

**Report on Multi-stakeholders Consultation Workshop
for developing draft plan for implementation of “Ecosystem Health Card
approach for Chilika Lake” held on 13th September, 2013 at
Fisheries Training Institute, Balugaon, Khurda**

The Chilika Development Authority (CDA), Government of Odisha, India on the strength of its mandate joined the UNEP-GPA facilitated Global Partnership on Nutrient Management (GPNM) and agreed to take lead in developing a comprehensive ‘ecosystem health reporting card’ approach to estuaries and deltas, to demonstrate the effects of nutrient over-enrichment on water quality of coastal ecosystem. In pursuance to this the CDA signed a Small Scale Funding Agreement (SSFA) with the UNEP, to carry out the work “development of an ecosystem health report card” and apply this for the management of the Chilika Lake with technical inputs from the Institute for Ocean Management, Anna University, Chennai and National Centre for Sustainable Coastal Management (NCSCM), India. In this effort, the CDA in partnership with NCSCM had earlier organized an expert group meeting and an inception workshop, to develop indicators and values for establishing ecological thresholds in determining the coastal ecosystem health.

As a follow up to the above initiatives a multi-stakeholders consultation workshop for developing draft plan for implementation of the “Ecosystem on Health Card approach for the Chilika Lake” was held at Fishery Training Institute (FTI), Balugaon on 13th September, 2013 under the Chairmanship of Dr. Ajit Kumar Pattnaik, Chief Executive, Chilika Development Authority, Bhubaneswar. The other dignitaries who attended the workshop included Principal, F.T.I., Balugaon, Asst. Registrar Co-operative Society (Fy), Chilika Circle, Balugaon, District Fishery Officer, ADF (B&T), Balugaon, Scientific Officer and Consultant of Chilika Development Authority, Bhubaneswar. The workshop was also attended by the members of Primary Fishermen Cooperative Societies (PFCS), ex-Board members of the Chilika Central Fishermen Cooperative Societies (CCFCS), elderly fishermen, Representatives of Non-governmental Organization (NGOs) and Self-help Groups (SHGs) and members of watershed committees. It is important to note that most of above mentioned participants (multi-stakeholders of Chilika) also had attended the first inception workshop held from 24th to 27th June, 2012 at WRTC, Balugaon and also participated in the mid-evaluation meeting workshop held from 4th -7th February, 2013

at Hotel Swosti Premium. The list of the participants who attended this workshop is enclosed as Annexure I.

At the outset, Dr. K. S. Bhatta, consultant of CDA welcomed the guests and the participants to the consultation workshop. He presented in detail the significance and objectives of the workshop and requested Dr. A. K. Pattanaik, Chief Executive, CDA and Chairman of the workshop to deliver his opening remarks on the workshop.

In his opening remarks Dr. A. K. Pattnaik, Chief Executive, CDA elaborated that Chilika Development Authority in collaboration with NCSCM, Chennai and University of Maryland, USA had worked on the Ecosystem Health Report Card of Chilika. He impressed upon the fact that such work has been done in lakes/lagoons of USA and Australia, but in Asia this is the first time such initiative has been undertaken in Chilika Lake. The Scientist, Professors of Maryland University and NCSCM worked on Chilika Lake with the Scientific Staffs of CDA for developing this report card. He also stressed on the need for the stakeholders of Chilika; the fishermen communities, watershed committees and other people who are closely associated with Chilika to know the health of the lake; how it behaves in different months of the year. He narrated that Chilika Health Report Card is broadly based on the ten important factors of the lake known as indicators under three categories viz., **(i) Water quality (ii) Fisheries and (iii) Biodiversity**. He informed the participants that Dr. Praditpta Ranjan Muduli, Scientific Officer of CDA will present the detailed study report of the work and the participant's valuable suggestions would be also incorporated in the final report. He also informed that this workshop is the third consultative meeting before finalisation of the Health Report Card of Chilika. During the first inception workshop, the stakeholders were apprised of the scope and objective of this work and in second workshop, the parameters arrived for the report card formulation was shared with the stakeholders. He then requested Dr. Muduli to deliberate the results of the report through power point presentation.

Dr. Muduli, Scientific Officer, CDA addressed the participants using a power point presentation in local Odia language. He showed a map containing 30 sampling stations from four sectors of the lake, wherein the water and biological samples were collected for preparation of Chilika Health Report Card. During his presentation he narrated the factors like fishery, aquaculture, pollution from catchment; tourism and sedimentation are the mainly responsible for the environmental degradation of Chilika

ecosystem. After collecting different types of data on physical and biotic factors, the scientist fixed ten important indicating factors under three categories such as (i) water quality (ii) Fishery and (iii) Biodiversity of the ecosystem. The abiotic factor like water quality included water clarity, dissolved oxygen and chlorophyll “a”. The biotic factor, “fisheries” includes total catch, commercial species diversity and length measurement of the fish species. The biodiversity included phytoplankton diversity, benthic fauna diversity, dolphin abundance, bird count and richness. After reviewing the past data of Chilika, the threshold value for each indicating factor was fixed. After the total score of each indicating factor, the lake health condition was divided into 5 grades such as “A” (80-100%), “B” (60-80%), “C” (40-60%), “D” (20-40%) and “F” (0-20%). Based on results; the Northern Zone was classified as “B” grade, Central Zone as “B+” grade, Outer Channel Zone as “B” grade and while the Southern Zone was classified as “B” grade.

Participating in the discussion, Dr. Pattnaik clarified the scoring of the each zone and narrated in detail the 10 important indicators based on which the different zones of the lake identified by grade symbol. Some of the participants wanted to know about the stations nearer to which village situated in the periphery of the lake. The Chairman instructed Dr Bhatta to identify nearby villages of the above sampling stations of each sector. Accordingly he identified the nearby villages of each station of the lake using the lake monitoring map. He also discussed on the 10 important indicating factors and grade points scored by each zone.

The Chairman invited the participants to come up with their views on Ecosystem Health Report Card of Chilika Lake based on the discussion made. Sri Biranchi Behera, queried as to why the *Hilsa* fish landing declined in the lake. Dr. Pattnaik clarified that due to obstruction of mouth and due to use of “khanda net”, the *Hilsa* fish could not migrate freely to the lake for breeding. Dr Bhatta narrated that the *Hilsa* fish migrated to the lake from sea for their breeding in freshwater of Daya, Bhargavi and Luna rivers which drains to the northern sector of the lake. The cyclic patterns in *Hilsa* fishery signifies the fact that it takes 5 to 7 years for a bumper catch and hence good catches is not natural in the lake every year.

Sri Murali Behera, Sri Abhiram Behera, Sri Anadi Behera, Sri Murali Ghadei, Sri Rabi Behera, Sri Basanta Naik, Sri Pradeep Jally, Sri Dharmananda Kei and Sri Baikuntha Behera representatives of PFCS and Ex-Board members also participated in the

discussion and put forth their views and suggestions on the spread of Nala grass, a dominant emergent weed of Chilika. They have also narrated the problem faced due to the spreading of “Nala” grass area in the Northern Sector of the lake. They also narrated on the obstructions of the lake mouth by “Alimi net” and other nets, deposition of silt through the rivers and rivulets from catchments. They have requested that these problems should be sent for redressal to Government of India through the State Government by Chilika Development Authority.

Replying to above queries of the stakeholders, Dr. Pattnaik informed that CDA is doing its best by consulting the scientists and experts of the country and abroad to find a scientific solution to arrest the spread of Nala grass - *Phragmites karka* in the lake. He also informed that the Scientists/Professors of OUAT, Odisha suggested eradicating the weed through chemicals which proved unsuccessful in pilot project undertaken by CDA. The other suggestions of the Scientist viz., cutting of the weeds before rainy season and biologically control of the weed were also found to be unsuccessful after its implementation in pilot trials. He also informed that as suggested by few scientists, CDA will examine the dredging trenches in “Nala grass - *Phragmites karka*” dominated area to restrict the propagation of Nala in to the adjacent areas of Northern Sector. This proposal was supported by most of the participants.

Sri Mihir Kumar Jena, representing, The Researcher, an NGO working in the Outer Channel sector suggested indicating the gradation of each 30 stations separately which will be helpful for local people.

Sri B.S. Munda, Principal, FTI, Balugaon suggested that as the water quality of the lake is very good for the development of lake fisheries through the ranching; some of the species like mullet and pearl spot should be attempted for improving the enhanced landing of these commercial species. To achieve the target of this project, some hatcheries should be made for production of bulk amount of juveniles of the species which he had seen some of the lakes in Japan. He also emphasized on more police patrolling in Chilika to implement the provisions of the OMFRA Act in the lake.

Sri Hemanta Kumar Dash, District Fisheries Officer, Balugaon suggested that the copy of the Health Report Card of Chilika in local language should be distributed among the fishermen. Intensive awareness campaign should be undertaken in fishermen villages to make them aware on good and bad practices which have the

direct effect on the health of the Ecosystem. The fishermen should practise optimum level of fishing to achieve the sustainable goal for the improvement of health of lake.

Most of the participants from the catchment areas, SHGs, PFCS, Ex-Board members and NGOs appreciated the fact that this innovative research work of Ecosystem Health Report Card of Chilika would help them to know the health condition of their highly treasured Chilika. The meeting ended with vote of thanks presented by Dr. Pradipta Ranjan Muduli, Scientific Officer, CDA to the Chair and officers of Fisheries Department, CDA and to all the multi-stakeholder participants who attended the workshop.