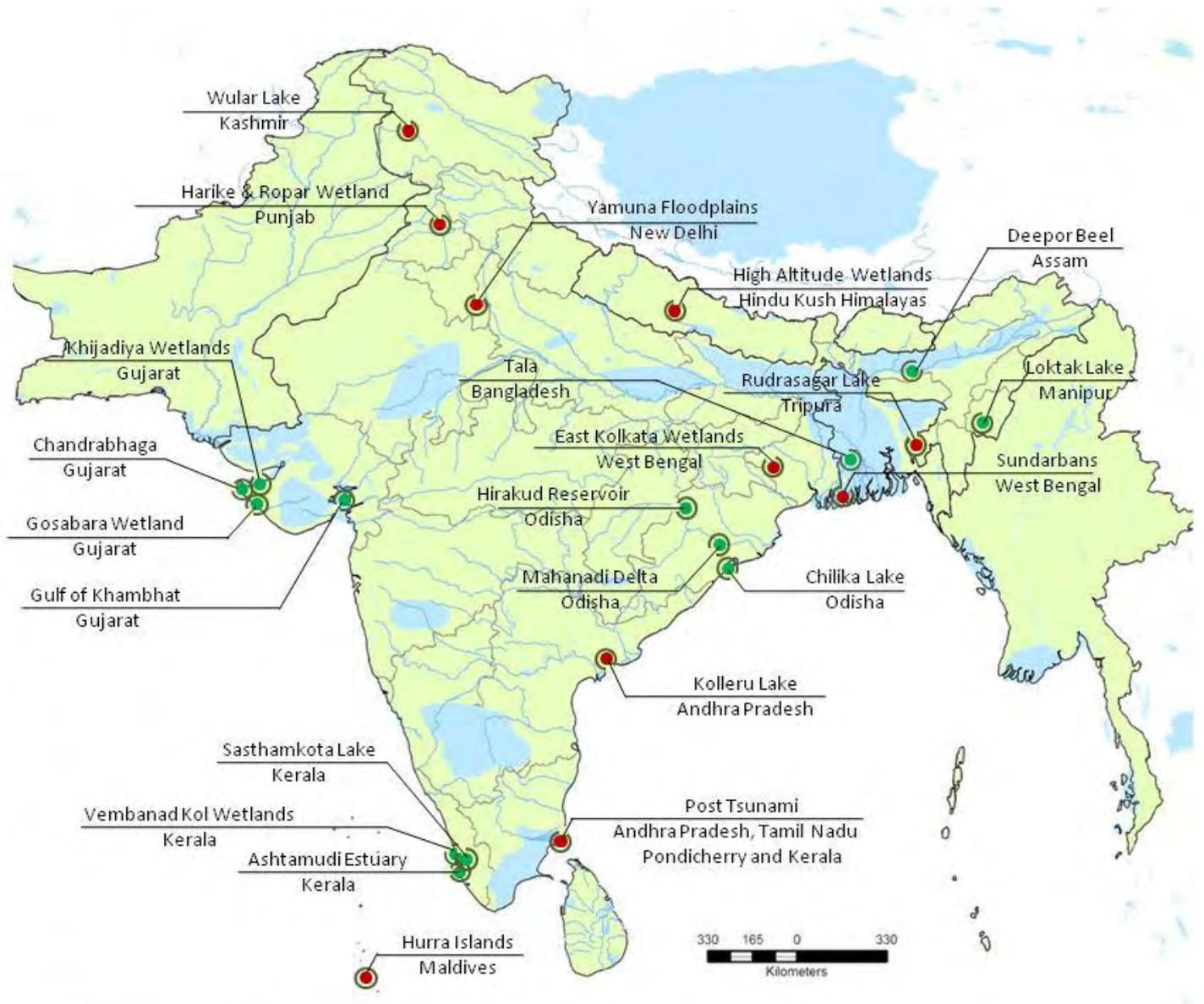


Wetlands International South Asia

Annual Report 2016 - 17



Wetlands
INTERNATIONAL



References	
	Ongoing Projects
	Completed Projects

Wetlands International South Asia

Wetlands International South Asia is a non-government organization working for sustaining and restoring wetlands, their resources and biodiversity in the South Asia region. Its office in New Delhi (India) was established in 1996 as a part of Wetlands International network. Wetlands International is a global, independent, non-profit organization dedicated to conservation and restoration of wetlands, and presently works in over 100 countries through a network of 18 regional and national offices and expert networks, with a headquarter in The Netherlands. Wetlands International is also one of the five International Organization Partners (IOPs) of the Convention on Wetlands (Ramsar Convention). In 2005, Wetlands International South Asia was registered under the Societies Registration Act of Government of India (retaining remit of South Asia region), consequently gaining an Indian legal entity while subscribing to the goals and targets of the Wetlands International network.

Wetlands International South Asia works for wetland conservation in ways which relate to the nature of wetlands as ecosystems, and the wider biophysical and social contexts in which they are placed and function. The organization, since its inception, has focused on promoting conservation and wise use of wetlands based on diagnostic assessment of wetland features and their influencing factors. The organization endeavours to use a mix of approaches including technical knowledge, policy dialogue and field demonstrations for addressing various issues related to wetland management. To leverage change, the organization works with national and state governments, knowledge centers, civil society as well as private sector, often acting as catalysts to enable joined up actions. Specific knowledge, tools and pilot projects help us achieve change. Given that securing positive change in status of wetlands and linked livelihoods takes considerable time, the organization works for long term engagement, forging strategic and innovative partnerships. The organization places specific emphasis on capacity development of wetland managers in applying integrated approaches.

A multidisciplinary team within the organization and expert network enable providing evidence-based scientific and technical advice to central and state governments, wetland authorities, and civil society on various aspects of wetland management. The projects

implemented have covered the following wide ranging elements, designed and delivered in partnership with central government ministries, state government departments and agencies, wetland management authorities, civil society and research organizations:

- **management planning** for ecosystem restoration and wise use
- **design and establishment of integrated inventory, assessment and monitoring system** for supporting adaptive management
- **valuation of ecosystem services and biodiversity** to support mainstreaming in developmental programming
- **environmental flow assessment** for maintaining ecosystem functioning while allocating water for developmental purposes
- **conservation of critical habitats** of wetland dependent species, particularly migratory waterbirds and fish
- **capacity building** for integrated wetland management
- **institutional development** for cross sectoral governance
- **policy formulation** support and advocacy for conservation and wise use
- **community led ecosystem-based approaches** for disaster risk reduction
- **communication, education and public awareness**

Presently, Dr. Ashok K. Kundra (former Secretary to the ministries of Mines and Special Secretary Environment and Forests, Government of India) is the President of the Society. Mr. Sudhir K. Pande (Former Director General, Forests and Special Secretary, Government of India) is the Vice-President. Dr. Ajit Pattnaik (Former Principal Chief Conservation of Forests, Forest and Environment Department, Government of Odisha) is the Treasurer. Ms. Jane Madgwick (Chief Executive Officer, Wetlands International) represents the Wetlands International headquarters on the Governing Body. Dr. Siddharth Kaul (former Advisor, Ministry of Environment and Forests, Government of India) serves as a nominated member of the General Body.



President's Message

It is with great pleasure that I present the Annual Report of Wetlands International South Asia for year 2016-17.

The year happened to be the first year of implementation of the South Asia regional strategy for 2015-25 which was duly approved by the General Body in their annual meeting held on 17 July 2016. Activities during the year broadly involved formulation of integrated management plans for wetlands, demonstrating mainstreaming of wetlands in developmental programming, and advocacy for strengthened governance. We completed drafting of management plans for two Ramsar Sites of Kerala. A management plan for Chandrabhaga, a prominent wetland of Okhamandal region of Gujarat was also developed in partnership with Tata Chemicals. A five year long partnership initiative on integrated risk management, based on ecosystem approaches to address water mediated risks has been taken up. The project also envisages engagement with decision makers on appropriate changes in policy framework. It is gratifying that the Society has been able to source funds under CSR programme of Aventus Capital for assessing management effectiveness of Ramsar Sites and strengthening implementation of Asian Waterbird Census programme.

It is heartening to note that wetlands are now receiving greater attention in policies and programmes of the Government of India. The draft Wetlands (Conservation and Management) Rules, 2016 received significant attention of the wetlands managers as well as civil society. As directed by the General Body, we have continued our association with the Ministry of Environment, Forest and Climate Change on strengthening the regulatory architecture of wetlands. We also assisted in drafting the guidelines for notification of wetlands under the rules, which should make the process simpler and robust.

Initiatives have also been taken during the year to improve organizational governance. The Rules and Regulations of the Society have been revised to enlarge the pool of eligible members for election of President and members of the Governing Body. Financial management manual has been put in place to provide the office with a standard operating procedure for conducting financial transactions. A policy for human resource development has also been drafted and is under consideration of the Governing Body.

This year, I will complete a decade of association with the Society as its Founder member and as President. We began the journey with an organization that had good track record of work on wetlands conservation, but had weak financials and management procedures. It is noteworthy that during the year 2010, a decision was taken to establish a corpus for meeting emerging requirements in terms of augmentation of infrastructure and to subserve as a safety net. The members will be happy to note that over the years, the corpus has a healthy balance. It is also gratifying that Wetlands International South Asia is being increasingly acknowledged by the Ministry and state governments as a credible agency for consultation on matters relating to wetlands. However, work needs to be done to further the organization's regional presence and build internal capabilities to meet emerging challenges.

I take this opportunity of thanking the Office Bearers, members of the Governing Body and all other members for their unstinted support and guidance and wish the incoming team the very best.

New Delhi, July 7, 2017

Dr. Ashok K. Kundra

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Abbreviations

AWC	Asian Waterbird Census	IBAs	Important Bird and Biodiversity Areas
BNHS	Bombay Natural History Society	IIT	Indian Institutes of Technology
BSWDA	Bihar State Wetland Development Authority	ILBM	Integrated Lake Basin Management
CCA	Climate Change Adaptation	ILEC	International Lake Environment Committee
CMPA	Coastal and Marine Protected Areas	IOPs	International Organization Partners
CSR	Corporate Social Responsibility	IRM	Integrated Risk Management
CWRDM	Centre for Water Resources Development and Management	IUCN	International Union for Conservation of Nature
DRR	Disaster Risk Reduction	IWC	International Waterbird Census
EMR	Ecosystem Management and Restoration	IWMI	International Water Management Institute
EOH	Enhancing Our Heritage	METT	Management Effectiveness Tracking Tool
GEER	Gujarat Ecological Education and Research	MFF	Mangroves for the Future
GEF	Global Environment Facility	MoEFCC	Ministry of Environment, Forest and Climate Change
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	MoUD	Ministry of Urban Development
Gol	Government of India	WISA	Wetlands International South Asia

Executive Summary

Wetlands International South Asia (hereinafter WISA) has a mission to sustain and restore wetlands, their resources and biodiversity. In July 2016, the Governing Body of WISA approved the South Asia Regional Strategy 2015-2025 as a guide to its technical programmes. Four workstreams (healthy wetland nature, vibrant coasts and deltas, replenished water stores from mountain to sea, and safeguarding peatland treasures) and eight regional targets have been set as a guides to achieve the organization's mission and goal. During the period under report, work was taken up under the first three workstreams.

Workstream I: Healthy Wetland Nature

- Prepared a participatory management plan for Chandrabhaga, a significant wetland of the Okahmandal region of Gujarat
- Compiled necessary documentation for designation of Khijadiya and Gosabara, two high biodiversity value wetlands of Gujarat State
- Supported development of a framework for identification of high biodiversity and ecosystem services value wetlands of North Bihar. Based on the framework, 22 wetlands have been prioritized and have been recommended by Government of Bihar for inclusion under the national regulatory framework for wetlands
- Collated 10 year waterbird count data for the period 2006-15. Of the 1,411 wetlands covered within the census, 66 sites recorded more than 20,000 waterbirds. Of these, 12 have records of over 100,000 waterbirds during a single count year. 274 sites supported more than 1% of the biogeographic population of at least one waterbird species. This is the first project of WISA to be funded under CSR initiative of Avendus Capital.
- Initiated a project on management effectiveness of Ramsar Sites, to assess the degree to which management implemented during the last 5 years has been sufficient to ensure wise use commitments. This project is also supported under the CSR initiative of Avendus Capital.

Workstream II: Replenishing water stores from mountain to the sea

- Management plan for Sastahmcotta Lake, a water source for Kollam City of Kerala was completed and submitted to Government of Kerala for review. The Ramsar Site is evolving towards a marsh dominated state due to alteration of hydrological regimes.
- Management plan for Ashtamudi, an estuary of River Kallada was completed. The estuary is becoming hypersaline due to reduced inflow of freshwater.

- Finalization of management plan of Hirakud Reservoir, which controls the hydrology of Mahanadi Delta was also pursued.
- Conducted a South Asia region consultation workshop on integrated lake basin management in collaboration with International Lake Environment Committee, Japan. Following from the recommendations, the process of setting up a South Asia lake basin managers' platform is under discussion.

Workstream III: Vibrant coasts and deltas

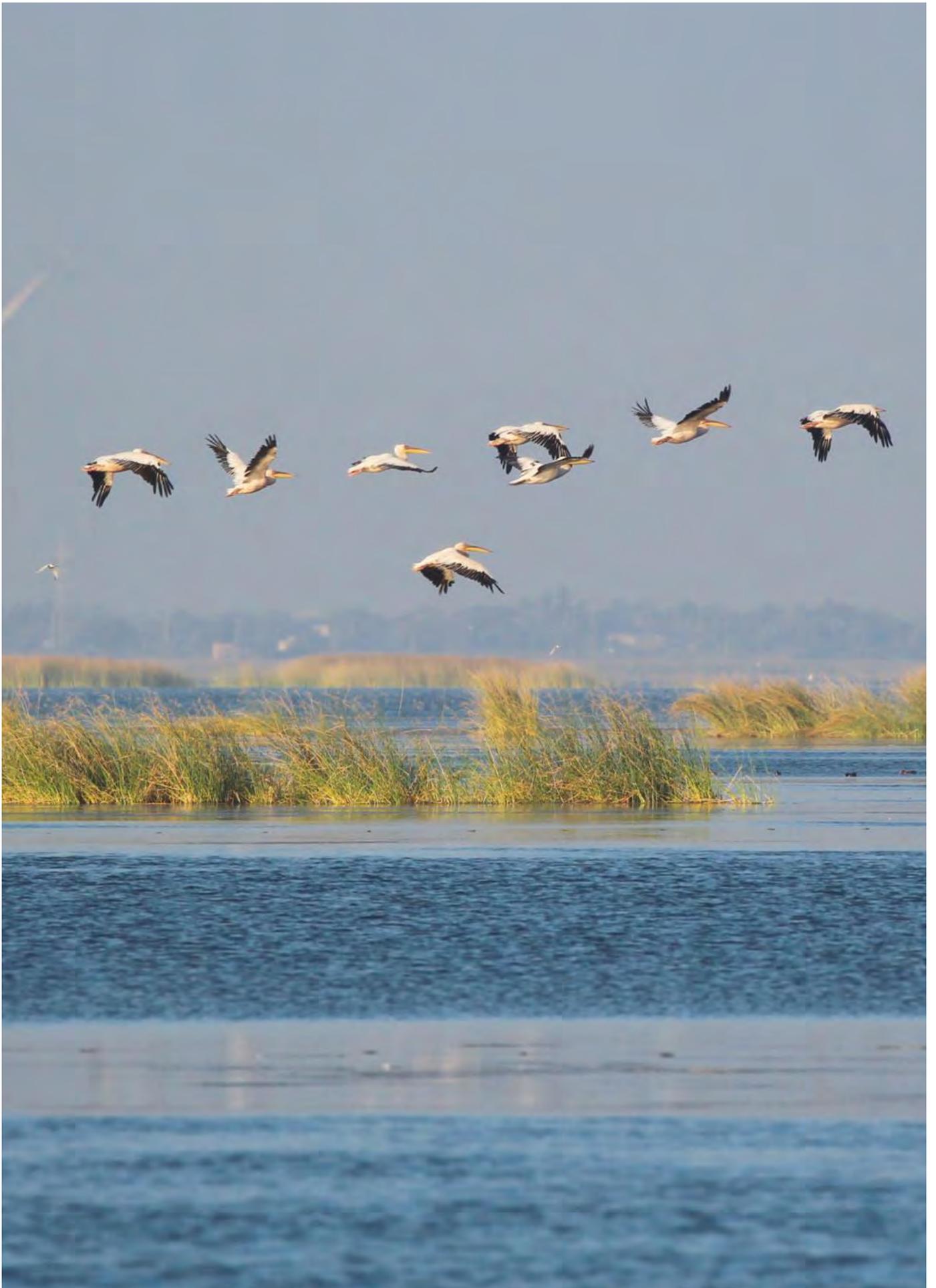
- Building on the implementation of Partners of Resilience project, a five year project aimed at strengthening civil society capacity for implementing integrated risk management approaches for reducing water mediated risk was initiated. The programme will be implemented in six states (Bihar, Odisha, Uttarakhand, Tamil Nadu, Gujarat and Himachal Pradesh). One of the key objectives is to build capacity of civil society organizations in use of wetland restoration as a means for reducing water mediated risks.
- Module for training communities on use of ecosystem based approaches for risk reducing planning at community level was prepared and piloted in Bihar and Tamil Nadu.

Governance

- The Ninth Annual General Body Meeting of Society held on July 14, 2016 at WISA Office, New Delhi.
- The Rules and Regulations of Society were reviewed as per directions of the General Body. Changes brought in to align voting rights for various membership categories and broaden the pool of members from which President and Governing Body members are elected. These changes were endorsed for implementation at the Extra Ordinary meeting of the General Body held on April 18, 2017.
- Financial management manual, laying down standard operations procedure for conducting financial transactions was approved for implementation
- Drafted Human Resources Policy, presently under consideration of the Governing Body.

Finance

- During financial year ended March 31, 2017, received an income of Rs. 30.82 million. This included Rs.28.56 million as project funds received from 5 donor agencies, and the balance, Rs. 2.26 million as interest earned on the reserves.
- Incurred an expenditure of Rs.18.55 million on programmatic and project activities.
- Direct overheads was Rs. 1.32 million, forming 7.13 % of total expenditure.
- On a net, a surplus of Rs.12.27 million was accrued.



Programme Overview 2016-17

Wetlands International South Asia (hereinafter WISA) has a mission to sustain and restore wetlands, their resources and biodiversity. The following goal statement of the organization brings to fore the importance of wetlands in supporting societal well-being:

Wetlands are wisely used and restored for the role they play in improving human well-being and local livelihoods, conserving biodiversity, sustaining the water cycle and reducing climate change and impacts.

In July 2016, the Governing Body of WISA approved the South Asia Regional Strategy 2015-2025 as a guide to development of technical programmes. Four workstreams (healthy wetland nature, vibrant coasts and deltas, replenished water stores from mountain to sea, and safeguarding peatland treasures) and eight

regional targets (summarized in table below) have been set as a pathways to achieve the organization's mission and goal. The technical programmes are designed around one or several of the intervention strategies, namely, mobilizing best available expertise and knowledge, raising awareness on key issues, enabling society to take action, and influencing policy and practice.

This section of the annual report presents an overview of activities and achievements of WISA during the period April 2016 – March 2017 under each of the four workstreams. During the period under reporting, work was taken up under the first three workstreams, with action under the peatlands workstream being envisaged to be taken up during the subsequent years. Project specific details are contained in Annex 1.

Workstream	Regional targets for 2015-2025	Geographical Focus of work during the year
Healthy Wetland Nature	1: Improved status of wetland biodiversity in 8 sites in South Asia (including 2 sites located in urban landscapes)	Wetlands of North Bihar Wetlands of Gujarat (Chandrabhaga, Khijadiya, Gosabara)
	2: Asian Waterbird Census (AWC) strengthened as an information base on status of migratory waterbirds within Central Asian Flyway	South Asia
	3: Implementation of national targets and international commitments related to wetland restoration tracked for 2 countries in South Asia to promote improved national policy making and governance	India and Bangladesh
	4: One national scale capacity building programme for wetland managers established	India

Workstream	Regional targets for 2015-2025	Geographical Focus of work during the year
Replenished Water Stores from Mountains to Sea	5: In 3 basins, implementation of water resources plans and projects safeguard and restore wetland functioning to reduce water risks	River Kallada Basin (Kerala)
	6: In 2 landscapes, WASH planning and governance takes into account role of wetlands resulting in enhanced access to environmentally sustainable water and sanitation solutions	North Bihar floodplains and Mahanadi Basin
Vibrant Coasts and Deltas	7: In 3 deltas and coastal landscapes of South Asia, wetland restoration is linked in coastal zone planning leading to improved livelihood resilience of dependent communities	Mahanadi Delta (Odisha)
Peatland Treasures Safeguarded and Restored	8: Knowledge base on status and trends in peatland resources in South Asia is compiled and made available to planners and decision makers	South Asia

Workstream 1: Healthy Wetland Nature

The aim of work under this workstream is to halt and reverse loss of wetland habitats, sites and species. The four regional targets under the workstream relate to improved status of wetland biodiversity in selected sites, establishment of national scale capacity building programme, strengthening information base on status of migratory waterbirds and tracking implementation of national targets and international commitments related to wetland restoration to promote improved national policy making and governance. Activities implemented under the four regional targets under this workstream are discussed in the following paragraphs.

Regional Target 1: Improved status of wetland biodiversity

Geographical focus of interventions taken up during the year under the regional target on improved status of wetland biodiversity was on three wetlands of Gujarat (Khijadiya, Gosabara and Chandrabhaga) and wetlands of North Bihar.

Bringing Khijadiya and Gosabara wetlands within the ambit of Ramsar Convention

The state of Gujarat located has the country's maximum extent of wetlands, several of which meet the designation criteria of Ramsar Convention. However, till date the only one Ramsar Site, Nalsarovar, has been declared as a Wetland of International Importance under Ramsar Convention. WISA worked with The Forest Department, Government of Gujarat, GIZ-India, under the aegis of the Indo-German bilateral cooperation project on Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas (CMPA) Project, to develop the necessary groundwork for designation of two significant wetlands, Khijadiya and Gosabara as Ramsar Site.

As a part of the process, a workshop on ecological characterization of two wetlands was held on September 28, 2016 at the Gujarat Ecological Education and Research (GEER) Foundation, Gandhinagar, Gujarat. The sessions, held interactively, aimed at specifying management objectives, setting desired wetland condition, prioritizing ecological character elements, and assessing monitoring needs.

Based on the management objectives and the desired wetland condition, the workshop participants evaluated the list of over 50 ecological character elements, and prioritized a subset for description of status and trends and development of a wetland inventory, assessment and monitoring system. Key knowledge gaps were also identified. Based on the results of the workshop, draft Ramsar Information Sheets required for designation of these site as Wetlands of International Importance have been prepared and submitted to the Forest Department, Government of Gujarat.

WISA will continue to work with GEER Foundation and Forest Department, Government of Gujarat for facilitating inclusion of comprehensive evaluation of ecological character of the two sites in line with wise use principles of wetland management within the existing protected area management plans.

Management planning for Chandrabhaga Wetlands

The culturally rich and ecologically fragile landscape of Okhamandal in western Gujarat is dotted with a number of inland and coastal wetlands. This highly arid region depends critically on its array of natural and human-made inland wetlands for freshwater. Spanning 160 ha on the flanks of Dwarka Municipal Area, Chandrabhaga is one such freshwater impoundment within the wetland complex of the Gomti creek. Gomti, a seasonal river of the Okhamandal flows into the creek, creating a mosaic of intermittent and perennial wetlands spanning 448 ha including fresh and salt marshes, mangroves, seasonal brackish flats, and rocky marine shore.

Chandrabhaga is a source of irrigation for 200 acres of agricultural land in Chandrabhaga Hamlet of Baradia Panchayat. Its waters recharge the aquifers preventing the wells of the hamlet turning saline. The Rabari community uses the wetland complex as a grazing ground. At least seven waterbirds one plant species found in the wetland are of high conservation significance globally.

The IUCN led Mangroves for Future (MFF) is a partner-led initiative to promote investment in coastal ecosystem conservation for sustainable development.



Waterbirds flying over Chandrabhaga

MFF implementation in India is guided by its National Coordination Body chaired by the Additional Secretary, Ministry of Environment, Forest and Climate Change, Government of India (MoEFCC). Tata Chemicals Limited (TCL) is a corporate sector partner of MFF. The initiative has developed a collaboration with TCL to demonstrate private sector engagement in conservation and sustainable management of coastal ecosystems. It was agreed to use this collaboration as an opportunity to put in place an integrated management plan for Chandrabhaga, so as to address the risk posed to the wetland by rapidly urbanizing and industrializing catchments and increasing tourism pressure. Wetlands International South Asia, a member of National Coordination Body of MFF, was entrusted the task of formulating of the management plan.

The shorelines of the wetland are being converted for developing tourist infrastructure, albeit with the highly unscientific soil excavation, and without adequate water and waste management arrangements. *Prosopis juliflora*, an invasive, has taken over most of the natural vegetation of Okhamandal and has evaded large areas of Chandrabhaga as well. Parts of Dwarka Rann, are being used as a solid waste and sewage dumping area. Degradation of Chandrabhaga ultimately puts the

Okhamandal region's water and food security at risk. Declining rainfall and increasing evaporation rate expose the wetland to risks of prolonged drying. In the absence of a clearly defined user and resource boundaries, low cost and effective conflict resolution mechanism, and linkages with wider developmental planning within the river basin and coastal zone, the existing institutional mechanisms are rendered insufficient.

The management plan for Chandrabhaga is based on the following strategies:

- Community-led management anchored within a multi-stakeholder committee constituted under the Dwarka District Administration and locally delivered through the Baradia Panchayat
- Notifying Chandrabhaga under Wetlands (Conservation and Management) Rules, 2010
- Embedding wetland wise use within the developmental programming at Baradia Gram Panchayat level
- Securing natural inundation regimes by preventing any excessive water abstraction within upstream catchments, maintenance of natural shorelines, containing terrestrialization induced by *Prosopis* colonisation.

- Maintaining habitat connectivity within wetland complex
- Putting in place an integrated wetland monitoring system, managed at Panchayat level, to enable assessment of status and trends in ecosystem health, and periodic adaptation of management to address emerging risks
- Developing ecotourism as an incentive for community resource stewardship

The action plan, developed in consultation with Panchayat members and various stakeholders has been organized under the five components of institutions and governance, habitat management, pollution abatement, ecotourism development, and communication and outreach. The plan was presented to the stakeholders in a consultation meeting held on May 11, 2017 and is being finalized integrating the inputs received from the workshop.

Ecologically significant wetlands of North Bihar

WISA continued to provide support to Bihar State Wetland Development Authority for identification and prioritization of wetlands of high conservation significance. Such wetlands are envisaged to be brought under the ambit of national regulatory framework to secure these ecosystems from developmental threats.

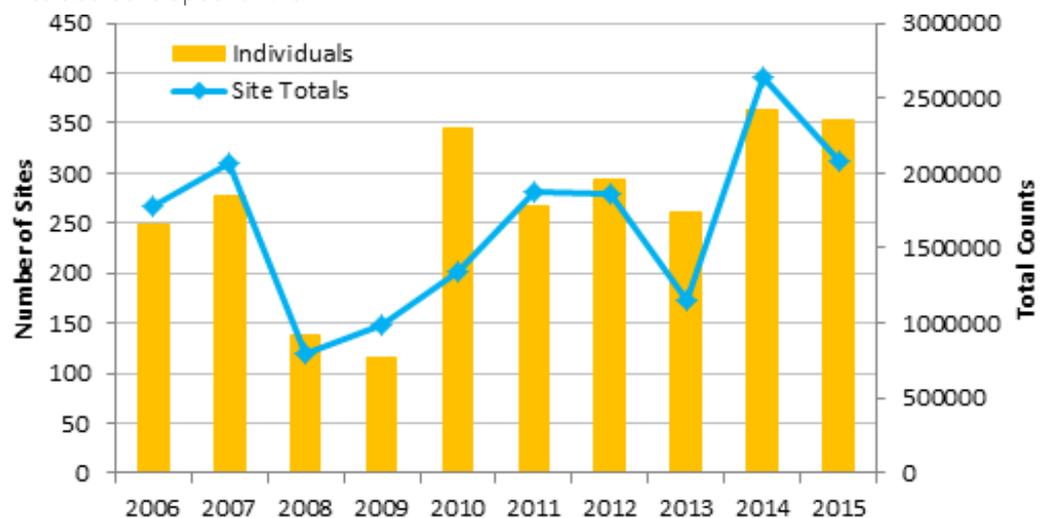
WISA assisted the BSWDA in setting up a consultation meeting of experts to develop a process and criterion for identification of priority wetlands. A framework for wetlands inventory based on national and global best practices were brought to the consultation workshop held on April 29-30, 2016 at Patna. Following up on the workshop, a review of available inventories was conducted and a list of 22 wetlands was generated. A protocol for inventorization was also developed for the State Government, in collaboration with IUCN-India, IIT-Kanpur and WTI. The said protocol has been used by the state to prepare summary documentation for notification of wetlands. The experiences of Government of Bihar have been found useful for application by other states as well.

Regional Target 2: Enhancing coverage of Asian Waterbird Census

The Asian region is home to a high diversity of waterbirds, including an increasing number of threatened species, many at risk of extinction. Conservation of these species and their habitats needs to be based on quality and recent information on their distribution and trends. To address this need, the Asian Waterbird Census (AWC) has been collating and disseminating information since 1987 to inform governments, conventions and the public. The AWC runs in parallel with other waterbird censuses carried out in Africa, Europe, Central and West Asia, the Caribbean, Central and South America under the umbrella of the International Waterbird Census (IWC).

In India, the AWC is jointly coordinated nationally by Bombay Natural History Society (BNHS) and WISA. Since its inception, the census coverage in India has grown rapidly in terms of site coverage as well as species and their population recorded. However, securing funding for this citizen science based monitoring system has been difficult leading to gradual decline in census coverage over the years. The initiative received a boost through CSR funding support from Avendus Capital.

As a part of activities this year, a synthesis of waterbird counts for 2006-15 was completed. This entailed analysis of data from 1,411 wetlands which were counted at least once. Counts were majorly contributed from the states of Gujarat, Maharashtra, Kerala, Andhra Pradesh and Telangana. Geographically, the Trans-Himalayas, Himalayas, Islands and the North-Eastern states of the region contributed the lowest counts during this period when compared with others. The total number of waterbirds reported varied



Trends in coverage of AWC over the years

between 0.7 and 2.4 million. Odisha and Gujarat reported the largest average number of waterbirds annually.

Sixty-six sites recorded more than 20,000 waterbirds. Of these, 12 sites have counts exceeding 0.1 million. As many as 274 sites recorded more than 1% of the biogeographic population of at least one species. These include 18 Ramsar Sites, 2 UNESCO World Heritage Sites, 1 Biosphere Reserve, 74 IBAs and 81 Protected Areas (PAs).

Overall, 171 waterbirds belonging to 21 families and 73 wetland dependent species (consisting 61 raptors, 10 kingfishers and 2 seabird species) were recorded. A majority of these (136 species) are migratory.

The top ten abundant waterbirds reported were Northern Pintail, Gadwall, Common Coot, Eurasian Wigeon, Ruff, Demoiselle Crane, Lesser Whistling-duck,

Northern Shoveler, Lesser Flamingo and Black-tailed Godwit.

One-fifth of the waterbird species covered in census (33 species) are of high conservation significance (being either critically endangered, threatened or near threatened species).

The population trends were collated using the Waterbird Population Estimates online database. The analysis indicates that within the Central Asian Flyway region, 23 % of the waterbird species shows a decreasing trend. Thus, nearly one out of four species found in Indian wetlands has a decreasing population trend.

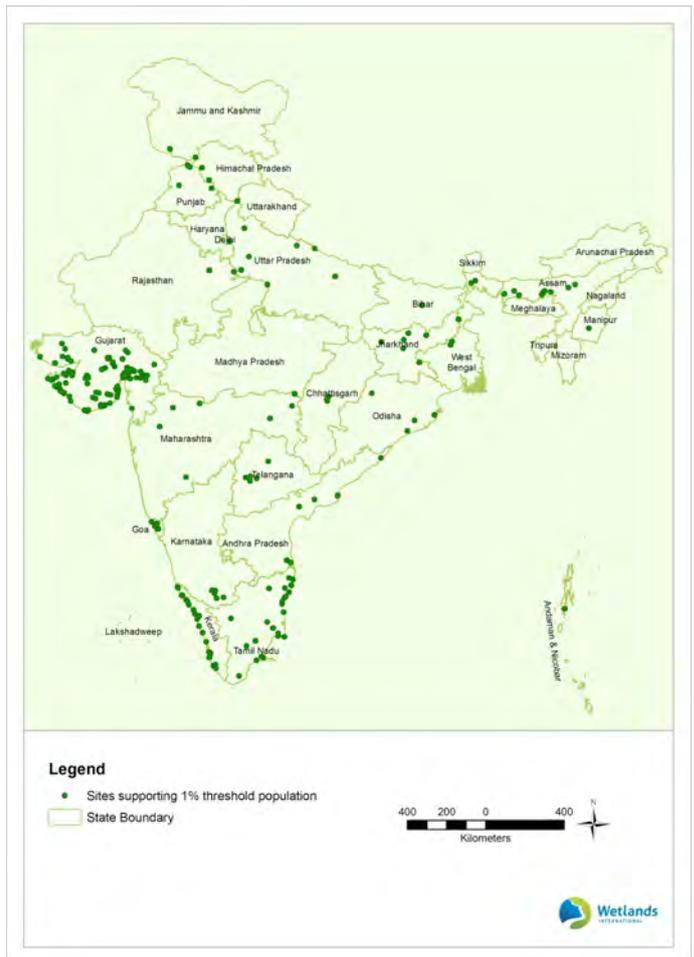
The synthesis is being published as a technical report, alongwith datasets for wider dissemination of findings and policy uptake.



Field outreach session to college student at Okhla Bird Sanctuary



Sites supporting > 20,000 and > 100,000 waterbirds



Sites supporting 1% threshold population (86% of the sites are represented in this map i.e. 235 out of 274 sites have been marked)

Regional Target 3: Tracking international commitments related to wetlands

India has designated 26 wetlands as Wetlands of International Importance under the Ramsar Convention. These sites form an integral component of the global network of over 2,000 Ramsar Sites, enabling application of wise use principle for maintenance of ecosystem components and processes which underpin delivery of ecosystem services. Designation of a wetland as 'Ramsar Site' commits the national government and stakeholders to wise use. The wise use definition as adopted by the Convention is "the maintenance of their ecological character within the context of sustainable development, and achieved through implementation of ecosystem approaches".

Management planning of wetland sites entails outlining an approach for maintenance of ecological character, and in doing so, retain those essential ecological functions which underpin delivery of ecosystem

services and maintenance of biodiversity. To be able to comprehensively address drivers of wetland degradation, and provide opportunities for sustaining livelihoods of dependent communities, the plans need to be based on diagnostic evaluation of wetland features and governing factors, enabled through participation of experts and stakeholders. Presently, barring a few exceptions, management plans are not based on comprehensive landscape scale assessments. As a result, the investments are largely sub-critical and spent on maintenance of the wetland condition (through dewatering, desilting and catchment treatment), rather than treatment of problem at source. A critical gap in the present system of wetland management, is lack of ability to assess management effectiveness, so as to refine site management periodically.

During the year, a project entitled "Tracking management effectiveness of Wetlands of International Importance in India" was initiated with financial support of Avendus Capital under Corporate

Social Responsibility (CSR). The project entails development of a management effectiveness tool suited to context of Indian wetlands and application to eight Ramsar sites to assess the degree to which wise use objectives have been achieved, and recommend necessary mid-course correction.

The management effectiveness assessment framework was developed based on review of available tools (METT, RAPPAM, EOH and R-METT). The framework broadly reflects three themes: a) design of management plan, both in relationship with site features as well as governing factors located within the wider basin or coastal zone landscape; b) adequacy and appropriateness of institutional arrangements and resources deployed; and, c) delivery of ecosystem services and biodiversity outcomes as a result of management. While maintaining a focus on outcomes as a result of management, the tool will enable compilation of information on planning (policy context, site evaluation and management objectives), adequacy (financial and technical resources and institutional arrangements) and delivery (activities, and resultant outcomes on wetland ecosystem services and biodiversity in relation to identified management objectives).

The prototype has been tested for Lake Chilika (Odisha), Deepor Beel (Assam), Sasthamkotta Lake and Ashtamudi Estuary (Kerala). The outcomes are being collated in the form of a technical report which would be released by close of 2017.

Initiatives for strengthening regulatory framework

Wetlands International South Asia continued its engagement with MoEFCC, Gol on strengthening regulatory framework for wetlands in the country. A synthesis and analysis of comments received on the draft Wetlands (Conservation and Management) Rules, 2016, was done based on which inputs were provided for reformulation of the draft rules. The organization also assisted in development of a guidance on formulation of brief documents for notification of wetlands under the national regulatory framework. A model Ramsar Information Sheet for Lake Chilika was compiled to demonstrate use of new formats introduced by Ramsar Secretariat since 2015.

Regional target 4: Establishing capacity building programme for wetland managers

Chilika Development Authority and WISA jointly convened a consultation meeting of Ramsar Site managers in January 2016 (details reported as part of Annual Report for the period 2015-16). The key decision taken during the meeting was to establish a National Capacity Building Center for Wetland Management at the existing Wetland Research and Training Center of Chilika Development Authority. This was also announced by the Ministry of Environment, Forest and Climate Change (Gol) as a part of its press release on World Wetlands Day 2016.

WISA is supporting development of a proposal for the said center for consideration of Government of Odisha and the MoEFCC. Follow up actions have also been included as a part of UNEP-GEF project on 'Integrated Management of Wetland Biodiversity and Ecosystem Services' developed during the previous year with GEF support (details reported in the 2015-16 Annual Report).

A consultation meeting on 'International Lake Basin Management in South Asia' was organised by International Lake Environment Committee (ILEC), Japan in collaboration with Wetlands International South Asia and Integrated Coastal Zone Management Project, Odisha during August 31 – September 1, 2016. The meeting aimed at assessing the status of implementation of Integrated Lake Basin Management related initiatives in the region, and development of strategies for development of a South Asia ILBM Platform. Experts representing ILEC Secretariat; nodal ministries of India, Nepal and Bhutan; ILEC partner organizations; the International Water Management Institute (IWMI), India & Sri Lanka, the IUCN India Office, the World Bank and GIZ-India attended the meeting.

The meeting participants deliberated on the state of affairs in implementing ILBM approaches in conservation of wetlands. A key conclusion arising from the meeting was the need to establish a South Asia platform of ILBM. The aim of the platform will be to strengthen application of integrated approaches to management of lakes and wetlands through sharing of lessons and best practices, technical exchange and capacity development. Pathways for convergence between implementation of Ramsar Convention commitments and lake basin management processes



South Asia workshop on Integrated Lake Basin Management in progress (August 31, 2016)

with the help of existing Ramsar Scientific and Technical Review Panel and ILEC Scientific Committee members. The members agreed to continue holding regional exchange on basin scale implementation of

wetland management programmes for better cross learning and networking, using a lentic-lotic interaction framework.

Workstream II: Replenishing water stores from mountains to the sea

The workstream replenished water stores from mountains to the sea aims at aligning policies across multiple sectors to transform the way water risks are managed in the landscape, including the improved management and restoration of wetlands as networks of natural infrastructure. The two regional targets under the workstream strive to: a) safeguard and restore wetland functioning for reducing water risks as a part of basin scale planning, and b) promote role of wetlands in provision of sustainable water and sanitation solutions within basins. Geographical focus of implementation of activities has been within Mahanadi River Basin (Odisha) and Wetlands of River Kallada Basin (Kerala). The work carried during the year is described in the following paragraphs, under the heads of wetlands and water management and wetlands and WASH (Water, Sanitation and Hygiene).

Regional Target 5: Integrating wetland functioning in water resources planning

Kallada, a perennial river arising from the Western Ghats is one of the two rivers draining Kollam District

of Kerala State. Before its confluence with the Ashtamudi Estuary at Koivila, the Kallada flows for a length of 121 km, drains 1,598 km² is joined by 47 tributaries. Its basin includes two Ramsar Sites, Sasthamkotta Lake and Ashtamudi Estuary. WISA is working with the State Wetland Authority to put in place intergated management plans for the two internationally significant wetlands, to ensure that their full range of biodiversity and ecosystem service values are taken into account in water resources and borader developmental planning for the region. The management plans for the two wetlands were drafted during the year, and are currently being reviewed by the State Government.

Sasthamkotta Lake

Located in Kunnathur Taluk of Kollam District, Sasthamkotta is the largest freshwater lake of Kerala. Spanning 373 ha, the lake is the principal source of water for nearly 0.5 million people living in Kollam City and its suburbs. Sastha temple, from which the lake is believed to have got its name is an important religious



A panoramic view of Sasthamkotta Lake

and cultural centre for the region. The striking beauty of Sasthamkotta's placid waters surrounded by lush green hills have earned it the distinction of 'Queen of Lakes'. Sasthamkotta was designated Ramsar Site in 2002, thereby underlining the commitment of National as well as State Government for its conservation and sustainable management.

Sasthamkotta is evolving towards a marsh dominated stage due to frequent drying out of its lake bed. Rapid land use intensification within the catchments, unregulated mining within the floodplains and increasing spread of macrophytes has greatly impaired the lake ecosystem's health. Waste management practices in the shoreline villages are far from being comprehensive. Continued prevalence of these trends is only likely to adversely impact ecosystem functioning and increase water insecurity for the dependent communities. A review of wetland features indicated following trends:

- Land use within Kallada River Basin as well as Sasthamkotta direct drainage basin over the years has intensified. Much of the marsh areas around Sasthamkotta have been converted to agriculture.
- Water levels in Sasthamkotta were traditionally maintained by a mix of surface and groundwater interactions. The sand layer between Sasthamkotta and River Kallada acted as conduit of freshwater flows from the river to the lake. Excessive sand mining has led to complete breakdown of this connection. Construction of embankment of the surface has limited flood pulse interactions with surface waters. It is highly susceptible to significant changes in inundation regimes in response to any changes in rainfall.
- The level of water withdrawn from Sasthamkotta far exceeds the inflow received from direct rainfall and run-off. With interactions between river floodplains limited, the current abstraction levels are not tenable even in the short run.
- Despite significant sanitation coverage, the high levels of fecal coliform within the lake waters indicate substantive leaching. Water quality has also been observed to be degraded in select pockets. Any degradation of water quality within Sasthamkotta has public health consequences, as it is a major drinking water source.

- Available information indicates stresses on the limited biodiversity present in the lake. The plankton community is shifting towards a dominance of pollution tolerant species. Within fish species there is a significant decline in population of *Horabagrus brachysoma* and *Etroplus suratensis* which were once abundant. Species as *Tachysurus malabaricus* and *Macrobrachium* are believed to have been nearly eliminated from the lake due to disrupted exchange of fish species caused due to construction of Velanthara embankment along the southern margin of the lake. The already meagre fishery is under stress due to unsustainable fishing practices as harvest of broods and disturbance in breeding areas.

While the institutional and governance architecture for management of Sasthamkotta is well developed, continued degradation of the lake is an indicator of ineffectiveness of current arrangements. With a number of sectoral programmes are being implemented in the region around Sasthamkotta, there is no mechanism available to ensure cross-sectoral coordination at the level of lake's drainage basin to prevent any adverse change. The State Wetland Authority Kerala has been constituted only recently and the terms of reference are yet to be articulated completely. Enforcement of existing regulatory frameworks is limited. The provisions of Wetlands (Conservation and Management) Rules, 2010 are not fully complied with. There is no system in place to comprehensively assess the status of wetland, and the impact of various interventions.

Given the role of hydrological processes in governing the ecological character of Sasthamkotta, there is a need to mainstream its full range of ecosystem services and biodiversity values in management of River Kallada Basin management, in order to achieve wise use outcomes. The purpose is to put in place effective institutional and governance arrangements with stakeholder-led management of Sasthamkotta at River Kallada Basin scale.

The management plan recommends following strategies:

- Forming a dedicated institutional platform to secure consideration of full range of wetland values and functions in developmental programming, while seeking engagement of stakeholders at multiple levels.

- Putting in place an integrated wetland monitoring system, managed by CWRDM, to enable assessment of status and trends in ecosystem health, and periodic adaptation of management to address emerging risks.
- Involving local self-government to drive the management plan
- Harmonising water abstraction with ecological condition
- Enforcing existing regulations for wetland conservations and management
- Integrating Sasthamkotta in Kallada River Basin management

Management planning for Sasthamkotta is proposed to be structured around following five components: a) Institutional development, b) Catchment conservation; c) Water management, and d) Biodiversity conservation and e) Sustainable Livelihoods. Implementation of the management action plan entails a budget of Rs. 98.63 crore over a period of 5 years. Of the total funds, 69% are earmarked for water management. The plan is presently under review of the Kerala Government.

Asthamudi Estuary

Located within the Kollam District of the state Kerala, and spanning an area of 5700 ha, Ashtamudi Kayal is one of the large estuaries of the Indian west coast. A diverse and dynamic assemblage of fish, invertebrate and crustacean species provide the basis of rich fisheries, with an annual harvest of over 25,000 MT and supporting livelihoods of nearly 5,000 fisher households. The estuary's clam fishery is famed to be the first Marine Stewardship Council certified fishery in the country.

Ashtamudi is popular as the gateway of Cochin backwaters and is one of the prominent touristic destinations of the state. Having a unique palm like eight-cone shape, the estuary is deeply linked with the local culture and belief systems, with many sites of historical and cultural significance, such as Quilon port located along its shorelines.

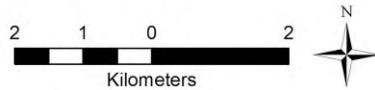


A houseboat in Ashtamudi Estuary



Legend

-  Rail
-  Road
-  Channel / drain
-  Branch Canal
-  Distributaries
-  Major river
-  Waterbody
-  Seasonally flooded
-  Marsh
-  Mangrove
-  Fish farms



Location of Ashtamudi Estuary and Sasthamkotta Lake

The wide-ranging ecosystem services and biodiversity values of Ashtamudi Estuary exist within a densely populated and highly developed landscape. A review of wetland features indicated following trends:

- Freshwater inflows into the Ashtamudi have declined due to reduced inflow from the Kallada Basin and declining rainfall. Post construction of the dam in 1986, there has been a drastic reduction in the inflows into Ashtamudi. Annual discharge at Enathu during 1972-78 was 1646 Mm³, which was 174% higher than the discharge during the 2002-2011 period.
- There is a gradual decline in rainfall during the south-west monsoon and as a result, total rainfall. As the estuary becomes more saline, adverse impacts on groundwater quality are also highly likely. Changes in salinity regimes are also leading to alteration in species richness. The most significant change observed is in the fisheries, wherein the freshwater species are on a decline.
- Mangroves have been extensively converted. Given their capability to reduce soil erosion, the reduction in mangroves has also exposed the islands to higher levels of erosion.
- Ashtamudi has become a cesspool of waste due to direct discharge of untreated sewage and wastes from the Kollam City, adjoining industrial units, boats which use the Neendakara harbour and tourist houseboats. In near term, pollution is likely to become a serious health hazard by moving through food chains.
- Waterbird habitats are under high anthropogenic pressure. The Kandachira part of the estuary where a large congregation of Black-tailed Godwits could be seen has now been reduced to a few numbers. Karali Marshes, once known for huge congregation of Purple Swamphen, have now been reduced to just a few flocks due to extensive sand mining in the area.

The management framework recommended for Ashtamudi Estuary aims to secure ecological integrity of the wetland ecosystem, while providing ecological, economic and cultural benefits to the society on a sustainable basis. A dedicated institutional platform in the form of Ashtamudi Wetland Authority has been

recommended to secure consideration of full range of wetland values and functions in developmental programming, while seeking engagement of stakeholders at multiple levels. An integrated wetland monitoring system, managed by CWRDM, is also recommended to enable assessment of status and trends in ecosystem health, and periodic adaptation of management to address emerging risks.

The management plan includes proposal to assess freshwater requirements of Ashtamudi, and build the same into water resources planning for the River Kallada Basin. Implement provisions contained within the Wetlands (Conservation and Management) Rules, 2010; the Coastal Regulation Zone Notification, 2011; and the Water (Prevention and Control of Pollution) Act, 1974 are recommended to be implemented on priority. Fisheries and clam harvest are proposed to be regulated within maximum sustainable yield levels, by involving communities and promoting application of sustainable management practices. Wetland conservation elements are proposed to be linked within the existing wetland tourism practices using multi-level communication strategies.

The management plan implementation entails a budget of Rs. 170.34 crores for five years. Of this, the component of water management is allocated 72%. The plan is currently under review of the Government of Kerala.

Management plan for Hirakud Reservoir

Hirakud Reservoir, formed due to the damming of River Mahanadi at Sambalpur in 1957, is the largest and most significant water infrastructure of the State of Odisha. Spanning an area upto 700 km² when full, the Hirakud Reservoir provides water for generating ~ 300 MW hydropower through its two power houses at Burla and Chiplima; irrigating 462,100 ha culturable command area within Bargarh, Bolangir, Sambalpur and Subarnapur Districts; and securing 9,500 km² of Mahanadi Delta region from floods. Over 7,000 fisher households depend on the reservoir fisheries for livelihoods. The vast open waterbody attracts a sizeable population of ducks, geese and waders during winter, making it one of the major waterbird congregation areas in the state. The scenic surroundings and historical and cultural landmarks lend significant cultural and recreational value to the reservoir.



The stretch of Hirakud Reservoir at Tamdei

The multiple values of the Hirakud Reservoir have been adversely affected by rapid transformation of catchments and increasing demands for water in the downstream reaches. Silt is accumulating in the reservoir at rates much faster than planned for, reducing its water storage and flood moderation capacity. Expansion of agriculture within the command area, and expansion of industries and urban settlements within the reservoir's catchment have accentuated water use conflicts. Decreasing fish catch, reduction in fish species diversity and increasing pollution has placed the livelihood of fishers under great stress. Biodiversity has been adversely impacted by habitat fragmentation and increasing anthropogenic stress on key habitats.

Realizing the multifaceted role of Hirakud in the overall economy and ecological security of the state, the Odisha Wetland Development Authority (OWDA) recommended putting in place an integrated management framework for the reservoir. WISA in collaboration with Chilika Development Authority responded to this decision, by drafting an integrated management plan. The plan was submitted to the Government of Odisha for review in December 2015.

The management plan is currently under review by the OWDA. WISA will work with the Authority to secure resources and put in place institutional arrangements as outlined in the management plan.

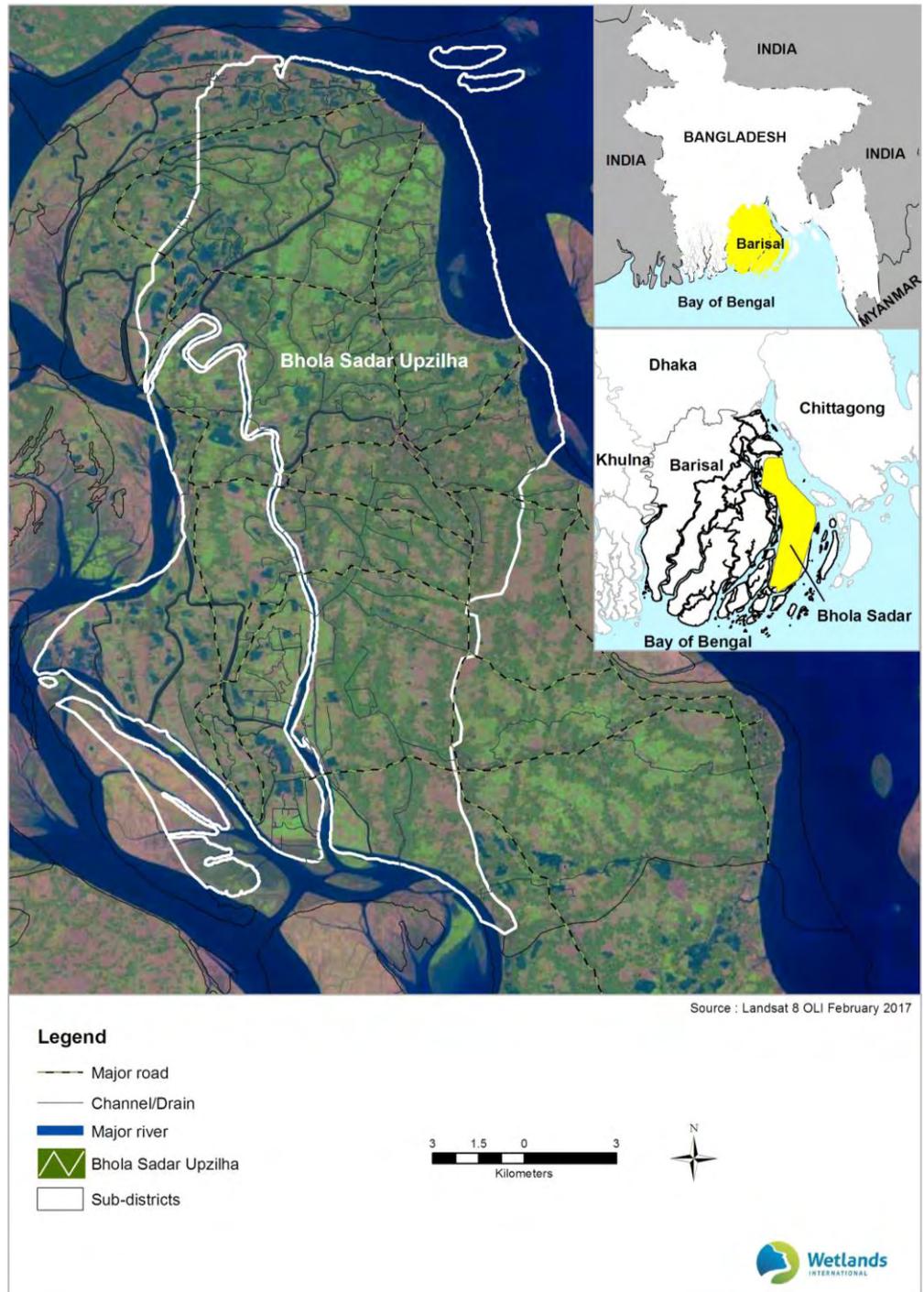
Regional Target 6: Integrating role of wetlands in Water, Sanitation and Health (WASH) planning and governance

South Asia is increasingly transforming into a area of high water insecurity. Poor access to water, sanitation and hygiene facilities furthers deepens physical water scarcity. Around 20 per cent of the population in South Asia region lacks access to improved water supplies and only a minority are connected to piped sewer systems, even in urban areas. Inadequate water supply and sanitation increase disease burden on the society. While nations have prioritized WASH services within the development agenda (as India's Swachh Bharat Mission), the role of wetlands as sources of water and, in certain circumstances as ultimate sinks of municipal waste is hardly recognized. There is an urgent need to embed the role of wetlands and concomitant basin scale thinking in planning and implementation of WASH programmes.

During the year, Wetlands International South Asia became a partner of Watershed, is a Strategic Partnership (SP) between the Dutch Ministry of Foreign Affairs and IRC, Wetlands International and Akvo. Over the next five years (2016-2020), the partnership aims to deliver improvements in governance and management of WASH services particularly water sources on which such services depend). Through a series of interventions, the programme endeavours to translate evidence, knowledge and lessons from local and community scale interventions upwards to influence governance and policy at national, regional and international level.

An incremental role of the partnership would be to increase recognition of integrated water resources management interface, particularly role of wetlands in WASH programming, such that services delivery is sustainable in the long run. Operating in geographies where management constraints the delivery of WASH objectives, the programme aims at addressing specific policy, practice and investment barriers, leading to creation of proof of concepts that can be leveraged by the SP to influence national programming.

Under the aegis of the partnership, Wetlands International South Asia will be working in landscapes



Location of Bhola Island, Bangladesh

in India (Mahanadi Delta, Odisha and Gandak-Kosi floodplains, Bihar) and Bangladesh (Bhola Island) to promote role of wetlands in delivering sustainable WASH solutions.

Workstream III: Vibrant coasts and deltas

The workstream vibrant coasts and deltas aims at conservation and restoration of coastal wetlands as an integral part of resilient and productive coastal landscapes. Regional target relate to linking wetland restoration to landscape scale planning in select deltas to ultimately lead to improved livelihood resilience of dependent communities.

Regional target 7: Wetland restoration for improved livelihood resilience of dependent communities

Work under the thematic area is delivered through the Partners of Resilience Strategic Partnership. With the first phase of programme implementation of the Partners for Resilience (PfR) drawing to a close in December 2015, the global alliance (i.e. Netherlands Red Cross, Red Cross Red Crescent Climate Centre, Care, Cordaid and Wetlands International) developed a new programme known as the Partners for Resilience : Strategic Partnership (PFR:SP), to be implemented from 2016 to 2020.

The general objective of the PFR:SP is to support the implementation of the Sendai Framework of Action (SFA) by ensuring that vulnerable people are more resilient to crises in the face of climate change and

environment degradation, thereby enabling sustainable and inclusive economic growth. Interventions continue to be focused on the application of Integrated Risk Management (IRM) approaches i.e. risk management through the integration of key elements of disaster risk reduction (DRR), climate change adaptation (CCA) and ecosystem management and restoration (EMR). The beneficiaries of the programme being communities and groups that are marginalised and therefore most vulnerable, with special attention paid to women, youth, elderly and disabled persons.

In India, the PFR:SP will be implemented at the local, district and national level to engage in policy dialogues and strengthen capacities of civil society networks on IRM for water mediated risks, based on a strong base of scientific evidence and knowledge developed through on-ground field implementation. The aim is to integrate IRM approaches within DRR policy, investment and practise. The programme has three inter-related specific objectives, responding to policy, investment and practise gaps that limit the application of IRM approaches:

- Policy makers at various governance levels take into account integrated risk management principles and approaches;



Pilot IRM orientation workshop in Bettiah, Bihar

- Public and private investments into IRM is increased with appliance of IRM safeguards and screening; and,
- Implementation and development of risk reduction, climate adaptation and development programmes at various levels address underlying causes of risk and prevent creation of new risks.

The programme will be implemented in 6 states, namely Bihar, Odisha, Uttarakhand, Tamil Nadu, Gujarat and Himachal Pradesh.

The first half of 2016 (1 January 2016 - 30 June 2016) was demarcated as the inception phase of the programme. Through a series of workshops and consultative meetings, the India team developed the India country programme by identifying objectives, formulating outcomes and their milestones, and identifying IRM dialogue trajectories and capacities required for engagement. A joint programme proposal was submitted to the global PfR:SP alliance at the end of the inception phase.

Implementation of the programme began on 1 July 2016. A module on the basic concepts of IRM i.e. risk reduction, climate change adaptation and ecosystem restoration and management, to protect the lives and livelihoods of vulnerable communities while ensuring

gender and social inclusion was developed. The purpose of the module was to trigger the development of implementation plans of field partners on policy engagement, investments and practice.

A pilot capacity strengthening programme for PfR:SP implementation partners in Bettiah, Bihar was also conducted from 27 November – 1 December 2016 on the basis of the aforementioned IRM Orientation Module. Based on the feedback received the national team revised the IRM module to address the needs of the partners. A national orientation workshop was held from 15-17 March 2017 in New Delhi for all PfR:SP partners.

The Ramsar Convention declared 'Wetlands for Disaster Risk Reduction' as the theme for World Wetlands Day in 2017. The PfR:SP team developed a poster on 'Wetlands for Disaster Risk Reduction'. The poster was released by the Additional Secretary, Ministry of Environment, Forest and Climate Change (MoEFCC) at the Ministerial Event held at Bhopal, Madhya Pradesh on 2 February 2017.

Implementation during 2017 would focus on building capacity of village panchayats to access funds from convergence sources for fructification of risk reduction plans.



Dr. Amita Prasad, Additional Secretary, MoEFCC releasing the World Wetland Day poster at National Workshop held in Bhopal, on February 2, 2017

Organizational Development and Governance

Governance

WISA is governed by a three-tiered structure. The General Body is at the apex of this structure and provides strategic direction and guides policy making. The overall management of the society is vested in its Governing Body. The President, Vice President and Treasurer are the Office Bearers of the Society, who meet periodically to maintain an oversight of the programme operations.

The Ninth Annual General Body Meeting of Society was held on July 14, 2016 at WISA Office. The General Body members reviewed progress of programme implementation and overall financial health during the meeting, and expressed in-general satisfaction on the course of actions. Members advised to continue policy engagement with the MoEFCC for improved policy and regulatory environment of wetlands in the country. Members also reviewed the South Asia Regional Strategy for 2015-2025, developed in line with global strategy and approved regional targets to guide delivery of technical programmes and resource development. A decision to amend the Society Rules and Regulations was also taken to expand the pool of

members from which President is elected, align rights of various categories of membership and define roles and functions of office bearers.

The Ninth Governing Body meeting of the Wetlands International South Asia was also held on July 14, 2016. The members conducted a detailed review of projects under implementation, and made specific recommendations for improved performance. The members also recommended revision of Society Rules and Regulations, a proposal which was subsequently accepted by the General Body for implementation.

During the year, the Office Bearers conducted nine meetings to review progress of various projects and implementation of decisions taken in various Society meetings. The Office Bearers also conducted visit to project implementation sites in Odisha to assess impact of implementation of Partners for Resilience project, and to strategize development of a follow up proposal under Strategic Partnership with Dutch Ministry of Foreign Affairs.



Ninth Annual General Body Meeting in progress

Review of Rules and Regulations

WISA is registered in India as a nongovernment organization under Societies Registration Act. Functioning of the Society is governed by the Memorandum of Association and Rules and Regulations, which were established at the inception of the Indian legal entity in 2006.

Upon review of the Rules and Regulations of the Society by the members, a need for comprehensive changes was felt so as to ensure efficient delivery of its strategic objectives. Specific aspects included the need to broaden the pool of members from which President can be elected, clear definition of the roles and functions of Office Bearers, aligning voting rights for various categories of membership, and ensuring editorial consistency in the overall structure of the document. Following General Body ratification of the decision to review the rules, the Office Bearers prepared a draft, which was finally endorsed for implementation at an Extra Ordinary meeting of the General Body held on April 18, 2017.

Financial Management Manual

A financial management manual of the organization was prepared during the year as a Standard Operating Procedure for financial management in the

organization. The manual sets out rules and procedures to: a) ensure that the organization's books of accounts conform to sound accounting principles and practices; b) enable management to obtain accurate and timely financial reports and thereby promoting sound financial management; c) ensure correct and accountable use of funds and other resources, in line with generally accepted accounting principles and organizations best practice reporting requirements; and, d) provide internal control and check in recording of various financial transactions.

The manual was adopted for implementation at the tenth meeting of Governing Body held on March 31, 2017.

Human Resource Policy

During the year, a Human Resource Policy for the organization was also drafted. The purpose is to lay down the policies and conditions governing the rights and obligations of Wetlands International South Asia employees and defining their roles, duties and responsibilities within the organization. The draft has been placed for consideration of the Governing Body. .

Outlook 2017-18 and beyond

The work of WISA during 2017-18 and beyond would continue to be guided by the four workstreams and eight Regional Targets approved for implementation for 2015-2025. A mid-term evaluation of strategy implementation shall be conducted in 2019 to assess the degree to which implementation has been achieved, and the strategy remains relevant to the regional context.

Conservation and integrated management of urban wetlands is proposed to be a thrust area during 2017-18. The South Asia region is the least urbanized regions of the world yet has the fastest urbanization rate. Annual population growth in the region is around 1.5 per cent and is projected to increase from around 1.6 billion to over 2.0 billion by 2050. This growth combined with the movement of people from rural areas to cities and towns will see urban populations grow from around 30 per cent of the total (currently) to between 40 and 50 per cent of the total. The urban population is unevenly distributed, being concentrated in few large cities, creating significant infrastructural, socio-spatial and ecological overloads, and particularly on wetland ecosystems.

It is not surprising to note that the expansion of major urban centres, as Bengaluru, Delhi, Kolkata, Chennai, Colombo, Dhaka, and Karachi have been associated with concomitant decline in wetlands, and increasing water insecurity. Studies on increasing urban flooding risks in Bangalore and Chennai have identified wetland encroachment as one of the main causative factors.

Strategies for urban governance, adopted thus far in the region, are yet to factor consistent and comprehensive solutions for wetland conservation within rapidly urbanizing landscapes. Regulatory frameworks for wetlands, as developed in India and Sri Lanka, have been largely ineffective in securing wetlands from direct and indirect impacts of urbanization. Experiences from management of urban wetlands as East Kolkata Wetlands, Bhoj Wetlands indicate that if well-managed, ecosystem services and biodiversity values derived from urban wetlands can improve environmental sustainability in urban spaces.

It is opportune that the Ramsar Convention has identified wetlands and urbanization as the theme of the Thirteenth Conference of Parties meeting being

held in October, 2018. It is intended to collate a state of the art report on wetlands and urbanization in South Asia region, to assess the trends, management approaches adopted, gaps and emerging lessons. In India, the Smart Cities initiative of the Ministry of Urban Development presents a unique opportunity for promoting synergies between wetlands conservation and urban development. The programmatic framework for the project includes 'sustainable environment' as its integral component. Wetlands conservation can be made a part of this component, with adequate guidelines provided for catchment scale planning. Wetlands International South Asia will work with the MoEFCC and MoUD to enhance consideration of integrated approaches for wetlands within urban spatial and functional planning processes.

In 2016, WISA completed two decades of work in India. The General Body in its Tenth meeting held on July 2016 advised commissioning an analysis of Strength, Weakness, Opportunities and Threat to reflect the impact organization has made on the policies and programming of wetlands in the country, and strengthen presence. Recommendations of the analysis include focusing on the organizational niche of integrating wetlands within river basin management, expanding networks, improving human resources and technical capacities and acting to improve science – management interface. Specific need has been expressed for improving communication capacity. The organization will systematically address the recommendations made in the analysis for a stronger organization.

WISA will also focus its work on building capacities of wetlands managers for integrated management. Tailor made courses will be developed in consultation with stakeholders and will be systematically implemented in partnership with training centers.

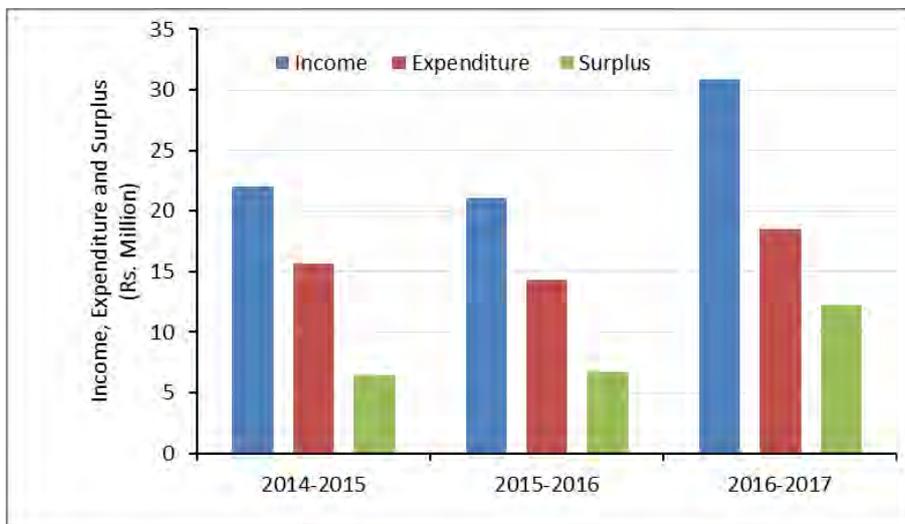
During the coming years, WISA will also work to enhance its regional presence. Current engagement in Bangladesh will be depended to engage in national scale programming and policy making for wetlands in the country. Closer collaboration with ILEC is also on anvil to establish a mechanism for networking and communication and exchange between South Asia wetland managers.

Financial Overview: 2016 - 17

During the period April 2016 – March 2017, a total income of Rs. 30.82 million was received. Of this, Rs.28.56 million was on account of project funds received from 5 donor agencies, and the balance, Rs. 2.26 million as interest earned on the reserves. Funds received from Wetlands International – Head Quarters for implementation of Partners for Resilience project was the major source (48%) during the year.

The total expenditure incurred during the year towards various programmatic activities was Rs.18.55 million. Direct overheads stood at Rs. 1.32 million, forming

7.13 % of total expenditure. Project expenses were Rs.13.06 million, including Rs.5.17 million towards staff salary. On a net, a surplus of Rs.12.27 million was accrued. The total reserves at the end of the financial year stood at Rs. 30.06 million, which is an increase of Rs. 6.73 million over the last year. Overall, the expenses made under projects were fully covered by project incomes. Similarly, the overheads were also well covered by the incomes accrued under staff time



B.P. Agrawal & Co.

Chartered Accountants

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Mobile: 09312605338, E-Mail: agarwalrakesh@hotmail.com

Audit report under section 12A(b) of the Income-tax Act, 1961, in the case of charitable or religious trusts or institutions

We have examined the balance sheet of Wetlands International-South Asia Society Regd. (Pan No: AAATW1125E, A-25, 2nd Floor, Defence colony, New Delhi) as at 31-3-2017 and the Income & Expenditure account for the year ended on that date which are in agreement with the books of account maintained by the said trust or institution.

We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of the audit. In our opinion, proper books of account have been kept by the head office and the branches of the above named trust / institution visited by us so far as appears from our examination of the books, and proper returns adequate for the purposes of audit have been received from branches not visited by us, subject to the comments given below:

In our opinion and to the best of our information, and according to information given to us, the said accounts give a true and fair view-

- (i) in the case of the balance sheet, of the state of affairs of the above named trust/ institution as at 31-3-2017, and
- (ii) in the case of the Income & Expenditure account, of the profit or loss of its accounting year ending on 31-3-2017

The prescribed particulars are annexed hereto.

For BP Agrawal & Co
Chartered Accountants
FRN: 001210C



Rakesh Agarwal
Partner
MS No 095224

Place : New Delhi
Date : 08-06-2017

Audited Balance Sheet

Particulars	2016-2017	2015-2016
Sources of Funds		
Capital Account	1,410,796	1,410,796
General Reserve		
Opening Balance	23,327,079	16,930,564
Add Transfer during the year	6,729,063	6,396,515
Closing Balance	30,056,142	23,327,079
Income & Expenditure Account		
Opening Balance	10,959,688	10,627,140
Add Surplus during the year	12,273,726	6,729,063
Less Transfer to General Reserve	(6,729,063)	(6,396,515)
Closing Balance	16,504,351	10,959,688
Current Liabilities	2,352,908	830,013
Total	50,324,197	36,527,576
Application of Funds		
Fixed Assets		
Opening Balance	1,001,906	773,064
Additions during the year	137,149	696,411
Less : Sale	-	(290,000)
Less: Depreciation	(165,693)	(177,570)
Closing Balance	973,361	1,001,906
Current Assets, Loans, Advances, Deposits& Cash balances	49,350,835	35,525,668
Rounding off Difference	1	2
Total	50,324,197	36,527,576

Signed in original copy

For BP Agrawal & Co
Chartered Accountants
FRN: 001210C

Rakesh Agarwal
Partner
MS No 095224

Audited Income and Expenditure Statement

Particulars	2016-2017	2015-2016
Income		
Project Income	28,560,542	19,124,964
Other Income	2,259,430	1,929,207
Total	30,819,972	21,054,171
Expenditure		
Overhead Costs		
Salary	5,388,657	5,101,300
Office running expenses	1,164,248	1,147,062
Organisational Tax	756,003	831,953
Depreciation	165,693	177,570
Project Costs		
Sub-contractor	6,562,711	3,645,147
Travel Costs	859,274	811,479
Project Material	93,695	313,485
Communication	59,853	74,146
Financial Charges	7,174	19,601
Publications	391,558	375,394
Training/Workshops/Meetings	3,097,381	1,827,971
Total	18,546,247	14,325,108
Surplus During the period	12,273,725	6,729,063
Total	30,819,972	21,054,171

Signed in original copy

For BP Agrawal & Co
Chartered Accountants
FRN: 001210C

Rakesh Agarwal
Partner
MS No 095224

Publications

Technical Reports

Natural Capital of Wetlands

In collaboration with Ministry of Environment, Forest and Climate Change and Indo-German Biodiversity Programme

Sasthamkotta Lake: An Integrated Management Plan

In collaboration with Center for Water Resources Development and Management, Kerala

Ashtamudi Estuary: An Integrated Management Plan

In collaboration with Center for Water Resources Development and Management, Kerala

Book Chapters

Integrating landscape dimensions in disaster risk reduction: A cluster planning approach

in F Renaud, K Sudmeier-Rieux, M Estrella and U Nehren (ed) Ecosystem based disaster risk reduction and adaptation: linking science, policy and practice, Springer

Wetlands of Ganga Brahmaputra Basin.

In Max Finlayson et al. The Wetland Book 2017: Distribution, Description and Conservation Volume II, Springer, Dordrecht, The Netherlands.

Contribution to peer-reviewed publications

Juffe-Bignoli D, Stuart H, Butchart HM, Flitcroft R, et al (2016). Achieving Aichi Biodiversity Target 11 to improve the performance of protected areas and conserve freshwater biodiversity. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 26 (Suppl. I): 133-151

Berghöfer A, C Brown, A Bruner, L Emerton et al. (2016). Increasing the Policy Impact of Ecosystem Service Assessments and Valuations – Insights from Practice. Helmholtz-Zentrum für Umweltforschung (UFZ) GmbH, Leipzig, and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Eschborn, Germany. 30pp. www.aboutvalues.net

Poster

Wetlands and Disaster Risk Reduction

Annex 1: Summary of projects under implementation during 2016-17

Project Title	Main Objectives	Geographical focus	Budget, implementation time frame and funding agency	Implementation Status
Partners for Resilience: Strategic Partnership	Support the implementation of Sendai Framework of Action (SFA) and aim to ensure that the communities vulnerable to water mediated risks are more resilient through use of integrated risk management approaches. Integrated Risk Management refers an approach building upon principles of disaster risk reduction (DRR), ecosystem management and restoration (EMR) and Climate Change Adaptation (CCA).	Mahanadi Delta, Odisha and Gandak-Kosi floodplains, Bihar	Budget: Rs.2,82,87,210 Time frame: Jan 2016 to Dec. 2017 Funding agency: Ministry of Foreign Affairs, The Netherlands through Wetlands International – HQ	Action plan for 2016-17 drafted in collaboration with partners. Baseline risk assessments in project sites completed. Partners provided training on integrated risk management approaches.
Watershed	Build capacity of CSOs and translate evidence, knowledge and lessons to <i>deliver improvements in governance and management of WASH services</i> (Water, Sanitation and Hygiene services and water sources on which such services depend). An incremental role of the project is to increase recognition of integrated water resources management interface in WASH programming, such that services delivery is sustainable in the long run.	South Bangladesh Chaur wetlands of Samastipur, North Bihar	Budget : Rs. 1,87,05,050 Time frame: Jan 2016 to Dec. 2017 Funding agency: Wetlands International – HQ	Action plan for 2016-17 drafted based on field assessments and stakeholder consultations. Baseline of the project intervention areas prepared.
Development of Wetland Management Plan and Ramsar Information Sheets for two coastal wetlands – Gujarat	Formulation of an integrated management plan for Gosabara-Mokarsagar wetland complex in Porbandar, Gujarat.	Gosabara-Mokarsagar wetland complex in Porbandar, Gujarat	Budget : Rs.18,42,500 Time Frame : 2015-16 Funding agency: GIZ, New Delhi	Ramsar Site Information Sheet for designation of Khijadiya Wetlands as Ramsar Site drafted and submitted to Government of Gujarat.
Preparation of Integrated Management Action Plan for Sasthamkotta and Ashtamudi, Kerala	Assessing the current status and trends of ecological, hydrological, socio-economic and institutional features Formulation of management objectives based on assessment of status and trends and consultation with stakeholders. Development of an implementation strategy for management plan, including institutional arrangement, monitoring mechanisms and evaluation systems.	Sasthamkotta and Ashtamudi, Kerala	Budget : 25,00,000 Time Frame 2014-16 Funding agency: Department of Environment & Climate Change, Kerala.	Draft management plan submitted to Government of Kerala.
Participatory management planning for	Develop a participatory management plan for	Okhamandal region, Gujarat	Budget : 25,00,000 Time Frame 2015-16	Baseline assessment of wetland features

Project Title	Main Objectives	Geographical focus	Budget, implementation time frame and funding agency	Implementation Status
Chandrabhaga Wetland in Gujarat	Chandrabhaga Catalyze science based integrated management of the wetland through apacity development of key stakeholders and public awareness		Funding agency: IUCN, India.	completed. Draft management plan submitted.
Management effectiveness tracking for Ramsar Sites	Develop a management effectiveness tracking tool for Indian wetlands Apply the tool to a selection of Ramsar Sites wherein management plans have been implemented in last 5 years to assess the degree to which wise use objectives have been achieved, and to recommend necessary mid-course correction.	8 Indian Ramsar Sites	Budget : Rs. 23,65,500 Time Frame: 2016-17 Funding agency: Avendus Capitals, Mumbai	Tool prototype developed Assessment for 4 sites completed
Strengthening waterbird monitoring in Central Asian Flyway	Provision of up-to-date information on waterbird population and their key sites in Central Asian Flyway to support conservation action through strengthened waterbird monitoring under the overall framework of International Waterbird Census	South Asia	Budget : Rs.16,15,000 Time Frame: 2016-17 Funding agency: Avendus Capital, Mumbai	Project initiated in February 2016. 10 year synthesis compiled and under publication process.

[†]The Ramsar Convention, in its 7th Conference of Parties held in 1999, conferred the status of 'International Organization Partners (IOPs)' to Wetlands International, IUCN, WWF-International and Birdlife International. These institutions played a significant role in Convention's inception and provide extensive support to its implementation. Subsequently, in 2005, International Water Management Institute (IWMI) was admitted to the list of IOPs, and became the fifth organization to be conferred this status.

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