.

The Ecological character description was discussed and finalized in a multi-stakeholder workshop in Gandhinagar. The workshop was facilitated by Dr. Ritesh Kumar from Wetlands International South Asia and Dr. Neeraj Khera, CMPA project GIZ. There was active participation of key forest department officials from the State including the Chief Wildlife Warden, Director- GEER Foundation, Director of Khijadiya Wildlife Sanctuary, DCF of Porbandar, scientific experts on floral and faunal aspects of biodiversity, hydrology, socio-economic aspects of wetlands, and team members of Gujarat team of CMPA project, Wetlands International and GEER Foundation.

It was agreed upon by the groups that the Ecological characterization description” should be used as an annex to the existing Wetland Management Plan of Khijadiya, and as a planning document for Gosabara - Mokar wetland complex.



Supported the process to designate two coastal wetlands for inclusion in the List of Wetlands of International Importance under the Ramsar Convention

Ramsar Information Sheet (RIS) prepared for Khijadiya Bird Sanctuary

The project facilitated development of Ramsar Information Sheets (RIS) for Khijadiya Bird Sanctuary in line with the principles adopted by the Ramsar Convention on wetlands.

Khijadiya Bird Sanctuary supports breeding of two Near Threatened bird species i.e. Black-necked Stork and Oriental Darter. Therefore, the sanctuary is equally important for conservation of local bird species and migratory species. Sanctuary supports 1% population of several migratory and resident birds. Some of them are even categorized by IUCN as Near Threatened and Vulnerable species such as Lesser Flamingo, Greater Flamingo, Common Crane, Demoiselle Crane, Great White Pelican, Dalmatian Pelican, Black Tailed Godwit, Painted Stork, Black-headed Ibis.

Ramsar Information Sheet (RIS) prepared for Gosabara-Mokar Wetland Complex

The project facilitated development of Ramsar Information Sheets (RIS) for Gosabara-Mokar wetland complex in line with the principles adopted by the Ramsar Convention on wetlands.

Gosabara wetland complex fulfils two waterbird specific criteria for the Ramsar designation, that as it regularly supports more than 20,000 birds. And the waterbird population estimate suggests that the Gosabara wetland complex supports 1% populations of 32 species

Support in facilitating participatory process for conserving and documenting biodiversity around the wetlands

The project supported state-of-the-art documentation of existing biodiversity elements including plants, fish and other aquatic life.

Strengthening the capacity of institutions working towards documentation of biodiversity in Gujarat was one of the key contributions that the project has made. Key organizations and experts working on preparation of Plant Biodiversity registers (PBRs) in Gujarat were imparted training on documentation of coastal and marine biodiversity.



These participating organizations were further supported in further imparting training to the Village Panchayat Members about their role and legal regulatory power as BMC, biodiversity conservation & development, and support in BMC jurisdiction in general following the PBR guidelines.

With the aim of bringing community participation in planning and implementation of conservation measures in an around the wetlands, the project supported awareness measures in partnership with community-based organizations at Gosabara.





Photo by: Dr. Neeraj Khara

Work Area 2:

Facilitating Capacity Development

Capacity strengthening at the state level bringing in national and international expertise and involving forest, fisheries and media sectors, including orientation and sensitization workshops and expedition for forest officials as well as for other sectors; technical training on coastal marine protected areas, leadership, Strategic Environment Assessment (SEA), management effectiveness related courses for IFS officers and SFS Officers, and support to State Forest Training Institutes on tools, faculty development and curriculum development on coastal marine protected areas.

Capacity Needs Assessment for Effective Management of Coastal and Marine Protected Areas in Gujarat

A Capacity Needs Assessment (CNA) study was carried out in 2014, engaging experts from key sector; forest, fisheries and media. The study aimed at analysing the gap between the desired capacities and existing capacities vis-a-vis sustainable management of coastal and marine protected areas. The study resulted in formulating a Capacity Development strategy and plan for Gujarat that can address these gaps at three levels (enabling policy environment, organizations and individuals) and three dimensions of capacity (knowledge, skills and attitudes).



The overall methodological framework was developed by GIZ. The framework was customized for use under Indian conditions and for key sectors. A team of experts was engaged to undertake the assessment. The experts were drawn from three sectors that are most relevant for achieving the project objectives, viz., forest, fisheries and media. The team for the study in Gujarat was as follows:

- Framework for Capacity Needs Assessment: Dr Neeraj Khera, Senior Advisor, Indo-German Biodiversity Programme, GIZ India,
- Forest Sector Capacity Needs Assessment (National + four states): Dr V B Mathur (Team Leader), Dr K Sivakumar, Dr J A Johnson, and Dr Gopi G. V., Wildlife Institute of India
- Media Capacity Needs Assessment: Mr. Sanjay Dave (Gujarat)
- Fisheries Capacity Needs Assessment (National + four states): Dr Yugraj Yadava, Mr Sharif Uddin, Bay of Bengal Project, Mr. Rajdeep Mukherjee, Ms. Fahmeeda Hanfee, Bay of Bengal Project
- Consolidation of reports: Mr Peter Bank (Capacity building expert, Germany)



Training of personnel from Forest Department, at the National Level

Two national-level trainings were organized in Andamans for the **senior IFS officers**, in partnership with the Wildlife Institute of India and MoEFCC. The training curriculum consisted of specific issues on coastal and marine biodiversity including special modules on leadership, Strategic Environment Assessment (SEA), and management effectiveness. Nomination from Gujarat were sought for these trainings.

Two national level training courses (one month, and 15 days duration, respectively) on “Coastal and Marine Biodiversity and Marine Protected Areas” **For field-level MPA managers** in India were conducted by the project in partnership with the Wildlife Institute of India, Indian Institute of SCUBA diving and aquatic sports (IISDA), and Andaman and Nicobar Forest Department. Four participants from Gujarat attended the training (December 1-18, 2016 in Andamans). All four completed the course successfully, and two of them also received their Open water diver PADI certification.



Translation of national training material into Gujarati

The entire curriculum “Coastal and marine biodiversity and MPA management for the field-level managers” which was developed in English with the involvement of National level experts and institutions such as WII, IGNFA and fisheries and media intuitions, was translated into Gujarati language for the benefit of the field-level staff from the forest, fisheries and other line departments in Gujarat.



Not only the training material, but the **Trainer’s Guides** were also translated into Gujarati for the benefit of the trainers, officers and other expert. The English versions of these trainer’s guides are being successfully used by the faculty and experts at the Wildlife Institute of India, IGNFA, and by the other national experts and trainers to deliver the trainings on coastal and marine biodiversity for the front-line staff. The guides were considered extremely useful by the faculty at the Gujarat University, and therefore were considered suitable for translation in Gujarati language.

Training of field-level Forest Staff of Gujarat on coastal and marine biodiversity and MPA management

A Training Expedition on ‘Coastal and Marine Biodiversity and Protected Area Management’ was organised for the front-line staff of the Gujarat Forest Department from 24-26 October, 2016 in Jamnagar, Gujarat. The training expedition was jointly organised by GIZ, Wildlife Institute of India, Gujarat Forest Department, and GEER Foundation.



A total of 16 participants consisted of 16 Forest Range Officers and Foresters participated from Jamnagar, Sikka- Narara, Khambhat, Bhavnagar, Kutch, Bharuch, Dwarka, and Salaya. Inputs were provided by trainers and experts from the office of the CCF Jamnagar, the Wildlife Institute of India, MS University Baroda, and GIZ.

The two-day training engaged participants with discussions, role-plays, games on MPA management, quiz, visits to specific marine protected areas sites, mangrove area, interpretation centre, sessions on connectedness to nature, and expert inputs.

The training used the specialised training material developed for the field-level MPA managers, and participatory training methods. The training was extremely successful with all the participants confirming the achievement of their individual learning outcomes.

Majority of the participants developed a plan to conduct awareness and training sessions, November 2016 onwards, on coastal and marine biodiversity for their colleagues and staff.



“A truly participatory training, where the participants get ample amount of time and situations to express themselves”

Training Expedition on Marine Fisheries to bring together managers from key sectors

The project facilitated a cross-sector group, consisting of the field level and senior officers from forest, fisheries departments and the Indian Coast Guard, to be trained together on the issue of coastal and marine biodiversity and sustainable fisheries management. In order to achieve this, the project engaged the Wildlife Institute of India, and Central Marine Fisheries Research Institute (CMFRI) Veraval regional center.

During April 19 -21, 2017 at Veraval, Gujarat. The participants were **senior Managers** from Forest and Fisheries departments, and from the Indian Coast Guard. The expedition was organized jointly by GIZ, Wildlife Institute of India and Central Marine Fisheries Research Institute (CMFRI) Regional Center- Veraval together with the Gujarat Forest Department.

During April 24-26, 2017. The participants in the training expedition were **field-level managers** of the coastal and marine ecosystems from forest and fisheries department of Gujarat. The training expedition used a participatory training approach, and included field visits, case studies, role-plays and interactive sessions with the experts.



CMPA Exposure visit to Malaysia: Learning from good models in Coastal and Marine Conservation

Participants from the Gujarat, Maharashtra and Goa Forest Departments, the Department of Economic Affairs India and Ministry of Environment, Forest and Climate Change India; attended a one week exposure visit to Malaysia between October 30 2016 to November 6th 2016. This exposure visit was organized by the GIZ, under its Conservation and Sustainable Management of Coastal and Marine Protected Areas, India (CMPA) Project. The aim of this one week exposure visit was to learn from coastal and marine conservation models in Malaysia and activate peer support pods of colleagues within both the Indian and Malaysian Forest Departments. Mr. Mansukh Manji Bhalodi and Dr. Sandeep Kumar participated in the visit.

Training of Trainers on Participatory methods of Training Effective Content Delivery

A ToT was conducted on August 6-7, 2014 at Gandhinagar. The ToT brought together key experts and faculty members of forest and media training institutions of Gujarat as well as National capacity development organizations who are delivering/ planning coastal and marine biodiversity relevant trainings/ programmes. The master trainer and resource persons come from Germany and CMPA project of Biodiversity Programme GIZ India

The training focussed on basic skills for facilitation: Planning and needs assessment, public speaking and body language, group dynamics and basics of facilitation, introductions and icebreaking. Selected methods were included in the training, viz, Panel discussion, World café, Bus Stop, Break out groups and small group assignments, Card-query, Ratings and matrix-based collections, and Action plans. The training focussed on experiential learning by applying what is demonstrated and evaluating it to connect it to Kolb's learning cycle.

The participants rated the workshop quality high: everyone rated the overall satisfaction with good or excellent. A total of 27 trainers were trained, including experts from the Forest Department, State Forest Training College, Gujarat Biodiversity Board, GEER foundation, Gujarat Ecology Commission and Media experts.

During 2014-17, the experts on forest, fisheries and Media have participated in several Training of Trainers programmes, and also supported delivery of sessions on coastal and marine biodiversity in other states for the forest, fisheries and media participants.

The project supported networking of expertise within forest, fisheries and media sectors in Gujarat by inviting experts from one sector to the project supported trainings at the other sector.





Capacity development of forest, fisheries and media training institutions

Support to Gujarat University for integrating coastal and marine biodiversity as part of the media curriculum

CMPA project has developed training resource material for media students and professionals on 'Communicating Coastal and Marine Biodiversity Conservation and Management through the Media'.

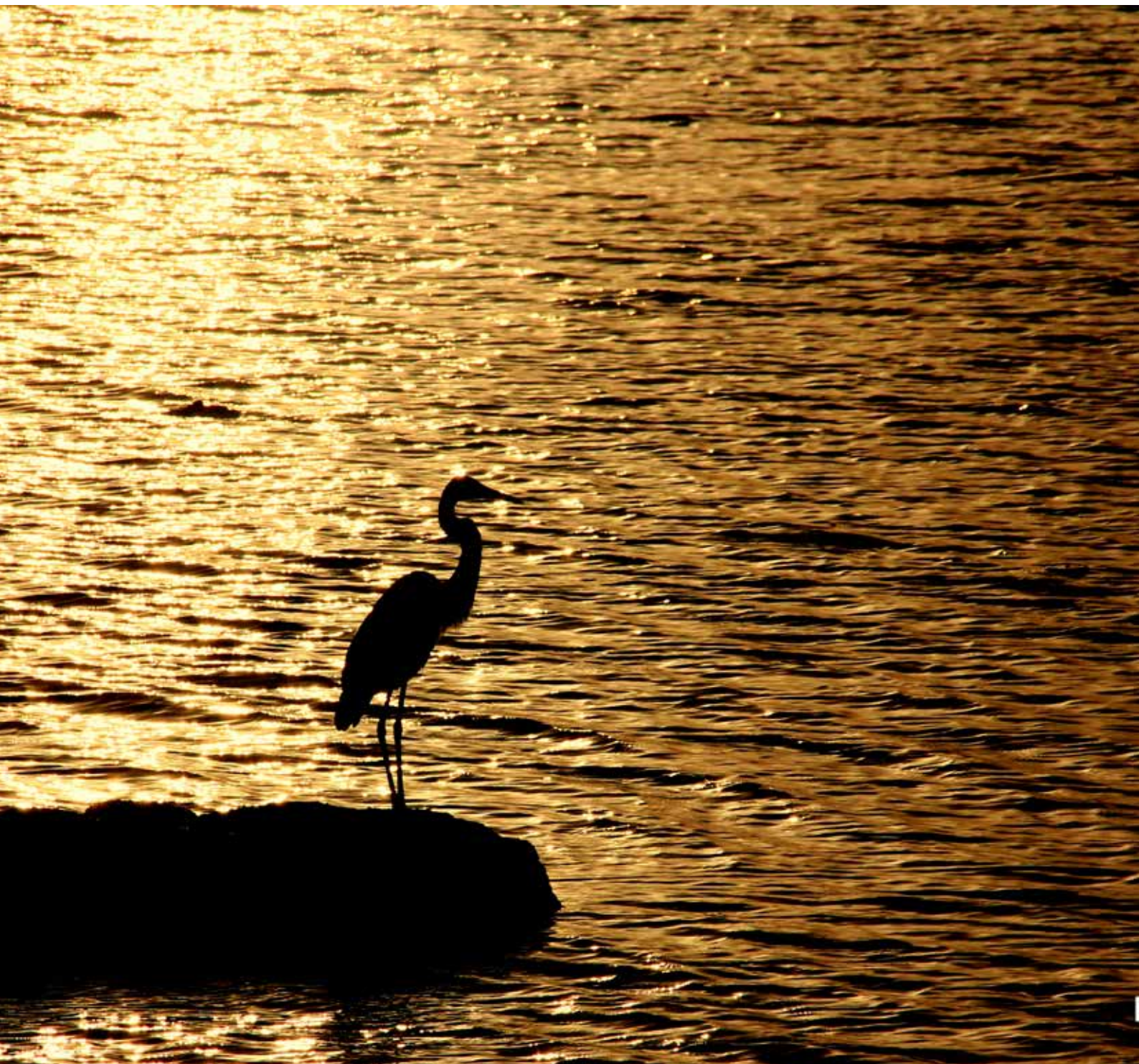
This competence-based training material for media professionals, students and trainers was implemented by the Department of Communication, Journalism of the Gujarat University during the year 2015 on a pilot basis, as a module into their full time course on mass communication and development communication.

The faculty and experts from this department and their visiting faculty were imparted Training of Trainers on the media curriculum as well as on the participatory training methods, by the project.

After an extremely successful pilot testing, the Department has committed to integrate the curriculum in a seamless manner as part of the existing course curriculum. According to Dr Sonal Pandya, the Head of Department, "Since Department believes in social responsibility as part of our core philosophy, we believe this inclusion of coastal and marine training modules will benefit the students greatly in this age of environmental degradation...This whole process will make them very sensitive media professionals towards coastal marine biodiversity issues undoubtedly.... Implementation of the pilot of this course was an eye opening experience for us.... "

Experts from GEER foundation contributed during the implementation process of the modules at Gujarat University as resource persons. Media students were hosted at GEER foundation for a day visit for orientation on the coastal and marine issues by Sh Bharat Pathak. The students and their faculty members at Gujarat University provided very positive feedback on their exchange with the Forest and coastal experts.

Media students from Gujarat University developed documentaries on coastal and marine issues, as part of their course. These documentaries are available on the YouTube channel of Indo-German Biodiversity Programme.



Work Area 3:

Raising the level of Awareness and communication on coastal and marine biodiversity in Gujarat

Strengthening of existing Interpretation centres at Khijadiya and Madhavpur, developing new exhibits for Gosabara wetland, and Madhavpur turtle hatchery training and sensitization of media professionals, development of communication material on coastal marine protected areas, and facilitating information sharing of project related knowledge with a wider audience.

conceptualizing the ways and approaches to effectively communicate coastal and marine biodiversity issues with the school children. The participants very enthusiastically discussed the issue and challenges in communicating the topics related coastal and marine biodiversity to school children, and went back with the take-aways in the form of their personalized approach to communicate the biodiversity issues to the students.

Trainers and resource persons came from GIZ, GEER Foundation, Charkha in Gujarat and Marine National Park- Jamnagar- Dr. R. D. Kamboj (IFS), Director, GEER Foundation; Dr. Lopamudra Das, Research Associate, GEER Foundation Gandhinagar; Dr.Dhiraj Chavda, Marine biologist, Gujarat Forest Department-Jamnagar; and Mr. D. C. Mehta, DFO, GEER Foundation, Mr. Aalap Pandit, Ms. Devanshi Joshi, Research Associate, GEER Foundation, Mr. Sanjay Dave, Media trainer and communication expert, Charkha, Mr. Abhinav Mehta-Junior Project Coordinator, CMPA Project, GIZ.

Film festival on coastal and marine biodiversity

A panel discussion on “Coastal and Marine Biodiversity in Gujarat” under GIZ’s CMPA project was organised on 22 October 2016 in Ahmedabad. The discussion was jointly organised by GIZ, Gujarat Forest Department GEER Foundation and **International Environmental Film Festival and Forum of CMS VATAVARAN.**

Mr. Uday Vora, Conservator of Forests (Wildlife), Gandhinagar talked about the wetlands of Gujarat and its importance with a point of biodiversity and the work that CMPA project is doing on coastal wetlands of Gujarat in partnership with GFD and GEER.

The participants consisted of local NGOs, local media, students and researchers. There was a discussion on the need for intensifying conservation activities at the ground level in participatory manner with the rural people. Some also expressed the need to bridge the gap between the communities and scientific fraternity.

The event ended with the common understanding that in addition to creating such dialogues, it is urgent to look into the human actions and the need to bring in more stringent policy interventions. The marine biodiversity at Gujarat's coast harbours some rare species of corals and mammals, therefore the development should be in accordance, that minimum or no impact is created on these ecosystems.

Facilitating the awareness through mass media (Radio Programme)

Radio Programme on "Coastal and Marine Biodiversity and Protected Area Management and awareness in Gujarat" were organized jointly by GIZ and GEER Foundation under the Indo-German CMPA project, in May, 2017 at GEER Foundation studio. This radio programme was designed to engage the common people in coastal biodiversity and its knowledge through social media using traditional approach. Speakers were discussing very enthusiastically about the issue and challenges in coastal and marine biodiversity with our chief speaker, and went back with the take-aways in the form of their personalized approach to communicate the biodiversity issues to the common people of Gujarat.

The programme was conducted and recorded at the foundation studio facility with anchors Mr. Bharat Rajgor and Ms. Meenaben from All India Radio. Also Dr. Harshad Salvi, Scientist, GEER Foundation (ICZM Project) supported us as a keynote speaker for coastal biodiversity knowledge and its awareness among people, students, organizations of Gujarat who are working or interested in marine conservation aspects.

Facilitated the conceptualization, design, Refurbishment and establishment of Interpretation exhibits

The Concept: Transferring knowledge to visitors

Visitors will wander through the conservation site or the interpretation centre without always being accompanied by a guide, facilitator, or interpreter. It is therefore necessary to give them other means of understanding what plants and animals they encounter or would encounter in a different season. Information boards and info graphics need to be easy to understand, should hold content in images or be interactive so that different target groups all have a chance of learning from them. Hands on exhibits involve visitors more, thus giving them an additional access to information. Information boards hold a chance to make the learning aims of a site obvious and to make the invisible visible

[Archimedes presentation]

The project engaged a German company Archimedes for the design and installation of a state-of-the-art interpretation centers in India, including in Gujarat. The project supported the following 4 Interpretation exhibits:

Refurbishing of the Indoor Interpretation Center at Khijadiya:

On 28th November 2016, Shri Kuldeep Goel, Principal Chief Conservator of Forest (PCCF-Wildlife), Government of Gujarat, and Dr. Konrad Uebelhoer, Director, Indo-German Biodiversity Programme, presided over the opening of the completely renovated and redesigned Interpretation Centre at the Khijadiya Bird Sanctuary, Jamnagar. The refurbishing was made possible through a cooperation between the Gujarat Forest Department, the CMPA Project, and TATA Chemicals. The Forest Department ascertained the renovation of the building, improvement of facilities, and the necessary landscaping. The CMPA Project provided technical assistance through engaging the services of Archimedes Exhibitions, a German communications agency specializing in science and research. While the design was developed in Germany, thematic focus and content were generated in collaboration with the Gujarat Forest Department and other experts in the field. TATA Chemicals provided the funds necessary for acquiring the exhibits produced in Germany.



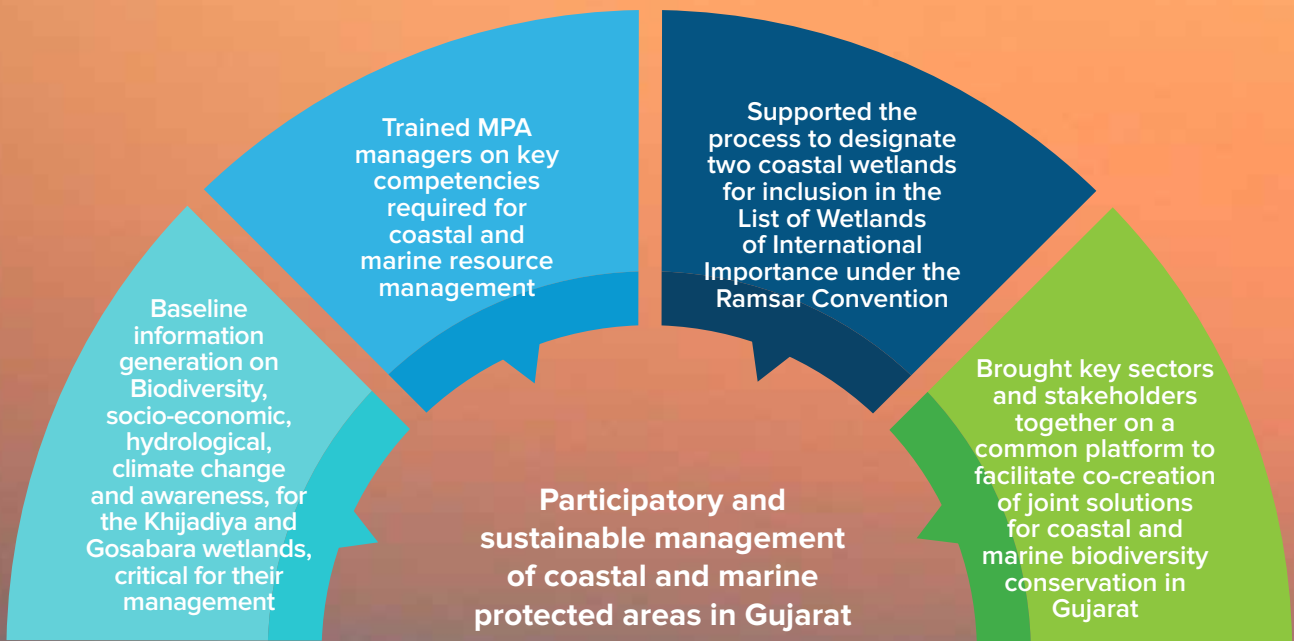


- The project supported content development, design, production and installation of boards as **Outdoor Exhibits at the Khijadiya Wildlife Sanctuary.**
- The project supported content development, design, production and installation of boards as **Outdoor Exhibits at the Gosabara wetland.**
- The project supported an **Indoor Interpretation center at Madhavpur Turtle Hatchery.** The center has been receiving lots of appreciation from the visitors, as their comments in the visitor's book indicate.









<http://www.indo-germanbiodiversity.com/publications.html>