

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 (Alternative names, including in local language should be given in parenthesis after official name)

Parra Lake (पररा तळे)

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

Parra Village, Bardez 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 15°34'00.5" N to 15°33'58.00" N

Longitude: From 73°46'39.70"E to 73°46'41.09"E

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

Village Panchayat Parra

Section 2: Site Characteristics

2.1 Area of wetland (ha): 0.2 ha

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

| Category | Subcategory |
|---|--|
| <input checked="" type="checkbox"/> Natural(Inland) | <input checked="" type="checkbox"/> Permanent lakes <input type="checkbox"/> Seasonal/intermittent lakes <input type="checkbox"/> Permanent streams/creeks <input type="checkbox"/> Seasonal/ intermittent streams/creeks <input type="checkbox"/> Oxbow <input type="checkbox"/> River flood plain <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"/> Coastal lagoon <input type="checkbox"/> Estuary <input type="checkbox"/> Intertidal mud, sand or salt flats <input type="checkbox"/> Mangroves <input type="checkbox"/> Coral reefs |
| <input type="checkbox"/> Human-made | <input type="checkbox"/> Aquaculture pond <input type="checkbox"/> Tank <input type="checkbox"/> Saltpan <input type="checkbox"/> Dam /Reservoir |

2.3 Depth (m) Maximum 2.1

2.4 Elevation(m above mean sea level) 7 m

2.5 Water regimes

a) Main source of water (tick all applicable)

Rainfall Groundwater Catchment run off 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) Circum neutral (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(in ha) 1.4 ha [Ref. paras 32-34 of the guidelines on wetlands]

2.8 Major land use within zone of influence (provide as approximate % of catchment area)

| | |
|---------------------|----------------|
| Forests/vegetation | <u>50</u> % |
| Plantation | <u>0</u> % |
| Agriculture | <u>35.71</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 with site photographs to this document)

Section 3: Biodiversity

3.1 Notable plant species present in wetland

Hydrilla verticillata,

3.2 Notable animal species present in wetland

Pseudosphromenous cupanus (spike-tailed paradise fish)

3.3 Species of conservation significance (rare, endangered, threatened, endemic species)

Maybe identified from validated PBR

3.4 Major plant invasive alien species

Hydrilla sp.

3.5 Major animal invasive alien species

None

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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Fisheries | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| 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 | Used by local cattle for wallowing |
| Medicinal plants | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Is a recreational site | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Buffering communities from extreme events as floods and storms | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Groundwater recharge | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Water stored in the lake helps replenish ground water levels |
| Water purification | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Water gets purified as it percolates through the soil. |
| Acts as a sink for sediments | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Provides de-silting, settling of silt from rainwater runoff |
| Has significant cultural and religious values | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Is a site for recreation and tourism | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Supports noteworthy plants species | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <i>Hydrilla</i> sp. |
| Supports noteworthy animal species | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Site of high congregation of migratory water birds | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Migratory birds visit the lake during winter months |
| Supports life cycle of fish or amphibians | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | The lake supports life cycle of fish and frogs eg. <i>Pseudosphromenous cupanus</i> |
| Mining | <input type="checkbox"/> Yes <input checked="" 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"/> Not assessed | |
| 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"/> Not assessed | |
| 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"/> Not assessed | |
| 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"/> Not assessed | |
| 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"/> Not assessed | |
| Grazing | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not assessed | |
| Religious practices | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not assessed | |
| 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"/> Not assessed | |
| Withdrawal of water for agriculture or fisheries | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not assessed | |
| Bathing or wallowing of domestic animals | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not assessed | |
| Plying of boats | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not assessed | |
| Any other, please list here | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not assessed | |

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 checked="" type="checkbox"/> Potential | |
| Pollution | <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low | <input checked="" 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 checked="" type="checkbox"/> Potential | |
| Mining | <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low | <input type="checkbox"/> Present <input checked="" type="checkbox"/> Potential | |
| Siltation | <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low | <input type="checkbox"/> Present <input type="checkbox"/> Potential | |
| Encroachment | <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low | <input type="checkbox"/> Present <input checked="" type="checkbox"/> Potential | |
| Spread of invasive species | <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | <input checked="" type="checkbox"/> Present <input type="checkbox"/> Potential | Water body covered by <i>hydrilla</i> sp.. |
| 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 | | Village Panchayat/ Water Resource Department (WRD) | Statutory approval required |
| Harvesting of resources (living / non-living) | <input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited | <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence | | Agriculture Department | Statutory approval required |
| Grazing | <input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited | <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence | | Animal husbandry | |

| | | | | | |
|---|--|---|--------|------------------------------------|---|
| Discharge of treated sewage/ effluent / wastewater | <input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited | <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence | | Goa waste management corporation | 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 | Medium | Agriculture and fishery 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 | | Village panchayat | 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. Disposal of solid waste/untreated sewage | <input type="checkbox"/> Regulated <input checked="" type="checkbox"/> Prohibited | <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Zone of influence | | Village Panchayat | Statutory national and state legislation applicable. |
| 2. 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 | | Village Panchayat | Statutory national and state legislation applicable. |
| 3. 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 | | Village Panchayat | Statutory national and state legislation applicable. |

Section 8: Activities Proposed to be permitted

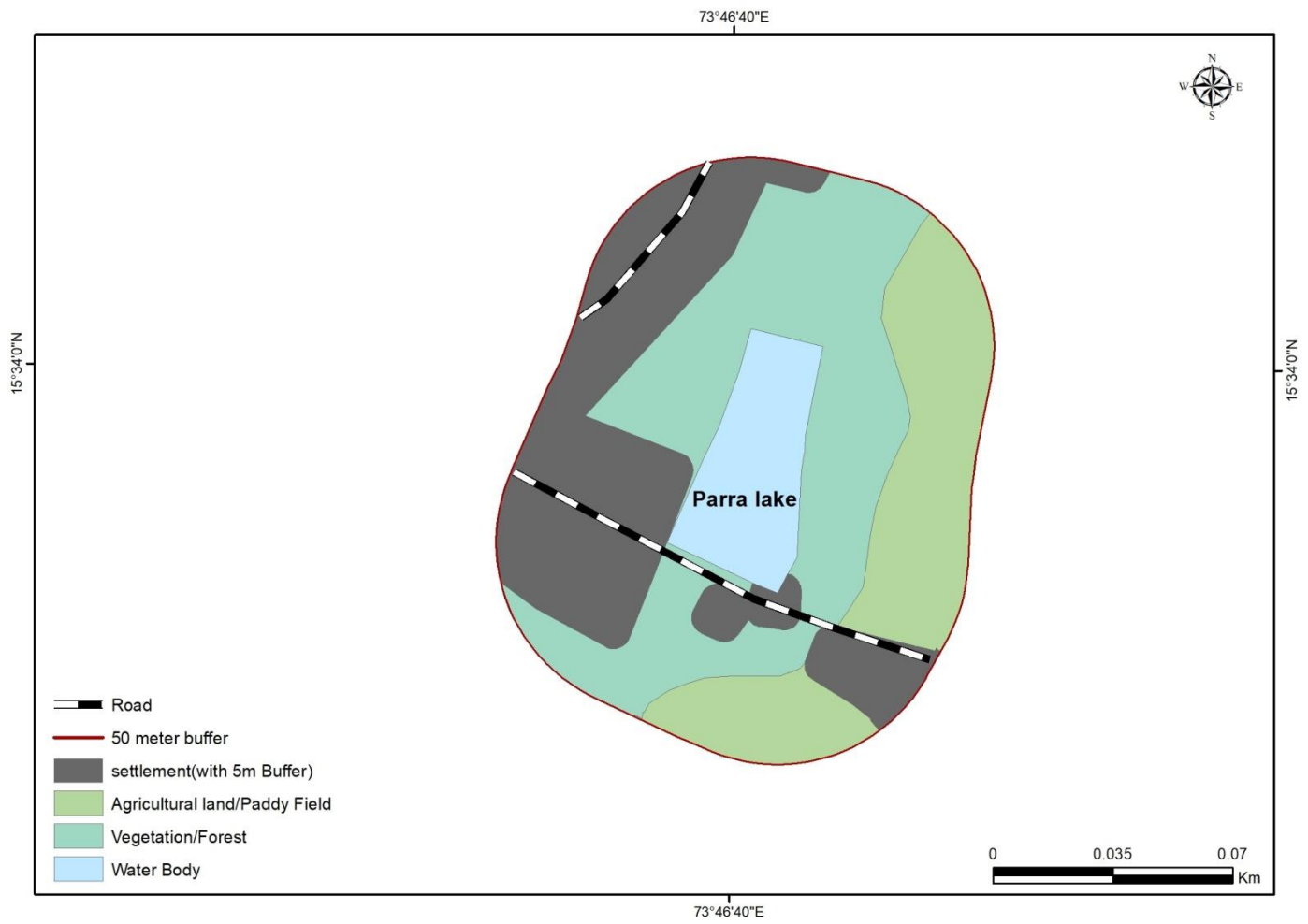
| Activity | Place a tick mark if relevant | Within wetlands or zone of influence | Additional information, if any |
|---|-------------------------------|---|--------------------------------|
| Traditional Agriculture/ Paddy cultivation | ✓ | <input type="checkbox"/> Wetland <input checked="" type="checkbox"/>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

Section 9: Listing of Available Scientific Resources Used

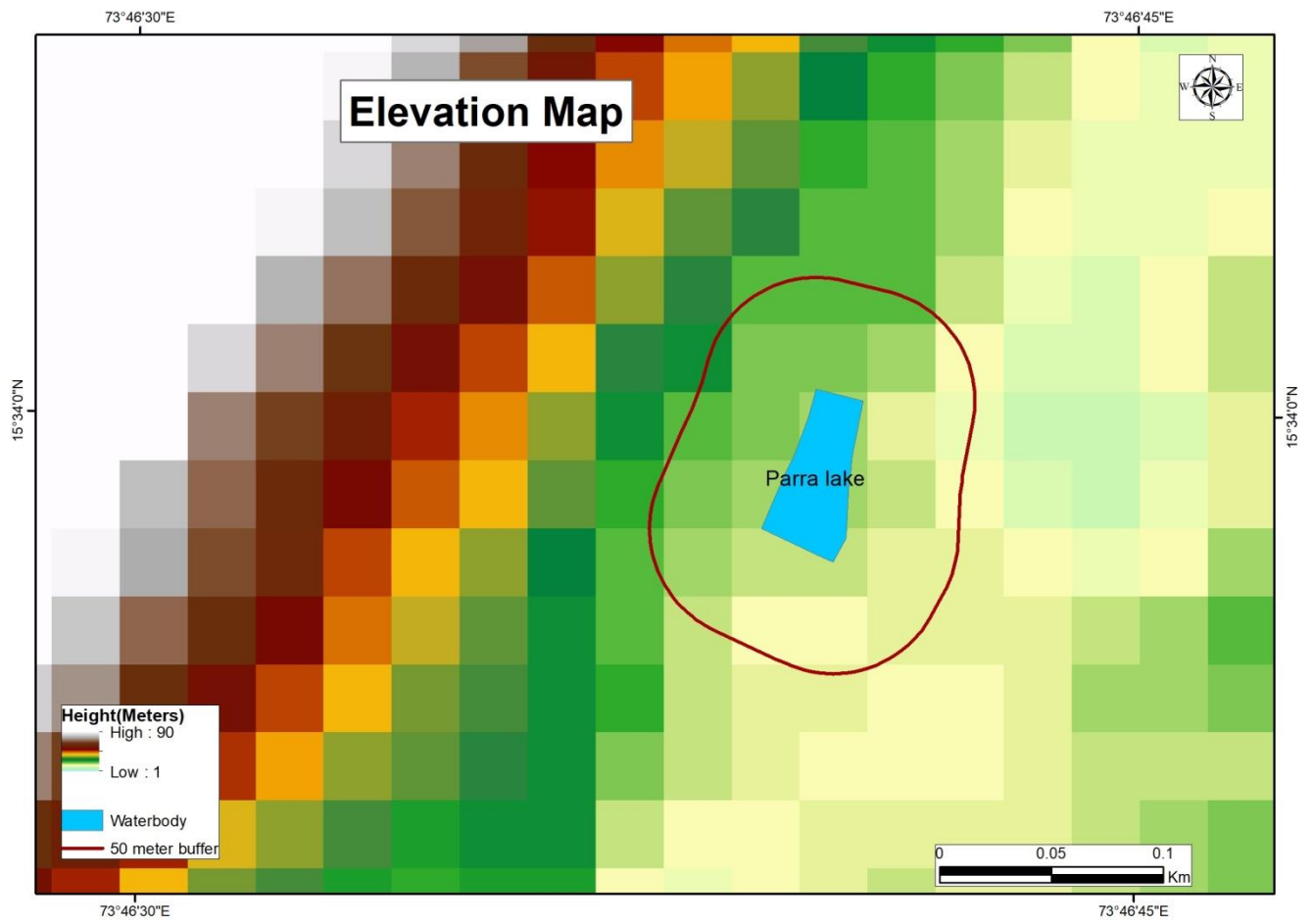
Table-I: Area table of Parra Lake

| Parra Lake | | | |
|-------------------|-------------------|------------------------|------------------------|
| Sl:No: | LULC | 50 meter Buffer | |
| | | Area(Hec) | Percentage Area |
| 1 | Vegetaion/Forest | 0.7 | 50 |
| 2 | Agricultural Land | 0.5 | 35.71 |
| 3 | Parra waterbody | 0.2 | 14.29 |
| | Total Area | 1.4 | 100 |

Annexure-I: LULC of 50m buffer of Parra Lake



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



Annexure-III: Survey Map of Parra Lake showing influence zone

Annexure-IV: Google image of Parra Lake



Annexure-V: Site Photographs of Parra Lake

