

**THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (CONSERVATION AND  
MANAGEMENT OF WETLANDS) AMENDMENT REGULATIONS, 2017**

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## **Citation**

1. These Regulations may be cited as the Environmental Management and Coordination (Conservation and Management of Wetlands) Amendment Regulations, 2017

## **Interpretation**

2. In these Regulations, unless the context otherwise requires –

**“Act”** refers to the Environmental Management and Co-ordination Act Cap 387;

**“agriculture”** means all farming activities including cultivation, agroforestry, bee keeping, livestock management and aquaculture;

**“alien species”** means any exotic non-indigenous life forms originating from outside a given ecological location, accidentally or deliberately introduced to the location by human activity or by natural means;

**“Authority”** refers to the National Environment Management Authority as stipulated in the Act;

**“beach”** means a geological landform of loose particles often composed of rock, sand, gravel, shingle, pebbles or cobble, found at the landward margin of a lake or coastline, the lower limits approximating to the position of the highest and lowest tidal water levels;

**“beach front”** means a strip of land facing or running along a beach;

**“Board”** means the Board of Management of the Authority established under section 10 of the Act;

**“Cabinet Secretary”** means the Cabinet Secretary for the time being responsible for matters relating to the environment;

**“coastal and marine wetlands”** means wetlands found in the areas between land and open sea that include rivers, estuaries, deltas, seagrass belts, shorelines, beaches, mangroves and coral reefs;

**“community”** means a consciously distinct and organised group of users of a wetland who share attributes of common ancestry, culture or unique mode of livelihood, socio-economic or other similar interests, geographical space or ecological space;

**“conservation”** means the care and management of a resource so that the resource maintains its ability to fulfil its functions and provide goods and services for present and future generations;

**“county government”** has the meaning assigned to it in the County Government (Amendment) Act, No. 13 of 2014;

**“County Environment Committee”** means the County Environment Committee established under section 29 of the Act;

**“developer”** means any person or entity, including government, private sector or civil society) desiring to conduct a project which may have an impact on a wetland, wetlands within river basin, lake basin or coastal zone;

**“drainage of wetlands”** means the removal or exclusion of water from a wetland by pumping, excavation of channels, planting of fast growing non-wetland trees or plants, abstraction of water from a river entering a wetland, channelling, or reclamation;

**“endangered species”** means any species which is in danger of extinction throughout all or a significant portion of its range due to man-made or natural changes in the environment or as may be declared by the relevant national authority;

**“environmentally significant areas”** includes an area covered by a threatened ecological community that require special management consideration due to their conservation needs;

**“high water mark”** means the historical recorded point of the highest level of contact between the water and the shore or bank, as the case may be;

**“hunting”** includes the doing of an act immediately directed at killing, wounding, injuring or capture of any animal and the taking or wilful interference with any nest, lair or other place where a dependent young animal is born, hatched, or reared;

**“inland wetlands”** include rivers, bogs, floodplain, swamps, springs, dams, lakes and man-made wetlands like rice paddies, wastewater management facilities found in the hinterland;

**“inspector”** means an inspector designated as an environmental inspector under section 117 of the Act;

**“integrated management plan”** means a management plan for a wetland, riverbank, lakeshore or seashore, prepared by involving all the stakeholders under this Regulation;

**“interested parties”** includes the community, the lead agency, the County Environment Committee and any other party having a discernible interest or a concern;

**“lake”** means a body of fresh or salt water of considerable size, completely surrounded by land, or a natural body or pool of water;

**“lake basin”** refers to a land area draining into a lake; also referred to as drainage basin or watershed;

**“lake shore”** means the rising ground from the highest normal water mark, bordering or adjacent to a lake in the form of rock, mud, gravel or sand;

**“lead agency”** means any Government ministry, department, state corporation in which any law vests functions of control or management of any element of the environment or natural resource;

**“livestock”** includes cattle, horses, donkeys, mules, pigs, sheep, goats, camels and all other domesticated animals;

**“modification”** means any man-made change in the natural state of a wetland, river, riverbank or lake, lake shore or seashore;

**“natural resources”** include resources of the land, air, water, animals and plants including their aesthetic qualities;

**“occupier”** means a person in possession or control of any land in which there is a wetland, riverbank, lakeshore, sea shore or beach front:

**“protected species”** means any plant or animal species declared as endangered or threatened species under the Wildlife (Conservation and Management) Act;

**“protected wetlands”** means an area declared as a protected wetland under these Regulations or any other written law;

**“restoration”** means regeneration or putting back a wetland, riverbank or lake shore or sea shore to the state it was in or near to what it was before it was modified;

**“river”** includes a permanent and seasonal channel with flowing water draining a watershed;

**“river bank”** means the rising ground from the highest normal water mark, bordering or adjacent to a river in the form of rock, mud, gravel or sand and in cases of flood plains include the point where the water surface touches the land, that land not being the bed of the river;

**“river basin”** refers to a geographic land area draining into a river; also referred to as drainage basin or watershed;

**“riverine wetlands”** includes wetlands along rivers and streams;

**“soil”** includes earth, sand, rock, shale, minerals, and the flora and fauna in the soil and the derivatives thereof;

**“soil erosion”** means, a general process whereby soil particles are worn away or removed by natural agencies;

**“sustainable use”** means present use of the environment or natural resources which does not compromise the ability to use the same by future generations or degrade the carrying capacity of supporting ecosystems;

**“threatened species”** means any species of plant or animal likely to become an endangered species within the foreseeable future throughout or in a significant portion of its range or as may be declared by the relevant national authority;

**“traditional interests”** means the oral traditions and activities, customs, traditional knowledge and popular wisdom, and the traditional forms of social organization for utilising and managing wetland resources;

**“Tribunal”** means the National Environment Tribunal established under section 125 of the Act;

**“wetlands”** means 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 6 metres.

**“wetland products”** includes water, fish, fibre, fruit, papyrus, grass, trees, soil, stone, gravel, sand and such other things as the Cabinet Secretary may by statutory instrument declare

**“wetland resource use permit”** means a permit granted to a person, community or organization to make extractive utilization of wetlands and other non-extractive uses such as tourism and cultural activities in accordance with the grant under these regulations or any other law

Application of  
the Regulations

### 3. Application

These Regulations apply to the protection, conservation and management of Inland, coastal and marine, lake basin and river basin wetlands, whether occurring on private, public or community land, both natural and man-made.

Objectives

### 4. Objectives

The objectives of these Regulations include-

- (a) to provide for participatory conservation of wetlands and their resources in Kenya;
- (b) to promote the integration of wise-use of resources in wetlands into the local, county, and national management of natural resources for, ecological, aesthetic, cultural and socio-economic development;
- (c) to ensure the protection of the diversity of wetland habitats, flora and fauna;
- (d) to promote awareness creation, education, research, indigenous knowledge and partnerships with other relevant institutions in the management of wetland ecosystems;
- (e) to prepare and maintain an up to date inventory and database of wetlands and wetland resources, for prioritisation of relevant interventions;
- (f) to protect wetlands within river basins, lake basins and coastal zones from pollution including siltation, agricultural and infrastructural developments, overexploitation, alien and invasive species, and other activities likely to degrade the wetland ecosystem.

## **PART II – PROTECTION AND MANAGEMENT OF INLAND, COASTAL AND MARINE WETLANDS**

### **Inventory of Wetlands**

5.(1) Within three (3) years from the date of amendment of these Regulations, the Authority shall, in consultation with relevant lead agencies, prepare and maintain an inventory of all wetlands in Kenya and shall cause such measures, including the development of integrated wetland management plans, to prevent and control degradation of such wetlands.

(2) The inventory in sub-regulation (1) shall show for each wetland –

- (a) the location;
- (b) the type of fauna and flora;
- (c) the soil and hydrological characteristic;
- (d) the discharge, volume fluctuations and quality of water where possible;
- (e) the existing uses;
- (f) threats to the wetland;
- (g) the density of the population in the wetland catchment, drawing attention especially to those most dependant on the wetland;
- (h) the conservation status;
- (i) the area of the wetland;
- (j) the land tenure system in the wetland catchment; and
- (k) any other factor relevant to the wetland.

(3) The boundaries of such wetlands shall be shown on all official boundary maps of Kenya.

(4) The Authority in collaboration with other lead agencies shall periodically inspect wetlands using a rapid assessment protocol to determine the necessity for revision or correction of the inventory maintained under this Regulation.

(5) The Authority may, in consultation with the relevant lead agencies register changes in the boundaries of wetlands on maps in the inventory referred to in sub-regulation (1) and make any other necessary changes in the inventory to reflect the actual situation on the ground.

(6) In preparing an inventory of wetlands, the Authority shall consult with the County Environment Committees, and other relevant agencies with a view to involving the public in determining whether a wetland should be included in the list of wetlands of national or international importance.

(7) The Authority shall, in consultation with the relevant lead agencies, publish an inventory of wetlands after every five (5) years, reflecting the current state of wetlands included in the inventory.

Integrated Wetland Management Plan

6.(1) The Authority shall in consultation with all stakeholders, cause such measures, including the development of integrated wetland management plans, to prevent and control further degradation of such wetlands.

(2) The integrated wetland management plans should include, but not limited to the following -

- a) Preamble
- b) Description
- c) Evaluation
- d) Objectives
- e) Stakeholder analysis
- f) Threats
- g) Action Plan

Protected  
Wetlands

Protected Wetlands

7. (1) The Cabinet Secretary may, by notice in the Gazette, declare an area to be a protected wetland where such area has national or international significance due to its-

- (a) biological diversity;
- (b) ecological and hydrological importance;
- (c) landscape;
- (d) natural and cultural heritage; or
- (e) aesthetic value.

(2) Upon declaration of an area to be a protected wetland, the following activities may be permitted in the area-

- (a) research;
- (b) eco-tourism;
- (c) restoration or enhancement of the wetland;
- (d) cultural values; or
- (e) any other activities identified in the integrated wetland management plan

Procedure for declaration of a protected wetland

8. (1) The Cabinet Secretary may in consultation with the relevant lead agency and on the recommendation of the Authority or on its own motion or in consultation with the lead agency, county government, a registered civil society organization or an individual person declare a protected wetland under regulation 7, by-

- (a) notice in the Gazette;
- (b) publishing in at least one newspaper circulating in the local area to notify the public of its intention to declare the area to be a protected wetland, which notice shall identify and assign terms of reference to a task force which shall be mandated to prepare the integrated wetland management plan;
- (c) setting up a taskforce to prepare an integrated wetland management plan by, incorporating the views of the people inhabiting the areas contiguous to the wetland in accordance to sub-regulation 7 (1);

(2) Where the Authority is satisfied with the findings under sub-regulation (1) (c), it shall submit its recommendations to the Cabinet Secretary for the gazettelement of the wetland.

(3) Where a lead agency, County government, a member of the public or a registered civil society organization petitions the Authority to initiate the process for declaration of an area as a protected wetland, the Authority shall consider the petition and may initiate the process as set out in sub-regulation (1).

(4) Where the Authority declines to initiate the process of declaring an area to be a protected wetland, it shall communicate its decision together with its reasons, to the petitioner within thirty (30) days of the decision to decline.

(5) Where the petitioner is not satisfied by the decision of the Authority in sub-regulation (4), he or she may appeal to the National Environment Tribunal.

#### Protection of

#### riparian reserves

9. (1) All shores of lakes specified in the First Schedule to these Regulations shall have a protected zone of fifty (50) metres measured from the high water mark.

(2) All shores of lakes not specified in the Third Schedules shall have a protected zone of thirty (30) metres measured from the high water mark.

(3) The shore of the ocean shall have a protection zone of sixty (60) metres measured from the high water mark.

(4) The Rivers specified in the Second Schedule to these Regulations shall have a protection zone of thirty (30) metres measured from the highest water mark of the river.

(6) Rivers not specified in the Second Schedule shall have a protected zone of twice the rivers width measured from the highest water mark of the river.

(7) No activity shall be permitted within protected zones without the written approval of the Authority.

(8) Each County Environment Committee shall determine watering points and routes for animals to have access to the water in each river.

(9) The Authority in consultation with the relevant lead agency will identify the high water mark

#### Erosion and pollution

10. Every person shall refrain from any act which directly or indirectly causes, or may cause immediate or subsequent water pollution.



(1) No person shall throw or cause to flow into or near a wetland any liquid, solid gaseous or any other hazardous substance or deposit any such substance in or near it, as to cause pollution.

(2) The Authority shall, in consultation with the relevant lead agencies, initiate appropriate measures to prevent, reduce and control pollution or other form of environmental damage in the wetland ecosystems by-

- (a) monitoring the water quality in the wetland;
- (b) enforcing the EMCA (Waste Management and Water Quality) Regulations;
- (c) implementing pollution prevention and control guidelines for wetlands; and
- (d) implementing the oil spill contingency plan;

(3) Where there arises a grave and imminent threat or danger of damage of discharge, release or escape of polluting or hazardous substances into the wetland any person responsible for management of the polluting or hazardous substances shall be liable for-

- (a) the cost of any measures reasonably taken for the purpose of preventing, minimising or controlling any such damage; and
- (b) any damage caused by any measures so taken.

#### Permitted use of Wetlands

11. The following uses of wetland resources may be permitted subject to wise-use and sustainable use principles for:-

- (a) subsistence harvesting of papyrus, medicinal plants, trees and reeds;
- (b) any cultivation where the cultivated area is not likely to adversely affect the wetland;
- (c) fishing, subject to the provisions of the Fisheries Management and Development Act;
- (d) harvesting of water for domestic use;
- (e) hunting, subject to the provisions of the Wildlife (Conservation and Management) Act;
- (f) small-scale fish farming, subject to the provisions of the Fisheries Management and Development Act; and
- (g) controlled grazing of livestock.

#### Wetland Resource

Use Permit 12. Subject to the provisions of Section 42 of the Act, no person shall carry out any of the activities stipulated therein without a permit issued by the relevant lead agency and an Environmental Impact Assessment License issued by the Authority where applicable.

#### Temporary Permit

13. (1) The relevant lead agency may, after consultation with the Authority, grant a temporary permit to an applicant for the use of a wetland in case –

- (a) of an emergency situation; or
- (b) of a special research project that requires the use of the wetland for a specified period of time;

(2) The temporary permit issued under this Regulation shall be valid for a maximum period of three (3) months, and may be renewed for a further period of three (3) months upon application by the holder with reasons to the satisfaction of the Authority.

Duty of land owners, users and occupiers

14. (1) Every owner, occupier or user of land which is adjacent to a wetland is obligated to prevent the degradation or destruction of the wetland.

(2) A person or a group of persons may make an application to the court for the grant of one or more environmental easements to use a wetland as stipulated in the Act.

### **PART III – PROTECTION AND MANAGEMENT OF TRADITIONAL INTERESTS**

Protected  
Interests

15. (1) In preparing an inventory of wetlands sub-regulation 5, the Authority shall consult with the County Environment Committees to involve the public in determining whether a wetland or its resources should be included in the list of protected interests of national or international importance.

(2) In preparing records on wetlands with traditional interests, the Authority shall work in consultation with the relevant lead agency, County government, civil society organisations to –

- (a) identify procedures for acquisition and sharing of indigenous knowledge;
- (b) document indigenous knowledge; and
- (c) patent relevant indigenous knowledge and innovations

### **PART IV – MISCELLANEOUS**

Requirement for Environmental Impact Assessment and Environmental Audit

Environmental  
Impact  
Assessment  
and Audit

16.(1) A developer shall be required to carry out an Environmental Impact Assessment in accordance with the provisions of the Act.

(2) A developer shall ensure that any-

- (a) drainage;
- (b) conversion;
- (c) burning;
- (d) alteration of a wetland and wetland resources;
- (e) introduction of alien and invasive species; or
- (f) extraction of wetland resources through alluvial gold and sand mining

Shall be subjected to approved standard procedures including Environmental Impact

Assessment.

(3) The developer referred to in sub-regulation (1) shall carry out an environmental audit as provided for by the Act, and the Authority shall monitor such activities in accordance with the Act.

#### The County Environment Committee

County  
Environment  
Audit

17. The County Environment Committee shall be responsible for coordinating, monitoring and advising on all aspects of wetland resource management within the County for which it is appointed.

#### Duty of Environment Officer

Duties of  
Environment  
Officer

18. An environment officer within whose jurisdiction activities likely to degrade or are degrading wetlands are taking place, shall ensure that the communities living near such areas participate in conservation activities and assist them in implementing these Regulations and any other law that protects.

#### Sanitation

Sanitation

19. (1) Each County government shall in consultation with the Authority, take adequate measures to manage solid waste and waste waters in wetlands in accordance with the Public Health Act, and with other pertinent laws.

(2) Where two or more Counties share a wetland, minimum sanitation standards shall be prescribed by the Authority.

#### Transition

Transition

20. Any developer carrying out any activity on a wetland, immediately before the coming into force of these Regulations, shall within six (6) months from the coming into force thereof, take all necessary measures to ensure full compliance with these Regulations.

#### Environmental Restoration Orders.

Environmental

Restoration orders

21. The Authority may issue environmental restoration orders pursuant to the provisions of the Act in order to allow a wetland area which has been degraded to regenerate and the offender bears the burden of regeneration.

#### Improvement Notice

Improvement

Notice

22. (1) Where an inspector has reasonable cause to believe that any person is violating the provisions of these Regulations, the inspector may –

(a) issue against such person an improvement notice in accordance with the provisions of the Act; or

(b) take such measures as are provided for under the Act.

## Offences and Penalties

### Offences and Penalties

23. Any person who contravenes the provisions of these Regulations, commits an Offence and shall be liable on conviction to imprisonment for such term and such fine as are provided for in the Act.

### Appeals

### Appeals

24. A person aggrieved by a decision of the Authority under these Regulations may appeal to the Tribunal in the manner as prescribed in the Act.

## Delegation of powers and functions

### Delegation of powers and functions

25. The Authority may where necessary, delegate any of the functions and powers provided for within these Regulations to any officer of the Authority, County or to a lead agency.

## Operations of Regulations

### Operations of Regulations

26. These Regulations shall be in addition and not in derogation from any other regulations relating to the environment made under any other law.

## **SCHEDULES**

### **FIRST SCHEDULE**

#### **RIVERS**

Tana

Athi- Galana-Sabaki

Turkwel

Mara

Nzoia

Yala

Ewaso Ng'iro

Gucha – Kuja - Migori

Kerio

Nairobi

Ruiru

Mbagathi (Ngong)

Mogonga

Naro moru

Njoro

Nyando

Thika (Chania)

Tsavo

Suam

Sondu Miriu

Sio

Lumi

Malewa

## SECOND SCHEDULE

### LAKES

Victoria  
Turkana  
Baringo  
Naivasha  
Nakuru  
Elementaita  
Bogoria  
Jipe  
Ol Bolossat  
Kapnarok  
Kanyaboli  
Kenyatta  
Magadi  
Simbi  
Kwenia  
Solai

### THIRD SCHEDULE

#### WATER QUALITY MONITORING FORM

Station..... Wetland type/classification.....

Date..... Location (GPS).....

| Parameter                              | Values | Interpretation/comments |
|--|--------|-------------------------|
| <b>Physio-Biochemical</b>              |        |                         |
| Temperature (°C)                       |        |                         |
| pH                                     |        |                         |
| Dissolved Oxygen (mgL <sup>-1</sup> )  |        |                         |
| Biological Oxygen Demand               |        |                         |
| Colour                                 |        |                         |
| Turbidity (NTU)                        |        |                         |
| Total Suspend Solids                   |        |                         |
| Conductivity (µS cm <sup>-1</sup> )    |        |                         |
| Depth (M)                              |        |                         |
| Transparency (Secchi depth)            |        |                         |
|  |        |                         |
| <b>Nutrients</b>                       |        |                         |
| Total phosphorous (mgL <sup>-1</sup> ) |        |                         |
| Total nitrogen (mgL <sup>-1</sup> )    |        |                         |
|  |        |                         |
| <b>Heavy metals</b>                    |        |                         |
| Lead (µg/g DW)                         |        |                         |
| Mercury (µg/g DW)                      |        |                         |
| Chromium (µg/g DW)                     |        |                         |
| Cadmium (µg/g DW)                      |        |                         |
| Silver (µg/g DW)                       |        |                         |
|  |        |                         |
| <b>Other parameter</b>                 |        |                         |
| Coliforms (counts/100ml)               |        |                         |
| Colour                                 |        |                         |
| Fluorine (mg/L)                        |        |                         |
| Odour (smell type)                     |        |                         |
|  |        |                         |
| <b>Biological (flora and fauna)</b>    |        |                         |
| Species diversity (types)              |        |                         |
| Species abundance (counts)             |        |                         |

**Notes: water quality monitoring will be done in conjunction with Rapid Assessment Protocol parameters**

## FOURTH SCHEDULE

### RAPID ASSESSMENT PROTOCOL FORM

Name of wetland: .....

Location (GIS location): .....

Name of person recording data: .....

Date.....

| Biophysical features  | Particulars |
|---|-------------|
| <p><b>1. Site name:</b></p> <ul style="list-style-type: none"> <li>• Official name of site</li> <li>• Catchment</li> </ul>  |             |
| <p><b>2. Type of wetland:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> River</li> <li><input type="checkbox"/> Swamp</li> <li><input type="checkbox"/> Lake</li> <li><input type="checkbox"/> Dam</li> <li><input type="checkbox"/> Mangrove</li> <li><input type="checkbox"/> Any other, specify _____</li> </ul>   |             |
| <p><b>3. Area and boundary:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Original size</li> <li><input type="checkbox"/> Current size</li> <li><input type="checkbox"/> Variation (km<sup>2</sup> m<sup>2</sup> or %)</li> </ul>   |             |
| <p><b>4. Water permanence</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Static</li> <li><input type="checkbox"/> Flowing</li> </ul>   |             |
| <p><b>5. Location:</b></p> <ul style="list-style-type: none"> <li>i. Projection system</li> <li>ii. Map coordinates</li> <li>iii. Map centroid</li> <li>iv. GPS and elevation</li> </ul>  |             |
| <p><b>6. Geomorphic setting:</b></p> <ul style="list-style-type: none"> <li>i. Where it occurs within the landscape: <ul style="list-style-type: none"> <li><input type="checkbox"/> Upper catchment</li> <li><input type="checkbox"/> Middle catchment</li> <li><input type="checkbox"/> Lower catchment</li> </ul> </li> <li>ii. Linkage with other aquatic habitat: <ul style="list-style-type: none"> <li><input type="checkbox"/> Tributary</li> </ul> </li> </ul> |             |



|   |  |
|---|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> Ox bow lake</li> <li><input type="checkbox"/> Satellite lake</li> <li><input type="checkbox"/> Lagoon</li> <li><input type="checkbox"/> Creek</li> <li><input type="checkbox"/> Delta</li> <li><input type="checkbox"/> Any other, specify _____</li> </ul> <p>iii. Biogeographical region/ecological zone:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> East African Montane Forest</li> <li><input type="checkbox"/> East African montane moorlands</li> <li><input type="checkbox"/> Eastern Arc forests</li> <li><input type="checkbox"/> East African Coral Coast</li> <li><input type="checkbox"/> East African mangroves</li> <li><input type="checkbox"/> East African halophytics</li> <li><input type="checkbox"/> Coastal Delta/estuary</li> <li><input type="checkbox"/> Lake Victoria</li> <li><input type="checkbox"/> Soda lakes</li> <li><input type="checkbox"/> Inland freshwater lakes</li> <li><input type="checkbox"/> Any other, specify _____</li> </ul> <p>iv. Lake/river basin:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Tana</li> <li><input type="checkbox"/> Athi/Galana/Sabaki</li> <li><input type="checkbox"/> Ewaso Nyiro</li> <li><input type="checkbox"/> Mara</li> <li><input type="checkbox"/> Yala</li> <li><input type="checkbox"/> Nzoia</li> <li><input type="checkbox"/> Turkwell</li> <li><input type="checkbox"/> Victoria</li> <li><input type="checkbox"/> Turkana</li> <li><input type="checkbox"/> Any other, specify _____</li> </ul> |  |
| <p><b>7. General description:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Shape</li> <li><input type="checkbox"/> Cross-section</li> <li><input type="checkbox"/> Plain view</li> </ul>   |  |
| <p><b>8. Climate – zone and major features:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Humid</li> <li><input type="checkbox"/> Semi-arid</li> <li><input type="checkbox"/> Arid</li> </ul>   |  |
| <p><b>9. Soil:</b></p> <ul style="list-style-type: none"> <li>i. Structure</li> <li>ii. Colour</li> <li>iii. Type: <ul style="list-style-type: none"> <li><input type="checkbox"/> Clay</li> </ul> </li> </ul>  |  |

|  |  |
|--|--|
| <input type="checkbox"/> Sandy<br><input type="checkbox"/> Loam  |  |
| <p><b>10. Water regime:</b></p> <p>i. Seasonality:<br/> <input type="checkbox"/> Permanent<br/> <input type="checkbox"/> Seasonal</p> <p>ii. Extent of flooding</p> <p>iii. Depth</p> <p>iv. Source of surface water</p> <p>v. Links with groundwater</p>  |  |
| <p><b>11. Water chemistry:</b></p> <p>i. Salinity</p> <p>ii. pH</p> <p>iii. Colour</p> <p>iv. Transparency</p> <p>v. Temperature</p> <p>vi. Oxygen</p> <p>vii. Odour</p> <p>viii. Any other, specify _____</p>   |  |
| <p><b>12. Biota:</b></p> <p>i. Vegetation type</p> <p>ii. Vegetation zonation (%)</p> <ul style="list-style-type: none"> <li>• Floating macrophytes</li> <li>• Riparian papyrus/reeds</li> <li>• Shrubs</li> <li>• Trees</li> </ul> <p>iii. Animal species present, habitat and populations</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Birds</li> <li><input type="checkbox"/> Mammals</li> <li><input type="checkbox"/> Fish</li> <li><input type="checkbox"/> Reptiles</li> <li><input type="checkbox"/> Amphibians</li> </ul> <p>iv. Special features including rare/endangered species</p> <ul style="list-style-type: none"> <li>• Name</li> <li>• Migratory</li> <li>• Resident</li> <li>• Endemic</li> <li>• Common</li> <li>• Any other, specify _____</li> </ul> |  |
| <i>Management features</i>   |  |
| <p><b>13. Land use:</b></p> <p>i. Cultivation</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Subsistence farming</li> <li><input type="checkbox"/> Commercial farming</li> </ul> <p>ii. Grazing</p> <p>iii. Settlements:</p>  |  |

|   |     |
|---|-----|
| <input type="checkbox"/> Rural<br><input type="checkbox"/> Urban<br><input type="checkbox"/> Hotel<br><input type="checkbox"/> Campsite/eco-lodge<br><input type="checkbox"/> Any other, specify _____  |     |
| <p><b>14. Pressures on the wetland:</b></p> <input type="checkbox"/> Water pollution<br><input type="checkbox"/> Industrial<br><input type="checkbox"/> Urban waste water<br><input type="checkbox"/> Domestic waste water<br><input type="checkbox"/> Agricultural effluent<br><input type="checkbox"/> Solid wastes<br><input type="checkbox"/> Siltation<br><input type="checkbox"/> Invasive species<br><input type="checkbox"/> Overgrazing<br><input type="checkbox"/> Clearing of vegetation<br><input type="checkbox"/> Burning<br><input type="checkbox"/> Reclamation<br><input type="checkbox"/> Conversion<br><input type="checkbox"/> Any other, specify _____ |     |
| <p><b>15. Land tenure</b></p> <input type="checkbox"/> Private land<br><input type="checkbox"/> Community land<br><input type="checkbox"/> Public land <p><b>16. Administrative authority</b></p> <input type="checkbox"/> County government (Specify)<br><input type="checkbox"/> National   |     |
| <p><b>17. Conservation and management status of the wetland:</b></p> <p>i. Protected</p> <input type="checkbox"/> National Reserve<br><input type="checkbox"/> National Park<br><input type="checkbox"/> Community Sanctuary<br><input type="checkbox"/> Ramsar site<br><input type="checkbox"/> Sacred site<br><input type="checkbox"/> World heritage site<br><input type="checkbox"/> Any other, specify _____ <p>ii. Unprotected (specify) _____</p> <p><b>18. Social or cultural traditions that influence the management of the wetland</b></p> <input type="checkbox"/> Circumcision site<br><input type="checkbox"/> Shrine   | (✓) |

|   |  |
|---|--|
| <input type="checkbox"/> Kaya<br><input type="checkbox"/> Any other, specify _____  |  |
| <p><b>19. Ecosystem benefits/services derived from the wetland</b></p> <p>i. Provisioning services</p> <input type="checkbox"/> Domestic water<br><input type="checkbox"/> Fish<br><input type="checkbox"/> Fodder<br><input type="checkbox"/> Reeds/papyrus<br><input type="checkbox"/> Medicinal plants<br><input type="checkbox"/> Thatch<br><input type="checkbox"/> Urban water supply<br><input type="checkbox"/> Any other, specify _____ <p>ii. Supporting services</p> <input type="checkbox"/> Nutrients recycling<br><input type="checkbox"/> Transport<br><input type="checkbox"/> Habitat for flora and fauna<br><input type="checkbox"/> Buffering<br><input type="checkbox"/> Protection<br><input type="checkbox"/> Tourism and recreation<br><input type="checkbox"/> Any other, specify _____ <p>iii. Regulating services</p> <input type="checkbox"/> Carbon sequestration<br><input type="checkbox"/> Soil formation<br><input type="checkbox"/> Flood regulation<br><input type="checkbox"/> Wastewater treatment<br><input type="checkbox"/> Any other, specify _____ |  |
| <p><b>20. Management plans and monitoring programmes – in place and planned within the inland water and in the river basin and/or coastal zone</b></p> <p>i. Management plans and programmes in place (specify)</p> <p>ii. Coverage</p> <p>iii. Particular programmes in management plan (list)</p>   |  |