Building enabling framework for sustainable urban water bodies management in Delhi

K.S. Jayachandran
1. **Wetland Authority: Background**


- Our mandate: Nodal authority; oversee and issue necessary directions for conservation and sustainable management of wetlands.
A. Major issues taken up so far

- Listing wetlands, preparation of brief documents, action plans, recommend wetlands for regulation, and notification.

- Conservation of two wetlands Tikri Khurd and Najafgarh Jheel.
2. Listing and mapping of waterbodies

- Listed 1040 wetlands in Delhi
- UID numbers allotted to 1040 water bodies of Delhi
- District & Agency-wise details of water bodies now available on DPGS website
- Publication on wetlands of Delhi
A. Mapping of water bodies

Mapped 982 out of 1040 Water bodies on GIS platform

- Coordination with land agencies
- Capacity building on collecting geo data
- Site visits
### B. Distribution of water bodies

<table>
<thead>
<tr>
<th>Sl. Nos.</th>
<th>Water Body Owning Agencies</th>
<th>Reconciled No. of Water Bodies (Till date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DDA</td>
<td>832</td>
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<tr>
<td>2</td>
<td>BDO/REV.</td>
<td>132</td>
</tr>
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<td>3</td>
<td>EDMC</td>
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<td>5</td>
<td>NORTH MCD</td>
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<td>6</td>
<td>DJB</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>PWD</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>CPWD</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
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<td>15</td>
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<tr>
<td>10</td>
<td>FOREST</td>
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<tr>
<td>11</td>
<td>DELHI ARCH. DEPTT.</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>DELHI WAKF BOARD</td>
<td>1</td>
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<tr>
<td>13</td>
<td>DUSIB</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>DSIIDC</td>
<td>3</td>
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<tr>
<td>15</td>
<td>JNU</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>IIT</td>
<td>1</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1040</strong></td>
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</table>
3. Preparation of brief documents and action plans

**BRIEF DOCUMENTS**

MoEF&CC, GOI notified rules for conservation and management of wetlands (dt. 26.09.2017). And directed that within a period of one year, prepare a brief document for each of the wetland.

**ACTION PLANS**

Action Plan is a administrative document which will contain conservation/restoration action proposed to be done.
A. Progress in number of brief documents prepared

Number of water bodies

<table>
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<th>Date</th>
<th>Numbers</th>
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<tbody>
<tr>
<td>01.07.2020</td>
<td>23</td>
</tr>
<tr>
<td>01.01.2021</td>
<td>100</td>
</tr>
<tr>
<td>09.04.2021</td>
<td>303</td>
</tr>
<tr>
<td>NOW</td>
<td>388</td>
</tr>
</tbody>
</table>

01.01.2021 (Hon'ble LG review meeting)

Number of water bodies

388 (Now)

23 (1st July, 2020)
B. Progress in number of action plans prepared

- **01.07.2020**: 0
- **01.01.2021**: 278
- **09.04.2021 (Hon'ble LG review meeting)**: 344
- **NOW**: 455

Number of water bodies
C. Review and grievance framework on Brief Documents

1. Technical Committee under Chairmanship of Dr. Madhu Verma, Chief Economist at the World Resources Institute at Delhi consisting of six wetland experts formed (01.07.2021).

2. Grievance Committees formed in every district (01.07.2021).
4. **Assistance for land agencies**

a). Technical guidance

- Continuous engagement through handholding workshops.
- A dedicated YouTube channel with training videos for landowning agencies.
- Resource Team facilitated Revenue Department in preparation of brief documents of 130 water bodies.
4. **Assistance / technical guidance for land agencies**

b). **Benchmarks for a healthy wetland**

- Water spread in lean season should be maintained at least 60% of HFL.
- Where possible at least 50% of dry revenue area be afforested.
- Spread of aquatic invasives, such as water hyacinth, would be checked.
- Pond should not be filled using groundwater.
- Wastewater inflow, if not diverted, be treated through natural methods before flowing into waterbody.
- RWA committee to look after conditions of pond, ensure that appropriate regulations on sewage discharge, solid waste dumping, and encroachment are adhered to.

**Indicator Parameters**

a) No foul smell
b) Aquatic life present (fish, introduced turtles)
c) Surface water quality to meet Class C of CPCB norms

**ACTION TAKEN**

Benchmarks for Model Ponds prepared and sent to all agencies
4. Guidance for land agencies
c). Restoration techniques

- Manual of low cost restoration techniques being finalized
- Empanelment of restoration agencies
5. Preparation of Catchment Area Protocol

The catchment of a wetland comprises specific landscape features that transmit water to the wetland via surface and ground water movements (e.g., contributing surface drainage areas, groundwater recharge areas, river basins).
5. Preparation of Catchment Area Protocol

Wetland and urban landscape experts
- INTACH, Delhi University, Wetland International South Asia, SACON, CSIR, IARI, NRSC, & NGO Yamuna Jiye Abhiyan consulted

Key points

1. Demarcate on map and on ground ecosystem boundaries of each water body (Extent of catchment, floodplains and water covered lands) and drainage lines that feeds water body.

2. Investigate integrity of catchment and identify breakage points (encroachments, diversions, land use change etc).

3. Prepare water body specific GIS maps showing clearly the extent of catchment, drainage lines with obstructions if any marked.

4. Draw up plans for restoration of catchments.

- Circulated amongst land agencies
6. Assessment of Water Quality

• Land agencies need to do water testing / sampling of all water bodies every month or at least 08 times in a year as per *Indicative Guidelines for restoration of water bodies of CPCB*.

• One time assessment of water quality done.

• Future: Water quality data could be entered on our portal.
7. **Model pond in every district**

- District Magistrates were directed to hold meetings within one month, of all stakeholders for protection and restoration of water bodies.

- To create model ponds.

- Wetland Authority of Delhi planning further course of action, including directions to district authorities for future programme up to panchayat level.
8. Incorporating Wetlands in Land Revenue Records

- Nine-fold land record system placed wetlands in category of wastelands. This loophole is often exploited to convert wetlands to more productive usages.

- MoEF&CC in guidelines for implementation of Wetlands (Conservation and Management) Rules, 2017 recommended that wetlands be placed in land records.

- This inclusion has thereby provided statutory protection to wetlands, as several of wetland categories (especially man made wetlands) cannot be notified under the Wetlands (Conservation and Management) Rules, 2017.
9. Encroachment of water bodies

~240
TOTAL

- Time bound encroachment removal plans by land agencies in coordination with districts
- Special Task Force
10. Stakeholders and public engagement:

1. Wetland Mitras: 25 Mitras identified after public notices

2. Online Training Workshop of Master Trainers during April 2021 towards celebration of Bharat Ka Amrut Mahotsava - 787 School teachers trained on wetland values


IN PROCESS: Wetland authority portal
11. Wetland awards

Ardhrabhoomi Puraskar

- Categories
  - Youth Leadership
  - Scientific Research
  - Promoting Awareness
  - Local Stewardship
# A Roadmap

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Roadmap</th>
<th>Timeline</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Submission of brief documents</td>
<td>30.09.2021</td>
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<tr>
<td>2</td>
<td>Review of brief documents and prioritization</td>
<td>31.12.2021</td>
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<tr>
<td>3</td>
<td>Recommendation to State Government for notification</td>
<td>31.03.2022</td>
</tr>
<tr>
<td>4</td>
<td>Final notification</td>
<td>30.06.2022</td>
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</table>
Thank You