



## **NATIONAL REPORT ON THE IMPLEMENTATION OF THE RAMSAR CONVENTION ON WETLANDS**

**National Reports to be submitted to the 10<sup>th</sup> Meeting  
of the Conference of the Contracting Parties,  
Republic of Korea, 28 October – 4 November 2008**

Please submit the completed National Report, in electronic (Microsoft Word) format, and preferably by e-mail, to the Ramsar Secretariat by **31 March 2008**.

National Reports should be sent to: Alexia Dufour, Regional Affairs Officer, Ramsar Secretariat ([dufour@ramsar.org](mailto:dufour@ramsar.org))

## Introduction & background

1. This Ramsar COP10 National Report Format (NRF) has been approved by the Standing Committee for the Ramsar Convention's Contracting Parties to complete as their national reporting to the 10<sup>th</sup> meeting of the Conference of the Contracting Parties of the Convention (Republic of Korea, October/November 2008).
2. Following Standing Committee discussions at its 35<sup>th</sup> meeting in February 2007, and its Decisions SC35-22, -23 and -24, this COP10 National Report Format has been significantly revised and simplified in comparison with the National Report Formats provided to previous recent COPs.
3. In particular this National Report Format provides a much smaller number (66) of implementation "indicator" questions, compared with the much larger suite of questions on all aspects of national implementation of the Convention's Strategic Plan 2003-2008 included in previous NRFs.
4. The COP10 NRF indicators include, with the agreement of the Standing Committee (Decision SC35-24), certain indicators specifically requested to be included by the Convention's Scientific & Technical Review Panel (STRP) and CEPA Oversight Panel, in order to facilitate their information gathering and reporting on key aspects of scientific, technical and CEPA implementation under the Convention.
5. The 66 indicator questions are grouped under each of the implementation "Strategies" approved by the Parties at COP9 (Resolution IX.8) in the Convention's "A Framework for the implementation of the Convention's Strategic Plan 2003-2008 in the 2006 -2008 period" ([www.ramsar.org/res/key\\_res\\_ix\\_08\\_e.htm](http://www.ramsar.org/res/key_res_ix_08_e.htm)). The indicators have been selected so as to provide information on key aspects of the implementation of the Convention under each of its Strategies.
6. In addition, for each Strategy the option is provided for a Contracting Party, if it so wishes, to supply **additional information** concerning its implementation under each indicator and, more generally, on implementation of other aspects of each Strategy.

## The purposes and uses of national reporting to the Conference of the Contracting Parties

7. National Reports from Contracting Parties are official documents of the Convention, and are made publicly available through their posting on the Convention's Web site.
8. There are six main purposes for the Convention's National Reports. These are to:
  - i) provide data and information on how the Convention is being implemented;
  - ii) capture lessons/experience, so as to allow Parties to develop future action;
  - iii) identify emerging issues and implementation challenges faced by Parties that may require further attention through Convention processes;
  - iv) provide a means for Parties to be accountable against their obligations under the Convention;
  - v) provide each Party with a tool to help it assess and monitor its progress in implementation, and plan for its future implementation and priorities; and
  - vi) provide an opportunity for Parties to draw attention to their achievements during the triennium.
9. In addition, the data and information provided by Parties in their COP10 National Reports now have another important purpose, since a number of the indicators in the National Reports on Parties' implementation will provide key sources of information for the analysis and assessment of the "ecological outcome-oriented indicators of effectiveness of the implementation of the Convention" currently being further developed by the Scientific and Technical Review Panel for Standing Committee and COP10 consideration.

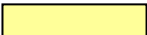
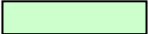
10. To facilitate the analysis and onward use of the data and information provided by Contracting Parties in their National Reports, once received and verified by the Ramsar Secretariat all information is entered and held by the Secretariat in a database, which then facilitates extraction and analysis of the information for a number of purposes.
11. The Convention's National Reports are used in a number of ways. These include:
  - i) providing the basis for reporting by the Secretariat to each COP on the global and regional implementation, and progress in implementation, of the Convention. This is provided to Parties at COP as a series of Information Papers including:
    - the Report of the Secretary General on the implementation of the Convention at the global level (see, e.g., COP9 DOC 5);
    - the Report of the Secretary General pursuant to Article 8.2 (b), (c), and (d) concerning the List of Wetlands of International Importance (see, e.g., COP9 DOC 6); and
    - the reports providing regional overviews of the implementation of the Convention and its Strategic Plan in each Ramsar region (see, e.g., COP9 DOCs 10-13);
  - ii) providing information on specific implementation issues in support of the provision of advice and decisions by Parties at COP. Examples at CO9 included:
    - Resolution IX.15, *The status of sites in the Ramsar List of Wetlands of International Importance*, and
    - Information Papers on *Issues and scenarios concerning Ramsar sites or parts of sites which cease to meet or never met the Ramsar Criteria* (COP9 DOC 15) and *Implementation of the Convention's CEPA Programme for the period 2003-2005* (COP9 DOC 25);
  - iii) providing the source of time-series assessments of progress on specific aspects in the implementation of the Convention, included in other Convention products. An example is the summary of progress since COP3 (Regina, 1997) in the development of National Wetland Policies, included as Table 1 in Ramsar Wise Use Handbook 2 (3<sup>rd</sup> edition, 2007); and
  - iv) providing information for reporting to the Convention on Biological Diversity (CBD) on the national-level implementation of the CBD/Ramsar Joint Work Plan and the Ramsar Convention's lead implementation role for the CBD for wetlands.

### **The structure of the COP10 National Report Format**

12. In line with Standing Committee Decisions SC35-21 and SC35-22, the COP10 National Report Format is in three sections.
13. **Section 1** provides the Institutional Information about the Administrative Authority and National Focal Points for the national implementation of the Convention.
14. **Section 2** is a "free-text" section in which to provide a summary of various aspects of national implementation progress and recommendations for the future.
15. **Section 3** provides the 66 implementation indicator questions, grouped under each Convention implementation strategy, and with a "free-text" section under each Strategy in which the Contracting Party may, if it wishes, add further information on national implementation of the Strategy and its indicators.

## Guidance for filling in and submitting the COP10 National Report Format

### IMPORTANT – READ THIS SECTION OF GUIDANCE BEFORE STARTING TO FILL IN THE NATIONAL REPORT FORMAT

16. All three Sections of the COP10 National Report Format should be filled in, in one of the Convention’s official languages (English, French, Spanish).
17. The deadline for submission of the completed National Report Format is **31 March 2008**. It will not be possible to include information from National Reports received from Parties after that date in the analysis and reporting on Convention implementation to COP10.
18. All fields with a pale yellow background  must be filled in.
19. Fields with a pale green background  are free-text fields in which to provide additional information, if the Contracting Party so wishes. Although providing information in these fields in the COP10 NRF is optional, Contracting Parties are encouraged to provide such additional information wherever possible and relevant, since it is the experience of the Secretariat that such explanatory information is very valuable in ensuring a full understanding of implementation progress and activity, notably in informing the preparation of global and regional implementation reports to COP.
20. In order to assist Contracting Parties in their provision of such additional information, for a number of indicator questions some particularly helpful types of such information are suggested. However, of course, Parties are free to add any other relevant information they wish in any of the “Additional implementation information” fields.
21. The Format is created as a “Form” in Microsoft Word. You are only able to move to, and between, each of the yellow or green boxes to give your replies and information. All other parts of the form are locked.
22. To go to a yellow or green field you wish to fill in, move the cursor over the relevant part of the form, and left-click the mouse. The cursor will automatically move to the next field available.
23. To move down the sequence of fields to fill in, you can also use the “Tab” key on the computer keyboard.
24. For a “free-text” field, you can type in whatever information you wish. If you wish to amend any of the text you have put in a green or yellow “free-text” box, it is recommended that you cut-and-paste the existing text into a separate file, make the amendments, and then cut-and-paste the revised text back into the green box. This is because within the “Form” format there is limited facility to make editorial changes within the “free-text” box once text has been entered.
25. For each of the “Indicator questions” in Section 3, a drop-down menu of answer options is provided. These vary between indicators, depending on the question asked in the indicator, but are in general of the form: “Yes”, “No”, “Partly”, “In progress”, etc.
26. For each indicator question you can choose only one answer. If you wish to provide further information or clarifications concerning your answer, you can provide this in the green additional information box below the relevant indicator question.
27. To select an answer to an indicator question, use the Tab key, or move the cursor over the relevant yellow box, and left-click the mouse. The drop-down menu of answer options will appear. Left-click the mouse on the answer option you choose, and this will appear in the centre of the yellow box.

28. The NRF is not intended normally to be filled in by one person alone – for many indicators it would seem best for the principal compiler to consult with colleagues in the same and other agencies within the government who might have fuller knowledge of the Party's overall implementation of the Convention. The principal compiler can save the work at any point in the process and return to it subsequently to continue or to amend answers previously given.
29. After each session working on the NRF, remember to save the file! A recommended filename structure is: COP10NRF [Country] [date].
30. After the NRF has been completed, please send the completed National Report to the Ramsar Secretariat, preferably by email, to Alexia Dufour, Regional Affairs Officer, Ramsar Convention Secretariat, email: [dufour@ramsar.org](mailto:dufour@ramsar.org). The Secretariat must receive your completed National Report in electronic (Microsoft Word) format.
31. When the completed National Report is submitted by the Party, **it must be accompanied by a letter or e-mail message in the name of the Administrative Authority, confirming that this is that Contracting Party's official submission of its COP10 National Report.**
32. If you have any questions or problems concerning filling in the COP10 NRF, please contact the Ramsar Secretariat for advice (e-mail as above).

**SECTION 1: INSTITUTIONAL INFORMATION**

|   |   |
|---|---|
| <b>NAME OF CONTRACTING PARTY: INDIA</b>   |   |
| <b>DESIGNATED RAMSAR ADMINISTRATIVE AUTHORITY</b>   |   |
| <b>Name of Administrative Authority:</b>  | <b>Ministry of Environment and Forests</b>  |
| <b>Head of Administrative Authority - name and title:</b>   | Ms. Meena Gupta, Secretary  |
| <b>Mailing address:</b>   | Ministry of Environment and Forests, Paryavaran Bhavan, C.G.O. Complex, Lodhi Road, New Delhi-110003, India |
| <b>Telephone/Fax:</b>   | 91-11-24360721 (Tel)/91-11-24362746 (Fax)   |
| <b>Email:</b>   | meena_gupta@nic.in  |
| <b>DESIGNATED NATIONAL FOCAL POINT (DAILY CONTACT IN THE ADMINISTRATIVE AUTHORITY) FOR RAMSAR CONVENTION MATTERS</b>                              |   |
| <b>Name and title:</b>  | Mr. A.K. Goyal, Joint Secretary   |
| <b>Mailing address:</b>   | Ministry of Environment and Forests, Paryavaran Bhavan, C.G.O. Complex, Lodhi Road, New Delhi-110003, India |
| <b>Telephone/Fax:</b>   | 91-11-24361774/Fax : 91-11-24367009   |
| <b>Email:</b>   | akg@nic.in  |
| <b>DESIGNATED NATIONAL FOCAL POINT FOR MATTERS RELATING TO STRP (SCIENTIFIC AND TECHNICAL REVIEW PANEL)</b>                                       |   |
| <b>Name and title of focal point:</b>   | Dr. S. Kaul, Director   |
| <b>Name of organisation:</b>  | Ministry of Environment and Forests   |
| <b>Mailing address:</b>   | Paryavaran Bhavan, C.G.O. Complex, Lodhi Road, New Delhi-110003, India                                      |
| <b>Telephone/Fax:</b>   | 91-11-24360492  |
| <b>Email:</b>   | kaul52@yahoo.com  |
| <b>DESIGNATED GOVERNMENT NATIONAL FOCAL POINT FOR MATTERS RELATING TO THE CEPA PROGRAMME ON COMMUNICATION, EDUCATION AND PUBLIC AWARENESS</b>     |   |
| <b>Name and title of focal point:</b>   | Dr. S. Kaul, Director   |
| <b>Name of organisation:</b>  | Ministry of Environment and Forests   |
| <b>Mailing address:</b>   | Paryavaran Bhavan, C.G.O. Complex, Lodhi Road, New Delhi-110003, India                                      |
| <b>Telephone/Fax:</b>   | 91-11-24360492  |
| <b>Email:</b>   | kaul52@yahoo.com  |
| <b>DESIGNATED NON-GOVERNMENT NATIONAL FOCAL POINT FOR MATTERS RELATING TO THE CEPA PROGRAMME ON COMMUNICATION, EDUCATION AND PUBLIC AWARENESS</b> |   |
| <b>Name and title:</b>  | Dr. C.L. Trisal, Director   |
| <b>Name of organisation:</b>  | Wetland International-South Asia  |
| <b>Mailing address:</b>   | A-25, Defence Colony, New Delhi-110024  |
| <b>Telephone/Fax:</b>   | 91-11-24338906  |
| <b>Email:</b>   | wisaind@del2.vsnl.net   |



## SECTION 2: GENERAL SUMMARY OF NATIONAL IMPLEMENTATION PROGRESS AND CHALLENGES

In your country, in the past triennium (i.e., since COP9 reporting):

### A. What new steps have been taken to implement the Convention?

Following new steps have been initiated by the Ministry for implementing the Convention :

- Expansion of Wetland Conservation Programme in the country from the date of inception till date. 103 wetlands have been identified as national wetlands till date.
  - A small brochure entitled Conservation of Wetlands in India – A profile has been published on the eve of World Wetland Day. This contains details of National Wetland Conservation Programme, highlighting distribution of wetlands, admissible components of Management Action Plan, guidelines for research & development to supplement execution of management in the field.
  - Recommendations of Working Group on Strategies of Biodiversity Conservation during Eleventh Five year Plan, which include “setting up an Institute of Inland Aquatic Ecosystem Studies”. The brochure also talks about Regulatory framework for wetlands so that they are not used beyond their carrying capacity. This is a new dimension added in Wetland Conservation Programme.
  - The brochure also talks about guidelines for various components for making a comprehensive Management Action Plan (MAP) for long-term goals, which are : comprehensive strategy, ranging from legal framework and policy support to inventorization, institutional mechanism, capacity building and community participation.
  - National Lake Conservation Plan which caters to the need of urban wetlands subject to anthropogenic pressures in urban areas, with the basic objective to restore and conserve the polluted and degraded lakes in the country. The activities covered under NLCP include : prevention of pollution from joint sources by intercepting, diverting and treating the pollution loads entering the lake; in-situ measures of lake cleaning such as desilting, dewatering and bio-remediation depending on the site conditions; catchment area treatment, public awareness & public participation and other activities depending on location-specific conditions including the interface with human population.
  - Some information about Mission of Ramsar Convention, criteria for identifying wetlands, advantages of joining Ramsar Convention, some initiatives from our country pertaining to this Convention and the theme of World Wetland Day, 2007.
  - The brochure also contains messages from various dignitaries on the eve of this day.
  - 12<sup>th</sup> World Lake Conference was organized in India from 28<sup>th</sup> October-2<sup>nd</sup> November, 2007 with a theme on conserving of lakes and wetlands for future.
  - Evaluation of conservation activities under five wetlands have been conducted by Wildlife Institute of India, Dehradun.
- A draft notification on Regulatory Framework on Wetlands is under preparation which is to be brought out under the provisions of the Environment Protection Act.

### B. What have been the most successful aspects of implementation of the Convention?



103 wetlands have been identified for conservation of wetlands at the national level in the country, adding 35 more sites to the existing list. Similarly, 38 Mangroves and 4 coral areas have been identified under National Mangroves Programme. Under NLCP, 42 lakes have been identified, giving clear cut increase of 32 lakes. During 10th Five Year Plan, number of training programmes were conducted in the country, total 12 in number, initially to sensitize people about values and functions of wetlands. Later it changed to training programme in thematic areas and with further refinement, some programmes have been initiated for training of wetland managers in the country. A national training programme for Integrated Water Resource Management and Wetland Conservation was organized during 7-11 August at Orissa. On the basis of feedback from various State governments, various regional programmes were requested and these are being held in the present Plan and these programmes will be conducted in Western, Central, Southern and Eastern region, on specific request from the State Governments.

A project on 'National Wetland Information System and Updation of Wetland Inventory' has been sanctioned by the Ministry of Environment and Forests. The objectives of this project are to (1) to map and inventorize wetlands on 1:50,000 scale by onscreen interpretation of digital IRS LISS III data of post and pre-monsoon seasons, (2) prepare State-wise wetland Atlases, and (3) create a digital database in GIS environment in respect of all wetlands in the country.

Earlier, all the wetlands in the country were mapped in the scale of 1:50,000 which did not give information on some of the smaller wetlands. The idea of the present project was to get more information on wetlands of smaller size, particularly, high altitude wetlands

One of the leading Centre, the Centre for Advanced Studies in Marine Biology at Annamalai University, Parangipettai was given a project of updating wetlands directory in the country.

Recognizing the value of Wetlands and taking cognizance of the fact that there does not yet exist a formal system of Wetland Regulation, the National Environment Policy (NEP), 2006 as approved by the Cabinet in May 2006 seeks to set up a legally enforceable regulatory mechanism for identified valuable Wetlands to prevent their degradation and enhance their conservation. It also undertakes to develop an inventory of such Wetlands. In pursuance of the policy resolution a Multi Disciplinary Expert Group has held a series of meetings to formulate a regulatory framework for the Wetlands. The Expert Group has prepared its recommendations on the Categories of Wetlands for Regulation, Process and Procedure for Identification, Composition of Regulatory Authority, Functions of the Authority, and Activities to be regulated. A draft notification has been prepared which after approval from Minister of State (Environment) will be put on Ministry's website for sixty days, for seeking comments of State Governments/experts/individuals. After incorporating the inputs, the draft notification will be sent to Ministry of Law and justification for notification under Environment (Protection) Act, 1986.

Under Community participation, to blend traditional and scientific technologies, more and more participatory rural appraisal (PRA) exercises have been initiated taking into consideration issue of gender sensitization.

## Monitoring

A three-tier system at National, State, and District levels is in operation for effective coordination to implement the programme.

### National level

\_ A National Wetland Committee is in existence for giving advice on appropriate policies, research and training, identification of wetlands, and review of progress of MAPs.

\_ Thematic Research Committee has been recently reconstituted on a more rational and scientific basis to approve appropriate user-driven research projects with applied research approach.

\_ The Expert Group on Wetlands (EGoW) appraises MAPs of identified wetlands received from various State Governments for financial assistance.

### State level

\_ The State Steering Committees have been constituted under the chairmanship of Chief Secretaries/Additional Chief Secretaries /Principal Secretaries of concerned departments. The committees will have members from subject matter Departments/ academicians/stakeholders/representative from Central Government to discuss Management Action Plans and review conservation activities undertaken from time to time. The Secretary of the nodal implementing Department is the Member-Secretary of this Committee. The representatives of other relevant State Departments like Industry, Urban Development, Municipal Administration, Mining, and Agriculture, and State Pollution Control Board are members of State level Committee. The activities of these sectors like obnoxious chemical, industrial effluents, toxic run-off due to chemical inorganic fertilizers, pesticides and weedicides, sewage discharge, solid waste and soil erosion cause pollution to wetlands and as such, sensitization of these stakeholders is essential to secure their support and cooperation.

### District level

District level committees have been constituted in some states for involving stakeholders in the decision-making process. However, much more work needs to be done in this regard. The MAPs are discussed in the State-level Committee, inputs from various members obtained and the Plans approved by the State-level Committee are sent to the Ministry for examination.

## Research component under National Wetland Conservation

Research priority areas have been finalized in such a manner so that they help in execution of Management Action Plans and consolidate data thus generated on various parameters for acting as models.

At the international level, 25 sites have been designated as Ramsar sites of International Importance.

Six more sites are under process of designation which involve 3 transboundary sites at international level and one transboundary site at national level

India was re-nominated in Supervisory Council of Wetland International for three years from 2008-2010

ICIMOD arranged one workshop in Nepal during 2006. It mostly revolved around opening of Regional Centre in Himalayas and finding out some ways of capacity building particularly through GIS for giving latest information on high altitude wetlands in Himalayan/Hindu-kush region.

Another meeting on opening up of training center in East Asia and Himalayan Initiative Forum was held in Changwon city of South Korea in June, 2006

Another workshop on high altitude wetlands and water management is being convened during 27-29 March by ICIMOD with collaborative approach of Wetland International-South Asia with support from EU Asia and Ramsar Convention.

#### C. What have been the greatest difficulties in implementing the Convention?

Inadequate infrastructure at the State level, lack of capacity of managers for executing the programme in the field, dearth of baseline information on various research aspects and above all, low priority to wetland sectors in State are the greatest difficulties in implementing the Convention. Besides, there is also lack of community participation in the implementation phase, as there exist a number of conflicts between managers and the rural people, which need to be sorted out.

Another difficulty in implementation of the Convention is sectoral approach of various departments because of which, there is lack of integration and cohesiveness. However, in order to bridge these gaps, State Governments have been asked to constitute Wetland Conservation Authorities. From our plans, it is seen that wherever, Wetland Conservation Programme is implemented through wetland authorities, it has more impact in achieving conservation goals as already, various experts from State Government Departments are available in these authorities which can take care of areas of particular expertise for implementation.

#### D. What proposals and priorities are there for future implementation of the Convention?

Finalization of draft 'regulatory mechanism to prevent over-usage of wetlands for different purposes beyond their carrying capacity. Under this, categories of wetlands have been divided into three, one is to be regulated at Central level which involves areas of wetlands which are bigger in size, all Ramsar sites, and some wetlands of immense of national/international importance. The second category involves wetlands of national parks/sanctuaries and also in non forest areas. Third categories include wetlands at Village/Panchayat level in the concerned districts. Process and procedures for functioning of groups at various level is under process.

More capacity building programmes are proposed for implementation for benefit of user agencies.

Inventorization of wetlands below 10 hectares has been initiated on 1:50,000 scale for those wetlands which have not been covered for conservation earlier.

Programme for evaluation of wetlands has been initiated through independent agencies to see the impact of conservation activities in wetlands which have received financial assistance for 5-10 years. Monitoring and review of activities is also undertaken through inspection from time to time. There is a provision for collecting baseline data for different aspects of conservation from research & development point of view. It will be most important tool for conservation of wetlands. Some innovative technologies which have been tested earlier will be applied in the field like bio-remediation technology and technology like biological control of weeds. There will be further innovations to use aquatic weeds for some useful purposes like making compost, biogas, paper, handicrafts depending on cost-benefit analysis. Experimentation in this regard are going in collaboration with different institutions., It is proposed to use these technique in the coming triennium.

E. Does the Contracting Party have any recommendations concerning implementation assistance from the Ramsar Secretariat?

Small grants funds is a very small assistance from Ramsar Secretariat for implementation of the Convention. As such, there has to be mechanism so that some assistance is provided by Ramsar Secretariat at least to go ahead with ecological interventions in Ramsar sites.

Ramsar Secretariat should also evolve mechanism at international/regional level to monitor conservation activities in some of the Ramsar sites as it is of no use to declare more Ramsar sites unless some review is done for the conservation activities in the existing sites. This can be best achieved through some regional collaboration for achieving long-term goals.

F. Does the Contracting Party have any recommendations concerning implementation assistance from the Convention's International Organisation Partners (IOPs)?

Partner-organizations like Wetland International, Birds International and World Wide Fund are already involved in a number of programmes in the country for strengthening the hands of the Ministry in conservation goals. All these organizations are involved in capacity building programmes, inventorization, making of Management Action Plans, issues pertaining to bird flu, etc.

G. How can national implementation of the Ramsar Convention be better linked with implementation of other multilateral environmental agreements (MEAs), especially those in the "Biodiversity cluster" (Ramsar, Convention on Biological Diversity (CBD), Convention on Migratory Species (CMS), CITES, and World Heritage Convention), and UNCCD and UNFCCC?

Though attempts have been made to synergize various activities emerging out in connecting Conventions but either linkages are so poor or they are not taken into consideration while preparing country stands for the respective Conventions. Some coordinating mechanism needs to be developed for better understanding of linkages between various conventions to avoid duplication. Activities of repetitive nature in all the conventions need to be avoided. Though there has been a strong linkage between biodiversity convention and Ramsar Convention, more needs to be done in this direction.

H. How can Ramsar Convention implementation be better linked with the implementation of water policy/strategy and other strategies in the country (e.g., sustainable development, energy, extractive industry, poverty reduction, sanitation, food security, biodiversity)?

Ramsar Convention implementation can be better linked with the implementation of water

policy and other related issues by involving various Ministries for policy planning. Under Wetland Conservation Programme, care has been taken to include concerned Ministries as members of NWC to get feedback for better implementation of the Ramsar strategy.

I. Does the Contracting Party have any other general comments on the implementation of the Convention?

In general, all the regions in their prior review before the Convention should take stock of the situation in terms of implementation of goals ear-marked for the triennium, how much they have achieved, their constraints in achieving the goals and what are the beneficiary impacts of activities to the local people, Government, planners and in the field of research and development. All these things need to be measured in a quantifiable manner in the regional meetings which are held prior to the Convention. This will give more teeth to the implementation of the Convention's goal which have been set in the last triennium and it will be a good opportunity to assess the work done by various countries in this direction.

**SECTION 3: INDICATOR QUESTIONS & FURTHER IMPLEMENTATION INFORMATION**

**Guidance for filling in this section**

1. For each “indicator question”, please select one answer from the “drop-down” list in the yellow box.
2. If you wish to add any additional information on either one or more of the specific indicators for each strategy, and/or for other aspects of the national implementation of this strategy, please provide this information in the green “free-text” boxes below the indicator questions for each Strategy.
3. If you wish to amend any of the text you have put in a green “free-text” box, it is recommended that you cut-and-paste the existing text into a separate file, make the amendments, and then cut-and-paste the revised text back into the green box.
4. So as to assist Contracting Parties in referring to relevant information they provided in their National Report to COP9, for each indicator below (where appropriate) a cross-reference is provided to the equivalent indicator(s) in the COP9 NRF, shown thus: {x.x.x}

**GOAL 1. THE WISE USE OF WETLANDS**

**STRATEGY 1.1:** *Describe, assess and monitor the extent and condition of wetland resources at relevant scales, in order to inform and underpin implementation of the Convention, in particular in the application of the wise use principle.*

**Indicator questions:**

|  |                    |
|--|--------------------|
| 1.1.1 Does your country have a comprehensive National Wetland Inventory? {1.1.1}   | C - In progress    |
| 1.1.2 Is the wetland inventory data and information maintained and made accessible to all stakeholders? {1.1.3; 1.1.6}   | C - Partly         |
| 1.1.3 Does your country have information about the status and trends of the ecological character of wetlands (Ramsar sites and/or wetlands generally)? {1.2.2}<br>[if “Yes”, please indicate in Additional implementation information below, from where or from whom this information can be accessed] | C - For some sites |
| 1.1.4 If the answer is “Yes” in 1.1.3, does this information indicate that the need to address adverse change in the ecological character of wetlands is now greater, the same, or less than in the previous triennium, for:<br>a) Ramsar sites<br>b) wetlands generally                               | ---<br>---         |

**Additional implementation information:**

A): on Indicators 1.1.1 – 1.1.4 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “1.1.3: [.. additional information ...]”

1.1.1 :Survey and inventorization should take into consideration identification of different human activities, effect of both industrial and domestic effluents, and information obtained through remote sensing to be verified with the ground truth data for getting proper results. This component includes mapping of catchment areas through revenue records, survey and assessment, and land-use pattern using GIS techniques, with emphasis on drainage pattern, vegetation cover, siltation cover, encroachment, conversion of wetlands, human settlements, total area encroached, human activities, at the primary, secondary, and tertiary levels, and their impact on catchment and water body.

The following surveys of wetlands have been undertaken so far.

\_ Asian Wetland Directory, 1989 – identified 93 Wetlands of International Importance

\_ Wetland Directory published in 1990 by the Ministry of Environment and Forests using questionnaire survey

\_ Identification of 2167 natural freshwater wetlands covering 1.5 million ha area

\_ Identification of 65,253 man-made freshwater wetlands covering 2.6 million ha area

\_ WWF-India and the Ministry of Environment and Forests in 1993 identified 54 additional wetlands of international importance with more details.

\_ Space Application Centre using remote sensing techniques identified 27,403 inland and coastal wetlands covering 7.6 million ha

\_ Salim Ali Centre for Ornithology under UNDP project has undertaken survey of 72 districts.

\_ A project on 'National Wetland Information System and Updation of Wetland Inventory' has been sanctioned by the Ministry of Environment and Forests. The objectives of this project are to (1) to map and inventorize wetlands on 1:50,000 scale by onscreen interpretation of digital IRS LISS III data of post and premonsoon seasons, (2) prepare State-wise wetland Atlases, and (3) create a digital database in GIS environment in respect of all wetlands in the country.

\_ The Centre of Excellence, Paranjipatty, has been assisted in project mode for updating all wetlands in the country.

1.1.2 : The Inventory will be made more comprehensive and it is proposed to take up inventorization process State-wise which will be updated at national level and made available to all stakeholders through website of Ministry of Environment and Forests.

B): on any other aspects of Strategy 1.1 national implementation:

The inventory includes assessment of ecological, economic and socio-cultural significance of different wetlands in the country through rapid surveys and assessments using remote sensing and GIS studies. Almost all wetlands have an immense role in providing food security to the local communities, particularly economically less privileged. Mangroves in the coastal regimes while providing livelihoods to the communities through fisheries and other products play an important role as coastal defenses. Sunderbans is the largest mangrove area in the country providing livelihoods support to a large population of 3.76 million people. The mangrove areas of Bhitarkanika and Mahanadi Delta have provided strong defenses against the frequent cyclones occurring in the region. Pichavaram mangroves have acted as a strong defense to protect coastal population from damages of recent tsunami in 2004.

MoEF is the custodian of information on wetland inventory and has established database on wetlands of India. Overall 25 states and 2 Union Territories are covered under inventory on wetlands. Satellite imageries, maps, and other products on wetland inventory are managed by MoEF for wider dissemination. The information on regional basis has been also developed and is maintained by the Ministry.

Since COP8 detailed information has been developed on some river basins. A detailed inventory of wetlands associated with Manipur River Basin with a focus on Loktak Lake has been published in the form of 'Atlas of Loktak', few copies of which have been sent to Ramsar Secretariat.

Inventorization of Chilika Lake indicating information on vegetation and physical changes has been carried out using remote sensing and GIS techniques.

The information collected through inventorization has been widely used by the concerned wetland conservation agencies and developmental planners for formulation of management action plans.

Wetland inventorization is supported through own resources by MoEF and other concerned Ministries. A programme under National Natural Resources Management System (NNRMS) scheme of the MoEF, several projects have been funded for detailed inventorization at river basin / district levels with the objective of identifying key issues in the management of bio-resources.

Work on some of the Ramsar sites has been taken up with emphasis on status and trends of ecological characters of these wetlands

**STRATEGY 1.2:** *Develop, review, amend when necessary, and implement national or supranational policies, legislation, institutions and practices, including impact assessment and valuation, in all Contracting Parties, to ensure that the wise use principle of the Convention is being effectively applied, where possible specifying the appropriate policy instrument(s) in each Contracting Party which ensures wise use of wetlands.*

**Indicator questions:**

1.2.1 Is a National Wetland Policy (or equivalent instrument) in place? {2.1.1}  
 [If "Yes", please give the title and date of the policy in Additional implementation information]

A - Yes



|   |            |
|---|------------|
| 1.2.2 Does the National Wetland Policy (or equivalent instrument) incorporate any World Summit on Sustainable Development (WSSD) targets and actions? {2.1.2}   | B - No     |
| 1.2.3 Have wetland issues been incorporated into national strategies for sustainable development (including National Poverty Reduction Plans called for by the WSSD and water resources management and water efficiency plans)? {2.1.2} | A - Yes    |
| 1.2.4 Has the quantity and quality of water available to, and required by, wetlands been assessed?  | C - Partly |
| 1.2.5 Are Strategic Environmental Assessment practices applied when reviewing policies, programmes and plans that may impact upon wetlands? {2.2.2}   | A - Yes    |

**Additional implementation information:**

A): on Indicators 1.2.1 – 1.2.5 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “1.2.3: [.. additional information ...]”

1.2.1 : National Environment Policy (NEP), approved by the Cabinet on 19 May 2006, recognizes the numerous ecological services rendered by wetlands which are under threat from drainage and conversion for agriculture and human settlements, besides pollution. This happens because public authorities or individuals having jurisdiction over wetlands derive little revenues from them, while the alternative use may result in windfall financial gains to them. However, in many cases, the economic values of wetlands' environmental services may significantly exceed the value from alternative use. On the other hand, the reduction in economic value of their environmental services due to pollution, as well as the health costs of the pollution itself, are not taken into account while using them as a waste dump. There also does not yet exist a formal system of wetland regulation outside the international commitments made in respect of Ramsar sites. A holistic view of wetlands is necessary, which looks at each identified wetland in terms of its causal linkages with other natural entities, human needs, and its own attributes.

One of the Action Plan of National Environment Policy is to integrate wetland conservation, including conservation of village ponds and tanks, into sectoral development plans for poverty alleviation and livelihood improvement, and the link efforts for conservation and sustainable use of wetlands with the ongoing rural infrastructure development and employment generation programmes. Promote traditional techniques and practices for conserving village ponds.

In pursuance of the policy resolution, a draft regulatory framework for the wetlands which includes categorization of various wetlands, setting up of regulatory authorities at national, state and district levels, their functions, process of identification of wetlands and the activities to be regulated, has been prepared. Notification will be issued under the Environment (Protection) Act, 1986 after seeking comments of the State Governments/experts and other stakeholders'.

1.2.3 : A project on Sustainable Development Water Resources and Management of Loktak Lake recently completed by Wetlands International and Loktak Development Authority through the support under India Canada Environmental Facility have brought out strategies for improving water management of lake and sustaining its resources for the benefit of the local communities on long term basis. The ultimate purpose of the project was to provide livelihood security to the local communities while ensuring conservation of the Loktak Lake through managing effective water regimes. The project has developed some initiatives for utilization of phumdis and sustainable fisheries development with the overall objective of improving livelihoods through effective water resources management and value additions to the natural products.

Wetlands International in collaboration with CDA and other concerned agencies developed scenario approach for allocation of freshwater from upstream Naraj barrage. The operational regimes developed have been extremely useful in decision making for optimizing agriculture in the upstream area and fish productivity in the lake.

Again during this Plan, overall conservation of Loktak lake is being taken up in view of river basin approach. State Government has approached Planning Commission, Ministry of Environment and Forests and Wetland International for making a comprehensive Management Action Plan for conservation of Loktak lake from Manipur in totality. Wetland International, in this regard, gave presentation before the Chief Minister of the State. Joint MAP in comprehensive manners is going to be executed soon.

It is planned to develop policies for effective conservation and management in regard to water regimes for representative wetlands in the Himalayan region to coastal wetlands and to floodplain wetlands.

1.2.4 : Considering the importance of freshwater flow into the wetlands at the river basin level, assessments have been carried out in consultations with the stakeholders and local communities for harmonizing water use for ecological and human purposes. Environmental flow assessment was carried out in case of Loktak and Chilika Lakes with the objective of maintaining ecological

character while harnessing multiple benefits provided by wetlands through their natural functioning. Environmental flow assessment has been carried out in case of Loktak and Chilika Lakes in India. Vembanad Kol also has been assessed in regard to the dams on the hydrological regimes by Centre for Water Resources Development and Management, (CWRDM) Kerala.

The studies carried out have adopted scenario based approach for trade off between ecosystem conservation and development for agriculture and hydro-power generation. The reports on these studies are available with Wetlands International South Asia as well as within Loktak and Chilika Development Authorities. Government of Kerala as well as CWRDM have reports on Vembanad-Kol..

Water quality monitoring is periodically being carried out by Central Pollution Control Board in 31 rivers under National River Conservation Plan. Water quality of 28 lakes selected under National Lake Conservation Plan are also monitored by concerned state government agencies. A regular monitoring of water quality for Chilika Lake at 19 stations is monitored by Chilika Development Authority. In case of Loktak Lake information collected on water quality parameters has been assessed by Loktak Development Authority and Wetlands International and the information has been documented in the Atlas on Loktak published in 2004.

Stakeholder endorsed water management plan has been prepared in case of Loktak Lake, clearly indicating allocation of water for human and ecological purposes various scenarios have been build up for use by the decision makers for allocation of water during various seasons of the year for habitat improvement of Keibul Lamjao National Park supporting highly endangered ungulate species as well as power generation.

Environmental flow assessment in regard to construction of Naraj barrage in the upstream of Chilika Lake involving all concerned stakeholders, particularly local communities was carried out by Wetlands International, Chilika Development Authority and a consultant from World Bank. The scenario approach developed based on wide ranging consultations and hydrological assessment for allocation of water would provide paradigm shift from the current water use practices to sustainable water resources development policy considering ecological and human uses. The study is being further pursued to clarify and define the barrage operation policy to ensure optimum water release from the barrage to the Chilika Lake and silt laden water to the floodplain area in Mahanadi delta. ]”

1.2.5 : Environmental Impact Assessment of the developmental projects in relation to fish migration and other species is a high priority area for assessing the feasibility of developmental projects. Almost all the projects relating to development of dams has EIA component addressed to fish migration in the riverine ecosystem.

Environmental impact assessment is mandatory for all the developmental projects including foreign and domestic likely to have impacts on wetlands particularly Ramsar sites. Apply broad based EIA methodology including impacts of the developmental activities within river basin. Impacts of hydraulic structures on river flows and biodiversity is the key area to ensure conservation and sustainable use of its resources.

B): on any other aspects of Strategy 1.2 national implementation:

**STRATEGY 1.3:** *Increase recognition of the significance of wetlands for reasons of water supply, coastal protection, flood defence, climate change mitigation, food security, poverty reduction, cultural heritage, and scientific research, with a focus on under-represented ecosystem types, through developing and disseminating methodology to achieve wise use of wetlands.*

**Indicator questions:**

1.3.1 Has an assessment been conducted of the ecosystem benefits/services provided by Ramsar sites? {3.3.1}  
 [If “Yes” or “Partly”, please indicate in the Additional implementation information below, the year of assessment and from where or from whom this information can be obtained]

C - Partly

|   |         |
|---|---------|
| 1.3.2 Have wise use wetland programmes and/or projects that contribute to poverty alleviation objectives and/or food and water security plans been implemented? {3.3.4} | B - No  |
| 1.3.3 Has national action been taken to implement the Guidelines for Global Action on Peatlands (Resolution VIII.17)? {3.2.1}   | B - No  |
| 1.3.4 Has national action been taken to apply the guiding principles on cultural values of wetlands (Resolutions VIII.19 and IX.21)? {3.3.3}                            | A - Yes |

### Additional implementation information:

A): on Indicators 1.3.1 – 1.3.4 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “1.3.3: [.. additional information ...]”

1.3.1 : Economic valuation of Harike wetland has been carried out and the report has been sent to the Ramsar Secretariat which is significant contribution to the Ramsar STRP work relating to application of economic valuation tools to highlight the contributions of biodiversity and values and functions of wetlands in general for policy planners and decision makers. Economic evaluation of Chilika Lake carried out by Wetlands International in collaboration with Chilika Development Authority has provided significant contribution to the development of policy for freshwater release from the upcoming Naraj barrage within Mahanadi basin. Wetlands International has carried out detailed economic evaluation of Loktak lake through financial support provided by MoEF. The implementation of the project has brought out the strategy for water allocation in regard to human and ecological purposes based on economic evaluation of the Loktak within Manipur River basin.

1.3.4 : In general guiding principles as per the resolution VIII. 19 and IX.21 on cultural values of wetlands adopted by COP8 are very broad in nature and are incorporated directly or indirectly in the management plans formulated by the concerned state governments. Almost all priority wetlands are identified considering their socio-cultural sensitivity.

B): on any other aspects of Strategy 1.3 national implementation:

No decision-making is complete without participation of local people whose livelihoods depend on wetland resources. People have been using wetlands since times immemorial. We have to blend both traditional and latest scientific technologies to achieve long-term conservation goals. Participatory Rural Appraisal exercise involving local communities should be the main ingredient of community participation. It should also take into consideration issues of women and gender sensitization and involve women in the management process.

**STRATEGY 1.4:** *Integrate policies on the conservation and wise use of wetlands in the planning activities in all Contracting Parties and in decision-making processes at national, regional, provincial and local levels, particularly concerning territorial management, groundwater management, catchment/river basin management, coastal and marine zone planning, and responses to climate change, all in the context of implementing Integrated Water Resources Management (IWRM).*

### Indicator questions:

|   |         |
|---|---------|
| 1.4.1 Has the Convention's water-related guidance (see Resolution IX.1. Annex C) been used/applied in decision-making related to water resource planning and management? {3.4.2 – r3.4.xiv} | A - Yes |
| 1.4.2 Have CEPA expertise and tools been incorporated into catchment/river basin planning and management?   | A - Yes |

|   |         |
|---|---------|
| 1.4.3 Has the Convention's guidance on wetlands and coastal zone management (Annex to Resolution VIII.4) been used/applied in Integrated Coastal Zone Management (ICZM) planning and decision-making? {3.4.5} | A - Yes |
| 1.4.4 Have the implications for wetland conservation and wise use of national implementation of the Kyoto Protocol been assessed? {3.4.9}   | A - Yes |

**Additional implementation information:**

A): on Indicators 1.4.1 – 1.4.4 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “1.4.3: [.. additional information ...]”

1.4.1: Integrated Water Resource Management (IWRM) approach has been followed for conservation and sustainable development of some wetlands in India. Basin level planning has been carried out for conservation and management of Loktak and associated wetlands within Manipur River Basin and Chilika Lake within Mahanadi River Basin. Water management plans have been formulated for allocation of water for human and ecological purposes for these wetlands using scientific and elaborate social processes. Consultations are ongoing with the hydropower agency to ensure that the barrage operations are carried out for maintenance of biodiversity within the lake particularly the protected area which is the habitat for the highly endangered ungulate species.

Similar initiatives have been undertaken for Vembanad Kol wetlands within Periyar River Basin; Harike and Ropar wetlands within Sutlej – Beas Basin; and Dal and Wular Lakes within Jhelum Basin

Effective linkages have been developed with the government agencies concerned with water resources management, fisheries, agriculture and rural development for conservation and sustainable livelihoods of the communities living in and around the wetlands. Multi-stakeholder approach involving concerned government agencies, NGOs, and community organizations has been elaborately adopted by wetland authorities and conservation organizations involved in the management of Loktak, Chilika, Bhoj, and Dal lakes. India is also developing a GEF project on conservation and sustainable use and globally significant treatment wetlands of Mainpuri (UP) and Kaliveli Tank (Tamil Nadu).

India has played a lead role in formulation of Ramsar guidelines on integration of wetlands into river basin management. As a follow up of this, CBD-Ramsar River Basin Initiative was undertaken and a joint programme was developed for the integrated management of wetlands, biological diversity and river basin which operates through cross-sectoral partnership and local, country at national level. The synergy between CBD and Ramsar Conventions in India has helped to integrate various developmental sector into planning process at River Basin level for management of wetlands.

The models developed for Loktak and Chilika have been extensively used at the regional level to demonstrate successful stakeholder led wetland conservation and management. The management of these wetlands involve extensive consultations at various levels and particularly through elaborate social processes to identify the problems and implement restoration measures. This has helped to generate awareness at various levels in the sustainable development of the wetland which was used as a practical example for Communication Education and Public Awareness initiative undertaken by the Ramsar Convention.

1.4.2 : The management action plans developed for all the Ramsar sites have a focus on CEPA to generate awareness about the values and functions of wetlands. The activities includes also disseminating awareness about the successful models developed in case of some wetlands such as Chilika and Loktak Lakes. It is planned to promote CEPA initiatives to all the priority wetlands in the country. Planning Commission which is a Central Planning body in a country has been involved to promote sustainable management integrating various sectors such as agriculture, water and industries. Mainstreaming of wetlands into developmental planning has been promoted involving decision makers, policy planners and concerned developmental planners.

1.4.3 : Ministry of Environment & Forests (MoEF) launched Mangrove Conservation Programme in 1987 and has so far, identified 38 mangroves areas for intensive conservation and management in the country. This mangrove areas are identified on recommendation of National Committee on Mangroves & Coral Reefs on the basis of their unique ecosystems, biodiversity etc. Hundred percent central assistance is given under management action plans (MAPs) for undertaking activities like raising mangrove plantation, protection, catchment area treatment, siltation control, pollution abatement, biodiversity conservation, sustainable resource utilization, survey and demarcation, education and awareness etc. This is further supplemented by research and developmental activities which can give scientific inputs for smooth execution of management action plans. Efforts have been made to persuade of the state governments to identified new and additional mangrove conservation areas.

The National Committee on mangroves and coral reefs had earlier recommended intensive conservation and management of corals in four areas, namely Andaman & Nichobar islands, Lakshwadeep islands, Gulf of Kachchh and Gulf of Mannal. Management action plans are being

implemented in all the four areas through financial assistance extended by the Ministry through the respective states / Uts. The National Coral Reef research centre at Port Blair was provided financial assistance for strengthening infra-structure of the centre and to continue bio physical monitoring related to the health of coral reefs.

India has a long coastal line of 5700 kms covering east coast, west coast and islands of the Bay of Bengal and Arabian Sea. These wetlands are in general under various decades of anthropogenic pressures resulting in degradation and loss of species richness. Changes in salinity regimes, pollution and effective communication with marine and freshwater sources are causative factors for degradation. Coral reefs are affected by high amounts of silt brought in by rivers and their removal for various uses. Mangroves have been seriously affected by increased human pressures resulting in decrease of overall mangrove forest cover.

MoEF through Forest Survey of India periodically monitors state of forest including mangroves after every two years. The State Forest Report of 2005 indicates the mangrove cover in the country in the area of 4445 km<sup>2</sup> (0.14% of geographic area) of which 1147 km<sup>2</sup> (25.8%) is very dense, 1629 km<sup>2</sup> (36.6%) is moderately dense and 1669 km<sup>2</sup> (37.6%) is open mangrove. Compared with 2003 assessment, there has been a marginal net decrease in mangrove cover of the country, mainly because of the tsunami that hit Andaman & Nicobar Islands on December 26, 2004. Gujarat has shown an increase in mangrove cover mainly because of plantations and protection measures.

A Special Session on the Tsunami and Coastal Wetlands was organized on 9th February 2005 as part of the Asian Wetland Symposium in Bhubaneswar, Orissa. It was co-organised by the Ministry of Environment and Forests of the Government of India, Ramsar Centre Japan, Chilika Development Authority, Wetlands International, Global Environment Centre and the Ramsar Convention Secretariat. It was chaired by Ms Meena Gupta, the then Additional Secretary of the Ministry of Environment and Forests and attended by over 250 experts on wetlands, natural resource management and tsunami issues from many countries in the region as well as international organisations. Presentations were made by 15 experts on different aspects of impacts and response options. Key findings from the session were as follows:

The major human impacts include massive loss of life, destruction of coastal settlements and infrastructure, loss of fishing boats and facilities, loss and degradation of agricultural lands and forests and salinisation and contamination of water sources.

According to rapid assessments, the main impacts of the tsunami on coastal wetlands varied according to the location and distance from the epicenter/fault line. Impacts included loss or degradation of mangroves and seagrass beds, silting and degradation of coral reefs, sedimentation/turbidity of coastal waters leading to algal blooms, major changes in intertidal flats and coastal lagoons

Certain wetland types played a role in reducing the tsunami impact, especially in locations further from the epicenter, including coral reefs and mangroves which broke the impact of the waves and absorbed some of the energy and protected areas further inland. Mangroves also stopped people being washed out to sea and trapped debris, reducing further damage.

The main response to the tsunami by the affected countries in relation to coastal wetlands has been focused initially on rescue and survival of local communities, followed by rapid assessment of impacts which are leading to the development of action plans.

Future planning for restoration of wetlands and livelihoods of communities by the participants highlighted on the following:

- Providing new, sustainable livelihoods in affected communities linked to wetlands
- Determining Role of wetlands in recovery, securing water supply, fisheries, protection of storms
- Protecting remaining coastal ecosystems and rezoning development
- Use of soft engineering versus hard structures

Rehabilitation of degraded coastal wetlands

Formation of coastal greenbelt (mangroves and coastal forests) for tsunami and storm damage protection

Standardizing assessment methodologies

Joint assessments and sharing of information

Early warning and preparedness, communication

Resources, generating and sharing

Climate change implications and coastal zone management

Partnership framework and the way forward as a group]

]

B): on any other aspects of Strategy 1.4 national implementation:

**STRATEGY 1.5:** *Identify priority wetlands where restoration or rehabilitation would be beneficial and yield long-term environmental, social or economic benefits, and implement the necessary measures to recover these sites.*

**Indicator questions:**

|  |         |
|--|---------|
| 1.5.1 Have wetland restoration/rehabilitation programmes or projects been implemented? {4.1.2}<br>[If “Yes”, please identify any major programmes or projects in Additional implementation information]  | A - Yes |
| 1.5.2 Has the Convention’s guidance on wetland restoration (Annex to Resolution VIII.16; Wise Use Handbook 15, 3rd edition) been used/applied in designing and implementing wetland restoration/rehabilitation programmes or projects? {4.1.2} | A - Yes |

**Additional implementation information:**

A): on Indicators 1.5.1 – 1.5.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “1.5.2: [.. additional information ...]”



#### 1.5.1 : Identification of more sites under National Wetland Conservation Programme

- 103 sites have been identified for conservation in the country, 41 being recently added to the List apart from 38 Mangroves & 4 coral areas and 10 urban lakes.
- Identification of wetlands sites is based on Ramsar criteria which include aspect of waterfowl population, dominance of various plant/animal species, biodiversity values, cultural aspects, religious and sacred sanctities, socio-economic aspects, sustainable fisheries, traditional knowledge and other such issues as are listed in the Ramsar criteria.

#### Wetland strategy

Most of the strategies/policies made by the Government do not reflect the pragmatic approach, the recent example is Water Policy document by the Ministry of Water Resources which do not mention about the role of wetlands which are pivotal for re-charging of aquifers. With this intention in mind, concept paper for wetland strategy was made and circulated to various experts alongwith terms of reference for various components to be taken up by expert institutes/ consortia of experts. The following project components are to be addressed in the present context :

- Survey & Assessment
- Database development
- Catchment area treatment
- Water management
- Biodiversity conservation
- Sustainable resource development
- Weed control
- Capacity building
- Community & local institutional development
- Pollution control
- Eco-tourism development
- Women & gender sensitization
- Education & awareness general
- Development of Wetland policy and regulatory mechanism

After getting inputs from various experts, draft Wetland Strategy will be finalized for initiating action. Terms of Reference are being finalized and thereafter, strategy will be finalized by expert institutions/consortia of expert organizations.

#### Capacity building

1. For implementation of Wetland Conservation programme, capacity building is the major tool as unless and until people are sensitized about importance of wetlands, need for their conservation and role of local people/communities, no tangible results can be achieved. With this intention in mind, series of regional workshops were organized in various parts of the country to make people aware of the importance of wetland and integrate their traditional knowledge in the main plan process. These workshops have come out with number of recommendations and after sifting them, these will be sent to the user agencies for implementation.

Apart from workshops, various training programmes on various components of wetland conservation are organized to train people about methodology at conceptual level of understanding for undertaking conservation programmes. We are planning to open a Centre of Excellence for 'Ecology & Management of Inland Waters'. A special Task Force has been made to see the feasibility of some of the already existing Centres to work as Centre of Excellence in

Aquatic Ecology with strengthening it further.

Number of interpretation centres are being opened up in various States to teach various target groups about products coming from wetlands, knowledge of biodiversity and how various components of the wetland ecosystem are used in a wise manner so that they are passed on to next generation in a much better manner.

Initiatives taken up by the Ministry at different levels for protection of wetlands involve following :

- Several wide ranging policies, strategies and action plans have been formulated by the Government which directly or indirectly support wetland conservation.
- National conservation strategy and policy statement on Environment & Development (1992) highlights conservation and sustainable development of wetlands, including coastal areas, riverine and island ecosystems. Similarly, National Forest Policy and National Wildlife action plan emphasize conservation of wildlife on scientific principles of evolution and genetics, including social and cultural aspects.
- Several legislations have been enacted which have relevance to wetland conservation. These include Forest Act, 1927, Forest Conservation Act, 1980, the Wildlife Protection Act, 1972, the (Prevention & Control of Pollution) Act, 1974, the Water (Prevention & Control of Pollution) Cess Act, 1977 and the Umbrella provision of Environment (Protection) Act, 1986.
- Notification declaring the coastal stretches of seas, bays, estuaries, creeks, rivers and back waters which are influenced by tidal action in the landward side upto 500 meters from the high tide line and the land between the low tide line and the high tide line as the Coastal Regulation Zone Notification, 1991 under the provision of Environment (Protection) Act, 1986. This proposes graded restriction on setting up and expansion of industries, operations and processes including pressures from human activities.

A draft Notification on Regulatory Framework on Wetlands is under preparation which, after approval, will be put on Ministry's website for seeking comments of State Governments and concerned people.

- Environment (Protection) Act also specifies protection of ecologically fragile areas which includes number of wetlands including Ramsar sites for notification.
- Portions of the listed sites have been declared as wildlife sanctuaries and Keoladeo National Park in Bharatpur has been notified as a national park.
- Ministry has published several reports/documents on conservation and wise use of wetlands which include six monographs on Ramsar sites in collaboration with WWF-India, eco-tourism guidelines for Chilka lake. Fact sheets have been published for 19 Ramsar sites in collaboration with WWF-India and circulated to user agencies.
- Economic valuation of wetlands has been identified as a priority area and this valuation has been done for Keoladeo National Park by Indira Gandhi National Institute for Development & Research under UNDP project on Capacity-21. The project has also been undertaken under Small Grants Fund for Ramsar for Harike wetland in Punjab.
- 103 wetlands have been identified for conservation and management under the National programme where 100% assistance is given for undertaking conservation activities.
- Catchment re-treatment programme is being given due attention involving community participation and water management.
- Emphasis is being given on ecological activities than on engineering measures for catchment area treatment. Traditional knowledge of the people associated with water bodies is emphasized involving cultural aspects of wetland conservation, particularly in and high altitude

remote areas.

- Weed control measures have been taken up which involve biological as well as manual methods. Recently, in Punjab, Chief Minister engaged army for control of water hyacinth from Harike lake showing sensitivity of Government towards conservation of wetlands.
- Some of the endangered species of wildlife have been re-introduced in wetlands and certain portions of some of the wetlands have been declared as sanctuaries for protection of wildlife. Construction of mounds and ponds have been initiated for developing suitable habitats for waterfowl.
- Guidelines for sustainable development and management of brackishwater aquaculture have been drawn up. Some State Governments like Tamil Nadu, Andhra Pradesh have aquaculture guidelines also at local level. Orissa Govt. have formulated a Task Force for prawn farming aspects alongwith coastline.
- Community participation has become a most useful tool and at present, practiced as a successful case study in case of Chilka in Orissa and Loktak in Manipur. NGOs are also involved effectively in wetland conservation programmes. The typical example is Shramdan to save Sukhna lake in Chandigarh.
- Awareness and participatory programmes are in operation in number of identified areas which involve various target groups like children/youth/adults/stakeholders, etc.
- Several training programmes are being conducted in collaboration with different academic organizations/research institutes/State Governments/ international NGOs to impart training on various components of wetland conservation which include wise use, catchment area treatment, weed control, hydrological aspects, research methodology, preparation of management action plans, community participation, etc.. This training is imparted to senior managers/middle level managers/research organizers/policy makers/stakeholders, etc.
- Under inventorization, Directory of Wetlands was published in 1990 by Ministry of Environment & Forests on the basis of questionnaire survey giving information about location, geographical coordinates, area and ecological category of wetlands over 100 ha. Similar directory is proposed for mangroves and corals. The Directory on Wetlands has been updated in collaboration with WWF-India incorporating detailed information on 40 more wetlands compared to Asian wetland directory.
- A project on survey and mapping of wetlands involving remote sensing technology has been undertaken by Space Application Centre. Under UNDP-sponsored project, survey and mapping of wetlands less than 56 hectares is being executed by Salim Ali Centre for Ornithology and Natural History to give more information on those satellite wetlands which cater to larger wetlands in the area. On the basis of results obtained during the present investigations, a more meaningful wetland conservation project can be posed to GEF for holistic conservation of at least one wetland in its totality.
- A project on 'National Wetland Information System and Updation of Wetland Inventory' has been sanctioned by the Ministry of Environment and Forests. The objectives of this project are to (1) to map and inventorize wetlands on 1:50,000 scale by onscreen interpretation of digital IRS LISS III data of post and pre-monsoon seasons, (2) prepare State-wise wetland Atlases, and (3) create a digital database in GIS environment in respect of all wetlands in the country.
- India is a signatory to Ramsar Convention and plays an important role in conservation and wise use of wetlands. On the basis of our country's work in the field of wetland conservation, India has been nominated as a member of standing committee for the trienniums 1993-1996 and 1999-2002.

- For the first time, Ramsar Conservation Award has been given to India for its work on intervention in Chilka lake by opening the muggarmukh mouth. India is the first Asian country to get this award.
- India is also a member of Convention on Climate Change, Biodiversity, Migratory Species, World Heritage and inter-linkages among these Conventions are frequently discussed in the inter-Ministerial and intra-Ministerial meetings to develop comprehensive plans on actions for their implementation.
- The Memorandum of Understanding has been signed by our country with Iran, Kazakhstan, Pakistan and Russian Federation for conservation of Siberian cranes. Action has also been initiated for conservation of marine turtles. Project Elephant and Project Tiger are also under operation for conservation of these species.
- Project on Conservation of Upper and Lower lake, Bhopal has been supported by OECF, Japan
- Though number of steps have been initiated taking shelter from existing laws as there is no separate legal mechanism for wetland conservation, we feel that more emphasis needs to be given on preventive measures than the curative ones. A comprehensive approach needs to be adopted for wetland conservation on sound ecological basis. The experience gained over till date for wetland conservation would help to draw an appropriate strategy for refining the objectives and addressing issues relating to ecological and social aspects. This would help in rehabilitation of selected water bodies and sustainable utilization of their resources improving water quality enhancing biodiversity and restoring the aesthetic value of wetlands.
- Some States have already constituted authorities for execution of wetland conservation programmes in their respective States. Notable of them are Chilka Development Authority in Orissa, Loktak Development Authority in Manipur, Shore Area Development Authority in Andhra Pradesh, Lakes and Waterways Development Authority in Jammu & Kashmir, etc. In the interest of the wetland conservation Programme, State Govts. have been asked to form State Development Authorities for wetland conservation so that these authorities are themselves a unit for undertaking wetland conservation activities having different subject matter experts.

#### Integrated approach

River basin approach has been followed for conservation and wise use of wetlands as unless and until flood plain wetlands of riverine character are taken up for integrated study, successful management cannot be achieved. Two wetlands, namely, Ken River and National Chambal sanctuary from M.P. are identified for the same purpose which are not only taken up from river basin point of view but are also transboundary wetlands between different States. For achieving successful results, discussions are being initiated between various State Governments and ultimately, presentations will be made so that an effective and long-term Management Action Plan could be made in holistic manner to deal with such type of inter-related ecosystems.

#### Economic evaluation

The concept of economic evaluation for wetlands has been undertaken in Harike (Punjab) for Small Grants Funds and now for Chilika (Orissa). The economic evaluation encompasses values of various functions and activities of the wetlands which can help in developing a framework for efficient allocation of resources for the sustainable development of wetlands. This could be an effective tool for integrating wetland management with overall development, planning and resource management.

Successful studies have already been made in Chilika lake (Orissa) through opening of a mouth which was silted up, the mouth was dredged to influx of saline water into the wetland area which otherwise acquired complete freshwater characters in a lagoon structure. This has resulted in maintaining salinity levels and also increase in fish, prawn and has helped in control of obnoxious weed in the area. The most significant part of the intervention is that it has helped to raise socio-economic structure of the community living around the area because of manifold increase in fish production.

Such type of requests are coming from different regions and on the basis of its feasibility and analysis, these will be applied in near future for keeping these wetlands in good health through help of communities.

#### Community participation

This is the most important tool where participatory rural appraisal exercises (PRA) are undertaken with the help of communities. They are involved in demonstration projects pertaining to low cost sanitation, indigenous methods of income generating avenues so that livelihood issues of communities are taken care of without pressurizing the wetlands. It also involves capacity building programmes to self-help groups for the community's benefits.

#### Change in guidelines of Management Action Plans

Because of various developments, there is need for changing guidelines for Management Action Plan with the basic aim of wise use principles. These are under preparation. A method for monitoring mechanism has been developed to review management activities from time to time. This will be supported by Research & development. Priority areas of research have been identified with the basic aim to supplement wetland conservation with appropriate research findings to make it more meaningful and pragmatic in nature.

#### Environment Education

Stress is being laid on environment education particularly in area of wetland conservation. We are in contact with a number of educational institutions, wetland authorities to include wetland conservation concept in curriculum both at formal and non-formal level. Various quick methods kits are being developed to help people in assessing water quality, soil texture, eutrophication assessment, etc. Number of labs have been strengthened for scientific research which help in overall wetland conservation

Ministry of Environment & Forests through National Committee on Wetlands have identified training needs for wetland functionaries involved in the implementation of management action plan. Several workshops have been organized in different regions of the country which had a focus on capacity building and training programmes.

Chilika Development Authority has developed sufficient infrastructure as well as expertise involving experts at local national and international levels to impart training on wetland management. A special session was held on the training needs assessment in the Asian Wetland Symposium. Wetlands International is providing technical support and assisting Chilika Development Authority to develop curriculum for specific training programmes.

Almost all the restoration projects for the identified wetlands have a component on livelihood improvement. In case of Loktak and Chilika Lake consistent efforts have been made to link conservation programmes with the livelihood improvement of the communities with the ultimate objective of poverty reduction in these areas. '

1.5.2 : MoEF has identified several wetlands with the objective of conservation of biodiversity, water resources management and poverty alleviation. Number of wetlands identified under implementation by MoEF in collaboration with the State Government Agencies are:

Management action plans have been prepared for 58 out of 103 identified wetlands which are at various stages of implementation. These action plans have focus on management of water regimes, poverty alleviation and biodiversity conservation.

Management action plans for 38 mangrove areas representing large chunks of mangrove vegetation in the country have been identified for intensive conservation and management. The main objective of these management plans is to restore the mangrove vegetation for coastal protection, flood defense, food security and poverty alleviation.

4 coral reef areas have been identified for coastal protection and biodiversity conservation.

Most of the wetlands in India are directly or indirectly associated with river systems. Ganga floodplain wetland system constitutes the largest wetland regime in the country. For improving the water quality of this river system, Ganga Action Plan was initiated by the Ministry of Environment and Forests in 1985 under which a comprehensive programme has been developed for pollution abatement of the river and water quality monitoring. The methodology for water quality monitoring has been developed for four major components namely surface water quality, sediment characteristics, drain/outfall effluent quality and sewage treatment plant performance to control pollution. These components cover measurement of water quality of the river, long term changes in the river ecosystem and efficacy of the reduction of pollution load into the river from point sources through the implementation of the pollution abatement schemes.

Several other river stretches in the country viz. Yamuna, Western Yamuna Canal, Gomati, Hindon, Damodar, Upper reaches of Ganga, Additional towns in Bihar under GAP Phase II and for rivers Satluj (Punjab), Khan, Kshipra, Wain Ganga, Narmada, Chambal, Tapti, Betwa (Madhya Pradesh), under NRCP have been taken up for water quality monitoring. Recently, the proposals for undertaking water quality monitoring for rivers Godavari (Andhra Pradesh), Damodar (Bihar), Subernrekha (Bihar), Chambal (Rajasthan), Tunga, Bhadra, Tungabhadra, Cauvery (Karnataka) have been undertaken for water quality monitoring and assessment of pollution load. Overall 42 parameters have been identified for monitoring purposes out of which nine have been selected as core parameters in addition to some site specific parameters. The water quality monitoring of these stretches are at various stages of progress. The agencies involved for monitoring include Central Pollution Control Boards, State Pollution Control Boards, university departments and research institutions.

Overall 42 priority lakes have been identified under National Lakes Conservation Plan (NLCP) for conservation and restoration of water bodies in view of their significance in terms of water supply, cultural heritage and scientific research. The focus is on improvement of water quality for water supply and food security.

Under National Wetland Programme several activities have been also undertaken to optimize water regimes for food security and ecosystem conservation. Initiatives have also been undertaken in case of Harike Lake in Punjab, Wullar Lake in Kashmir and other wetlands for water conservation and management.

Conservation and management of wetlands is a high priority area of the MoEF, Government of India. Based on the recommendations of the National Committee, 103 wetlands, 38 mangroves ecosystems and 4 coral reefs have been identified for intensive conservation and management purposes. Guidelines have been formulated for preparation of management action plans. The various activities under these action plans include protection, catchment area treatment, pollution control weed control, wildlife conservation, sustainable fisheries development, environmental education and peoples participation. These management plans are supported by the Government of India under centrally sponsored schemes on "Wetlands" and "Mangroves". The management action plan has been formulated in case of all 38 identified mangrove areas 58 wetlands, 42 lakes and 4 coral reefs. It is planned to undertake conservation and restoration of all 103 identified wetlands and continue financial support for all the identified areas during 11th five year plan.

An effective monitoring mechanism has been developed as part of the management action plan to assess the impacts of restoration measures undertaken for the priority wetlands. Restoration of Chilika lake through effective water management, community participation and providing sustainable economic benefits to the community dependent upon these resources for their sustenance was carried out by the Government of Orissa, through the support of MoEF, Wetlands

International, NGOs and local communities. Restoration of Chilika lake was an example of application of successful model for rehabilitation of biodiversity and livelihood support to a large community dependent upon the lake. Ramsar award was conferred to Chilika Development Authority for this exemplary wetland restoration model.

Community participation and development is one of the key components of all the management action plans formulated for the priority wetlands. A lot of emphasis has been laid on involvement of communities in restoration measures with the objective of sustainable resource development on livelihood improvements of the communities dependent on wetlands for their sustenance.

The framework and guidelines developed through Ramsar Convention are extremely useful in conservation and management of wetlands of international importance. These guidelines have been applied wherever relevant and further refined as per the local conditions.

India has designated 25 wetlands under the list of wetlands of international importance it is proposed to designate six more wetlands to raise the total number of Ramsar sites to 31 as per the commitment given by India in the last COP meeting.

Information on 93 well known wetlands of the country has been given in the Asian Wetland Directory which represents important wetland sites of national and international importance. Subsequently WWF-India in collaboration with Asian Wetland Bureau (now Wetlands International) has revised the section dealing with India's wetlands in the Asian Wetland Directory. Information on 40 new sites has been added, while that on most other sites has been updated.

SACON has identified 199 wetlands as potential Ramsar sites. The inventory carried out on these wetlands has provided a baseline information on the criteria adopted by Ramsar Convention for designation of wetlands under Convention. This is being reviewed in consultation with the concerned State Governments in India, research institutions as well as in relation to sites proposed by other institutions for designation.

The information collected on inland water bodies as well as coastal wetlands is being reviewed to examine the wetland representative of rare or unique wetland. The information on other wetland is also being collected to assess the feasibility of wetlands as potential Ramsar sites.

Five wetland has been designated as Ramsar site which is supporting globally threatened species viz. Cervus Ildi Ildi in Loktak, Irrawadi Dolphin in Chilika, Siberian Crane in Keladeo National Park, Royal Bengal Tiger in Sundarban and Black necked crane in Tso Murari.

The highest counts total for 14 globally threatened species were as follows:

- 1) critically endangered Siberian Crane (3 in 1997 and 2 in 1999, the number of this small CAF population that used to visit Keoladeo National Park has dwindled with no birds being recorded here in the last few years raising fears that this population may have been extirpated);
- 2) Endangered White-bellied Heron (10 in 2001), Greater Adjutant (6 each in 2000 and 2001), Nordmann's Greenshank (3 in 2001) and the vulnerable Spot-billed Pelican (199 in 2001), Lesser Adjutant (74 in 2001), Lesser White-fronted Goose (1 in 1997), Marbled Teal (24 in 1999), Baer's Pochard (1534 in 1997), Sarus Crane (178 in 1999), Sociable Lapwing (17 in 2001), India Skimmer (138 in 2001), Pallas's Sea Eagle (4 in 1999) and Greater Spotted Eagle (4 in 1999).

Twelve Lower Risk species were also recorded: the highest count of Conservation Dependent Dalmatian Pelican was 81 in 1999. Eleven Near Threatened species, Oriental Darter, Painted Stork, Black-neck stork, Black-headed Ibis, Lesser Flamingo, Ferruginous Duck, Beach Thick-knee, Asian Dowitcher, Black-bellied Tern, Grey-headed Fishing Eagle and Pallid Harrier were also recorded. Small numbers of Goliath Heron were recorded, a species for which the South Asian population is estimated at 20 individuals.

25 Ramsar sites designated by India form a part of Central Asian Flyways for migratory species. An effective network of protected areas consisting of national parks, sanctuaries and biosphere reserves has been set up in the country. Many wetlands are included in this network. Efforts are being made to include the remaining identified wetlands under the network and the respective State Governments have been requested for taking the necessary steps. The State Governments have a well structured system to protect these areas. However, assistance is also being provided to the State Governments under the centrally sponsored scheme for Development of National

Parks and Sanctuaries. Under the Mangrove Conservation Programme, State Forest/Wildlife Departments are being provided financial assistance for various protection measures.

A total of 355 sites in India were counted during 1997 – 2001 under Asian Waterfowl Census conducted by Wetlands International. Totals of waterbirds counted were 157,292 (34 sites), 109,994 (65 sites), 568,658 (178 sites), 45,551 (17 sites), 1,615,664 (194 sites) in 1997 – 2001 respectively. Eight of total 19 Ramsar sites in India were counted viz. Pong Dam Bird Sanctuary (93, 487 in 2001), Vemband Lake (6223 in 2001), Loktak Lake (11301 in 1999), Chilika Lake (781739 in 2001), Harike wetland (13735 in 2001), Ropar wetland (326 in 1999), Keoladeo National Park (61031 in 1997) and Sambhar Lake (920 in 1999).

A total of 13 sites including three of Ramsar sites mentioned above recorded maximum of more than 20,000 birds. The others were Patna Bird Sanctuary (148426 in 1999), Kole Wetland (120322 in 2001), Farakka Barrage (89206 in 2001), Palta Water Works (52488 in 2001), Ganga River at Malda (48781 in 1999), Rengali (39980 in 2001), Pobitora Sanctuary (55851 in 1997), Yamuna River, I.S.B.T Nigambodh (34481 in 2001), Nandur Madhemeshwar (21418 in 1990) and Oustery Tank (20245 in 2001).

The survey has indicated occurrence of 161 species of waterbirds and nine species wetland dependent raptors. Ten species with more than 50,000 individual have been recorded. The highest counts in 2001 for each of these species were Northern Shoveler (193205), Northern Pintail (158115), Gadwall (141520), Eurasian Wigeon (136232), Tuffed Duck (115234) Lesser Whistling Duck (91619), Garganey (87259), Common Coot (72998), Common Teal (55056) and Red-crested Pochard (54542).

Wetlands International conducts periodic waterfowl census of wetlands in India. Bombay Natural History Society has been identified by Wetlands International as a nodal agency to coordinate with NGOs and other concerned agencies and experts. The information received from various agencies by Wetlands International is compiled and widely disseminated through various reports. The latest report published in 2004 on Numbers and distribution of waterbirds and wetlands in the Asia-Pacific region including India based on results of the Asian Waterbird Census carried out using 1997 – 2001.'

B): on any other aspects of Strategy 1.5 national implementation:

**STRATEGY 1.6:** *Develop guidance and promote protocols and actions to prevent, control or eradicate invasive alien species in wetland systems.*

**Indicator questions:**

|   |            |
|---|------------|
| 1.6.1 Have national policies, strategies and management responses to threats from invasive species, particularly in wetlands, been developed and implemented? {r5.1.ii}                       | C - Partly |
| 1.6.2 Have such policies, strategies and management responses been carried out in cooperation with the focal points of other conventions and international organisations/processes? {r5.1.ii} | C - Partly |

**Additional implementation information:**



A): on Indicators 1.6.1 – 1.6.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “1.6.2: [.. additional information ...]”

1.6.1 : Control of water hyacinth and other alien plant species is a high priority under management action plans and measures have been developed to control proliferation of these alien species'.

1.6.2 : Integrated Water Resource Management approach has been followed for conservation and sustainable development of some wetlands in India. Basin level planning has been carried out for conservation and management of Loktak and associated wetlands within Manipur River Basin and Chilika Lake within Mahanadi River Basin. Water management plans have been formulated for allocation of water for human and ecological purposes for these wetlands using scientific and elaborate social processes. Consultations are ongoing with the hydropower agency to ensure that the barrage operations are carried out for maintenance of biodiversity within the lake particularly the protected area which is the habitat for the highly endangered ungulate species.

Similar initiatives have been undertaken for Vembanad Kol wetlands within Periyar River Basin; Harike and Ropar wetlands within Sutlej – Beas Basin; and Dal and Wular Lakes within Jhelum Basin

Effective linkages have been developed with the government agencies concerned with water resources management, fisheries, agriculture and rural development for conservation and sustainable livelihoods of the communities living in and around the wetlands. Multi-stakeholder approach involving concerned government agencies, NGOs, and community organizations has been elaborately adopted by wetland authorities and conservation organizations involved in the management of Loktak, Chilika, Bhoj, and Dal lakes. India is also developing a GEF project on conservation and sustainable use and globally significant treatment wetlands of Manipuri (UP) and Kaveri Tank (Tamil Nadu).

India has played a lead role in formulation of Ramsar guidelines on integration of wetlands into river basin management. As a follow up of this, CBD-Ramsar River Basin Initiative was undertaken and a joint programme was developed for the integrated management of wetlands, biological diversity and river basin which operates through cross-sectoral partnership and local, country at national level. The synergy between CBD and Ramsar conventions in India has helped to integrate various developmental sector into planning process at River Basin level for management of wetlands.

The models developed for Loktak and Chilika have been extensively used at the regional level to demonstrate successful stakeholder led wetland conservation and management. The management of these wetlands involve extensive consultations at various levels and particularly through elaborate social processes to identify the problems and implement restoration measures. This has helped to generate awareness at various levels in the sustainable development of the wetland which was used as a practical example for Communication Education and Public Awareness initiative undertaken by the Ramsar Convention.

Ministry of Environment & Forests is the nodal agency for implementation of Conventions like Ramsar, Convention on Biological Diversity(CBD), Convention to Combat Desertification (UNCCD), Convention on Migratory Species (CMS), World Heritage Convention and UN Framework Convention on Climate Change through joint work plans and collaborations.

B): on any other aspects of Strategy 1.6 national implementation:

## GOAL 2. WETLANDS OF INTERNATIONAL IMPORTANCE

**STRATEGY 2.1** *Apply the Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance (Handbook 7, 2<sup>nd</sup> edition; Handbook 14, 3<sup>rd</sup> edition).*

### Indicator questions:

2.1.1 Have a strategy and priorities been established for any further designation of Ramsar sites, using the Strategic Framework for the Ramsar List? {10.1.1}

[If further Ramsar site designations are planned, please indicate in Additional implementation information, the number of sites and anticipated year of designation]

A - Yes

### Additional implementation information:

A): on Indicator 2.1.1

2.1.1 : The Ministry of Environment and Forests (MoEF) is processing the proposals for designation of Ramsar sites, using the Strategic Framework for the Ramsar List, since 2004-05 which involves obtaining clearances from the Ministries of External Affairs, Home Affairs and Defence, etc. It also requires authentication of wetland maps by the Survey of India. 25 sites from India have already been designated as Ramsar sites and other six are under process of designation

B): on any other aspects of Strategy 2.1 national implementation:

**STRATEGY 2.2** *Maintain the Ramsar Sites Information Service and constantly update it with the best available information, and use the Ramsar Sites Database as a tool for guiding the further designation of wetlands for the List of Wetlands of International Importance.*

### Indicator questions:

2.2.1 Have all required updates of the Information Sheet on Ramsar Wetlands been submitted to the Ramsar Secretariat? {10.2.3}

B - No

2.2.2 Are the Ramsar Sites Information Service and its database used in national implementation of the Convention concerning Ramsar site issues?

A - Yes

### Additional implementation information:

A): on Indicators 2.2.1 – 2.2.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “2.2.1: [.. additional information ...]”

2.2.2 : 25 sites from India have already been designated as Ramsar sites. Six more are in process. These sites are being processed as per latest Ramsar Sites Information Service and its database.

Latest Ramsar information is always taken into account so that Ramsar sites do not come under Montreaux Record

B): on any other aspects of Strategy 2.2 national implementation:

**STRATEGY 2.3** *Maintain the ecological character of all Ramsar sites.*

**Indicator questions:**

|   |         |
|---|---------|
| 2.3.1 Have the measures required to maintain the ecological character of all Ramsar sites been defined and applied? {11.1.1}  | B - No  |
| 2.3.2 Have management plans/strategies been developed and implemented at all Ramsar sites? {11.1.2}<br>[ If “Yes” or “Some sites”, please indicate, in Additional implementation information below, for how many sites have plans/strategies been developed but not implemented; for how many are plans/strategies in preparation; and for how many are plans/strategies being reviewed or revised] | A - Yes |
| 2.3.3 Have cross-sectoral site management committees been established at Ramsar sites? {11.1.5}<br>[If “Yes” or “Some sites”, please name the sites in Additional implementation information]   | A - Yes |
| 2.3.4 Has any assessment of Ramsar site management effectiveness been carried out?<br>[if “Yes” or “Some sites”, please indicate in Additional implementation information below the year of assessment and from whom, or from where, the information is available]  | B - No  |

**Additional implementation information:**

A): on Indicators 2.3.1 – 2.3.4 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “2.3.3: [.. additional information ...]”

2.3.2 :Management Action Plans have been prepared for almost all the Ramsar sites except Upper Ganga and Keoladeo National Park'

"2.3.3 :A three-tier system at National, State, and District levels is in operation for effective coordination to implement the programme.

National level

\_ A National Wetland Committee is in existence for giving advice on appropriate policies, research and training, identification of wetlands , and review of progress of MAPs.

\_ Thematic Research Committee has been recently reconstituted on a more rational and scientific basis to approve appropriate user-driven research projects with applied research approach.

\_ The Expert Group on Wetlands (EGoW) appraises MAPs of identified wetlands received from various State Governments for financial assistance. Statewise (Figure 2) and yearwise (Figure 3) release of funds to identified wetlands.

State level

\_ The State Steering Committees have been constituted under the chairmanship of Chief Secretaries/Additional Chief Secretaries /Principal Secretaries of concerned departments. The committees will have members from subject matter Departments/ academicians/stakeholders/representative from Central Government to discuss Management Action Plans and review conservation activities undertaken from time to time. The Secretary of the nodal implementing Department is the Member-Secretary of this Committee. The representatives of other relevant State Departments like Industry, Urban Development, Municipal Administration, Mining, and Agriculture, and State Pollution Control Board are members of State level Committee. The activities of these sectors like obnoxious chemical, industrial effluents, toxic run-off due to chemical inorganic fertilizers, pesticides and weedicides, sewage discharge, solid waste and soil erosion cause pollution to wetlands and as such, sensitization of these stakeholders is essential to secure their support and cooperation.

District level

District level committees have been constituted in some states for involving stakeholders in the decision-making process. However, much more work needs to be done in this regard. The MAPs are discussed in the State-level Committee, inputs from various members obtained and the Plans approved by the State-level Committee are sent to the Ministry for examination.

B): on any other aspects of Strategy 2.3 national implementation:

**STRATEGY 2.4** *Monitor the condition of Ramsar sites, notify the Ramsar Secretariat without delay of changes affecting Ramsar sites as required by Article 3.2, and apply the Montreux Record and Ramsar Advisory Mission as tools to address problems.*

**Indicator questions:**

|   |                |
|---|----------------|
| <p>2.4.1 Are arrangements in place for the Administrative Authority to be informed of changes or likely changes in the ecological character of Ramsar sites, pursuant to Article 3.2? {r11.2.iv}</p> <p>[If “Yes” or “Some sites”, please summarise the mechanism(s) established in Additional implementation information]</p>  | <p>A - Yes</p> |
| <p>2.4.2 Have all cases of change or likely change in the ecological character of Ramsar sites been reported to the Ramsar Secretariat, pursuant to Article 3.2,? {11.2.4}</p> <p>[If “Yes” or “Some sites”, please indicate in Additional implementation information below for which Ramsar sites Article 3.2 reports have been made by the Administrative Authority to the Secretariat, and for which sites such reports of change or likely change have not yet been made]</p> | <p>B - No</p>  |
| <p>2.4.3 If applicable, have actions been taken to address the issues for which Ramsar sites have been listed on the Montreux Record? {r11.2.viii}</p> <p>[If “Yes” or “Partly”, please provide in Additional implementation information information about the actions taken]</p>   | <p>B - No</p>  |

**Additional implementation information:**

A): on Indicators 2.4.1 – 2.4.3 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “2.4.3: [.. additional information ...]”

2.4.1 : Several measures have been undertaken for restoration of Keoladeo National Park so as to remove the sites from the Montreux Record. The main issue was relating to the reduced migration of Siberian Cranes due to degradation of wetland habitat. The migration of Siberian Cranes is a wider issue, effecting many range countries in the region and therefore involves management at regional basis. The CAF meeting in Delhi, 2005, recommended some measures for protection of Siberian Crane.

Several measures have been taken for conservation and management of three Ramsar sites viz. Chilika, Loktak and Keoladeo with the objective of removing these sites from the Montreux Record. Chilika lake has already been taken out of Montreux Record after the visit of an international mission to see conservation measures taken by the State Govt. and this site was removed from the list of Montreux Record during 2002. Action is being initiated also to remove Keoladeo National Park, Bharatpur from the Montreux Record. In regard to Loktak lake in Manipur, State Govt. has been asked to go ahead with conservation measures taken so that it can also be processed for taking it off Montreux Record.

Ramsar Advisory Mission visited Chilika Lake and were satisfied with the conservation measures adopted by the Chilika Development Authority (CDA). The issue regarding prawn culture in Chilika Lake was since abandoned and effective measures adopted to restore salinity regimes and species migration through hydrological intervention based on extensive scientific studies carried out and involving local communities in the participatory management. The restoration of Chilika was a successful model helping in the restoration of biodiversity and providing economic benefits to the communities through enhanced fish yield. The CDA was conferred Ramsar Award for this outstanding work carried out by a developing country.

Wetlands International in collaboration with Chilika Development Authority has formulated a project for management planning of Chilika Lagoon as a follow-up of the recommendations of Ramsar Advisory Mission. The project has been approved by Ramsar Bureau and is being implemented in close collaboration with the CDA and MoEF involving various stakeholders and local communities.

Loktak Development Authority (LDA) in collaboration with WISA has carried out a detailed inventorization of Loktak Lake within Manipur River Basin and have identified the causative factors responsible for degradation of wetlands system through elaborate social processes. An 'Atlas of Loktak' has been published which has been used as an effective tool for management planning of the wetland.

The Management Action Plan (MAP) formulated outlines the commitment of Government of Manipur for conservation and sustainable development of Loktak Lake and associated wetlands within Manipur River Basin (MRB). The DPR has been prepared through comprehensive social and ecological processes involving state and central government departments, community organizations, National Hydropower Corporation, NGOs, research institutions and local communities. The information collected from various sources has been analysed in consultation with experts and concerned government agencies for identification of key issues and formulation of management strategies.

The main emphasis in the MAP is on optimizing resources to maintain ecological integrity while providing sustained economic benefits to the local communities through conservation measures. Integrated Water Resources Management (IWRM) approach integrating catchments into conservation and wise use of wetlands has been adopted to ensure ecological and economic security of the people in the basin. Additional / alternate income generation programmes have been proposed for the sustained economic development of the region with the focus on social equity and gender sensitivity. The plan envisages adoption of a community based approach to resource management with facilitation from government agencies and scientific institutions in terms of technical and financial resources.

The MAP is based on evaluation of ecological and socio-economic features of Loktak and associated wetlands within Manipur River Basin. A critical analysis of these features provides the rationale for identification of objectives including the factors governing these features. These steps are critical to understanding of the basic characteristics of wetland ecosystems and their

dynamics within the river basin. Adopting this approach helps to undertake measures to develop specific action plans for long-term sustainable management which can be monitored through indicators sensitive to changes in the ecosystem.

Keoladeo National Park (KNP) is an important habitat for waterbirds harboring more than 350 species of birds including some endangered species. KNP is the only wintering site in India for the Central and Western Asian population of Siberian Cranes that visit the park between October to middle of February. The population of Siberian Cranes has been consistently decreasing and it is a matter of concern. At present the Siberian Cranes have stopped visiting the park. Although these problems have much wider dimension though some measures have been pursued in collaboration with the International Crane Foundation and Convention on Migratory Species.

The Government of Rajasthan through Wildlife Department has taken several measures for effective habitat management of the Park. The measures undertaken include control of water hyacinth, re-establishment of Siberian Cranes, management of aquatic vegetation, ecotourism and eco-development. The prolific growth of some grass species has been controlled by bulldozing some areas of the park during the draught period, in addition to manual cutting and controlled burning. A definite sequence of flooding of the various blocks in the park is followed to ensure water level for different species of waterfowl. Broad guidelines have been formulated for the tourists visiting the park. To ensure the participation of the local communities in the management of the park, Keoladeo National Park Development Society has been formed under the chairmanship of the District Collector. The primary objective of this society is to delineate the ecological boundaries of the park and to draw up an eco-friendly integrated land use strategy for the over all development of the area. The society will raise funds by increasing the existing park entrance fee and diverting a part of revenue to be used for undertaking eco-development activities.

B): on any other aspects of Strategy 2.4 national implementation:

**STRATEGY 2.5** *Promote inventory and integrated management of shared wetlands and hydrological basins, including cooperative monitoring and management of shared wetland-dependent species.*

**Indicator questions:**

|   |        |
|---|--------|
| 2.5.1 Have all transboundary/shared wetland systems been identified? {12.1.1}   | B - No |
| 2.5.2 Is effective cooperative management in place for shared wetland systems (including regional site and waterbird flyway networks)? {12.1.2; 12.2.2}<br>[If “Yes” or “Partly”, please indicate in Additional implementation information below for which wetland systems such management is in place] | B - No |

**Additional implementation information:**

A): on Indicators 2.5.1 – 2.5.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “2.5.1: [.. additional information ...]”

B): on any other aspects of Strategy 2.5 national implementation:

**STRATEGY 2.6** *Support existing regional arrangements under the Convention and promote additional arrangements.*

**Indicator questions:**

2.6.1 Has the Contracting Party been involved in the development of a regional initiative under the framework of the Convention? {12.3.2}

[If "Yes" or "Planned", please indicate in Additional implementation information below the name(s) and collaborating countries of each regional initiative]

A - Yes

**Additional implementation information:**

A): on Indicator 2.6.1

2.6.1 :For reviewing the existing policies for implementing integrated approaches to wetlands and water management resources with a view to define specific policy support and technical capacity needs to improve the management of high altitude wetlands and water resources, regional initiative has been initiated. This is on the basis of importance and threats to high altitude wetlands recognized by the neighbouring countries. One of the key responses has been establishment of Himalayan initiative forum by government agencies of the region with the support of international and national level NGOs. The forum has committed itself to the conservation and wise use of high altitude wetlands in the Himalayan-Hindu-kush, Pamir-allay region.

It has defined an agenda that ranges from inventorization of wetlands in the region and developing strategies and practices for their better management. The need for integrated approaches to water management is being applied and accordingly, the capacity is built for the same. The European Union Pro-Asia project support for the Himalayan initiative through application of Asian Wetland Inventory approach and stakeholder led catchment management in adjoining countries is being implemented. The project focuses on four countries with the intention that the results and tools developed by the project can be utilized and adopted by the countries in the region through activities of the forum. Under the auspices of project of ICIMOD and Wetland International-South Asia are organizing a workshop on Integrated approach for high altitude wetlands and water management in Bhutan, India, Nepal and China in New Delhi during March, 2008. The broad aim of the workshop is to review existing policies for implementing integrated approach to wetlands, their wise use in water resource management, identify practices and tools which are most appropriate and assess deficiencies and gaps in technical practices for improving management of wetlands and water resources through provision of capacity building programmes.

India already has two high altitude wetlands as as Ramsar sites, Two Morari and Chandertal . Another wetland, viz. Pangong Tso, having boundary with China, is in process of designation as Ramsar site. There are six-seven sites in Sikkim which will be put up for designation as Ramsar sites in future in future.'

B): on any other aspects of Strategy 2.6 national implementation:



## GOAL 3. INTERNATIONAL COOPERATION

**STRATEGY 3.1** *Collaboration with other institutions: Work as partners with international and regional multilateral environmental agreements (MEAs) and other agencies.*

### Indicator questions:

|  |                    |
|--|--------------------|
| 3.1.1 Are mechanisms in place at the national level for collaboration between the Ramsar Administrative Authority and the focal points of other multilateral environmental agreements (MEAs)? {13.1.1} | A - Yes            |
| 3.1.2 Are the national focal points of other MEAs invited to participate in the National Ramsar/Wetland Committee? {r13.1.iii}   | A - Yes            |
| 3.1.3 [For African Contracting Parties only] Has the Contracting Party participated in the implementation of the wetland programme under NEPAD? {13.1.6}   | E - Not applicable |

### Additional implementation information:

A): on Indicators 3.1.1 – 3.1.3 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “3.1.3: [.. additional information ...]”

3.1.1 :MoEF is the nodal agency for implementation of Multi-lateral Environment Agreements. There is an effective mechanism to coordinate and supplement activities relating to CBD, CCD, CMS, World Heritage and UN Framework, Convention and climate change through joint work plans and collaborations.

3.1.2 :Focal points of MEA in the Ministry are invited to participate in the National Wetland Committee which provides an effective mechanism to coordinate with other Conventions and seek their cooperation to effectively develop the programs and avoid duplication.

B): on any other aspects of Strategy 3.1 national implementation:

**STRATEGY 3.2** *Sharing of expertise and information: Promote the sharing of expertise and information.*

### Indicator questions:

|  |         |
|--|---------|
| 3.2.1 Have networks, including twinning arrangements, been established, nationally or internationally, for knowledge sharing and training for wetlands that share common features? {14.1.3}<br>[If “Yes” or “Partly”, please indicate in Additional implementation information below the networks and wetlands involved] | A - Yes |
| 3.2.2 Has information about the country’s wetlands and/or Ramsar sites and their status been made publicly available (e.g., through publications or a Web site)? {14.1.1}  | A - Yes |

### Additional implementation information:

A): on Indicators 3.2.1-3.2.2

3.2.1 : The Ministry has taken several initiatives in this regard as per details given below.

(a) The Ministry has published several reports/documents on conservation and wise use of wetlands which include six monographs on Ramsar sites in collaboration with WWF-India and eco-tourism guidelines for Chilika lake.

(b) During the Tenth Five Year Plan, several training programmes have been conducted in collaboration with different academic organizations/research institutes/State Governments/international NGOs to impart training on various components of wetland conservation which include wise use, catchment area treatment, weed control, hydrological aspects, research methodology, preparation of management action plans and community participation. Training is imparted to policy makers, senior/middle level managers, organizations, stakeholders and others.

A National Training Programme for Integrated Water Resource Management and Wetland Conservation was organized during 7-11 August 2006 by Chilika development Authority with the financial support from Ministry of Environment and Forests. More training programmes are proposed to be organized at different regions of the country.

A series of regional workshops were organized in various parts of the country to make people aware of the importance of wetlands and integrate their traditional knowledge in the planning process'.

3.2.2 :[ A brochure on "Conservation of Wetlands in India : a profile (Approach & guidelines) was published on 2nd February, 2007 (World Wetland Day which is for the use of user agencies. This brochure has been put on Ministry of Environment and Forests' website : envfor@nic.in.

B): on any other aspects of Strategy 3.2 national implementation:

## GOAL 4. IMPLEMENTATION CAPACITY

**STRATEGY 4.1** *Local communities, indigenous people, and cultural values: Encourage active and informed participation of local communities and indigenous people, including women and youth, in the conservation and wise use of wetlands, including in relation to understanding the dynamics of cultural values.*

### Indicator questions:

|  |         |
|--|---------|
| 4.1.1 Has resource information been compiled on local communities' and indigenous people's participation in wetland management? {6.1.5}  | A - Yes |
| 4.1.2 Have traditional knowledge and management practices in relation to wetlands been documented and their application encouraged? {6.1.2}  | A - Yes |
| 4.1.3 Does the Contracting Party promote public participation in decision-making (with respect to wetlands), especially with local stakeholder involvement in the selection of new Ramsar sites and in Ramsar site management? {6.1.4}   | A - Yes |
| 4.1.4 Have educational and training activities been developed concerning cultural aspects of wetlands? {r6.1.vii}  | A - Yes |
| 4.1.5 Have cultural values of wetlands been included in the management planning of Ramsar sites and other wetlands? {r.6.1.vi}<br><small>[if "Yes" or "Partly", please indicate, if known, how many Ramsar sites and their names in Additional implementation information below]</small> | A - Yes |

### Additional implementation information:

A): on Indicators 4.1.1 – 4.1.5 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. "4.1.3: [.. additional information ...]"

4.1.1 : Successful models developed through elaborate consultation processes of stakeholders particularly local communities. Involvement of concerned State Government agencies, research institutions and NGOs is critical to the formulation and implementation of management plans, which would be, integrated with the overall sustainable development plans of the region.

Social and cultural factors are important components of the management action plans developed for priority wetlands, mangroves and coral reefs. Management action plan for Loktak and Chilika Lakes particularly have been developed through elaborate social processes. The overall objective is to restore ecological integrity of wetlands while providing sustain social and economic benefits. The successful models developed are being used in other identified priority wetlands.

Conservation and wise use of wetlands essentially involves management of water regimes at river basin level, conservation of biodiversity, and resource development for the sustainable livelihoods and benefits to the stakeholders. Coordinated actions at river basin level involving local communities and stakeholders in planning, implementation and decision making ensures sustained benefits from these ecosystems on a long term basis.

Almost all the restoration projects for the identified wetlands have a component on livelihood improvement. In case of Loktak and Chilika Lake consistent efforts have been made to link conservation programmes with the livelihood improvement of the communities with the ultimate objective of poverty reduction in these areas.

Community participation and development is one of the key components of all the management action plans formulated for the priority wetlands. A lot of emphasis has been laid on involvement of communities in restoration measures with the objective of sustainable resource development on livelihood improvements of the communities dependent on wetlands for their sustenance]”.

4.1.2 : Sunderbans, East Calcutta wetlands, Loktak and Chilika are some of the specific examples where lot of emphasis have been given on using traditional knowledge and management practices for livelihood improvements and improving the health of the ecosystems.

Needs and aspiration of local communities developed through elaborate social processes have been incorporated into the management plans developed by Loktak Development Authority and Chilika Development Authority particularly. The successful models developed are being applied to other wetlands.

Management planning for Loktak and Chilika Lakes in India have strong focus on developing action plans considering cultural sensitivity of the people. The people living in the catchments of Loktak have traditional rights for land and water resources and these have been legally retained and are enforced by the communities. The traditional practices of different tribal groups have been incorporated into land / water use management. These wetlands are considered as abode of gods and religious functions are organized every year to worship deities associated with these wetlands. This becomes a very strong argument to mobilize communities to conserve these wetlands. .

4.1.3 : Resource information on local communities has been elaborately compiled in case of Loktak and Chilika wetlands. The Atlas of Loktak provides a detailed assessment of community profile, community institutions, impacts of wetland degradation on communities, vulnerability context and participatory planning through involvement of local communities particularly economically disadvantaged groups and women. Mainstreaming of local wisdom has been collaboratively compiled in case of East Calcutta Wetlands through the lessons learned from waste water utilization for ecological and economic benefits through the application of the traditional knowledge of the local communities dependent on the East Calcutta Wetlands for their livelihoods. Chilika is another case study where information on participatory management planning through the involvement of local communities, NGOs, scientific organizations, planners and decision makers has been compiled.

The experiences of implementation of conservation and sustainable development of wetlands in case of Loktak and Chilika Lakes involving communities, stakeholders, government agencies, and others concerned departments have been widely disseminated at local, national and international levels through newsletters, brochures, posters, booklets and other resource materials as part of CEPA materials developed. This was quite significant as entire perspective of conservation and sustainable development was widely disseminated to generate awareness about the approach to achieve sustainable development among various target groups. The communication among the different target groups was quite pronounced as they learned the complex issues relating to conservation and sustainable development.]”.

4.1.4 :Capacity building of wetland functionaries, NGOs and local communities for conservation and wise use of wetlands and their resources in case of all Ramsar sites in India.

Activities :

- 1) Adopting innovative techniques for conservation and livelihood improvement of priority wetlands taking the examples of best use practices in different countries.
- 2) Capacity building of wetland managers and target community groups to sustainably use wetlands and their resources.

MoEF through national committee has reviewed the capacity building needs of institutions involved in wetland management. The Asian Wetland Symposium, organized a session on capacity building of wetland functionaries in Asia. This session was exclusively dedicated to developing mechanism to impart training to wetland managers. Chilika Development Authority has developed infrastructure to impart training to various target groups including policy planners, decision makers, communities, school children, youths and NGOs. This has been further promoted in collaboration with Wetlands International and funding agencies with the objective of providing training to the local, national and international level.

Education centers have been developed in number of wetlands of international importance. The focus in these wetlands has been on providing basic information on the wetlands using various interpretation mechanisms. However, these centers do not provide enough communication and awareness generation about the basic requirement to promote awareness about overall conservation and sustainable development activities intricately linked in a holistic manner and communication across various stakeholders.

CEPA has been promoted by Chilika Development Authority (CDA) in collaboration with stakeholders and communities living both with in islands and some shore land villages. CDA has developed basic infrastructure and necessary tools to generate awareness about conservation and wise use of wetlands for the stakeholders as well as imparting training at various levels involved in sustainable development of wetlands.

CEPA model has been also developed in case of Loktak Lake through long process of implementation of a project on Sustainable Development of Water Resources Management.

Some Ramsar sites have developed interpretation centres to facilitate providing basic awareness about the features of the wetlands problems and approaches needed for wetland conservation. These centers highlight the importance of these wetlands in regard to their biodiversity and resource potentials alongwith livelihood issues of communities associated with these wetlands. Awareness generation for biodiversity conservation is a high priority of the wetland centres established so far. The other objective of the wetland centres is to impart training to the students, youths and stakeholders for conservation and wise use of wetland. In some centres research and development activities are also carried out to supplement R&D inputs into management planning]”

“4.1.5 :[Most of the wetlands identified for conservation and management include wetlands of

cultural significance in addition to their social and economic values. However, economic valuation carried out for some of these wetlands have highlighted cultural importance of the identified wetlands. Specific programmes have been developed to promote appreciation and revitalization of cultural values.

Almost all wetlands in India have cultural importance as communities are intricately culturally linked with these wetlands in terms of their religious and other cultural values. Some of the wetlands such as Rudrasagar in Tripura and several wetlands in Rajasthan have tremendous archaeological importance in terms of archaeological structures constructed in the past by the rulers of these states. Moti Mahal in Rudrasagar, Jal Mahal in Pichola, and some other archaeological structures constructed within Chilika Lake are specific examples where concerned state governments are keen to conserve these sites considering their importance as cultural heritage sites.

In general guiding principles as per the resolution viii. 19 on cultural values of wetlands adopted by COP8 are very broad in nature and are incorporated directly or indirectly in the management plans formulated by the concerned state governments. Almost all priority wetlands are identified considering their socio-cultural sensitivity.

All the 25 wetlands designated as wetlands of international importance under Ramsar Convention by India have strong component on cultural values. Socio-cultural values have been taken into consideration while designating these sites under the Convention.]”

B): on any other aspects of Strategy 4.1 national implementation:

**STRATEGY 4.2** *Promote the involvement of the private sector in the conservation and wise use of wetlands.*

**Indicator questions:**

|  |         |
|--|---------|
| 4.2.1 Is the private sector encouraged to apply the wise use principle in activities and investments concerning wetlands? {7.1.1}  | A - Yes |
| 4.2.2 Have private-sector “Friends of Wetlands” fora or similar mechanisms been established? {7.1.4}<br>[If “Yes” or “Partly”, please indicate in Additional implementation information below the private sector companies involved] | B - No  |

**Additional implementation information:**

A): on Indicators 4.2.1 – 4.2.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “4.2.2: [.. additional information ...]”

“4.2.1 : Private sector is encouraged in following areas :

- 1) Promote conservation of mangroves for coastal defenses through innovative techniques.
- 2) Involvement of private sector in research and development of techniques for regeneration of mangroves and other coastal wetlands.
- 3) Help private sector to enhance their capacity for conservation and management of wetlands in floodplain areas

It is planned to involve private sector in the coastal management planning and development and provide them incentives for undertaking environmental friendly developmental activities. Chamber of Commerce has been invited by the Government to help regulation of trade activities relating to natural resources including wetlands.

The National Wetland Committee which advises government on policy planning and implementation of action plans for wetland conservation management include members drawn from academia, specialized institutions and some private organizations. Almost all the academia and specialized institutions are involved in planning and management of wetlands. As such they are directly and indirectly involved in decision making process related to wetlands.

Although there is not a formal mechanism involving forums of private sector but they are involved in promoting wetland conservation working closely with NGOs and concerned statutory bodies related to wetland conservation.

Some specific organisations such as Traffic India is involved in domestic and international trade in wetland derived plant and animal products. They are involved in legal issues relating to trade in the wetland products such as tiger, turtles, birds, etc. '

B): on any other aspects of Strategy 4.2 national implementation:

**STRATEGY 4.3** *Promote measures which encourage the application of the wise use principle.*

**Indicator questions:**

|   |         |
|---|---------|
| 4.3.1 Have actions been taken to promote incentive measures which encourage the conservation and wise use of wetlands? {8.1.1}      | A - Yes |
| 4.3.2 Have actions been taken to remove perverse incentive measures which discourage conservation and wise use of wetlands? {8.1.1} | B - No  |

**Additional implementation information:**

A): on Indicators 4.3.1 – 4.3.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “4.3.2: [.. additional information ...]”

4.3.1 : A project on Sustainable Development Water Resources and Management of Loktak Lake recently completed by Wetlands International and Loktak Development Authority through the support under India Canada Environmental Facility have brought out strategies for improving water management of lake and sustaining its resources for the benefit of the local communities on long term basis. The ultimate purpose of the project was to provide livelihood security to the local communities while ensuring conservation of the Loktak Lake through managing effective water regimes. The project has developed some initiatives for utilization of phumdis and sustainable fisheries development with the overall objective of improving livelihoods through effective water resources management and value additions to the natural products.

Environmental flow assessment in regard to construction of Naraj barrage in the upstream of Chilika Lake involving all concerned stakeholders, particularly local communities was carried out by Wetlands International, Chilika Development Authority and a consultant from World Bank. The scenario approach developed based on wide ranging consultations and hydrological assessment for allocation of water would provide paradigm shift from the current water use practices to sustainable water resources development policy considering ecological and human uses. The study is being further pursued to clarify and define the barrage operation policy to ensure optimum water release from the barrage to the Chilika Lake and silt laden water to the floodplain area in Mahanadi delta.

Wetlands International in collaboration with Loktak Development Authority has developed operation policy for Ithai barrage for water allocation for ecological purposes (wildlife, fisheries and vegetation) and human uses particularly hydro-power generation and irrigation. The intervention to be carried out has been proposed in the management action plan recently formulated by Wetlands International to the support received from Planning Commission, Government of India.'

B): on any other aspects of Strategy 4.3 national implementation:

**STRATEGY 4.4** Support, and assist in implementing at all levels, the Convention's Communication, Education, and Public Awareness Programme (Resolution VIII.31) for promoting the conservation and wise use of wetlands through public participation and communication, education, and public awareness (CEPA).

**Indicator questions:**

|  |                |
|--|----------------|
| <p>4.4.1 Has a mechanism for planning and implementing wetland CEPA (National Ramsar/Wetland Committee or other mechanism) been established with both CEPA Government and NGO National Focal Point (NFP) involvement? {r9.iii.ii}</p> <p>[If "Yes" or "Partly", please describe in Additional implementation information below the mechanism]</p>                                      | <p>A - Yes</p> |
| <p>4.4.2 Has a National Action Plan (or plans at the subnational, catchment or local level) for wetland CEPA been developed? {r.9.iii.iii}</p> <p>[Even if a National Action Plan has not yet been developed, if broad CEPA objectives for national CEPA actions have been established please indicate this in the Additional implementation information section for Strategy 4.4]</p> | <p>A - Yes</p> |
| <p>4.4.3 Have actions been taken to communicate and share information cross-sectorally on wetland issues amongst relevant ministries, departments and agencies? {r9.iii.v}</p>   | <p>A - Yes</p> |



|  |                |
|--|----------------|
| <p>4.4.4 Have national campaigns, programmes, and projects been carried out to raise community awareness of the ecosystem benefits/services provided by wetlands? {r9.vi.i}</p> <p>[If:<br/> a) support has been provided for the delivery of these and other CEPA activities by other organisations; and/or<br/> b) these have included awareness-raising for social, economic and/or cultural values,<br/> please indicate this in the Additional implementation information section for Strategy 4.4 below]</p> | <p>A - Yes</p> |
| <p>4.4.5 Have World Wetlands Day activities in the country, either government and NGO-led or both, been carried out? {r9.vi.ii}</p>  | <p>A - Yes</p> |
| <p>4.4.6 Have education centres been established at Ramsar sites and other wetlands? {r9.viii.i}</p> <p>[If any such centres are part of the Wetland Link International (WLI) Programme of the Wildfowl &amp; Wetland Trust, UK, please indicate this in the Additional implementation information section for Strategy 4.4 below]</p>   | <p>A - Yes</p> |

**Additional implementation information:**

A): on Indicators 4.4.1 – 4.4.6 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “4.4.3: [.. additional information ...]”

4.4.1 : The management action plans developed for all the Ramsar sites have a focus on CEPA to generate awareness about the values and functions of wetlands. The activities includes also disseminating awareness about the successful models developed in case of some wetlands such as Chilika and Loktak Lakes. It is planned to promote CEPA initiatives to all the priority wetlands in the country. Planning Commission which is a Central Planning body in a country has been involved to promote sustainable management integrating various sectors such as agriculture, water and industries. Mainstreaming of wetlands into developmental planning has been promoted involving decision makers, policy planners and concerned developmental planners.

“4.4.2 : [The NGO focal point was invited to all meetings organized by National Focal Point to develop strategies for promotion of CEPA and developing an effective mechanism to generate awareness among various stakeholders, local communities and others concerned.

“4.4.3 : [A review of the CEPA programmes has been undertaken through a consultation process in various workshops organized by MoEF in different regions of India. The information and successful models developed have been widely disseminated through newsletters, brochures and other material. This has been an effective mechanism to promote CEPA concept among wetland managers involving conservation and sustainable development of wetland of national / international importance in India.

4.4.4 : CEPA process has been successfully demonstrated in case of Loktak Lake. Loktak Development Authority and Wetlands International developed the initiative to promote overall concept of sustainable development involving stakeholders, local communities, including youth, students, development planners, research organizations and NGOs. The successful model developed has also been applied in case of Chilika wetland.

4.4.5 : World Wetlands Day is observed throughout the country to generate awareness about values, functions of wetlands and their importance for ecological and livelihood security of the people living in the different parts of the country.

The national level celebrations of the World Wetlands Day, 2008 (WWD-2008) were held at Fatehpur, near Pong Dam in Himachal Pradesh which is one of the identified wetlands under the National Wetlands Conservation Programme and also a 'Ramsar site'. The celebrations were inaugurated by Shri Namo Narain Meena, Hon'ble Minister of State (Environment), Ministry of Environment and Forests. A brochure entitled "Protect wetlands of Himachal Pradesh" with messages from various dignitaries, was also released on this day.

4.4.6 : Education centers have been established in a number of Ramsar sites which include Chilika in Orissa, Bhoj in Madhya Pradesh, Keoladeo National Park in Rajasthan and Harike in Punjab. These interpretation Centres are involved in training in capacity building for various target groups which include school/college/University students, teachers and other community people living around the wetlands.

B): on any other aspects of Strategy 4.4 national implementation:

**STRATEGY 4.5** *Promote international assistance to support the conservation and wise use of wetlands, while ensuring that environmental safeguards and assessments are an integral component of all development projects that affect wetlands, including foreign and domestic investments.*

**Indicator questions:**

|  |                |
|--|----------------|
| <p>4.5.1 [For Contracting Parties with development assistance agencies only] Has funding support been provided from the development assistance agency for wetland conservation and management in other countries? {15.1.1}<br/>[If “Yes” or “Some countries”, please indicate in Additional implementation the countries supported since COP9]</p>                               | <p>B - No</p>  |
| <p>4.5.2 [For Contracting Parties in receipt of development assistance only] Has funding support been mobilized from development assistance agencies specifically for in-country wetland conservation and management? {15.1.8}<br/>[If “Yes” or “Some countries”, please indicate in Additional implementation the agencies from which support has been received since COP9]</p> | <p>A - Yes</p> |

**Additional implementation information:**

A): on Indicators 4.5.1 – 4.5.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “4.5.2: [.. additional information ...]”

4.5.2 :100% financial assistance is given for conservation & management of identified wetlands and R&D activities under Wetland Conservation Programme. So far, an amount of Rs. 69 crore has been released to the State Govts. for conservation and management of identified wetlands in the country and R&D activities.

B): on any other aspects of Strategy 4.5 national implementation:

**STRATEGY 4.6** *Provide the financial resources required for the Convention’s governance, mechanisms and programmes to achieve the expectations of the Conference of the Contracting Parties.*

**Indicator questions:**

|  |               |
|--|---------------|
| <p>4.6.1 {16.1.1}<br/>a) For the last triennium have Ramsar contributions been paid in full and in a timely manner (by 31 March of calendar year)?</p> | <p>B - No</p> |
| <p>b) If “No” in 4.6.1 a), please clarify what plan is in place to ensure future prompt payment:</p>   |               |

|   |        |
|---|--------|
| 4.6.2 {16.1.2}  | B - No |
| a) Has any additional financial support been provided through voluntary contributions to the Ramsar Small Grants Fund or other non-core funded Convention activity? |        |
| b) If yes, please state the amounts:  |        |
|   |        |

**Additional implementation information:**

A): on Indicators 4.6.1 – 4.6.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “4.6.2: [.. additional information ...]”

B): on any other aspects of Strategy 4.6 national implementation:

**STRATEGY 4.7** *Ensure that the Conference of the Contracting Parties, Standing Committee, Scientific and Technical Review Panel, and Ramsar Secretariat are operating at a high level of efficiency and effectiveness to support implementation of this Framework.*

**Indicator questions:**

|   |         |
|---|---------|
| 4.7.1 Has the Contracting Party used its previous Ramsar National Reports in monitoring its implementation of the Convention?<br>[If “Yes” or “Partly”, please indicate in Additional implementation information how the Reports have been used for monitoring] | A - Yes |
|---|---------|

**Additional implementation information:**

A): on Indicator 4.7.1

Previous National Reports alongwith Ramsar guidelines on various themes made through STRP are used for implementation of the Convention. These guidelines are used taking into consideration local specific functions.'

B): on any other aspects of Strategy 4.7 national implementation:

**STRATEGY 4.8** *Develop the capacity within, and promote cooperation among, institutions in Contracting Parties to achieve conservation and wise use of wetlands.*

**Indicator questions:**

|   |            |
|---|------------|
| 4.8.1 Has a review of national institutions responsible for the conservation and wise use of wetlands been completed? {18.1.1}<br>[If “Yes” or “Partly”, please indicate in Additional implementation information if this has led to proposals for, or implemenation of, any changes in institutional responsibilities] | C - Partly |
|---|------------|

|   |                |
|---|----------------|
| <p>4.8.2 Is a National Ramsar/Wetlands cross-sectoral Committee (or equivalent body) in place and operational? {18.1.2}</p> <p>[If “Yes”, please summarise in Additional implementation information its membership and frequency of meetings]</p> | <p>A - Yes</p> |
|---|----------------|

**Additional implementation information:**

A): on Indicators 4.8.1 – 4.8.2 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “4.8.2: [.. additional information ...]”

4.8.1 :Recognizing the value of Wetlands and taking cognizance of the fact that there does not yet exist a formal system of Wetland Regulation, the National Environment Policy (NEP), 2006 as approved by the Cabinet in May 2006 seeks to set up a legally enforceable regulatory mechanism for identified valuable Wetlands to prevent their degradation and enhance their conservation. It also undertakes to develop an inventory of such Wetlands. In pursuance of the policy resolution a Multi Disciplinary Expert Group has held a series of meetings to formulate a regulatory framework for the Wetlands. The Expert Group has prepared its recommendations on the Categories of Wetlands for Regulation, Process and Procedure for Identification, Composition of Regulatory Authority, Functions of the Authority, and Activities to be Regulated. A draft notification has been prepared which after approval from Minister of State (Environment) will be put on Ministry’s website for sixty days, for seeking comments of State Governments/experts/individuals. After incorporating the inputs, the draft notification will be sent to Ministry of Law and justification for notification under Environment (Protection) Act, 1986.

Evaluation of conservation activities under five wetlands of national importance (viz. Pong dam (H.P.), Harike (Punjab), Deepar Beel (Assam), Chilika (Orissa) and Tso Morari (J&K)) has been entrusted to Wildlife Institute of India, Dehradun, which has submitted evaluation report.

4.8.2 : Only for transboundary sites in the country, discussions are being held in small committees having heads of concerned State Governments, for implementation of Ramsar strategic goals which are mutually agreeable to all the State Governments and thereafter, individual activities are supported from MoEF for execution of joint Management Action plan on mutually agreed terms. 100 % grant is given for the conservation activities.

B): on any other aspects of Strategy 4.8 national implementation:

**STRATEGY 4.9** *Maximize the benefits of working with the Convention’s International Organization Partners (IOPs\*) and others.*

**Indicator question:**

|  |                |
|--|----------------|
| <p>4.9.1 Has your country received assistance from one or more of the Convention’s IOPs* in its implementation of the Convention?</p> <p>[If “Yes”, please provide in Additional implementation information the name(s) of the IOP(s) and the type of assistance provided]</p> | <p>A - Yes</p> |
| <p>4.9.2 Has your country provided assistance to one or more of the Convention’s IOPs*?</p> <p>[If “Yes”, please provide in Additional implementation information the name(s) of the IOP(s) and the type of assistance provided]</p>   | <p>A - Yes</p> |

\* The IOPs are: BirdLife International, International Water Management Institute (IWMI), Wetlands International, The World Conservation Union (IUCN), and WWF International.

**Additional implementation information:**

A): on Indicators 4.9.1-4.9.2

4.9.1 : Wetland International-South Asia (WISA) and WWF-India are involved in number of activities in implementation of Convention. They are also represented in our National Wetland Committee. We receive assistance from WISA in terms of preparation of Management Action plans for a number of wetlands like Kolleru in Andhra Pradesh, East Kolkotta in W. Bengal, Wullar in Jammu & Kashmir and Rudersagar in Tripura. Designation of wetlands as Ramsar sites is being carried out in collaboration with WWF-India.

4.9.2 : India is a member of Wetland International and is paying annual membership every year to their main office, amounting to 10,000 Euros, at present.

B): on any other aspects of Strategy 4.9 national implementation:

**STRATEGY 4.10** *Identify the training needs of institutions and individuals concerned with the conservation and wise use of wetlands, particularly in developing countries and countries in transition, and implement appropriate responses.*

**Indicator questions:**

|   |                |
|---|----------------|
| <p>4.10.1 Has your country provided support to, or participated in, the development of regional (i.e., covering more than one country) wetland training and research centres?<br/>[If “Yes”, please indicate in Additional implementation information the name(s) of the centre(s)]</p> | <p>A - Yes</p> |
| <p>4.10.2 Has an assessment of national and local training needs for the implementation of the Convention, including in the use of the Wise Use Handbooks, been made? {20.1.2}</p>  | <p>A - Yes</p> |
| <p>4.10.3 Have opportunities for wetland site manager training in the country been provided? {20.1.6}</p>   | <p>A - Yes</p> |

**Additional implementation information:**

A): on Indicators 4.10.1 – 4.10.3 For each piece of additional information text, please clearly identify to which indicator number it refers – e.g. “4.10.3: [.. additional information ...]”

4.10.1 : Ministry of Environment & Forests provides support for several capacity building programmes at National/regional/district levels. Number of such programmes have been conducted in the country in collaboration with different academic organizations/research institutes/State Governments/international NGOs to impart training on various components of wetland conservation which include wise use, catchment area treatment, weed control, hydrological aspects, research methodology, preparation of management action plans and community participation. A National Training Programme for Integrated Water Resource Management and Wetland Conservation was organized during 7-11 August 2006 by Chilika development Authority with the financial support from Ministry of Environment and Forests. More programmes of capacity building are proposed to be organized in different regions of the country to make people aware of the importance of wetlands and integrate their traditional knowledge in the planning process

4.10.2 : Recommendations emerging out of various workshops and training programmes have been compiled for use of user agencies.

4.10.3 : Training is imparted to policy makers, senior/middle level wetland managers, organizations, stakeholders and others.

B): on any other aspects of Strategy 4.10 national implementation: