

Annex 2: Format for preparing Brief Document

State / Union Territory: Goa

Name and address of person(s) compiling this information CSIR- NIO & GSWA

Section 1: Identification, Location and Jurisdiction

1.1 Name of the Wetland complex (Alternative names, including in local language should be given in parenthesis after official name)

Kolamwadalake (कोलमवाडातळे)

1.2 Name of the Village(s) , Municipal area(s)

Village Karapur, Bicholim Taluka

1.3 Name of the District(s) in which wetland is located

North Goa

1.4 Geographical coordinates (Latitude and Longitude, to degree, minutes and second)

Latitude: From to

Longitude: From to

1.5 Name of the Department/Agency which has jurisdiction over the wetland

Karapur- Sarvan Village panchayat

Section 2: Site Characteristics

2.1 Area of wetland (ha): 0.78 ha

2.2 Wetland type (Please tick appropriate categories and sub-categories)

Category	Subcategory
✓ Natural (Inland)	<input type="checkbox"/> Permanent lakes ✓ Seasonal/intermittent lakes <input type="checkbox"/> Permanent streams/creeks <input type="checkbox"/> Seasonal/ intermittent streams/creeks <input type="checkbox"/> Oxbow <input type="checkbox"/> River floodplain <input type="checkbox"/> Permanent freshwater marshes <input type="checkbox"/> Seasonal/ intermittent freshwater marshes <input type="checkbox"/> Shrub-dominated wetlands <input type="checkbox"/> Tree-dominated wetlands <input type="checkbox"/> Geothermal wetlands <input type="checkbox"/> Karst and other subterranean hydrological systems

<input type="checkbox"/> Natural(Coastal)	<input type="checkbox"/> Coastallagoon <input type="checkbox"/> Estuary <input type="checkbox"/> Intertidal mud, sand or saltflats <input type="checkbox"/> Mangroves <input type="checkbox"/> Coralreefs
<input type="checkbox"/> Human-made	<input type="checkbox"/> Aquaculturepond <input type="checkbox"/> Tank <input type="checkbox"/> Saltpan <input type="checkbox"/> Dam /Reservoir

2.3 Depth (m) Maximum 1m

2.4 Elevation(m above mean sea level) m

2.5 Water regimes

a) Main source of water (tick all applicable)

Rainfall Groundwater Catchment runoff Direct / indirect inflow from river

Others please specify _____

b) Water permanence

Mostly permanent Mostly intermittent

c) Destination of water from wetland

Feeds groundwater To downstream catchment To river To sea

d) Water pH

Acid (<5.5) Circumneutral (5.5–7.4) Alkaline (>7.4)

Not known

e) Water salinity

Fresh (<0.5g/l) Brackish (0.5–30g/l) Euhaline (30- 40g/l)

Hypersaline (>40g/l) Not known

f) Nutrient in water

Eutrophic Mesotrophic Oligotrophic

Not known

2.6 Climatic setting

- a) Annual Rainfall(mm) 2918mm
- b) Temperature(°C)Minimum 20°C Maximum 33°C
- c) Humidity(%) Minimum 67% Maximum 84%

- 2.7 Area of zone of influence(inha) 2.38 ha[Ref.paras32-34of the guidelines onwetlands]
 2.8 Major land use within zone of influence (provide as approximate % of catchment area)

Forests/vegetation	<u>100 %</u>
Plantation	<u>0 %</u>
Agriculture	<u>0 %</u>
Settlements (Rural)	<u>0 %</u>
Settlements (Urban)	<u>0 %</u>
Industrial	<u>0 %</u>

(Detailed LULC of influence zone and 50m buffer is given in Table-I below)

- 2.9 Map of wetland complex and zone of influence

(Enclosed as Annexure I –V and VI &VII with
 site photographs to this Document)

2.10 Section 3: Biodiversity

- 3.1 Notable plant species present inwetland

Artocarpus (Breadfruit), *Musa sp.* (Banana), *Cocosnucifera* (Coconut), *Mussaendafrondosa* (Dhobi tree),
Clerodendrum sp., *Colocasiasp.*, (Taro), *Nymphaaalba* (Water lily), *Cassia tora*(Taikilo),
Myriophyllumaquaticum(Parrot feather)

- 3.2 Notable animal species present inwetland

Crocodyluspalustris(Mugger crocodile), *Pavocristatus*(Peacock), tortoise, *Botaurinae*
 (Bittern), *Egretta garzetta* (Little egret), *Bubulcus ibis*(Cattle egret), *Microcarboniger* (Little
 cormorant), *Alcedoatthis* (Small blue kingfisher), *Ardeolagrayii*(Pond heron), *Actitishypoleucos*(Common
 sandpiper), *Hirundosmithii* (Wire tailed swallow)

3.3 Species of conservation significance (rare, endangered, threatened, endemic species)
Crocodylus palustris (Mugger crocodile), *Pavocristatus* (Peacock) tortoise, Maybe identified from validated PBR

3.4 Major plant invasive alien species

3.5 Major animal invasive alien species

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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Source of water for agriculture	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water is used to cultivate paddy fields
Fisheries	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Small scale fishing is done by locals using net, hook and line methods
Cultivation of aquatic food plants	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
For buffalo wallowing and use of domesticated animals	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local people use the water for buffalo wallowing
Medicinal plants	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is a recreational site	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Locals come to the lake for fishing and relaxing
Buffering communities from extreme events as floods and storms	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Acts as a large reservoir for runoff water protecting the surrounding from possible flooding
Groundwater recharge	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	At certain level, standing water remains throughout the year.
Water purification	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Natural purification of the water takes place as the water body continuously receives percolated water.
Acts as a sink for sediments	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Has significant cultural and religious values	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Ganapativisarjan takes place in the water body
Is a site for recreation and tourism	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Locals visit the lake to relax
Supports noteworthy plants species	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>Artocarpus, Musa sp, Cocosnucifera Mussaendafrondosa, Nymphaea alba</i>
Supports noteworthy animal species	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>Crocodyluspalustris, Tortoise, Pavocristatus</i>
Site of high congregation of migratory water birds	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Supports life cycle of fish or amphibians	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fishes like Tamsho, Mori, Chankul are found in the lake
Mining	<input type="checkbox"/> Yes <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	
Fishing under lease from government department	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	
Harvest of plants (without any lease or permission from government department)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	
Harvest of plants under lease from government department	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	
Agriculture or horticulture within wetland	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	
Grazing	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	Water body area is used for grazing
Religious practices	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	Ganapativisarjan is done by the village people in the water body
Withdrawal of water for domestic use	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	
Withdrawal of water for agriculture or fisheries	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	Water is used for paddy cultivation
Bathing or wallowing of domestic animals	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	Water body used for wallowing of buffalo.
Plying of boats	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Notassessed	
Any other, please list here	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Notassessed	

Section 6: Present and Potential Threats

Threat	Degree	Present or Potential	Additional information, if any
Changes in water inflow and outflow	<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<input type="checkbox"/> Present <input type="checkbox"/> Potential	
Pollution	<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<input type="checkbox"/> Present <input type="checkbox"/> Potential	
Unsustainable harvest of biological resources	<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<input type="checkbox"/> Present <input type="checkbox"/> Potential	
Mining	<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<input type="checkbox"/> Present <input type="checkbox"/> Potential	
Siltation	<input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<input checked="" type="checkbox"/> Present <input type="checkbox"/> Potential	Desilting is required
Encroachment	<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<input type="checkbox"/> Present <input type="checkbox"/> Potential	
Spread of invasive species	<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<input type="checkbox"/> Present <input type="checkbox"/> Potential	
Any other, please list	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<input type="checkbox"/> Present <input type="checkbox"/> Potential	

Section 7: Activities Proposed to be Prohibited (other than those listed in Rule 4(2) of Wetland Rules and Regulated

Activity	Whether prohibited or regulated	Regulation within wetlands or zone of influence	If regulated, indicate the level of regulation (in terms of people, restricted area or any other)	Name of department / agency responsible for regulation / prohibition	Additional information, if any
Withdrawal of water / impoundment/diversion or any other hydrological intervention	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence		Water Resource Department	
Harvesting of resources (living / non-living)	<input checked="" type="checkbox"/> Regulated <input type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence		Water Resource Department	Only traditional activities to continue.
Grazing	<input checked="" type="checkbox"/> Regulated <input type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input checked="" type="checkbox"/> Zone of influence	Low	State Forest Department	
Discharge of treated sewage/ effluent / wastewater	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input checked="" type="checkbox"/> Zone of influence		State Public Works Department	Statutory national and state legislation applicable

Construction of boat jetties, and facilities for temporary use ,as pontoon bridges	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence		State Public Works Department	Statutory approval required for new activities within the wetland boundaries and buffer
Aquaculture, agriculture and horticulture activities within the wetland boundaries.	<input checked="" type="checkbox"/> Regulated <input type="checkbox"/> Prohibited	<input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Zone of influence	Mid	Fishery, Agriculture & Horticulture Department	Traditional activities may continue
Encroachment	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence		Panchayat, Revenue department and mamlatdar	Statutory national and state legislation applicable
Poaching	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence		Forest department	Statutory national and state legislation applicable
Any other, please list 1. Construction/ development activities (for all purposes)	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence		Pollution control board, Deputy collector	Statutory national and state legislation applicable
2. Extraction of soil, mud, rocks for commercial purpose	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence		Panchayat	Statutory national and state legislation applicable
3. Disposal of solid waste/untreated sewage	<input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited	<input checked="" type="checkbox"/> Wetland <input checked="" type="checkbox"/> Zone of influence		Panchayat	Statutory national and state legislation applicable

Section 8: Activities Proposed to be permitted

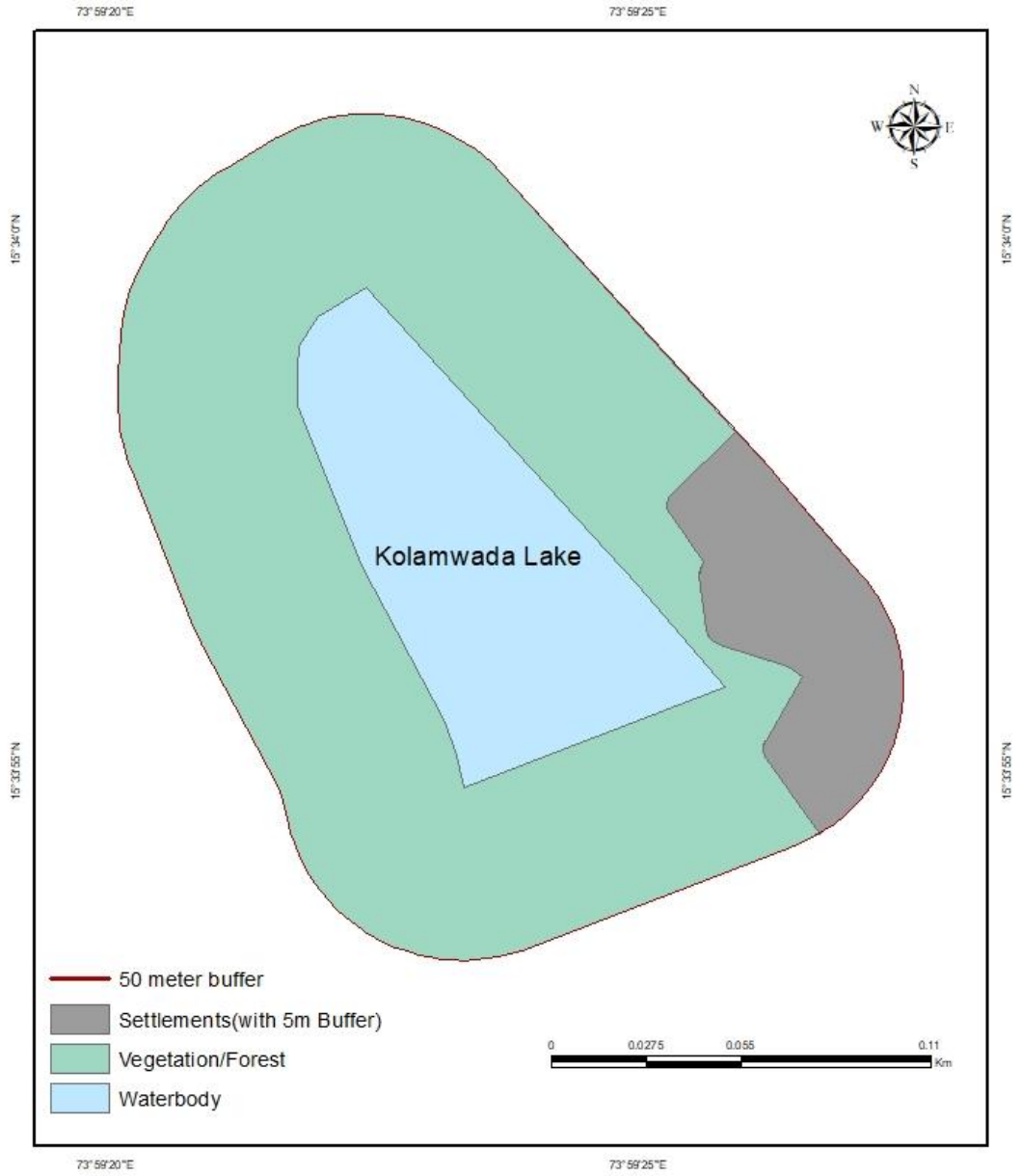
Activity	Place a tick mark if relevant	Within wetlands or zone of influence	Additional information, if any
Traditional Agriculture/ Paddy cultivation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Wetland <input checked="" type="checkbox"/> Zone of influence	Traditional activities may continue
Traditional fishery	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence	Traditional activities may continue
Traditional Religious activities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence	Traditional activities may continue

Section 9: Listing of Available Scientific Resources Used

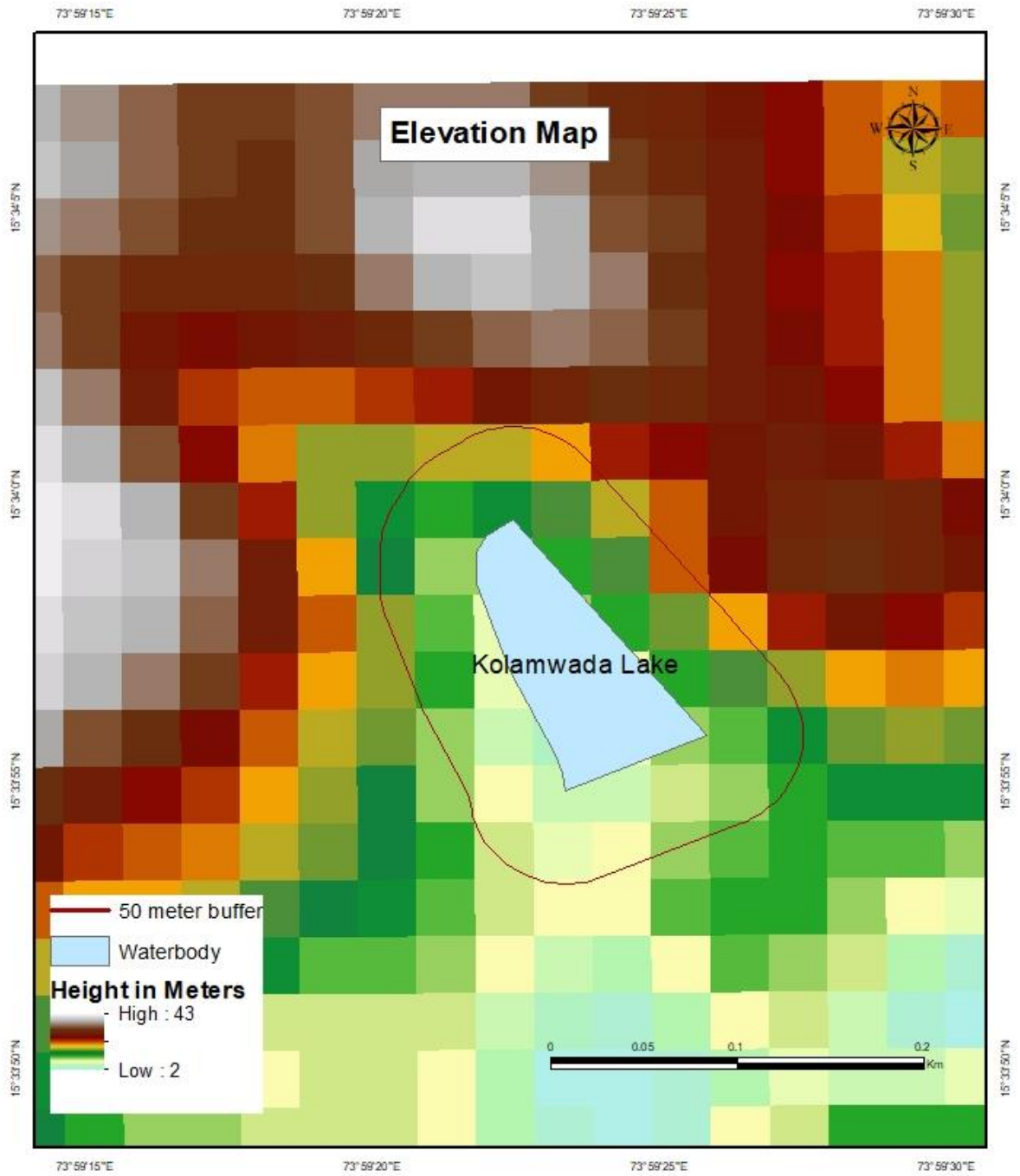
Table-I: Area table of LULC of Kolamwada Lake

Kolamwada Lake			
Sl:No:	LULC	50 meter Buffer	
		Area(Hec)	Percentage Area
1	Vegetation	2.38	100
Total Area		2.38	100

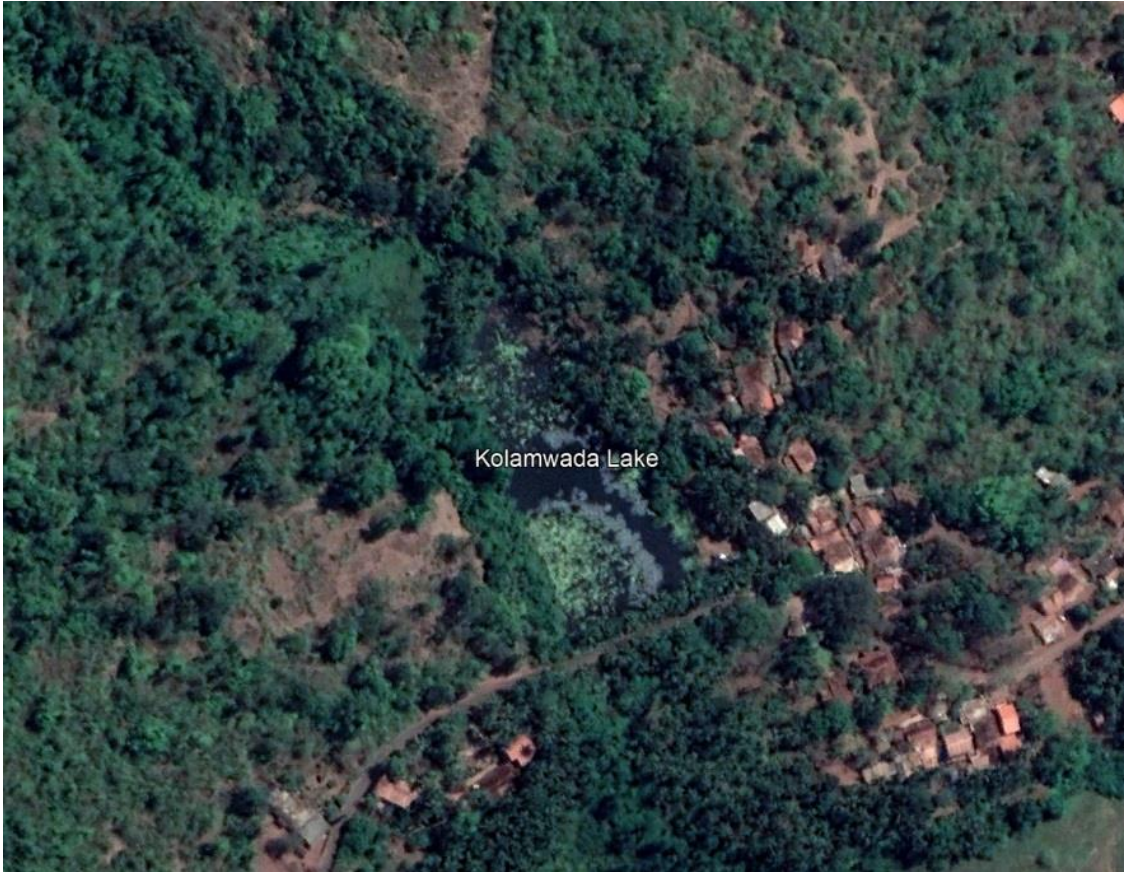
Annexure-I: 50m buffer zone of Kolamwada Lake



Annexure-II: Elevation (DEM) map of Kolamwada Lake



Annexure-III: Google image of Kolamwada Lake



Annexure-IV: Site Photographs of Kolamwada Lake



Annexure-V: Diversity of Kolamwada Lake

