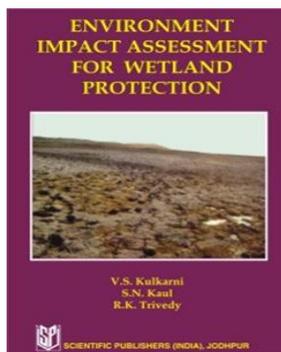


## Environment Impact Assessment for Wetland Protection



**R.K. Trivedy, S.N. Kaul & V.S. Kulkarni**

ISBN	: 9788172332938	Book Format	: Book
Language	: English	Binding	: Hard Bound
Imprint	: Scientific Publishers	Edition	: 1
Pages	: 142	© Year	: 2002
Weight	: 320 Gms	Trim Size	: 5.75 x 8.75

**Print Book** : ₹1,200.00 ~~₹1,080.00~~ **10%Off**

### Blurb

Wetlands are transitional areas between aquatic and terrestrial ecosystems where the water table is usually at or near the surface, or the land is covered by shallow water. Wetlands are among the most productive life support systems in the world and are of immense socio-economic and ecological importance to mankind. In India wetlands are distributed in different geographical regions. Wetlands play critical role in the improvement of water quality through the arrest of pollutants (organic inorganic) from direct release to the natural water bodies and by removal of sediments, production of oxygen, recycling of nutrients, and treatment of wastewater by removing nitrogen, phosphorus, bacteria and viruses. The wetlands act as habitat for fish shellfish, and for birds, mammals, reptiles amphibians, many of which are of economic value in terms of subsistence and commercial fishing, hunting and trapping. Non-consumptive uses of the wetlands, viz. bird watching, recreation, aesthetics, educational activities, and scientific research are also well recognized. Population pressures in the past few decades led to rapid utilization of natural resources for land based development. In this process wetlands were treated with contempt. Ignoring their importance, wetlands were considered obstacles in the path of progress and reservoirs of diseases. Wetlands were hence drained, filled and reclaimed for more economic gains. The rivers were dammed, regulated and channellized leading to modification or elimination of floodplains. This led to a considerable alteration of wetland habitats and the composition of associated flora and fauna. A select list of activities that affected wetlands is presented in Table - 1. In the recent past importance of wetlands has been realized by the policy makers worldover and efforts are being made to protect the wetlands from further deterioration and loss. Environmental Impact Assessment (EIA) is potentially one of the most valuable, inter-disciplinary and objective decision-making tools with respect to alternate routes for development, process technologies and project sites. It is an anticipatory mechanism which establishes quantitative values for parameters indicating the quality of the environment and natural systems before, during and after the proposed developmental activity, thus allowing measures ensuring environmental compatibility and economic efficacy. EIA is designed to present a clear and concise picture of all benefits and costs associated with alternative courses of action, and thus provides a mechanism for merging concerns for ecology and economics in the process of decision-making. In many cases developmental activities adversely affect wetland benefits which are of value to communities and natural processes. EIA can provide very useful information on how wetlands will be affected by the proposed developmental activities to ensure effective management of wetlands. EIA can help planners make rational decisions about resource allocation and ensure that the wetland benefits required for sustainable development are maintained. The objective of this manual is to assist project proponents, conservation activists and decision makers to identify the wetland benefits present at a particular site as also benefits which are likely to be adversely affected by a particular project activity. This would enable assessing the extent and cost of the management plan required to mitigate these impacts. With the backdrop of international conventions for wetland protection and initiatives of the Ministry of Environment and Forests, Government of India, manual delineates step by step procedure for EIA of developmental activities affecting wetland benefits. Worksheets that could enable preparation of case studies are included in the manual. Four casestudies prepared by the institutions that participated in the March 1995 workshop organized by the British Council, at Calcutta, have been included in the manual.

### Table of Contents

#### 1. LITERATURE REVIEW

1.1. Evolution of EIA World-wide, 1.2. Evolution of EIA in India, 1.3. Classification of Environmental Impacts, 1.4. Project Screening/ Methodology for screening of Projects/ Project screening criteria in India, 1.5. Methodology for Site Selection, 1.6. EIA Methodologies/ Introduction / Review of EIA Methodologies / Checklists / Matrices / Networks / Overlays/ Adaptive Environmental Assessment and Management (AEAM)/ Cost-Benefit Analysis (CBA), 1.7. Computer Aided EIA, 1.8. Impact Quantification techniques, 1.9. Methamatical Model for EIA/ Concept/ Air Quality Models/ Water Quality Models/ Noise Prediction Models, 1.10. Indicators of Biological and Socio-economic Environment, 1.11. Environmental Indices, 1.12. Enlarged Scope of EIA of Industrial Projects, 1.13. Conclusions

#### 2. DEFINITION AND CLASSIFICATION OF WETLANDS

2.1. Definition, 2.2 Classification of Wetlands

#### 3. BENEFITS OF WETLANDS

#### 4. REVIEW OF WETLAND MANAGEMENT FRAMEWORKS

4.1. International Treaties for Wetland Management, 4.2. Regional Initiatives for Wetland Management, 4.3. Status of Wetland Management Programme in India, 4.4. Wetland Area Legislation , 4.5. Wetland Area Administration

#### 5. INDICATORS FOR WETLAND ASSESSMENT

5.1. Indicators of Wetland Benefits, 5.2. Indicators for Assessment of Wetland Ecosystem,

#### 6. ENVIRONMENTAL IMPACT ASSESSMENT

6.1. Concept of EIA, 6.2. Evolution of EIA World-wide, 6.3. Evolution of EIA in India, 6.4. Hierarchy in EIA, 6.5. Major Issue in EIA, 6.6. Classification of Environmental Impacts, 6.7. Project Screening, 6.8. Site selection criteria, 6.9. EIA Methodologies

#### 7. EIA FOR PROTECTION OF WETLANDS

7.1. Impacts of Developmental Activities on Wetlands, 7.2. Steps in EIA/ Impact Identification/ Scoping of Studies/ Field Data Collection/ Impact Prediction / Impact Evaluation/ Impact Mitigation / Post Project Monitoring / Public Participation in EIA

#### WORKSHEETS

No. 1 Identification of wetlands in the study area

No. 2 Identification of Project activities likely to affect wetlands  
No. 3 Identification of potential benefits of wetlands  
No. 4 Data on wetland indicators  
No. 5 Matrix for impact assessment of project activities on wetland benefits 98  
No. 6 Cost of Mitigation  
CASE STUDY 1. - EIA of Industrial & Municipal Wastewater Discharges Wetlands Calcutta Trust Area  
CASE STUDY 2. - Keoladeo National Park (Bharatpur, India) - An Ecosystem Study  
CASE STUDY 3. - Environmental Impact Assessment of Sundarbans - A Case study  
CASE STUDY 4. - EIA of Bhitarkanika Wildlife Sanctuary World-wide Fund for Nature, India.

This is computer generated document and does not require signature

Scientific Publishers

Date :- Thu Mar 04 2021