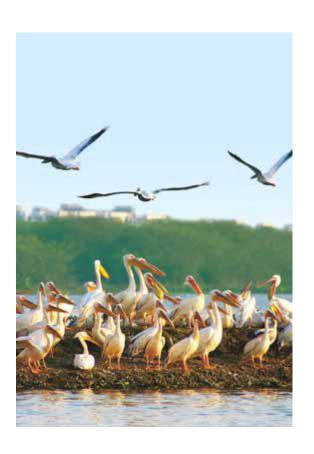
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Guidelines for Preparation of Brief Document to facilitate implementation of the Wetlands (Conservation and Management) Rules, 2010





National River Conservation Directorate Ministry of Environment, Forest & Climate Change Government of India January, 2017

Website: http://nrcd.nic.in/

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Introduction

- 1. Wetlands are areas covered with water permanently or seasonally. They are amongst the most productive ecosystems on the earth. Water is life, and wetlands are life support systems that ensure functioning of water cycle. Wetlands store water, reduce flooding, improve water quality, recharge aquifers, maintain shorelines, and prevent soil erosion. They support a very rich aquatic bio-diversity, and serve as prime habitats for numerous aquatic and amphibious plant and animal species. For migratory water birds, wetlands provide critical feeding, resting and breeding sites. Wetlands are important for fisheries, food and medicinal plants and a major source of livelihoods. They act as important carbon sink, nutrient transformer and repository of rich genetic material. Wetlands are also important attributes of our cultural heritage and deeply connected with societal beliefs and practices.
- 2. India is a signatory to the Ramsar Convention on Wetlands. The Convention has a broad approach for defining wetlands as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six metres. Article 2.1 of the Ramsar Convention provides that wetlands 'may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands'. The definition thus covers a large number of inland wetlands (such as swamps, marshes, lakes and peatlands); coastal and near shore marine wetlands (such as coral reefs, mangroves, seagrass beds and estuaries) and man—made wetlands (such as reservoirs, salt pans, irrigation channels and fish ponds).
- 3. The Space Application Centre of Indian Space Research Organization, under the National Wetland Inventory and Assessment Project supported by the Central Government has prepared state wise Atlas of wetlands at 1: 50,000 scale using remote sensing imageries of 2006-07. Wetland inventories have also been published by Wetlands International and WWF-India.
- 4. The measures taken up by the Central Government and State Governments/UT Administrations to promote conservation and their integrated management have been effective to a very limited extent in preventing water pollution, degradation and loss of wetlands. Wetlands have been drained, reclaimed and encroached upon widely. Most of the wetlands that remain today suffer from siltation, mining, altered hydrological regime, infestation by noxious aquatic invasive species, discharge of untreated sewage and industrial effluents, dumping of solid waste, hazardous waste and excessive harvesting of living resources. The loss of wetlands endangers water, food and climate security.
- 5. The Central Government notified the Wetlands (Conservation and Management) Rules, 2010, hereinafter referred to the Wetlands Rules as a significant step to conserve, manage and to maintain the ecological character of the wetlands, without curtailing and restricting the legitimate and wise use of these ecosystems.

Purpose and Scope

- 6. The Wetlands Rules require the State Governments/UT Administrations to prepare a wetland inventory within their jurisdiction and identify/prioritize wetlands for notification by the Central Government (specified in rule 3).
- 7. Further, the State Governments UT Administrations are required to submit a brief document, for each of the identified/prioritized wetlands, with the following information, namely (specified in rule 6):-
 - (i) broad geographic delineation of the wetland;
 - (ii) its zone of influence along with a map (accurate and to scale);
 - (iii)the size of wetland;
 - (iv)account of pre-existing rights and privileges, consistent or not consistent with the ecological health of the wetland.
- 8. The present guidelines have been framed to assist the State Governments/UT Administrations in the preparation of brief document for wetlands. Any natural or man-made wetland can be proposed for notification under the Wetlands Rules. Proposals for notification would, however, not be considered for the following:
 - (i) river channels;
 - (ii) paddy fields;
 - (iii)coastal wetlands within the purview of Coastal Regulation Zone 2011;
 - (iv) wetlands with permanent agriculture in Rabi and Kharif seasons;
 - (v) waterlogged areas created due to fragmentation of hydrological regimes within last three decades, and which do not possess any significant biodiversity or ecosystem service value; and
 - (vi)ash ponds of a thermal power plant, equalization tank, polishing pond as part of effluent treatment plant, sewage treatment plant or, water treatment plant.

Wetland Inventory

- 9. States/UTs are required to prepare a detailed inventory by consolidating the available information from existing inventories, official records and other resources together with ground truthing. It may also be helpful to consider the list of wetlands studied and described by various agencies. The States/UTs may seek the assistance of State Remote Sensing Agencies and local experts for preparing such wetland inventory expeditiously. It is recommended to classify each of these wetlands into two broad categories, inland and coastal. Each of these categories can be further sub-divided into 'natural' and 'human made'.
- 10. The State Governments/UT Administrations may submit a list of wetlands for notification under Wetlands Rules. Identification of such wetlands should be done with due consideration of their area (if specifically listed under category (iv) or (v) under rule 3) and the benefits provided in the form of:
 - a. food as fish and aquatic plants;
 - b. source of water for human use, animal use, agricultural (private/public) purpose or, industrial;

- c. moderation of water regimes for flood control and groundwater recharge;
- d. as a buffer for storms and cyclones;
- e. stabilization of coastlines;
- f. recreation;
- g. cultural or religious or tourism significance, etc.

Consideration of the value of wetlands as habitat for diverse plant and animal species, particularly those of high conservation significance (rare, endangered, endemic and threatened species) must also be included while prioritizing wetlands. Wetlands supporting large congregation of migratory water birds or fish may also be considered for notification under the Wetlands Rules.

11. Wetlands located within the protected area system of the country receive inherent protection under the provisions of the extant regulatory regimes for forests, wildlife and biodiversity. States/UTs may therefore identify wetlands beyond the Protected Area system, as well so as to ensure that the Wetlands Rules provide the regulatory architecture for a wider expanse of wetlands. Similarly, customary and traditional uses of wetlands have mostly been in line with 'wise use' principles of wetland management, and should not be curtailed on account of application of regulatory regimes. For regulating 'Idol Immersion' in wetlands, the Guidelines brought out by Central Pollution Control Board (CPCB) vide *Programme Objective Series: PROBES/136/2010* shall be followed. The same are available on CPCB website at http://cpcb.nic.in/upload/NewItems/NewItem_159_Guideline_for_Idol_Imersion.pdf

Preparation of brief document

- 12. A brief document and Check List in respect of each wetland to be notified is required to be prepared as per format prescribed in **Annex I and Annex II**, respectively.
- 13. The name and contact details of the person(s) compiling the brief documents must be provided since, CWRA may be required to seek additional information or, clarification on sections of the proposal.
- 14. Guidance on geographic delineation of wetland, zone of influence of wetland and preparing an account of pre-existing rights & privileges (private and public category) are also provided. The State Governments may seek assistance of State Remote Sensing Agencies for preparation and ground truthing of maps.
- 15. Best available information may be used to fill in the various sections of the brief document. The State Government agency / department entrusted with the task of preparing the said document may refer to published papers, technical reports, as well seek expert support and conduct rapid community consultations for collating the required information. Records of Botanical Survey of India, Zoological Survey of India, and other expert agencies (as Wildlife Institute of India, Salim Ali Center for Ornithology, Bombay Natural History Society, Wetlands International, World Wide Fund of Nature, International Union for Conservation of Nature) may also be accessed. The State Governments may also access information related to land use from revenue records. The known list of plant and animal species may be screened for highlighting species of high conservation significance (eg. species which are endemic, rare,

endangered or threated). Resources as IUCN Red List of Threatened Species (available at: http://www.iucnredlist.org/), National Biodiversity Authority (http://www.nbaindia.org/), FishBase (available at: http://www.fishbase.org/search.php), and Birdlife's World Bird Database (http://datazone.birdlife.org/species/search) can be used for this purpose.

(i) Delineating wetland boundary

- 16. Water creates wetlands. The biological composition of wetlands, from fish to migrating waterbirds, depend on the ways water moves within the wetlands. The amplitude and frequency of water level fluctuations are probably the most important factors affecting composition and functioning of wetlands. Hydrological regimes may therefore be used as the primary delineation characteristics for wetland boundary.
- 17. Wetland boundary can be derived using maximum area under inundation or saturation of soil near the surface during a normal *monsoon* year.
- 18. Special attention must be given to hydrological and ecological connectivity while delineating wetlands. Where the wetland proposed to be notified bears significant surface or subsurface hydrological connectivity with other wetlands in the vicinity, these may be delineated as a wetland complex by including all such connected ecosystems. Similarly, when a wetland dependent species shares several wetlands as habitat, these may be delineated as a complex.

(ii) Delineating zone of influence

- 19. The Wetlands Rules recommend delineation of a zone of influence. The zone of influence of a wetland is an area, in which developmental activities are likely to induce adverse changes in wetland structure and functioning. It is, therefore, important to align developmental planning within the zone of influence with wetland biodiversity and ecosystem services.
- 20. For wetlands with a well-defined surface drainage, its direct drainage basin should be delineated as the zone of influence. Inflows as well as outflows should be included within the zone of influence, as alteration in any of these can lead to adverse changes in wetland status. The zone of influence may be demarcated using a suitable digital elevation model data.
- 21. For wetlands with diffused drainage and where slope is too gentle, rendering large basin areas, the zone of influence can be delineated on the basis of features that are likely to adversely influence wetland functioning. These could be based on the outer periphery of adjoining settlements, or peripheral agricultural fields which drain directly into the wetland.
- 22. For each of the wetlands proposed to be notified under Wetlands Rules, a map must be submitted indicating clearly:
 - a) wetland boundary;
 - b) the Zone of influence;
 - c) latitude and longitude for each of the corners;
 - d) boundaries of settlements (villages / towns / cities);

- e) connecting drainages, inflows and outflows;
- f) distance to nearest highway (National/State), railway line (if any); and
- g) nearest bus stand, railway station and airport.

For wetlands above 500 ha, maps may be preferably prepared at 1:25,000 or, lower scale. For smaller wetlands, a scale of 1: 10,000 or, lower is recommended.

23. The map may be drawn on the Bhuvan – the Indian Geo-Platform of Indian Space Research Organization (available at: http://bhuvan.nrsc.gov.in/bhuvan_links.php).

(iii) Listing traditional rights and privileges

- 24. Each wetland is likely to be associated with a range of pre-existing rights and privileges, and it must be ensured that such rights and privileges are aligned with natural ecological functioning of these ecosystems. Privilege is defined here as a special entitlement granted to restricted group or persons, on a conditional basis and can be revoked. Rights on the other hand may be irrevocable and inherently held by human being. Thus, fish lease granted in certain wetlands by the Department of Fisheries can be considered as a privilege. Privilege can also be customary and traditional (for example, use of traditional fishing techniques, buffalo wallowing, elephant bathing, source of drinking water for bovines, etc.). Parking a house boat against a lease, right to clean environment are examples of rights. However, resource so generated should be used to conserve the wetland.
- 25. For assessing the consequence of a pre-existing right or privilege on a wetland, it may be important to consider their implication on ecosystem components, processes and services. Thus privilege of fishing granted along a migratory route can lead to adverse change in fish stocks or disposal of untreated sewage by houseboat in a wetland are thereby not aligned with ecosystem health. On the other hand, in many cases, subsistence level harvest of macrophytes may actually help in keeping species invasion in check, and therefore aligned with ecosystem health.
- 26. Ecological health of wetlands will be adversely impacted by the following activities, which have been listed as being prohibited under the provisions of the Wetlands Rules (specified in sub rule 4 (1)):
 - a. reclamation of wetlands (converting any area inside wetland for a non-wetland use);
 - b. setting up of new industries or expansion of existing industries;
 - c. manufacture, handling, storage or disposal of hazardous substances (except in port areas);
 - d. solid waste or biomedical waste or hazardous waste dumping (any prevailing activities to be phased out);
 - e. discharge of untreated sewage and effluents from industries, cities or towns and human settlements (any prevailing activities to be phased out); and,
 - f. any construction of a permanent nature (except for boat jetties) within 50 metres from the mean high flood level mark in the past 10 years.

- 27. Certain activities need to be regulated to ensure that they do not lead to an adverse impact on wetlands. The Rules therefore mandate prior approval of the concerned State Government for the following (specified in sub rule 4(2)):
 - a. withdrawal of water or the impoundment, diversion or interruption of water sources within the local catchment area of the wetland ecosystem;
 - b. harvesting of living and non-living resources;
 - c. grazing to the level that the basic nature and character of the biotic community is not adversely affected;
 - d. treated effluent discharges from industries, cities or towns, human settlements and agricultural fields falling within the limits laid down by the Central Pollution Control Board or the State Pollution Control Board or the Union Territory Pollution Control Committee, as the case may be;
 - e. Plying of motorized boat, if it is not detrimental to the nature and character of the biotic community;
 - f. Dredging, only if the wetland is impacted by siltation;
 - g. construction of boat jetties;
 - h. activities within the zone of influence, as per the definition of wetlands, that may directly affect the ecological character of the wetland;
 - i. facilities required for temporary use, such as as pontoon bridges, that do not affect the ecological character of the wetland;
 - j. aquaculture, agriculture and horticulture activities within the wetland; and,
 - k. repair of existing buildings or infrastructure including reconstruction activities.
- 28. The list of activities to be prohibited and regulated as listed in Para 27 and 28 should be strictly followed. Any other activities likely to have an adverse impact on the ecosystem of the wetland can be subject to prohibition or regulation, if identified by the CWRA.
- 29. A list of wetlands to be notified (with summarised information) may be provided as per the format in **Annex. III**.

FORMAT FOR BRIEF DOCUMENT ON WETLAND PROPSOED TO BE NOTIFIED UNDER WETLANDS (CONSERVATION AND MANAGEMENT) RULES, 2010

SECTION 1: IDENTIFICATION, LOCATION AND JURISDICTION

parenthesis after offici	nd (Alternate names, including in local language should be given in al name)
Name of the Village(s) and Tehsil(s)
Name of the District(s	
State / Union Territory	<i>7</i> :
• •	ates (Latitude and Longitude, to degree, minutes and second)
Longitude: From	to
Name of the State Go	overnment/UT Administration Department/Agency which has jurisdiction
Area of wetland (ha) Wetland type (Please t	tick appropriate category and sub-category)
Category	Subcategory
■Natural (Inland)	☐Permanent lakes ☐Seasonal/ intermittent lakes
	Permanent streams/ creeks
	Seasonal/ intermittentstreams/ creeks
	□Oxbow □River floodplain
	Permanent freshwater marshes
	☐Seasonal/ intermittent freshwater marshes
	☐ Shrub-dominated wetlands

		☐ Tree-dominated w ☐ Geothermal wetla ☐ Karst and other su		systems		
	□Natural (Coastal) □Coastal lagoon □Estuary □ Intertidal mud, sand or salt flats □Mangroves □Coral reefs					
	☐Human-made	☐ Aquaculture pond ☐Tank ☐ Saltpan ☐Dam / Reservoir				
2.3	Depth (m): Average _	Maximum	Highest ever re	ecorded		
2.4	Elevation (above mean	n sea level)	m			
2.5	Water regimes					
a)	Main source of water	(tick all applicable)				
	□Others, please speci	froundwater		rect inflow from river		
b)	Water permanence:	Mostly permanent	stly intermittent			
c)	Destination of water fr	rom wetland				
	☐Feeds groundwater	☐To downstream catc	hment	□To sea		
d)	Water pH: (absolute v □ (< 5.5) □ (alue:) $5.5 - 7.4$ \square (> 7.4)	□Not known			
e)	Water salinity Fresh (< 0.5 g/l) (>40g/l) Not known	□ Brackish (0.5 – 30 g/l))	□ Euhaline (30- 40 g/l)	□Hypersaline		
f)	Nutrients in water Eutrophic	□Mesotrophic	Oligotrophic	□Not known		
	Probable source of Nu	trients: surface runoff/ sew	age/ industrial effluent			
2.6	Climatic setting					
	a) Annual Rainfall /Sr	nowfall(mm)		_		

	b) Temperature (°C)	Minimum	Maximum	
	c) Humidity (%)	Minimum	Maximum	
2.7	Area of zone of influence (in ha)		
2.8	Major land use within zone	of influence (provide a	as approximate % of cat	chment area)
	Forests	%; Grass	land/Shrubland	%
	Agriculture _	%; Settle	ments (Rural)	%
	Settlements (Urban)	%; Indust	rial	%
2.9	Map of wetland and its zon ha and for wetlands $\geq 500 \text{ h}$	·	scale/1: 10,000 or low	er for wetlands < 500
	(To be enclosed as Annex I	to this proposal)		
SEC	TION 3: BIODIVERSITY			
3.1	List of plant species present	in wetland		
3.2	List of animal species preser	nt in wetland		
3.3	Species of conservation sig	nificance (rare, endange	ered, threatened, endem	ic species)
3.4	Major plant invasive alien s	species and extent of inv	vasion	
3.5	Major animal invasive alier	n species and extent of i	nvasion	

SECTION 4: ECOSYSTEM SERVICES

Importance	Relevant for the site (please tick yes or no)	If Yes, Details (upto 50 words for each category)
Source of drinking water for people living and around	□Yes □No	

Source of water for agriculture	□Yes	□No	
Fisheries	□Yes	□No	
Cultivation of aquatic food plants	□Yes	□No	
Medicinal plants	□Yes	□No	
Is a recreational site	□Yes	□No	
Buffering communities from extreme events as floods and storms	□Yes	□No	
Groundwater recharge	□Yes	□No	
Water purification	□Yes	□No	
Acts as a sink for sediments	□Yes	□No	
Has significant cultural and religious values	□Yes	□No	
Is a site for recreation and aquatic sport	□Yes	□No	
Source/cultivation noteworthy food plants species	□Yes	□No	
Habitat for noteworthy animal species	□Yes	□No	
Habitat for migratory water birds.	□Yes	□No	
Supports fisheries /aquaculture	□Yes	□No	
Mining	□Yes	□No	
Any other, please list			
		·	

SECTION 5: PRE-EXISTING RIGHTS AND PRIVILEGES

Nature of right and privilege	Relevant for the site (please tick yes or no)	Does this negatively impact the wetland's ecological health?	Brief description (upto 50 words for each category)
Community Fishing (without any lease or permission from government department)	□Yes □No	☐Yes ☐No ☐Not assessed	
Fishing under lease from government department	□Yes □No	☐Yes ☐No ☐Not assessed	
Harvest of plants (without any	□Yes □No	□Yes □No	

lease or permission from government department)			□Not assessed
Harvest of plants under lease from government department	□Yes	□No	□Yes □No
Agriculture or horticulture within wetland	□Yes	□No	□Not assessed □Yes □No
Grazing	□Yes	□No	□Not assessed □Yes □No
Grazing	L Tes	□N0	
D.1:	— x z		□Not assessed
Religious practices	□Yes	□No	□Yes □No
			□Not assessed
Withdrawal of water for domestic use	□Yes	□No	□Yes □No
domestic use			□Not assessed
Withdrawal of water for	□Yes	□No	□Yes □No
agriculture or fisheries			□Not assessed
Bathing or wallowing of	□Yes	□No	□Yes □No
domestic animals (buffalo,			
elephant etc.)			□Not assessed
Drinking water for bovines	□Yes	□No	□Yes □No
			□Not assessed
Plying of boats	□Yes	□No	□Yes □No
			□Not assessed
Any other, please list here	□Yes	□No	□Yes □No
			□Not assessed

SECTION 6: PRESENT AND POTENTIAL THREATS

Threat	Degree	Present or Potential	Additional information, if any
Changes in water inflow and outflow	☐High ☐Medium ☐Low	□Present □Potential	
Pollution (sewage/solid waste disposal etc.)	□High □Medium □Low	□Present □Potential	
Unsustainable harvest of biological resources	☐High ☐Medium ☐Low	□Present □Potential	
Mining	□High □Medium □Low	□Present □Potential	
Siltation/Idol immersion	☐High ☐Medium ☐Low	□Present □Potential	

Estimated rate of siltation				
Encroachment	□High □Medium □Low	□Present □Potential		
Spread of invasive species	☐High ☐Medium ☐Low	□ Present □ Potential		
Any other, please list	□High □Medium □Low	□ Present □ Potential		
SECTION 7: NOTIFICATION	ON CATEGORY			
☐Included in Ramsar List	t			
☐Included under Nationa	l Wetland Conservation Prog	gramme		
☐Wetland is located in ec	cologically sensitive and imp	ortant areas		
☐Wetland is located with	in a UNESCO World Herita	ge Site		
■Wetland is located in re	ligious/cultural site			
☐ High altitude wetland or	r wetland complex with area	≥ 5 ha		
☐Below an elevation of 2	,500 m above sea level and l	having area ≥ 50	00 ha	
Others				
SECTION 8: ACTIVITIES PROPOSED TO BE PROHIBITED UNDER WETLANDS (CONSERVATION AND MANAGEMENT) RULES, 2010				
Activity	Place a tick mark, i	if relevant	Additional information, if any	
Reclamation / filling up				
Setting up of new industri expansion of existing indu				

Setting up of new industries / expansion of existing industries		
Handling or storage / disposal of hazardous substances (except port areas)		
Solid Waste Dumping	0	
Sink for untreated sewage/industrial effluent		
Construction activities (except boat jetties)		

Any other places list		
Any other, please list		
SECTION 9: ACTIVITIES PROPOSED TO BE REGUL	ATED LINDED	Weti ands (Conseduation and
MANAGEMENT) RULES, 2010	ATED UNDER	WEILANDS (CONSERVATION AND
THE COMMENT OF THE PROPERTY OF		
Activity	Place a tick	Additional information, if any
	mark if	
XXIII 1 1 C	relevant	
Withdrawal of water / impoundment/diversion or any other hydrological intervention		
Harvesting of resources (living / non-living)		
That vesting of resources (fiving / non-fiving)		
Grazing		
-		
Discharge of treated sewage/ effluent / wastewater		
Construction of boot intring and facilities for		
Construction of boat jetties, and facilities for temporary use, as pantoon bridges		
Aquaculture, agriculture and horticulture activities		
within the wetland boundaries.		
Any other, please list		
SECTION 10: LISTING OF AVAILABLE SCIENTIF	IC RESOURCE	S REPORTS PERTAINING TO TH
WETLAND	ie Resource	S, REPORTS PERIAMMO TO THE

FORMAT FOR CHECK LIST

Name	of Wetland:									
	Responsible agency clearly identified and details of contact person included									
	Wetland boundary delineated using GIS and firmed up by adequate ground truthing									
	Wetland map provided at required scale (1: 10,000 scale for all high altitude wetlands, and 1: $25,000$ for wetlands ≥ 500 ha)									
	Wetland zone of influence delineated and included in wetland map or a separate map									
	Wetland zone of influence sufficient to manage all activities									
	Site's importance listed, and for major categories, justification provided									
	Site's biodiversity values listed, and for major categories, justification provided									
	List of existing rights and privileges provided									
0	Consistency or, inconsistency of existing rights and privileges indicated to be best of available knowledge									
	Threats to site listed, and for major categories details provided									
	List of activities to be prohibited is provided									
	List of activities to be regulated is provided									
Date: Place:	Name: Designation: Postal Address: Tel. No.: Mobile: Fax: Email:									

Format for List of Wetlands for Notification under Wetlands (Conservation and Management) Rules, 2010

Annex. III

Sr. No.	Name of the Wetland	District(s)	Wetland area (in ha)	Wetland	Category (as]	Noteworthy biodiversity value	Noteworthy benefit to the society				
				3 (i) Ramsar Site	3 (ii) Located in ecologically sensitive area	3 (iii) Recognized as or lying within UNESCO World Heritage Site	3 (iv) High altitude wetlands or wetland complexes with area ≥ 5 ha	3 (v) Wetlands or wetland complexes below 2,500 a msl with area ≥ 500 ha	3 (vi) Any other	(refer para 9 of the guidance)	
1.											
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											
11.											
12.											
13.											
14.											
15.											