



**CAG**

Citizen consumer and civic Action Group



# **AWARENESS PROGRAMME ON IMPORTANCE OF WETLANDS**

**PROJECT IMPLEMENTATION &  
IMPACT ASSESSMENT SURVEY REPORT**

**MARCH 2025**



*Project and Survey Implemented by:*

**Citizen consumer and civic Action Group (CAG)**

No.103 (First Floor), Eldams Road, Teynampet, Chennai - 600 018

T: +91(44) 2435 4458 | 2435 0387

# **Awareness Programme on Importance of Wetlands**

**A project implemented in Communities and Schools located near three Wetlands (Pallikaranai Marsh, Ennore Creek, Pulicat Lake) near Chennai, Tamil Nadu**

## **Project Activity & Survey Report**

**March 2025**

**PROJECT AND SURVEY IMPLEMENTED BY:**

**Citizen consumer and civic Action Group (CAG)**

**No.103 (First Floor), Eldams Road, Teynampet, Chennai 600 018**

**T: +91(44) 2435 4458 | 2435 0387**

**Disclaimers:**

The information in this document has been obtained in good faith from sources that are believed to be reliable, but any potential interpretation of this report as making an allegation against a specific company or companies named would be misleading and incorrect. The author accepts no liability whatsoever for any direct or consequential loss arising from the use of this document or its contents.

**Suggested Citation:**

2025. "Awareness Programme on Importance of Wetlands | CAG". [cag.org.in](http://cag.org.in).

**Copyright:**

Unless specified otherwise, all content in this report is licensed under a Creative Commons Attribution 4.0 International license [CC-BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/)

**About CAG:**

CAG is a 39-year-old non-profit and non-political organisation that works towards protecting citizens' rights in consumer, civic and environmental issues and promoting good governance processes, including transparency, accountability and participatory decision-making.



# CAG

Citizen consumer and civic Action Group

## Contents

|                                                                                            |           |
|--------------------------------------------------------------------------------------------|-----------|
| <b>Executive Summary .....</b>                                                             | <b>7</b>  |
| <b>1. Introduction &amp; Methodology .....</b>                                             | <b>8</b>  |
| <b>2. Awareness Programmes on Wetlands conducted in Schools and Communities .....</b>      | <b>14</b> |
| 2.1 Details of Wetland Awareness Programmes conducted in Schools & Communities             | 14        |
| 2.2 Details of school participants and community beneficiaries in the awareness programmes | 15        |
| 2.3 Themes covered in the Awareness across schools and communities                         | 17        |
| <b>3. Key findings of Baseline &amp; Endline survey .....</b>                              | <b>25</b> |
| 3.1 Demographic Profile of Respondents                                                     | 27        |
| 3.2 Awareness on Wetlands – Meaning and Types                                              | 33        |
| 3.3 Awareness on Key Benefits of Wetlands                                                  | 42        |
| 3.4 Ways of Protecting Wetlands                                                            | 48        |
| <b>4. Key Findings and Recommendations .....</b>                                           | <b>54</b> |
| 4.1 Gaps in the awareness level on conservation of wetlands among students and community   | 54        |
| <b>Annexure .....</b>                                                                      | <b>57</b> |
| 1 Wetland Awareness programme - Government Project Approval letter                         | 52        |
| 2. Baseline / Endline Survey Questionnaire                                                 | 53        |
| 3. IEC tools (Pamphlets)                                                                   | 60        |
| 4. Drawings from the competition                                                           | 64        |
| 5. Essays from the competition                                                             | 66        |

## List of Tables

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| Table 1 List of Target Wetlands identified for Project Implementation          | 9  |
| Table 2 Target sample size for awareness programme baseline and endline survey | 9  |
| Table 3 Methodology framework                                                  | 11 |
| Table 4 Timeline of activities                                                 | 13 |
| Table 5 Details of Wetland Awareness Programmes conducted in schools           | 14 |
| Table 6 Details of Wetland Awareness Programmes conducted in communities       | 14 |
| Table 7 Details of school participants                                         | 15 |
| Table 8 Types of plants and animals                                            | 23 |

## List of Figures

|                                                                                                               |    |
|---------------------------------------------------------------------------------------------------------------|----|
| Figure 1 Overview of the process followed for awareness generation                                            | 10 |
| Figure 2 Sample size across Baseline and Endline survey (%)                                                   | 25 |
| Figure 3 Proportion of students by Class (%)                                                                  | 25 |
| Figure 4 Age of Community members (%)                                                                         | 26 |
| Figure 5 Gender of Community respondents (%)                                                                  | 26 |
| Figure 6 Educational Qualification of Community respondents (%)                                               | 27 |
| Figure 7 Primary occupation of the head of household (%)                                                      | 27 |
| Figure 8 Number of Community Members by location (%)                                                          | 28 |
| Figure 9 Proportion of Students by Gender (%)                                                                 | 28 |
| Figure 10 Community Members by Ownership of house (%)                                                         | 29 |
| Figure 11 Proportion of respondents who are aware of wetland                                                  | 30 |
| Figure 12 Awareness on meaning of Wetlands among students across three locations                              | 30 |
| Figure 13 Awareness on different types of Inland wetlands                                                     | 31 |
| Figure 14 Awareness of minimum one type of coastal wetlands by Type of School                                 | 32 |
| Figure 15 Awareness on types of coastal wetlands                                                              | 33 |
| Figure 16 Awareness on man-made wetlands                                                                      | 34 |
| Figure 17 Awareness of minimum one type of man-made wetlands by Type of School                                | 34 |
| Figure 18 Source of awareness on various types of wetlands among students                                     | 35 |
| Figure 19 Source of awareness on various types of wetlands among community members                            | 36 |
| Figure 20 Awareness on types of plants that grow in wetlands                                                  | 37 |
| Figure 21 Awareness of types of animals that habitat in wetlands                                              | 37 |
| Figure 22 Awareness on socio-economic benefits of Wetlands for society among students                         | 39 |
| Figure 23 Awareness on socio-economic benefits of Wetlands for society (among Community Members)              | 40 |
| Figure 24 Awareness on minimum one socio-economic benefits of wetlands by Types of Schools                    | 41 |
| Figure 25 Awareness on Benefits of Wetlands for Environment among students                                    | 42 |
| Figure 26 Awareness on Benefits of Wetlands for Environment (among community members)                         | 42 |
| Figure 27 Awareness on cultural benefits of wetlands                                                          | 43 |
| Figure 28 Awareness on existing threats to wetlands (among students)                                          | 44 |
| Figure 29 Awareness level on existing threats to wetlands across students from Government and Private schools | 45 |
| Figure 30 Awareness on existing threats to wetlands (among community members)                                 | 45 |
| Figure 31 Awareness on things one should avoid to protect wetlands                                            | 46 |
| Figure 32 Awareness on things one should avoid to protect wetlands by Type of Schools                         | 46 |
| Figure 33 Role as a citizen to protect wetlands (Response from students)                                      | 47 |
| Figure 34 Role as a citizen to protect wetlands (Response from community members)                             | 48 |

**Abbreviations:**

|      |                                         |
|------|-----------------------------------------|
| BCC  | Behaviour Change Communication          |
| CAG  | Citizen Consumer and Civic Action Group |
| CEO  | Chief Education Officer                 |
| CSO  | Civil Society Organization              |
| DFO  | District Forest Officer                 |
| IEC  | Information, Education, Communication   |
| MoU  | Memorandum of Understanding             |
| NGO  | Non-Governmental Organization           |
| PET  | Physical Education Teacher              |
| PRI  | Panchayat Raj Institutions              |
| SPSS | Statistical Package for Social Science  |
| TN   | Tamil Nadu                              |

## Executive Summary

The Tamil Nadu Wetlands Mission, as part of its commitment to conserving critical wetland ecosystems, partnered with Citizen consumer and civic Action Group (CAG) to implement a targeted awareness programme in communities and schools located near three key wetlands: Ennore Creek, Pallikaranai Marsh, and Pulicat Lake Bird Sanctuary. These wetlands play a vital role in ensuring ecological balance, providing livelihood opportunities, and strengthening climate resilience for the region. However, lack of awareness and community participation have been persistent challenges in their conservation.

To address this, CAG designed and executed a structured awareness initiative supported by baseline and endline surveys to assess impact. The programme reached over 1,170 students across six schools (government and private) and 300 community members residing near the wetlands. Secondary and tertiary stakeholders such as teachers, community leaders, civil society organisations, and relevant government officials were also engaged to strengthen the knowledge ecosystem and promote sustained action.

A comprehensive Information, Education, and Communication (IEC) strategy formed the backbone of the awareness campaign. The initiative incorporated culturally relevant tools such as puppet shows, folk performances, street plays, and competitions including drawing, quiz, and essay writing to make the content accessible and engaging. Educational materials in Tamil and English were developed and distributed, while orientation sessions for teachers and community leaders ensured knowledge dissemination extended beyond the immediate duration of the project.

The results demonstrate the effectiveness of this approach. Awareness of the meaning of wetlands increased from 40.1 percent to 74.1 percent across all respondents. Among community members, awareness rose sharply from 26.7 percent to 81.3 percent, reflecting the strong connection between practical, locally relevant knowledge and community interest. Notably, understanding of harmful practices that damage wetlands, such as waste dumping and encroachment improved significantly, with awareness levels increasing from 29.1 percent to 81.4 percent.

However, the findings also highlight areas requiring further attention. While practical knowledge was absorbed quickly, awareness of the broader ecological, cultural, and long-term environmental benefits of wetlands, as well as the critical role citizens play in their protection, remains relatively low. The project reinforces the importance of embedding wetlands awareness into formal education, local governance processes, and community platforms. To achieve lasting impact, it is recommended that wetland-related content be integrated into school curricula and local development plans, alongside the creation of permanent, state-level IEC and Behaviour Change Communication (BCC) mechanisms. Digital tools and community-based stewardship models should be leveraged to promote continuous engagement, while eco-sensitive livelihood opportunities, such as eco-tourism and nature-based enterprises, can help align conservation goals with community well-being.

The initiative clearly demonstrates that context-specific, participatory awareness programmes can drive significant improvements in public understanding and engagement with wetland conservation. To sustain these gains, wetlands must be recognised not just as ecological assets, but as integral to Tamil Nadu's environmental resilience, community livelihoods, and long-term sustainable development. Policymakers, educators, and citizens alike have a unique opportunity to scale and institutionalise these efforts, ensuring that wetlands are protected and managed as shared, vital resources for generations to come.

# 1. Introduction & Methodology

The Ramsar Convention on Wetlands was adopted in 1971, but at that time, environmental issues were not yet a global policy priority. It was only after the rise of international environmental movements in the late 1980s and major events like the 1992 Earth Summit that nations began to actively focus on wetlands. As the role of wetlands in biodiversity protection, climate resilience, and disaster risk reduction became clearer, countries started implementing Ramsar commitments more seriously. It was only in 1982 that the Indian government became a party to the Ramsar Convention. The first major step India took was way back in 1985-86 with the National Wetland Conservation Programme. It was a comprehensive programme which had adopted a holistic framework to not only prevent degradation but also to promote its sustainable management. Besides policy and programme inputs and technical support, the Central Government allocated funds to states and union territories to initiate measures for prevention of degradation and promote sustainable management. In the subsequent years, there were some initiatives in line with global developments relating to wetlands.

The renaming of the National Wetlands Conservation Programme to National Plan for Conservation of Aquatic Systems, pointed to a new approach both in terms of concept and interventions, which emphasises not only the prevention of degradation but also on restoration and rejuvenation of damaged wetlands. It also took, within its fold, a programme on urban wetlands.

The Tamil Nadu government has been proactive in implementing the wetlands conservation and management programme. In 2021, the state government announced a 5-year plan and in accordance with it, the Tamil Nadu Wetlands Mission was set up with the mandate of identifying and mapping 100 wetlands and work on its conservation and management. The Mission will work on restoration of wetlands and ecological balance but will factor in livelihood concerns. It strikes a balance between conservation and people's livelihood. Accordingly, about Rs. 115 crores were allocated to be spent between 2021 and 2026.

One of the objectives of the Mission was to “raise awareness on wetland conservation through a public awareness campaign.” It adopts “community-based approaches” and promotion of “stakeholder participation for effective management of wetlands.” One of the initiatives was a project on awareness as a part of wetland conservation and the Mission chose the Citizen consumer and civic Action Group (CAG) to implement it.

## **Project on Wetland Awareness by CAG**

On January 22, 2025, the Tamil Nadu Wetlands Mission and CAG signed a memorandum of understanding (MoU) to jointly promote and implement wetland conservation initiatives. The scope of collaboration is:

1. **Community Engagement:** CAG will work closely with the local community and stakeholders to raise awareness about the importance of wetlands conservation and encourage participation in conservation activities organized by the Tamil Nadu Wetlands Mission.
2. **Capacity Building:** CAG will provide training and capacity-building opportunities to students, public and officials on topics such as wetland ecology, sustainable management practices, and community engagement strategies.

3. **Baseline and Endline study:** CAG will collect baseline and endline data during training, capacity building and other initiatives undertaken as part of the collaborative work and provide study reports to the Tamil Nadu Wetlands Mission.

## Methodology

It was decided that the awareness programme would be implemented in areas around three wetlands, namely the Ennore Creek, the Pallikaranai Marsh Reserve Forest, both in Chennai and the Pulicat Lake Birds Sanctuary in Tiruvallur district. The three project sites represent three types of wetlands: The Ennore Creek and Pulicat Lake are brackish wetlands, while Pallikaranai marsh is a partly freshwater and partly saline wetland.

**Table 1 List of target wetlands identified for project implementation**

| Sr. No | Area Name                         | Location     | District   |
|--------|-----------------------------------|--------------|------------|
| 1      | Ennore Creek                      | Ennore       | Chennai    |
| 2      | Pallikaranai Marsh Reserve Forest | Pallikaranai | Chennai    |
| 3      | Pulicat Lake Birds Sanctuary      | Pulicat      | Tiruvallur |

## Sample

The project targets two groups of respondents: school students and community members.

Six schools were identified – two schools in each project site. In each school, about 200 students per school were exposed to awareness programmes and about 60 students from each school were motivated to participate in drawing, elocution and essay writing competitions.

One community living in the proximity of each of the three wetlands was identified. From each of these communities, we sought participation of about 80 community members to participate in the awareness programme.

**Table 2 Target sample size for awareness programme baseline and endline survey**

| Sr. No | Location                     | No of schools | No of community | Students in competitions (60 per school) | Student in awareness programme | Community participants | Baseline & endline survey |            | Total beneficiaries (for all locations) |
|--------|------------------------------|---------------|-----------------|------------------------------------------|--------------------------------|------------------------|---------------------------|------------|-----------------------------------------|
|        |                              |               |                 |                                          |                                |                        | Students                  | Households |                                         |
| 1      | Ennore Creek                 | 2             | 1               | 120                                      | 400                            | 80                     | 200                       | 100        | 900                                     |
| 2      | Pallikaranai Marsh Reserve   | 2             | 1               | 120                                      | 400                            | 80                     | 200                       | 100        | 900                                     |
| 3      | Pulicat Lake Birds Sanctuary | 2             | 1               | 120                                      | 400                            | 80                     | 200                       | 100        | 900                                     |
|        |                              | 6             | 3               | 360                                      | 1200                           | 240                    | 600                       | 300        | 2,700                                   |

## Methodology Framework

Firstly, the hypothesis was that there was a wetlands knowledge and awareness gap in the target students and community members and absence of an enabling environment for continuous learning about wetlands which is critical in participatory management of wetlands.

Secondly, it was decided to provide them the required knowledge and awareness through IEC and Folk media on the following aspects:

- Meaning & types of wetlands,
- Various benefits of wetlands towards socio-economic, livelihood, environmental and cultural development,
- Existing threats and ways of protecting wetlands,
- Various government initiatives (TN Wetlands Mission, Ramsar, Wetland Mitras, etc.)

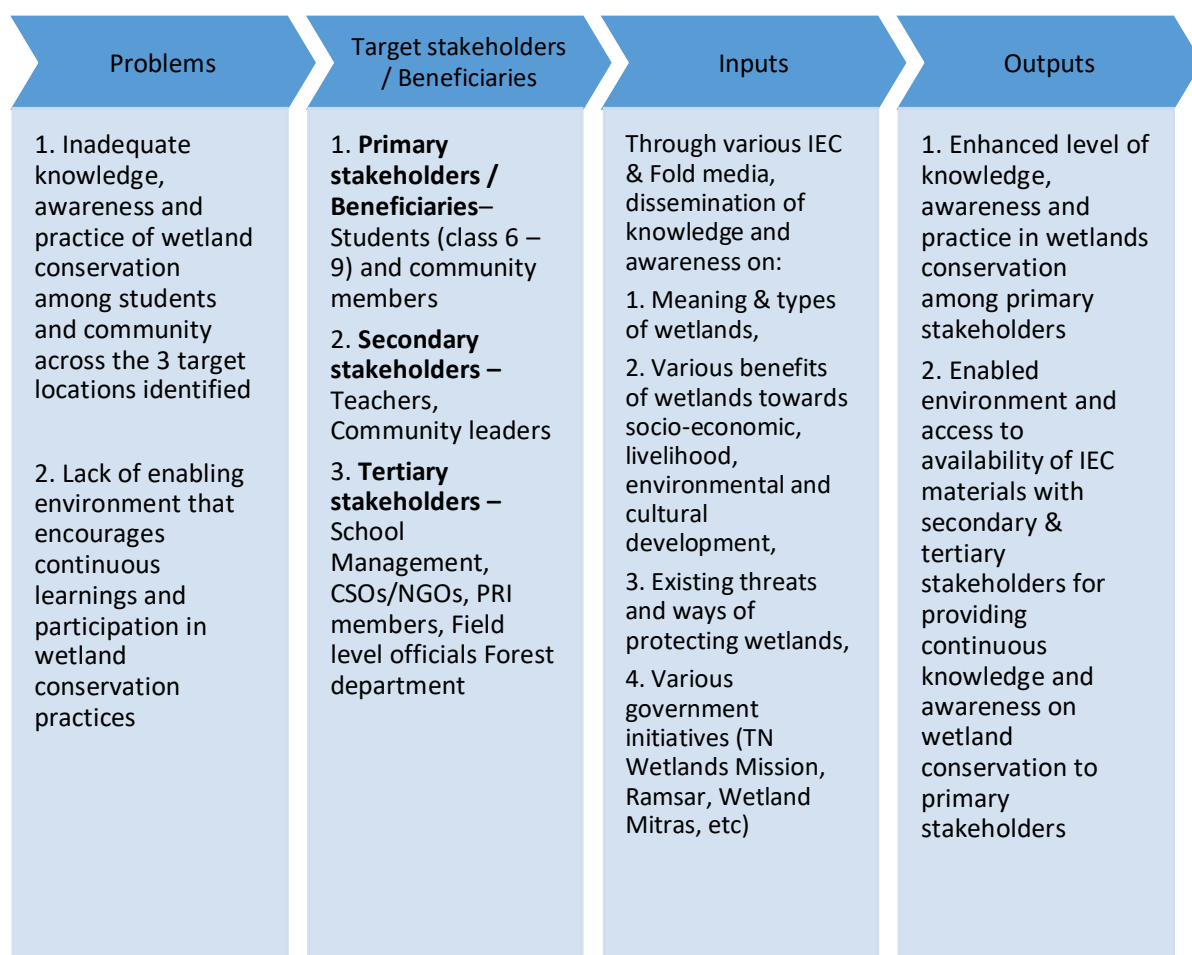


Figure 1: Overview of the process followed for awareness generation

## Plan for Information, Education, Communication (IEC) Tools

Depending on the type of theme and the nature of the target beneficiary (student or community member), different dissemination methods were conceptualised and designed.

While cultural performances such as folk play, puppet show, songs and folk dances focused on knowledge dissemination, the competitions (drawing, elocution and essay writing) for students made students seek new information and also use information acquired through the initiative.

The success of the programme depended on the active participation of teachers and school management and community leaders. Therefore, they were given an orientation regarding wetlands and the project objectives and methodology so that they could play the required role in mobilisation and implementation of the awareness programme.

**Table 3 Methodology framework**

| Thematic Content                                                                                                                                                                                                                                                                                                                                                                                                                 | Target Beneficiaries                                                                                          | Methods of IEC dissemination                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• The ecological value of wetlands</li><li>• Role in flood control</li><li>• Water filtration</li><li>• Biodiversity conservation</li><li>• Information about the threats to wetlands</li><li>• Importance of wetland conservation and protection</li><li>• Increase support towards the RAMSAR Convention</li><li>• Sensitise the public about their role in preserving wetland</li></ul> | <b>Primary:</b><br>Students studying classes 6 to 9 in government and private schools                         | <ul style="list-style-type: none"><li>• Competitions (only for students) - Speech, Drawing, Essay writing)</li><li>• Pamphlets (Tamil &amp; English) on (1) Know about Wetlands, (2) Dos &amp; Don'ts in protecting wetlands</li><li>• Cultural performance – Folk play, Puppet show, Songs and Folk Dance</li><li>• Orientation meeting (only for teachers)</li></ul> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                  | Community members living near the selected 3 wetlands                                                         |                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Secondary:</b><br>Teachers & Community Leaders (Secondary)                                                 | <ul style="list-style-type: none"><li>• Engaging them in planning and execution as Special guests / speakers in all IEC events</li></ul>                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Tertiary:</b><br>School Management / PRI members / Field level officials from Forest Department / CSOs/NGO | <ul style="list-style-type: none"><li>• Orientation meeting and sharing of IEC pamphlets and PPTs for continuous dissemination of knowledge on wetlands conservation to future beneficiaries</li></ul>                                                                                                                                                                 |

## Implementation Steps followed

### 1. Approval letter

- Obtaining formal approval letter from Tamil Nadu Wetlands Mission (Attached in Annex 1).
- A formal email consisting of the letter along with a proposed action plan was sent to the respective District Forest Officers (DFOs) during the second week of February 2025.
- Deputing Forest Range Officers (FROs) in each location to support project implementation
- Review of literature on wetlands

- Development of baseline and endline questionnaires (for Students and Community)

## **2. *Pilot visit and pre-testing of study tool***

- During last week of January 2025, the project team from CAG made a pilot visit to all the three locations – visiting schools (1 government and 1 private in each location) and community leaders
- During the pilot visit the project team along with an official from the Department of Forest met the school head teachers of all 6 target schools and sensitised them about the proposed project activities, obtained their consent and finalised the date and venue of each activity. Similar activity took place with the community leader in each of the project target locations.
- This visit helped to ensure that the selected schools and communities meet the eligibility criteria for implementing the proposed awareness activities such as minimum number of students, proximity to the nearby wetlands, availability of space for conducting various awareness activities and competitions and the official consent for participating in the programme.
- The draft questionnaires were also pre-tested in order to ensure that the choice of questions, response options flow and structure of the questions were relevant to the targeted respondents. This process helped to finalise the questionnaires. (Annex 2: Questionnaire)
- Based on the above discussions, the final programme agenda with date and venue was finalised and the same was shared with Tamil Nadu Wetland Authority, who were invited to attend.

## **3. *Development of IEC materials***

- Based on the review of literature and pilot visit the following IEC materials were developed. (Annex 3 for IEC materials)
  - Pamphlet 1: Importance of wetlands
  - Pamphlet 2: Dos and Don'ts for citizens living around wetlands
  - Banner
  - Script for puppet show (20 minutes' duration – with story and songs)
  - Themes for competitions – Drawing, Speech and Essay Writing
  - PPT for Orientation to teachers on importance of wetlands

## **4. *Follow-up preparations with school and community***

- Prior to implementation, the project team from CAG were constantly in touch with the school head teachers and nodal teachers (eco club teacher / PET) regarding various preparations such as identifying list of voluntary students for various competitions and survey activities
- Formal programme intimation mail was sent to the respective CEOs (Chief Education Officer) of both Chennai and Tiruvallur districts during the third week of February 2025.

## 5. Actual implementation of the programme

- Actual implementation of programmes was carried out during the third and fourth week of February 2025. (Detailed agenda and details of implementation are given in Chapter 2 on Awareness Programme on Importance of Wetlands)
- During the programme implementation, baseline and endline survey was administered with the targeted sample respondents after obtaining formal consent.

## 6. Data tabulation, analysis and reporting

- The survey data were fed in SPSS version 23 (Statistical Package for Social Science) for data cleaning, tabulation and analysis
- The report was generated based on the given objectives of the project during the third and fourth week of March 2025.

**Table 4 Timeline of activities**

| S. No. | Activity carried out                                                                                                                                                                                                             | Timeline                                                |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| 1      | MoU signed between CAG and Tamil Nadu Wetlands Mission                                                                                                                                                                           | 7 <sup>th</sup> January 2025                            |
| 2      | Project approval letter issued by Tamil Nadu Wetlands Mission                                                                                                                                                                    | 22 <sup>nd</sup> January 2025                           |
| 3      | Review of literature and development of draft-questionnaire for data collection                                                                                                                                                  | 23 <sup>rd</sup> – 26 <sup>th</sup> January 2025        |
| 4      | Pilot visit and pre-testing of questionnaires in all 3 locations (6 schools and 3 communities)                                                                                                                                   | 27 <sup>th</sup> – 31 <sup>st</sup> January 2025        |
| 5      | Questionnaires revised based on learnings from pre-test                                                                                                                                                                          | 5 <sup>th</sup> February 2025                           |
| 6      | Development of IEC materials – Pamphlets (2 sets), student competitions (speech, drawing, essay writing), script for folk arts (street play, puppet show, songs, dance), Training materials for teachers orientation and Banners | 15 <sup>th</sup> February 2025                          |
| 7      | Actual implementation awareness and capacity building activities in all 3 locations (6 schools and 3 communities)                                                                                                                | 20 <sup>th</sup> February to 5 <sup>th</sup> March 2025 |
| 8      | Data entry, tabulation, analysis and report preparation                                                                                                                                                                          | 15 <sup>th</sup> March to 30 <sup>th</sup> March 2025   |

## 2. Awareness Programmes on Wetlands conducted in Schools and Communities

### 2.1 Details of Wetland Awareness Programmes conducted in Schools & Communities

*Table 5 Details of Wetland Awareness Programmes conducted in schools*

| Sr. No | Activities in Schools                                                                 | Duration           | Details                              |
|--------|---------------------------------------------------------------------------------------|--------------------|--------------------------------------|
| 1.     | Drawing Competition                                                                   | 11.00 to 12.00 pm  | 30 students                          |
| 2.     | Speech Competition                                                                    | 11.00 to 12.00 pm  | 20 students                          |
| 3.     | Essay Competition                                                                     | 11.00 to 12.00 pm  | 30 students                          |
|        | Lunch                                                                                 | 12.00 to 1.00 pm   |                                      |
| 4.     | Mass Awareness - stage program<br>(Puppet show, Folk Songs and Dance,<br>Street play) | 1.00 pm to 2.00 pm | The entire students<br>in the school |
| 5.     | Conclusion & Prize Distribution<br>ceremony                                           | 2.00 pm to 2.30 pm | School Principal /<br>Head Teachers  |
| 6.     | Teacher Orientation                                                                   | 3.00 pm to 3.30 pm | All teachers from<br>class 6 - 9     |

*Table 6 Details of Wetland Awareness Programmes conducted in communities*

| Sr. No | Activities in Community                   | Duration           | Details                                                      |
|--------|-------------------------------------------|--------------------|--------------------------------------------------------------|
| 1.     | Inauguration and speech by<br>Chief Guest | 5.30 pm to 5.40 pm | NGO leader / Local community<br>leader / Government official |
| 2.     | Puppet show                               | 5.55 to 6.05 pm    | On importance of protecting<br>wetlands                      |
| 3.     | Folk-based Thematic songs                 | 6.05 to 6.15 pm    | On Do's and Don'ts for<br>protecting wetlands                |
| 4.     | Street play                               | 6.15 to 6.25 pm    | On importance of becoming<br>'Wetland Champion'              |
| 5.     | Public Oath Taking &<br>Conclusion        | 6.25 pm to 6.30 pm | For protecting wetlands                                      |

## 2.2 Details of school participants and community beneficiaries in the awareness programmes

*Table 7 Details of school participants*

Location: Ennore

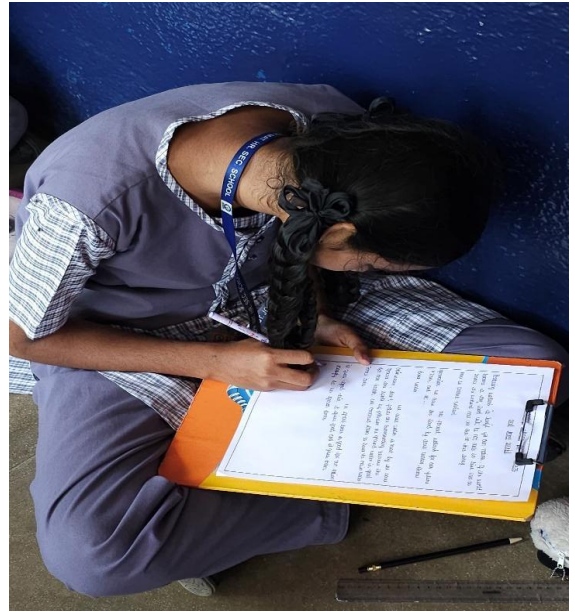
| Date                          | 17-Feb                                           |        |       | 18-Feb                                        |        |       |
|-------------------------------|--------------------------------------------------|--------|-------|-----------------------------------------------|--------|-------|
| School Outreach Activity Name | Government Higher Secondary School - Kathivakkam |        |       | St. Joseph Matriculation School - Kathivakkam |        |       |
|                               | Male                                             | Female | Total | Male                                          | Female | Total |
| Drawing competition           | 6                                                | 14     | 20    | 12                                            | 9      | 21    |
| Essay writing competition     |                                                  | 11     | 11    | 8                                             | 12     | 20    |
| Speech competition            | 1                                                | 5      | 6     | 3                                             | 12     | 15    |
| Cultural show                 | 128                                              | 160    | 288   | 155                                           | 170    | 325   |
| Baseline & Endline survey     | 49                                               | 51     | 100   | 48                                            | 52     | 100   |
| Total number of students      | 7                                                | 30     | 37    | 23                                            | 33     | 56    |
| Number of teachers            |                                                  |        |       |                                               | 14     | 14    |

Location: Pulicat Lake

|                               | 19-Feb                        |        |       | 20-Feb                                 |        |       |
|-------------------------------|-------------------------------|--------|-------|----------------------------------------|--------|-------|
| School Outreach Activity Name | National Matriculation school |        |       | J S Government Higher Secondary School |        |       |
|                               | Male                          | Female | Total | Male                                   | Female | Total |
| Drawing competition           | 13                            | 6      | 19    | 10                                     | 10     | 20    |
| Essay writing competition     | 4                             | 15     | 19    | 1                                      | 7      | 8     |
| Speech competition            | 5                             | 11     | 16    | 1                                      | 3      | 4     |
| Cultural show                 | 120                           | 145    | 265   | 65                                     | 85     | 150   |
| Baseline & Endline survey     | 55                            | 45     | 100   | 42                                     | 50     | 92    |
| Total number of students      | 22                            | 32     | 54    | 12                                     | 20     | 32    |
| Number of teachers            |                               | 8      | 8     | 2                                      | 3      | 5     |

Location: Pallikaranai

|                               | 21-Feb                                   |        |       | 22-Feb                           |        |       |
|-------------------------------|------------------------------------------|--------|-------|----------------------------------|--------|-------|
| School Outreach Activity Name | Government Model Higher Secondary School |        |       | Sivashakthi Matriculation School |        |       |
|                               | Male                                     | Female | Total | Male                             | Female | Total |
| Drawing competition           | 10                                       | 10     | 20    | 25                               | 17     | 42    |
| Essay writing competition     | 3                                        | 14     | 17    | 3                                | 5      | 8     |
| Speech competition            | 7                                        | 14     | 21    | 7                                | 4      | 11    |
| Cultural show                 | 185                                      | 175    | 360   | 85                               | 70     | 155   |
| Baseline & Endline survey     | 60                                       | 40     | 100   | 47                               | 43     | 90    |
| Total number of students      | 20                                       | 38     | 58    | 35                               | 26     | 61    |
| Number of teachers            |                                          | 13     | 13    |                                  | 6      | 6     |



Students participating in Essay Writing competition in Government school in Ennore



Awareness Programmes in Schools  
(Speech competition)



Awareness Programmes in  
Schools (Prize distribution to  
winners of various competitions)

Wetland is an area that is covered by water either permanently or seasonally. A wet land has both water and land characteristics.

- Total wetland area in Tamil Nadu is estimated at about 9 lakhs (902534) hectares which is 6.92 % of the geographic area. (Chennai and surrounding areas is about 1 lakh hectares)

### Types of Wetlands?

- Inland wetlands - include marshes, peatlands, lakes, rivers, floodplains, and swamps.
- Coastal wetlands - include saltwater marshes, estuaries, mangroves, lagoons and even coral reefs.
- Human-made wetlands - include Fish ponds, rice paddies and salt pans

### Importance of Wetlands?

- An acre of wetland can store 4 – 6 million litres of flood water
- Wetlands can store up to 50 times more carbon compared to rainforests
- Wetlands act like kidneys for other ecosystems. They filter, clean and store water.
- Wetlands are the most biologically diverse of all ecosystems



Puppet show conducted in a private school in Pallikaranai

### How it helps us - benefits?

- 50% of the worlds' drinking water comes from groundwater and wetlands are the major source of groundwater recharge. (Wetlands act as a sponge, soaking up intense rainfall. Marshes and floodplains absorb excess water, limit run-off, and recharge ground water)
- Natural water filters (removes dangerous pollutants from water)
- Support livelihoods and directly provide income to millions of families. (Fishing, agriculture, horticulture, tourism)
- Protect from natural disasters like floods. droughts. tsunamis and cyclones. (Marshes, ponds etc. store excess water and replenish low flows in times of drought – which are expected to rise in the coming days)
- Reduce threats of Global Warming (Wetlands regulate local climate, cooling the atmosphere in case of high temperature)
- Reduce soil erosion (protecting fertile upper layers of the soil important for production)
- Provide home to a wide variety of microorganisms, plants and animals

- Important for our survival and the environment.
- Acts as Recreational sites.
- Source of food – eg., fish
- Source of water - Inland wetlands provide fresh water
- Source of livelihood: building materials – eg., non-timber wood / source of fibres (for textiles), tourism as livelihood
- Coastal protection – prevents erosion of shoreline through vegetation and root system. Acts as a buffer zone
- Habitat for flora and fauna – plants and animals – important for biodiversity
  - Types of plants in Tamil Nadu wetlands – most are milkweed, bald cypress trees, mangroves and cattails.
  - Types of animals in Tamil Nadu wetlands – Fish, birds and reptiles and amphibians (snakes, frogs, etc.)



View of Folk Dance (Oyilattam) in Government school in Pallikaranai



View of Folk Dance (Thappattam) in private school, Kathivakkam



Students watching puppet show in Government Hr. Sec. School in Kathivakkam



Awareness Programmes in Schools (Teachers' orientation)

### How are we spoiling our wetland?

- Pollute wetland by dumping plastics or garbage or sewage or industry waster
- Encroachment
- Clearance of vegetation
- Over-exploitation through taking away the resources available in the wetlands such as trees, sand etc.
- Introduction of alien or invasive species
- Siltation – soil or sand that settles in the bottom and blocks flow of water
- Weeds – wild plants that grow and spread rapidly – often causing harm
- Especially important in the context of wetlands near big cities - uncontrolled discharge of waste water, industrial effluents, surface run-off etc.
- Encroachment by human beings
- For real estate
- For agriculture

### Effects of losing wetlands:

For humans:

- Water scarcity
- Exposure to flooding and extreme weather events
- Lost livelihood and wellbeing
- Threat to food security

### For Planet Earth:

- Biodiversity change
- Increased carbon and methane emissions
- Loss of natural freshwater sources



View of Folk Dance (Garakattam) conducted in Government school, Pallikaranai

### How do governments protect wetlands?

Tamil Nadu has 18 Ramsar sites. Under international convention, these are protected wetlands with unique or rare features and biodiversity.

### What can we do?

- Tree planting
- Participation in wetland restoration and protection projects
- Raising awareness and educating others on significance of wetlands
- Avoiding activities that lead to destruction of wetland Eg. Polluting, excess draining etc.)
- Be a 'Wetland Champion'
- Conduct cleanliness drive – clean the wetlands
- Use Pongal celebrations to spread awareness about wetlands and their conservation

## Know about your wetland

### Pallikaranai:

- Pallikaranai Marsh (also known by Tamil generic name 'kazhuveli' which means a floodplain or water logged area)
- Pallikaranai Marsh drains an area of 250 sq km of South Chennai encompassing 65 wetlands through two outlets viz., Okkiyam, Madavu and the Kovalam creek and falls into the Bay of Bengal.
- The Marsh always retains some storage, thus forming a classic wetland ecosystem.
- Large parcels of the Pallikaranai Marsh have been lost. 90% of the Marsh destroyed and only 10% is remaining
- Reasons: Fragmentation and encroachments
- It is declared as a Protected Area - is the last hope for the city of Chennai.



Students taking oath for protecting wetlands in Government school in Pulicat Lake

### Ennore Creek

- Ennore creek has:
  - Salt pans
  - Water bodies
  - Mangroves
- A natural carrier of floodwater and an important wetland that supports livelihood of fishermen
- 68% of wetlands are lost – area of salt pans, water bodies and mangroves have shrunk
- Strong community initiative to protect the creek



Students taking part in Drawing Competition in Government school in Kathivakkam

## Pulicat Lake

- Pulicat Lagoon is the second largest waterbody in India (after Chilika Lake in Odisha) - measuring 759 square kilometres (293 sq mi).



Awareness Programmes in Communities

- It is a coastal shallow, brackish water lagoon
- Freshwater comes from land runoff through three seasonal rivers (Arani, Kalangi and Swarnamukhi) that discharges into the lake
- The wetland attracts Northeast Monsoon rain clouds towards Chennai.
- Major threats – Increasing salinity, loss of waterbird habitat due to
  - reduced flow of freshwater from upstream areas,
  - clogging of bar mouth of the lake and
  - reduction in monsoonal precipitation over the years.
- The lake is managed by Pulicat Bird Sanctuary and plans to implement “integrated management plan”



Awareness Programmes in Communities

### 3. Key findings of Baseline & Endline survey

Before we dive into the key findings of baseline and endline surveys, it is relevant to focus on the adoption of an integrated approach in the design of the awareness programme and surveys. Firstly, the relevant knowledge was mapped, and this was fine-tuned based on the target audience (students, community members or secondary/tertiary stakeholders). Secondly, based on the mapping, awareness programmes were designed. Thirdly, the baseline and endline questionnaires were put together to measure each knowledge component of the awareness programme.

Given the levels of knowledge in existence regarding wetlands and the diverse sources where the knowledge was found, customised “knowledge resources” were first developed. This standardisation was a prerequisite for the integration of surveys with the actual awareness programme. For instance, the same definition of wetland was used for both the questionnaires and the awareness programme.

Following are the relevant extracts from the knowledge mapping exercise:

**Definition of Wetland:** An area 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 meters. (Source: Wetland (Conservation and Management) Rules, 2017)

**Types of Wetlands** (with special focus on the types of project sites):

- Marsh lands
- Coastal wetlands
- Mudflats
- Mangroves
- Any other, specify

**Types of Plants and Animals of Wetlands** (list included ones more commonly found in project sites)

*Table 8 Types of plants and animals*

| Plants             | Animals                          |
|--------------------|----------------------------------|
| Milkweed           | Fish,                            |
| Bald Cypress Trees | birds                            |
| Mangroves          | Reptiles and amphibians (snakes, |
| Cattails           | frogs, etc.)                     |
| Any other          | Any other, specify               |

**Key socio-economic benefits for the society/community** (The list was partly direct and specific to the project sites but also included some generic ones):

1. Source of food – eg., fish
2. Source of water (50% of Worlds' drinking water comes from groundwater and wetlands are the major source of groundwater recharge)
3. Source of building materials – eg., non-timber wood
4. Source of fibres (for textiles)
5. Source of fodder
6. Recreation
7. Tourism – as a source of livelihood

8. Water purification and waste treatment
9. Shoreline stabilisation and storm protection (erosion control)
10. Pollination
11. Any other, please specify

**Key benefits of wetlands for Environment / climate** (Nearly exhaustive list was compiled)

1. Storms control: Coastal wetlands protect coastlines from storm damage
2. Drought prevention: Marsh wetlands help fight drought by storing excess water and replenishing low flows in times of drought
3. Heat waves reduction: Wetlands helps in regulating local climate, cooling the atmosphere in case of high temperatures
4. Flood control: Wetlands work as sponge, soaking up intense rainfall, helping recharge groundwater.
5. Green corridors: Can reduce 'heat island' effect in cities
6. Habitat for flora and fauna – plants and animals – important for biodiversity
7. Absorbing carbon dioxide (Carbon Sink)
8. Soil formation (Sediment retention and accumulation of organic matter)
9. Nutrient recycling (Storage, recycling, processing and acquisition of nutrients)
10. Any other, specify.

**Key cultural benefits of wetlands**

1. Spiritual & Inspirational
2. Recreational
3. Aesthetic
4. Educational
5. Sports activities
6. Any other, specify

The other questions related to threats to wetlands (specific and generic), the role of citizens (especially the community members).

Flashcards were used as a visual aid to test the ability of the target audience to identify wetlands in general and the project sites. Based on the knowledge mapping, the content for the IEC campaign was designed and produced. For instance, the puppet show for school children provides information on each of the questions in the questionnaire. There's storytelling and song and music to make it engaging. The content is simplified while being factual and accurate and tested for ease of understanding.

### 3.1 Demographic Profile of Respondents

The study focused on three kinds of audiences – primary, secondary and tertiary. In order to find out the extent of knowledge and awareness among people of different walks of life and students belonging to different socio-economic backgrounds, the survey had to ensure a balanced demographic representation.

First let us look at the details of students covered by the studies.

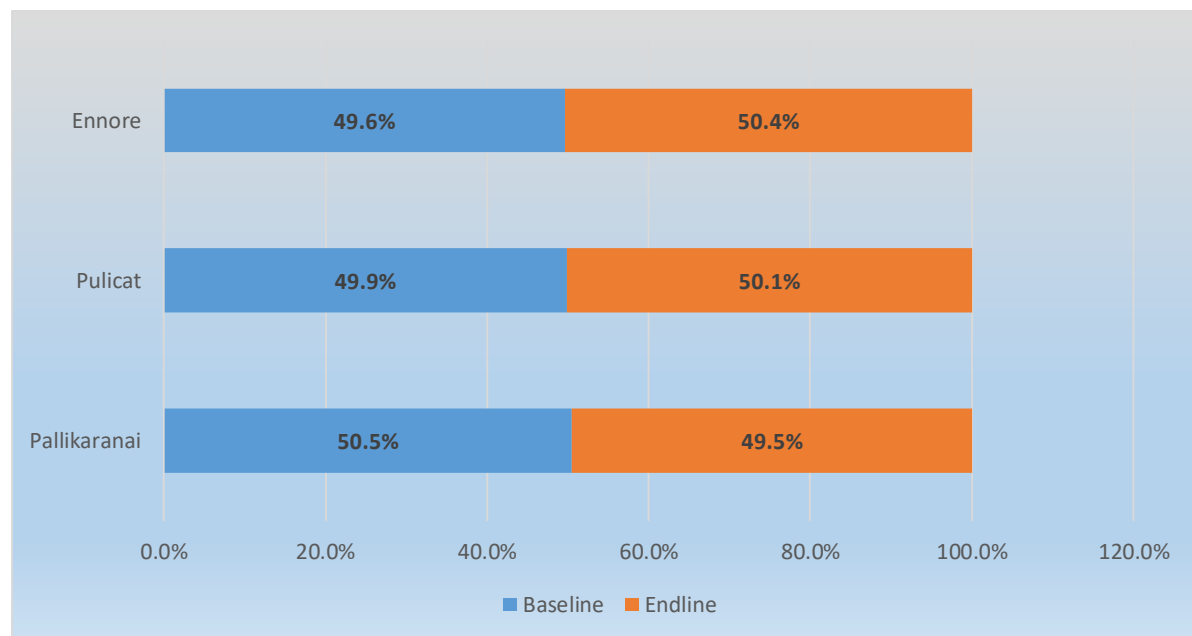


Figure 2: Sample size across Baseline and Endline survey (%)

A near equal representation of student respondents has been achieved across all three locations.

The minor variations found in sample size between schools are mainly due to the actual strength of students in each school and availability on the day of the programme, though it was targeted to achieve a minimum of 100 students per school.

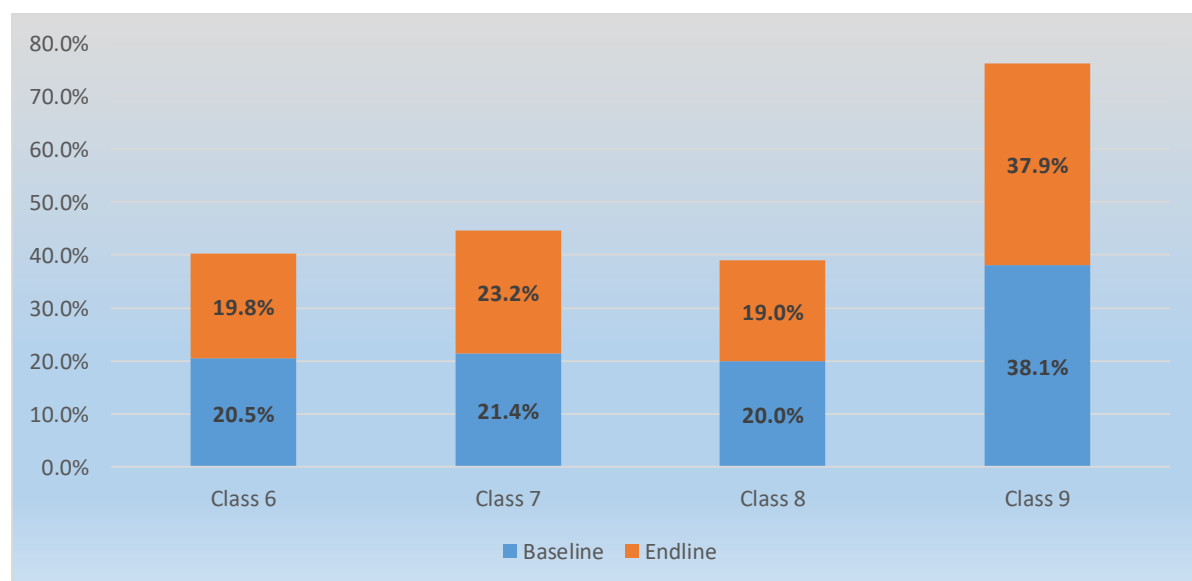


Figure 3: Proportion of students by Class (%)

The study originally targeted to cover a minimum of 25 students per class so that hundred students in baseline and the same hundred in endline could be achieved. However, the sample size in each school also had minor variations due to the actual strength and availability of students on the day of the programmes. For instance, in some government schools, the student size in class six and seven was much lower than required. Hence, the study covered all the students who were available. When it came to the members of the community, the study looked at their geographic location (place of stay), their age, gender, education, and occupation.

## Age

The community respondents belonged to a wide age group, starting from 18 years to more than 50 years.

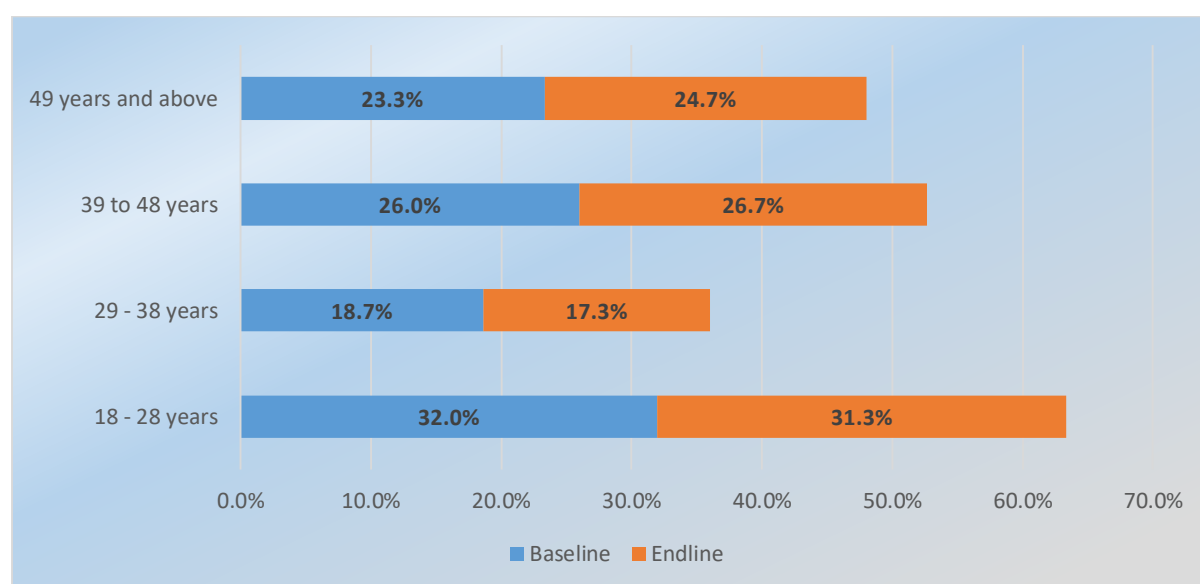


Figure 4: Age of community members (%)

## Gender

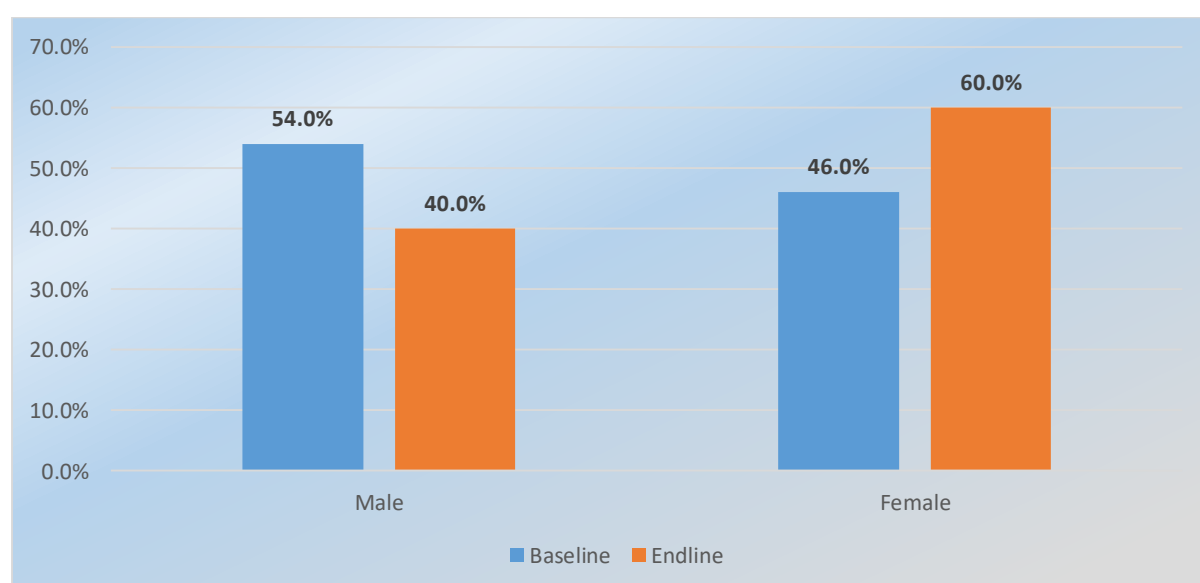


Figure 5: Gender of Community respondents (%)

## Education of Community Respondents

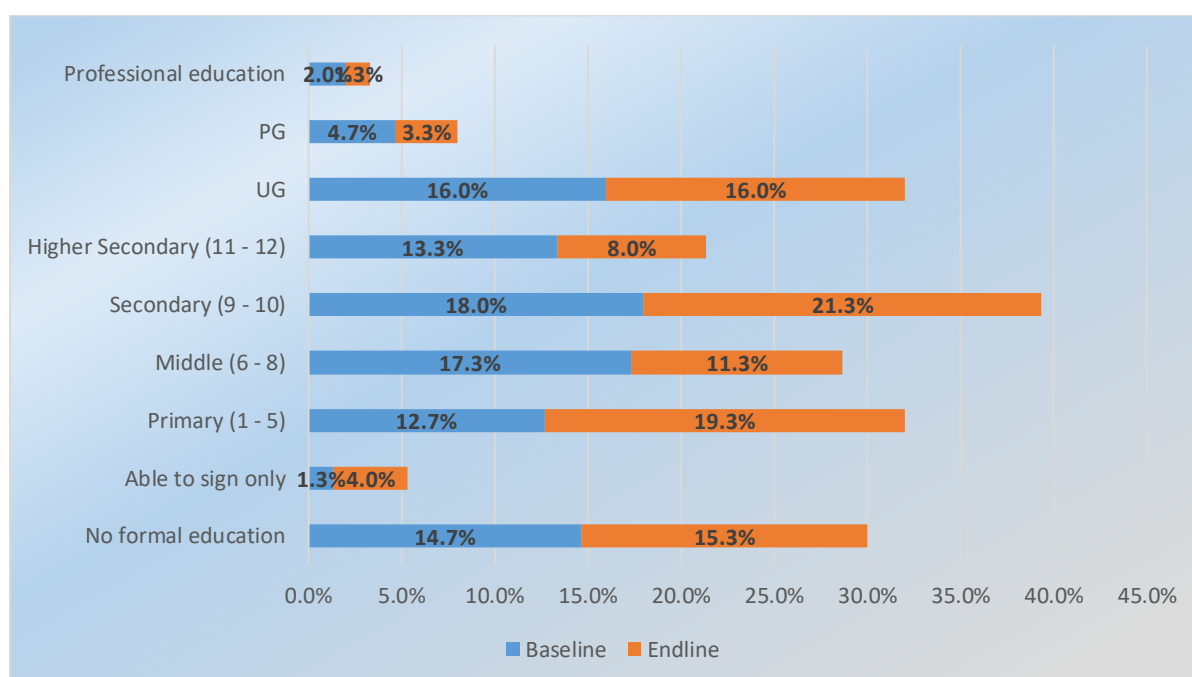


Figure 6: Educational Qualification of Community respondents (%)

Education has been an important criterion for this study as it was closely linked to the level of knowledge and awareness.

The qualifications of respondents interviewed in the community had a wide range, starting from those who were barely educated to those who had completed post-graduation. The majority [20%] had secondary education, that is up to class 10 as their qualification, followed by 16% with under graduation qualification.

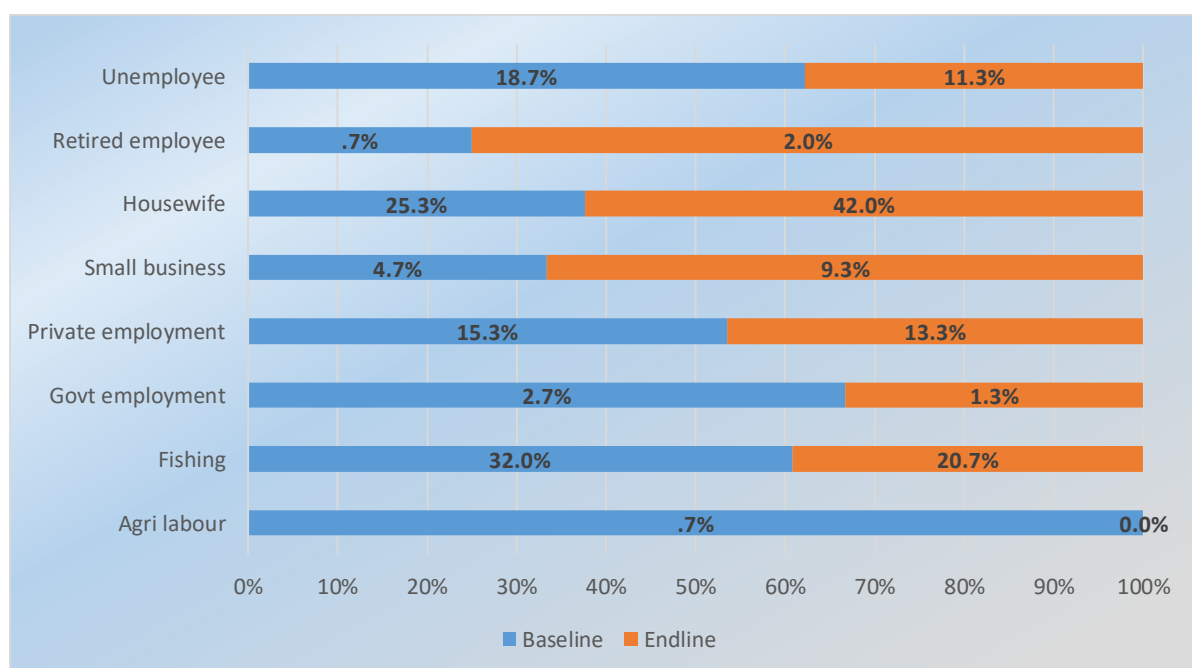


Figure 7: Primary occupation of the head of household (%)

Though the study was carried out in the metropolitan city of Chennai and neighbouring Tiruvallur, the actual project locations were low- or middle-income areas surrounding the 3 wetlands, where the majority (23.3%) were engaged in fishing occupation.

### Place of Residence

Since the study focused on the interrelationship between the community and the wetland, not only the place of residence (which was to be near the wetland) but also the duration of stay was factored in as the assumption was that the longer the stay the more perceptive one is likely to be about wetlands and its impact on community.

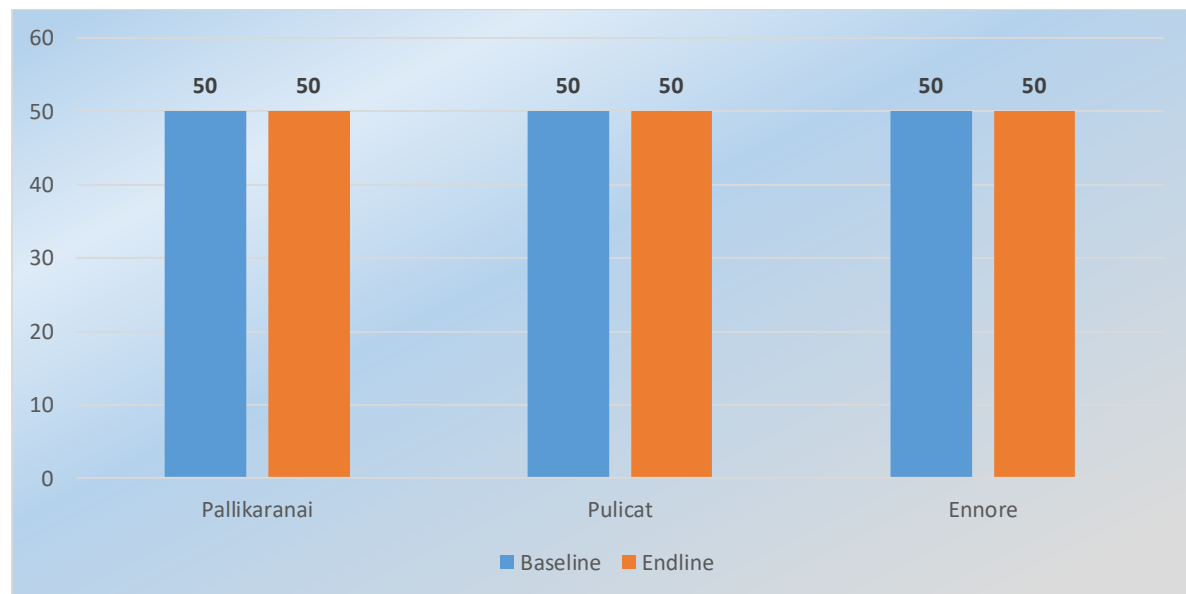


Figure 8: Number of Community Members by location (%)

In the community sample size, the project could achieve an equal number of respondents in each location.

### Proportion of students by Gender

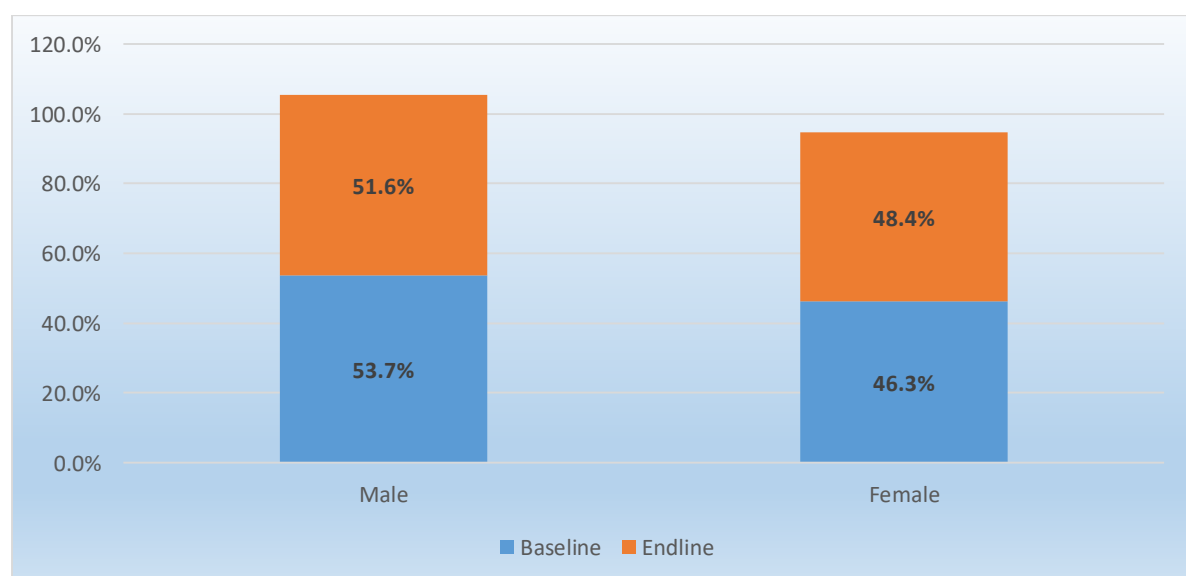


Figure 9: Proportion of Students by Gender (%)

## Community Members by Ownership of house

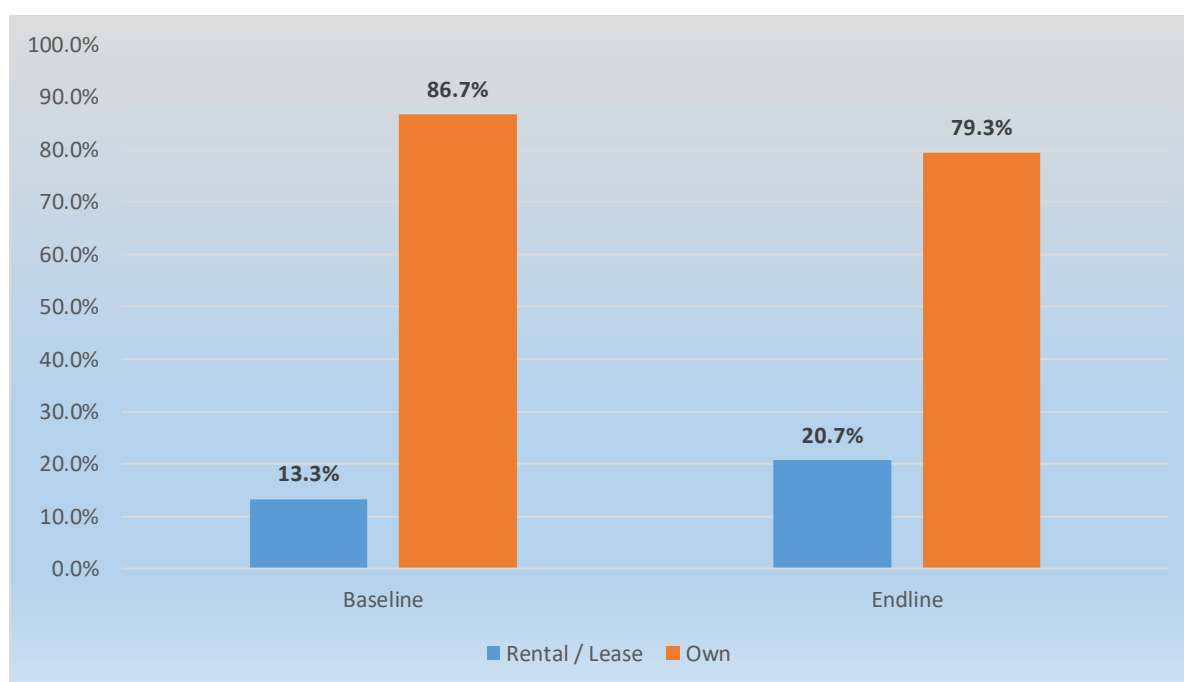


Figure 10: Community Members by Ownership of house (%)

Majority (83%) had their own house, while the remaining were living in rental or leased home. Majority of the respondents [nearly 75%] have been living in the same locality for more than 20 years.

## 3.2 Awareness on Wetlands – Meaning and Types

Lack of awareness or ignorance about wetlands results in apathy towards their destruction or degradation. Either people ignore its loss, unwittingly, or through their actions cause degradation.

Overall, the 40.1% baseline level of awareness on ‘what is wetland’ across students and community members has improved to 74.1% at the endline survey due to the awareness programmes conducted by CAG.

Among school students, the awareness about what a wetland is, showed an increase from 43.6 percent in baseline study to 72.3 per cent in the endline study. As one would expect, in the baseline study, a higher number of students in higher classes had more awareness than students studying in lower classes – that is, more students in class 9 knew of wetlands than students in class 6. There wasn’t much variation in the endline survey indicating that the awareness programme had nearly the same impact on students belonging to different classes.

Among the community members, the increase in level of awareness from 26.7% in baseline to 81.3% during endline indicated that the community members have shown interest in knowing about wetlands, given the obvious fact that they are living very much around the wetland, facing it day in and day out. The rate of increase in awareness of the meaning of wetland is higher among community members than among students. This indicates that the community who were living near the wetland area are keen to know more details about wetland.

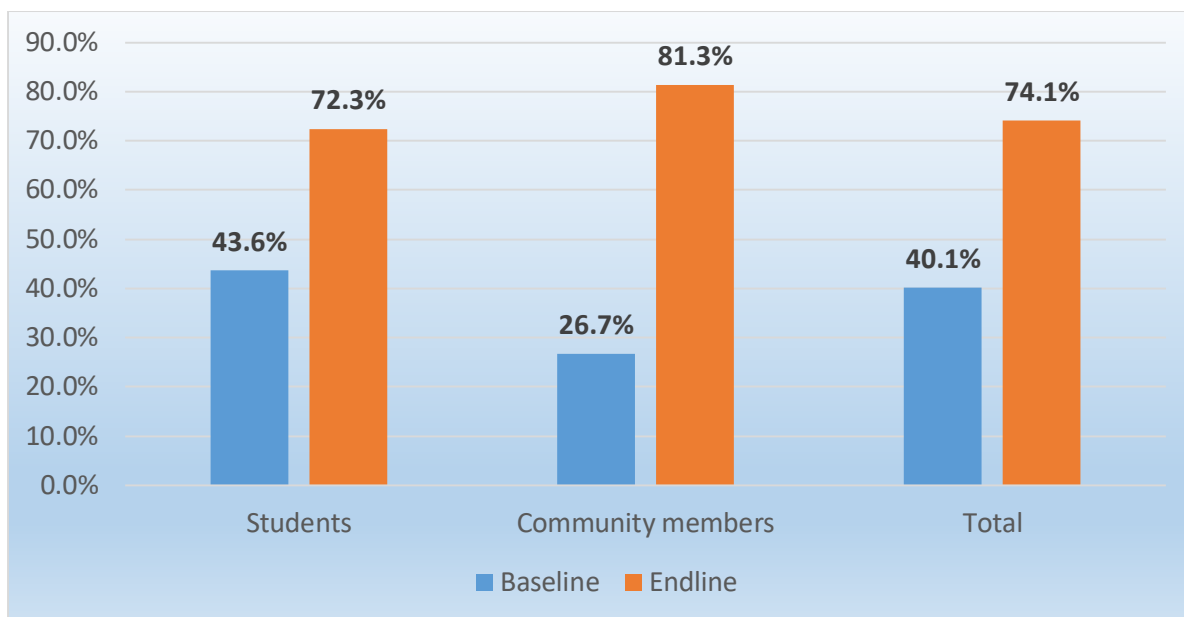


Figure 11: Proportion of respondents who are aware of what a wetland is

When it comes to awareness of types of wetlands, the levels of awareness are lower with regard to unfamiliar wetlands such as peatland (bogs where soil consists of decaying plants), while awareness regarding river and lake wetlands was naturally higher. In the baseline survey, among students, 48.9 percent and 51.5 percent knew of river and lake wetlands, respectively. This went up in the endline survey to 83.1 per cent and 82.6 per cent. In the baseline study, the response of an alarmingly high 75.3 percent of community members surveyed was “Don’t Know”. However, the endline results for community members were encouraging as no one (0 per cent) answered “Don’t Know”. After going through the awareness programmes, 81.9 percent and 75.2 percent of community members showed awareness of marshland and lake wetlands.

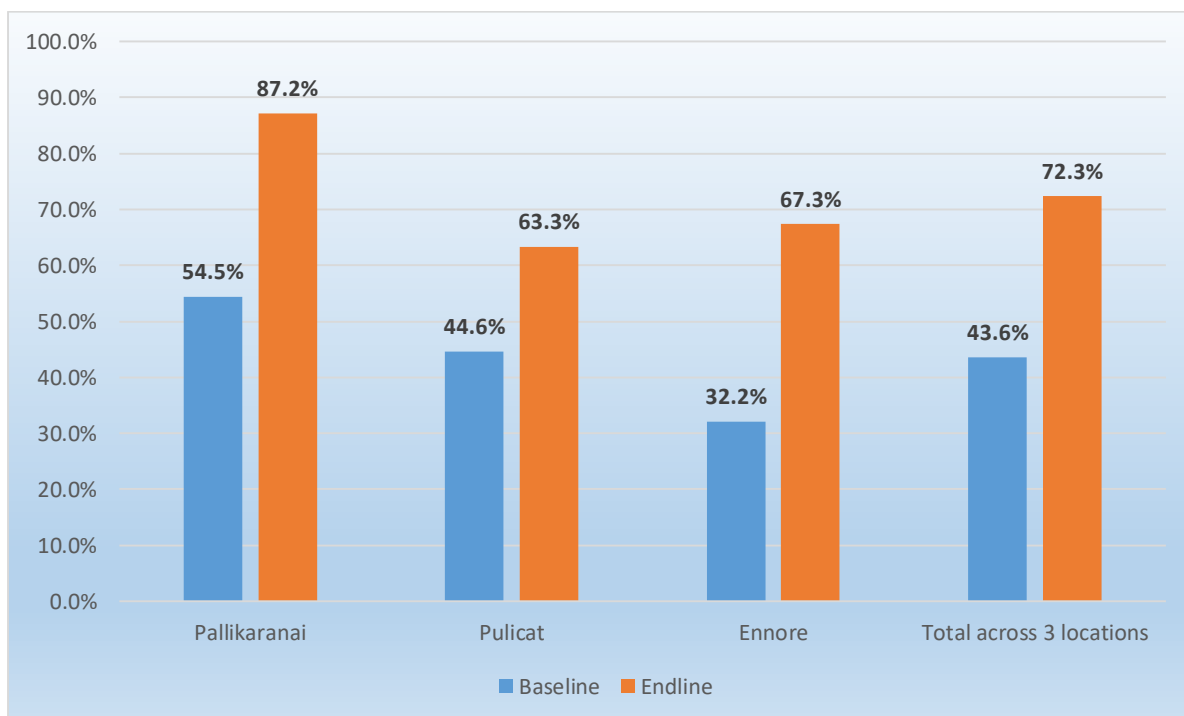


Figure 12: Awareness on meaning of Wetlands among students across three locations

In the above chart, it is clear that students from Pallikaranai had an increased level of awareness on the meaning of wetlands compared to other two locations both before and after the implementation of the awareness programme by CAG.

During baseline, student respondents from Ennore location reported the least level of awareness but the level of increased from pre- to post-implementation of awareness programme was highest across all the locations. This indicates that the reach of the programme in Ennore was more.

**Awareness level across Government and Private school students:** Across the types of schools between Government and Private schools, the difference in awareness level in both pre (Govt – 42.7%; Private – 44.5%) and post (Govt. – 70.2%; Private – 74.4%) implementation of awareness programme was only about 2 to 4%, meaning it is nearly equal across both the types of schools and no significant differences. This shows that the popular perception or belief that private English medium school students may have better awareness compared to government Tamil medium students is not true. Also, this is indicative of the quality of education imparted in government schools in Chennai and other places.

**Awareness level across male and female students:** During baseline, girl students showed a relatively lower level of awareness (39.1%) compared to boys (47.5%). However, in the endline survey the awareness level was near equal: Male – 73.2%; Female – 71.4%. This indicates that the increase in level of awareness is more among girl students.

Following the awareness programme, there has been an increase in the awareness of other types of wetlands, namely, peatland, floodplains and rivers, among community members.

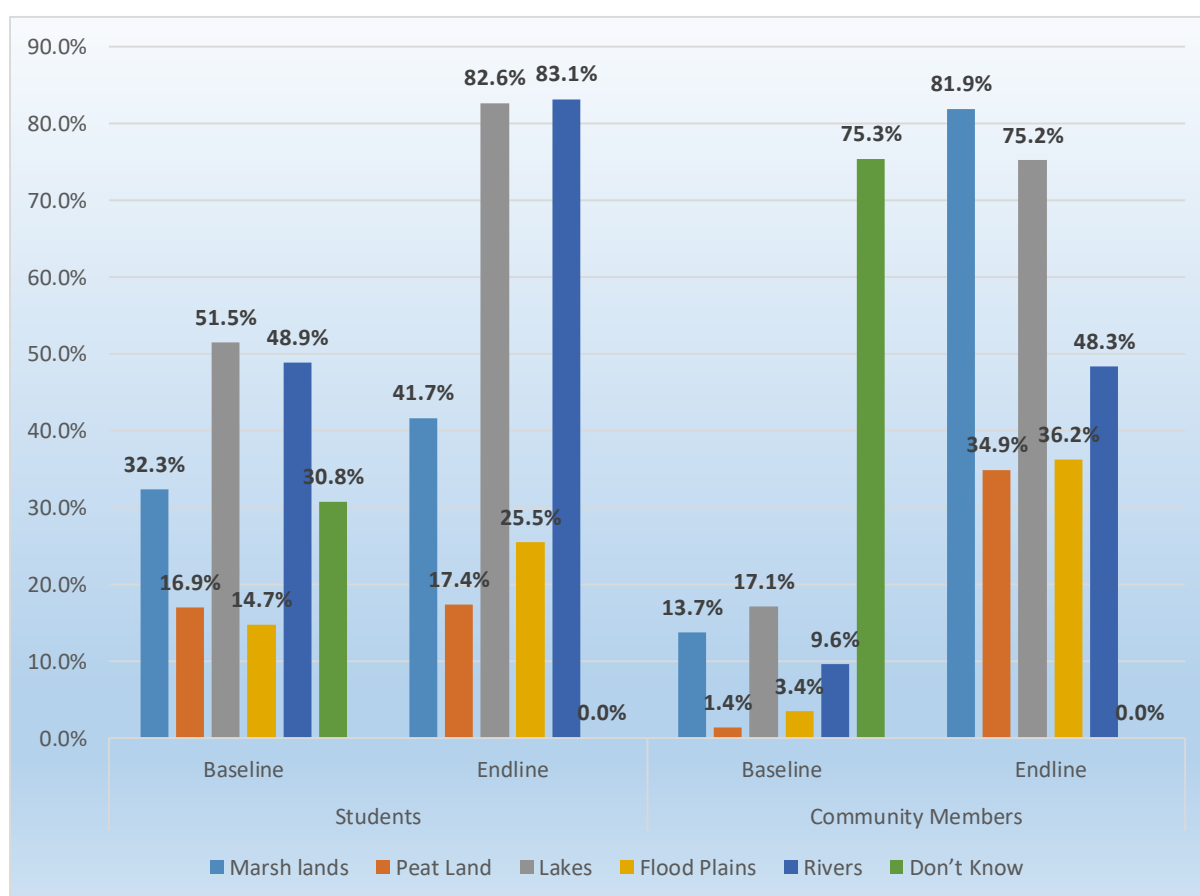


Figure 13: Awareness on different types of Inland wetlands

### Awareness on types of coastal wetlands

Since two of the three wetlands under study are coastal wetlands, and the third (Pallikaranai marsh) is a freshwater wetland but situated close to the coast, the knowledge of respondents regarding coastal wetlands was tested.

Coastal wetlands are typically found where land and sea meet. Salt marshes, mangrove swamps, estuaries, and coastal lagoons are some of the common types of coastal wetlands.

In the baseline study, 43.9 percent of students were aware of saltwater marshes, and in the endline study, it went up to 58.9 per cent. The percentage of students who responded with “Don’t Know” in endline study was 0 as against 32.5% in the baseline. For community members, the “Don’t Know” percentage dropped from 74.8 percent to 0 per cent in the endline study.

In the endline study, for community members, the highest percentage of 83.2 was reported for estuaries as against 19.0 per cent in the baseline study. Awareness of saltwater marshes and lagoons was around 65 per cent in the endline study for community members.

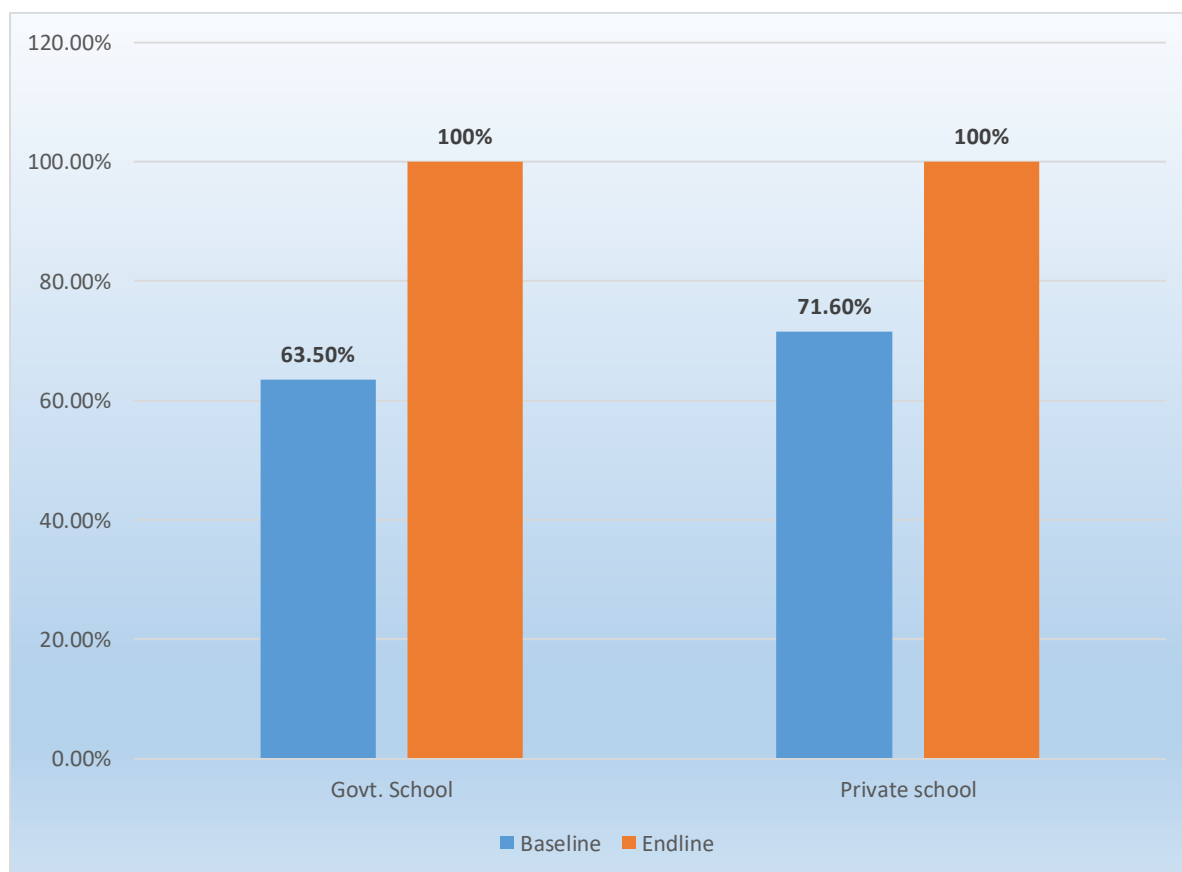


Figure 14 Awareness of at least one type of coastal wetlands by Type of School

In the above chart, it can be noted that during the baseline study, students from private schools had shown slightly more awareness on at least one type of coastal wetland compared to government school students. However, the difference was only minimal (about 8%). However, during endline, in both the types of schools, 100% students were aware of the same.

Given the nature of the subject and questions, it is difficult to explain the variations in responses. Only a more detailed study would be able to explain the variations.

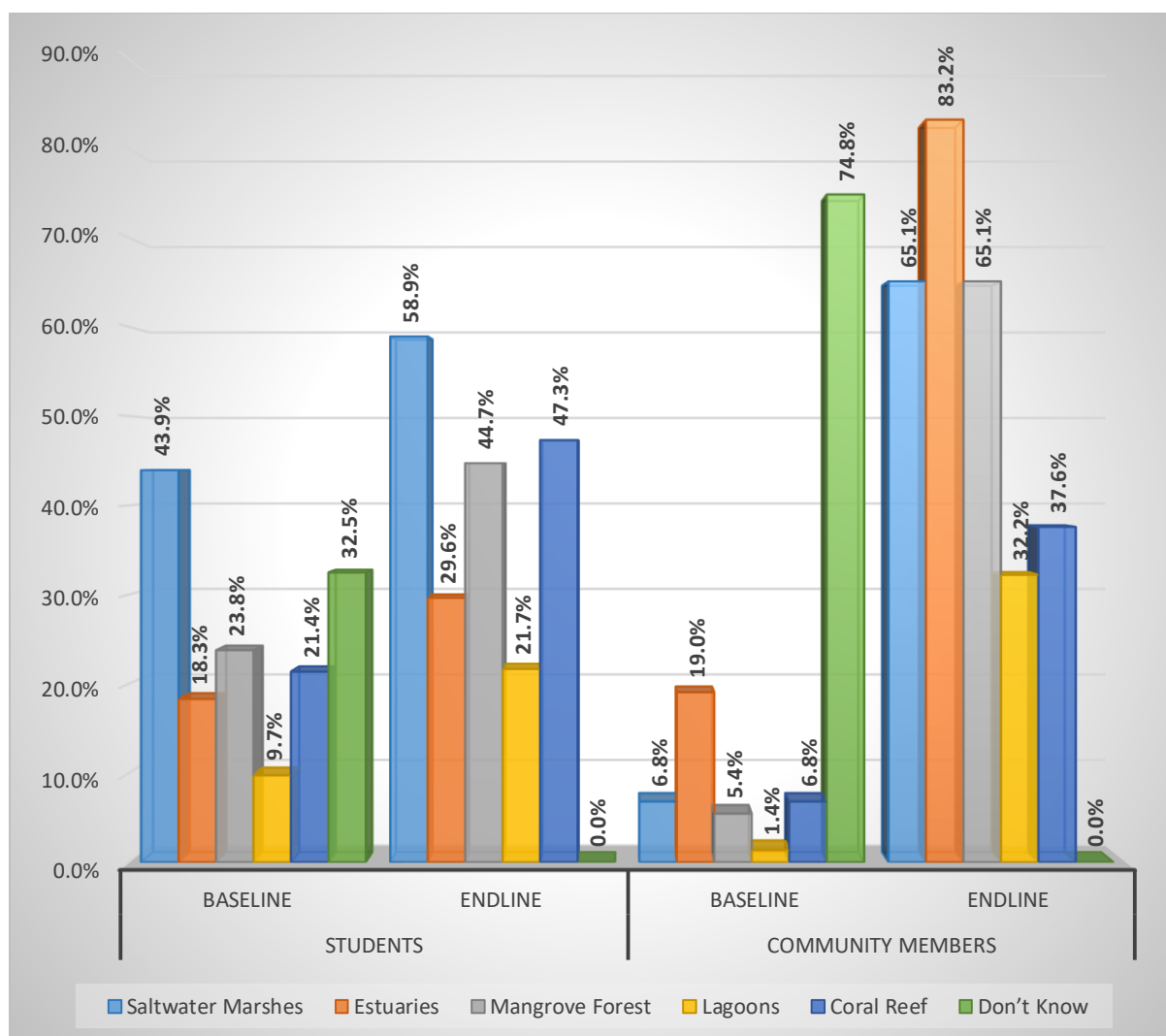


Figure 15: Awareness on types of coastal wetlands

Though all three target communities were living near coastal areas, still their awareness on types of coastal based inlands were largely limited to marshlands and not on other types such as Estuaries, Mangrove forests, lagoons and coral reefs.

#### Awareness on man-made wetlands

Contrary to natural wetlands, man-made wetlands are systems which mimic natural wetlands with regard to vegetation and other features and are largely used for commercial activity. Man-made wetlands include fishponds (aquaculture), paddy fields (agriculture), and salt pans.

In the baseline study, 30.1 per cent of students and 61.7 percent of community members said they did not know what man-made wetlands were. This dropped to nearly 0 per cent in the endline study.

Among students, awareness about fishponds and paddy fields as man-made wetlands increased from 38.5 percent and 46.2 per cent in the baseline study to 75.6 percent and 68.6 percent, respectively, in the endline study. For the community members, the comparable numbers were 34.2 and 12.1 per cent in the baseline study and 92.6 and 48.6 per cent, respectively.

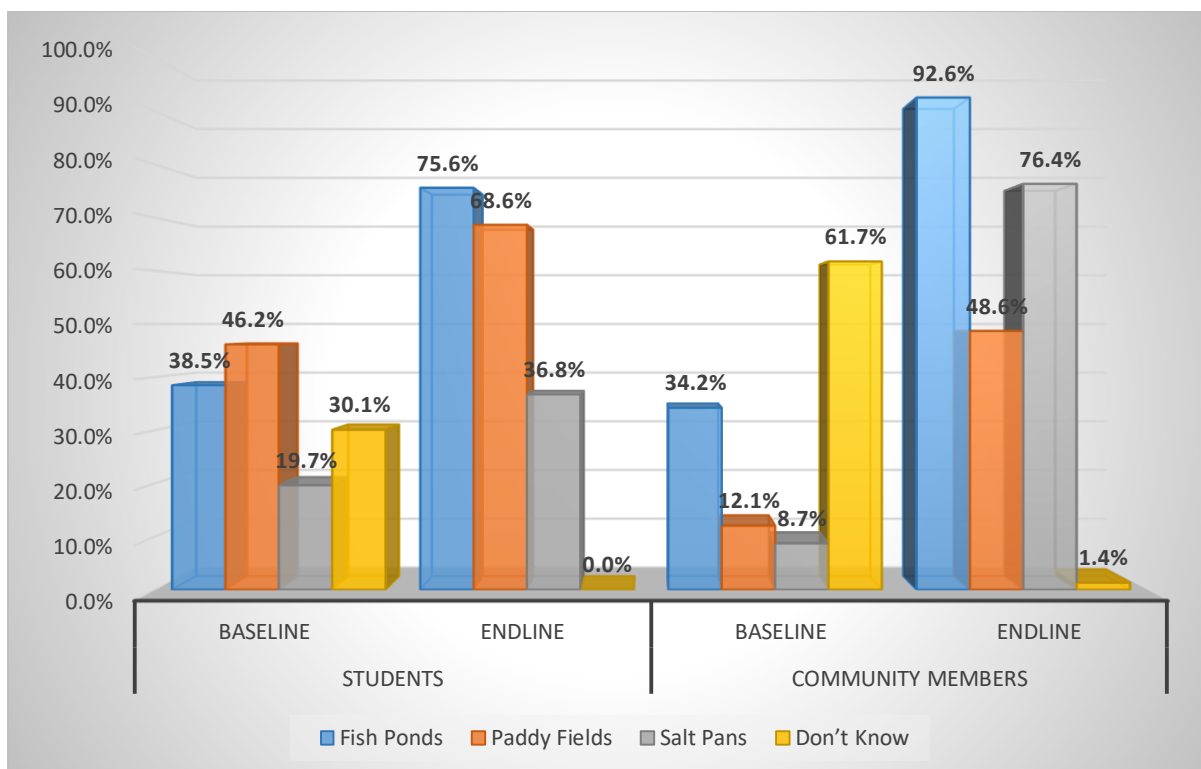


Figure 16: Awareness on man-made wetlands

Overall, the level of awareness on various types of wetlands, such as inland, coastal, and man-made, has improved from 21% to 56% due to the awareness programmes conducted by CAG.

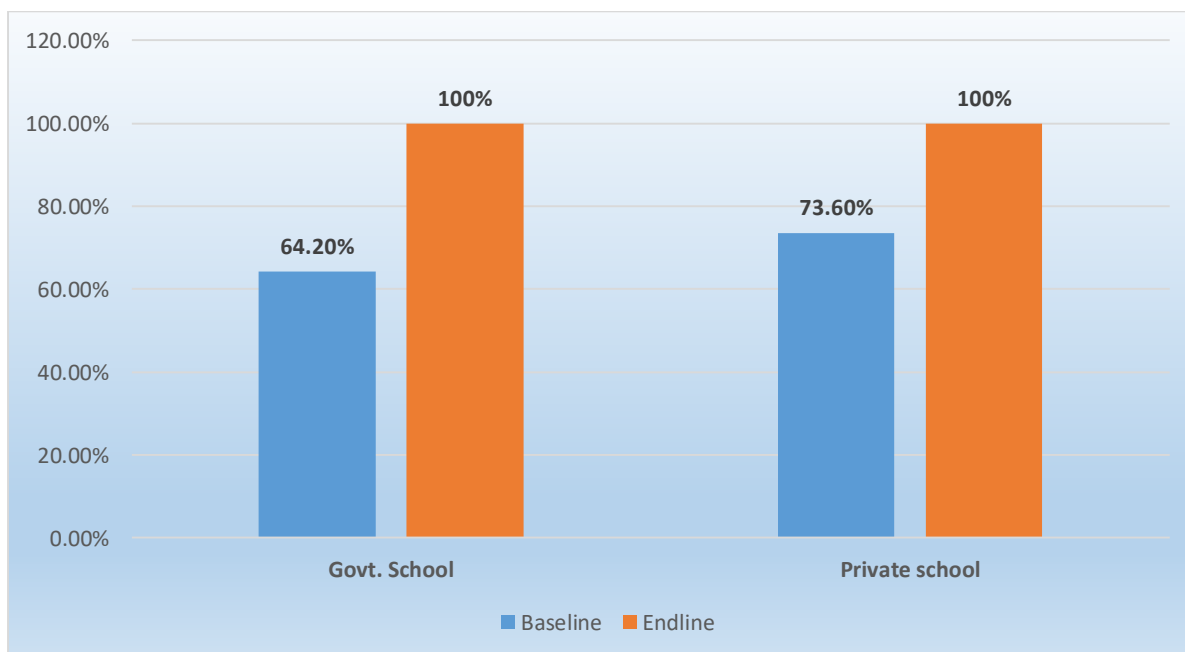


Figure 17: Awareness of minimum one type of man-made wetlands by Type of School

In the above chart, it can be noted that during baseline study, students from private schools had slightly better awareness on at least one type of man-made wetland compared to government school students. However, the difference is only minimal (about 9%). However, during endline, in both the types of schools, 100% students were aware of the same.

### Source of awareness on various types of wetlands

About 88.3% of students cited CAG's awareness programme as their main source of awareness about wetlands. Also significant to note that more than 30% of students cited their school books as a reference source for knowledge about wetlands.

For community members too, the CAG awareness programme was the main source of knowledge and awareness about wetlands.

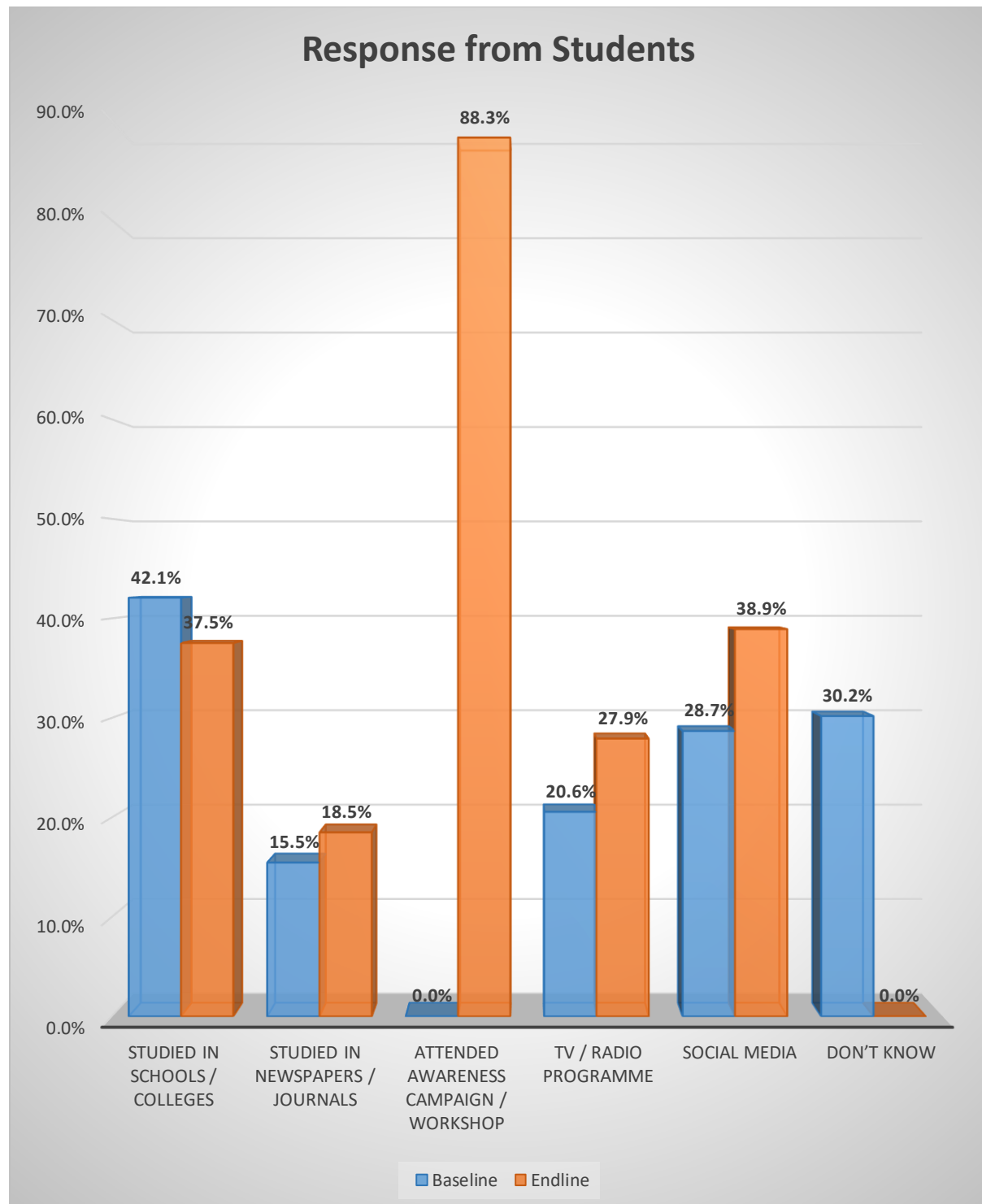


Figure 18: Source of awareness on various types of wetlands among students

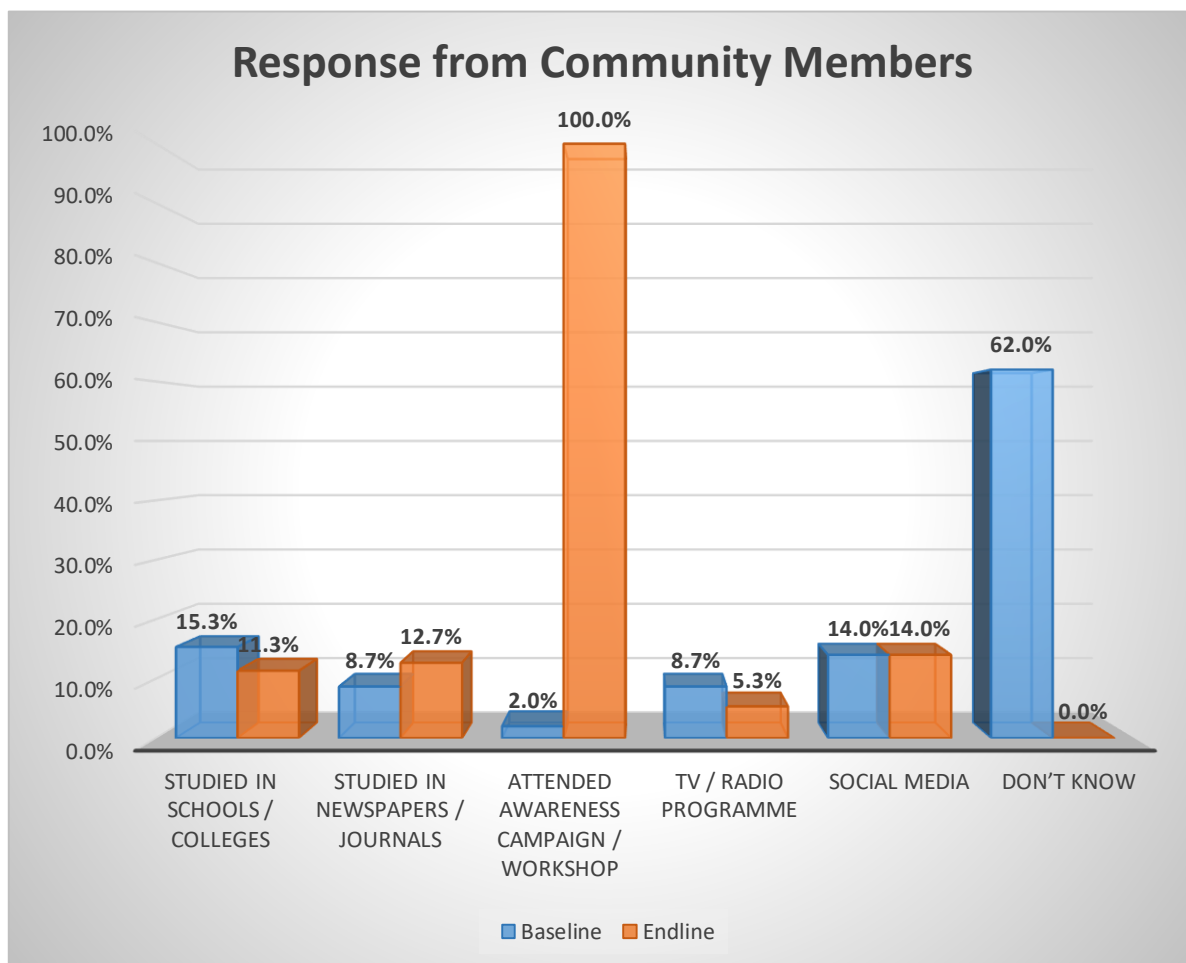


Figure 19: Source of awareness on various types of wetlands among community members

Overall, more than 90% of both the respondents across students and community mentioned that their prime source of knowledge and awareness about wetlands has been the current awareness programmes conducted by CAG.

#### Awareness on types of plants that grow in wetlands

The study focused on four types of plants that grow in wetlands. They are milkweed, bald cypress trees, mangroves and cattails. Of them, mangroves and cattails are quite common in Chennai wetlands. Among students, the awareness of mangroves increased from 41.4 per cent in baseline to 70.5 per cent in the endline study. The comparable numbers for community members were as low as 8.8 per cent in baseline and touched 100 per cent in the endline study.

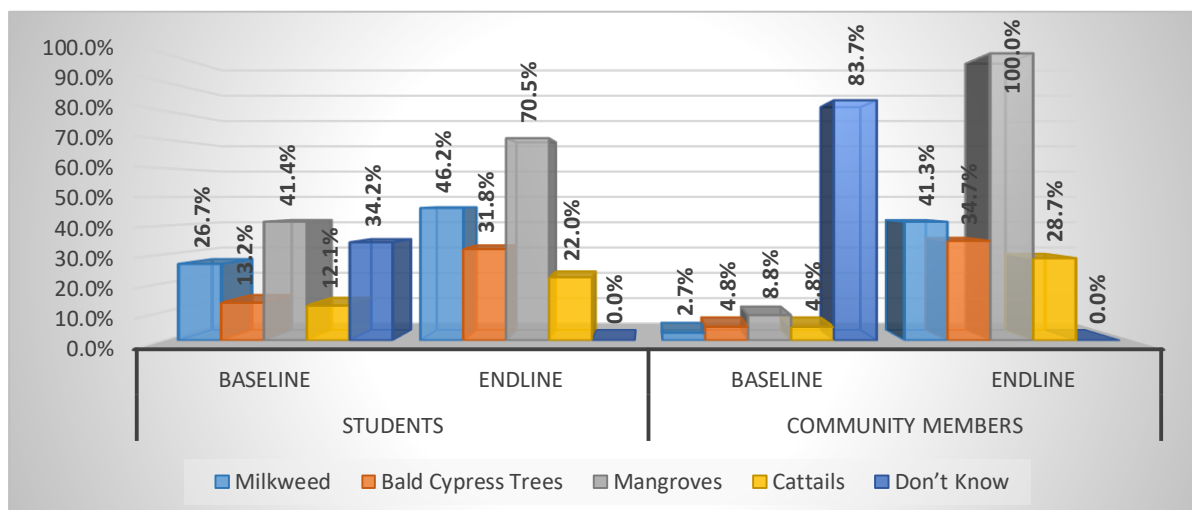


Figure 20: Awareness on types of plants that grow in wetlands

The awareness on types of plants that grow in wetlands was very poor (14.2%) in baseline and which were largely improved (47%) at the end of the project's awareness programme. There was no significant difference in the awareness level of the same across students from government and private schools.

#### Awareness of types of animals that habitat in wetlands

School students fared better than community members in knowing about types of animals that habitat wetlands. In the baseline survey, awareness among school students regarding fish and reptiles living in wetlands was about 65 per cent and after the awareness programme increased to over 70 percent. But among community members, in the baseline study 51 per cent reported "Don't Know", but after the awareness campaign 0 per cent reported don't know and 100 percent of respondents were able to show awareness regarding fish and birds living in wetlands.

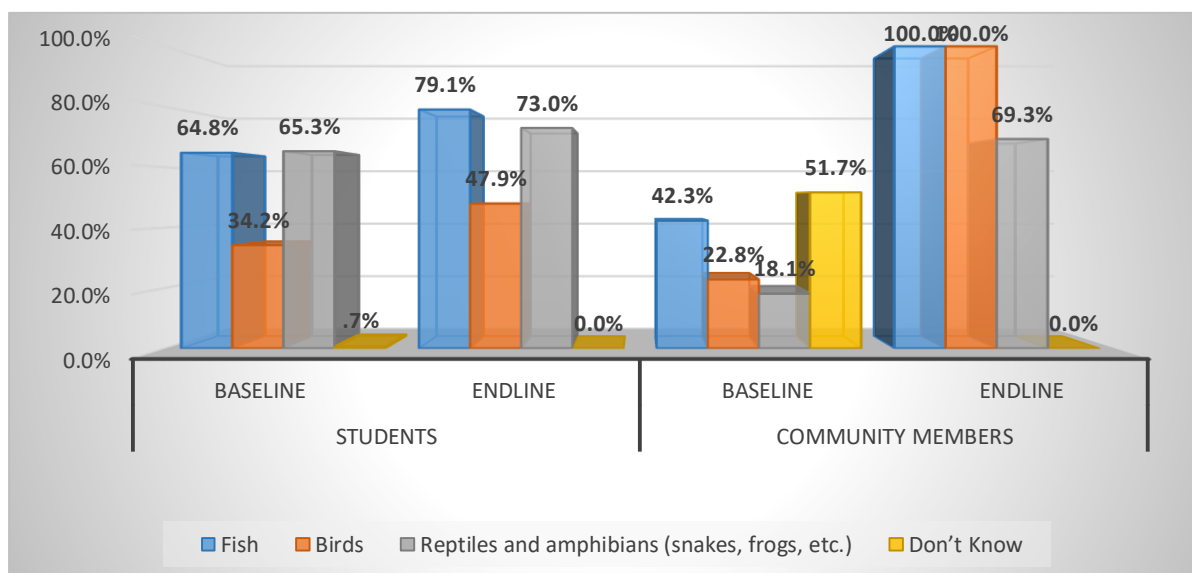


Figure 21: Awareness of types of animals that habitat in wetlands

Overall, the target respondents already had a reasonable level of knowledge (about 41%) on types of animals (except birds) that live in wetlands and yet a significant level of increase (78%) was witnessed during endline. There was no significant difference in the awareness level of the same across students from government and private schools.

### 3.3 Awareness on Key Benefits of Wetlands

An incentive, a motivation for the community to engage in conservation of wetlands would be the awareness on the benefits that accrue to them due to the wetlands.

The benefits to the community from wetlands can be categorised into the following:

1. Socio-economic benefits
  - a. Water
  - b. Food
  - c. Building materials
  - d. Tourism
  - e. Recreation, etc.
2. Environmental benefits
  - a. Storms and flood control
  - b. Drought prevention
  - c. Heat wave reduction
  - d. Absorbing excess carbon dioxide (Carbon sink)
  - e. Biodiversity
3. Cultural benefits
  - a. Educational
  - b. Recreational
  - c. Sports activities
  - d. Spiritual and inspirational

#### **Awareness on socio-economic benefits of Wetlands for society**

Even though people have been living near wetlands for several years, often for a decade or two, there is a discernible absence of awareness regarding their socio-economic benefits. There are gaps in making connections and articulating the benefits.

Among students, in the baseline study 44.4 percent and 56.8 percent of students were able to identify benefits relating to wetlands being a source of water and food (fish), respectively. Among the community members, in the baseline it was 10 per cent and 44 per cent respectively for water and food.

After conducting the awareness program, the percentage of community persons aware about wetlands as a source of water and food (fish) touched 100 percent. However, among students, it was 84.6 percent and 48.2 percent only.

Regarding other benefits, as one would expect, the level of awareness among students and members of the community at baseline, to start with, was low, but the increase in awareness after the awareness campaign has been modest and uneven. This aspect needs to be probed further, and appropriate strategies need to be chalked out to address it.

### Awareness on socio-economic benefits of Wetlands for society (among Students)

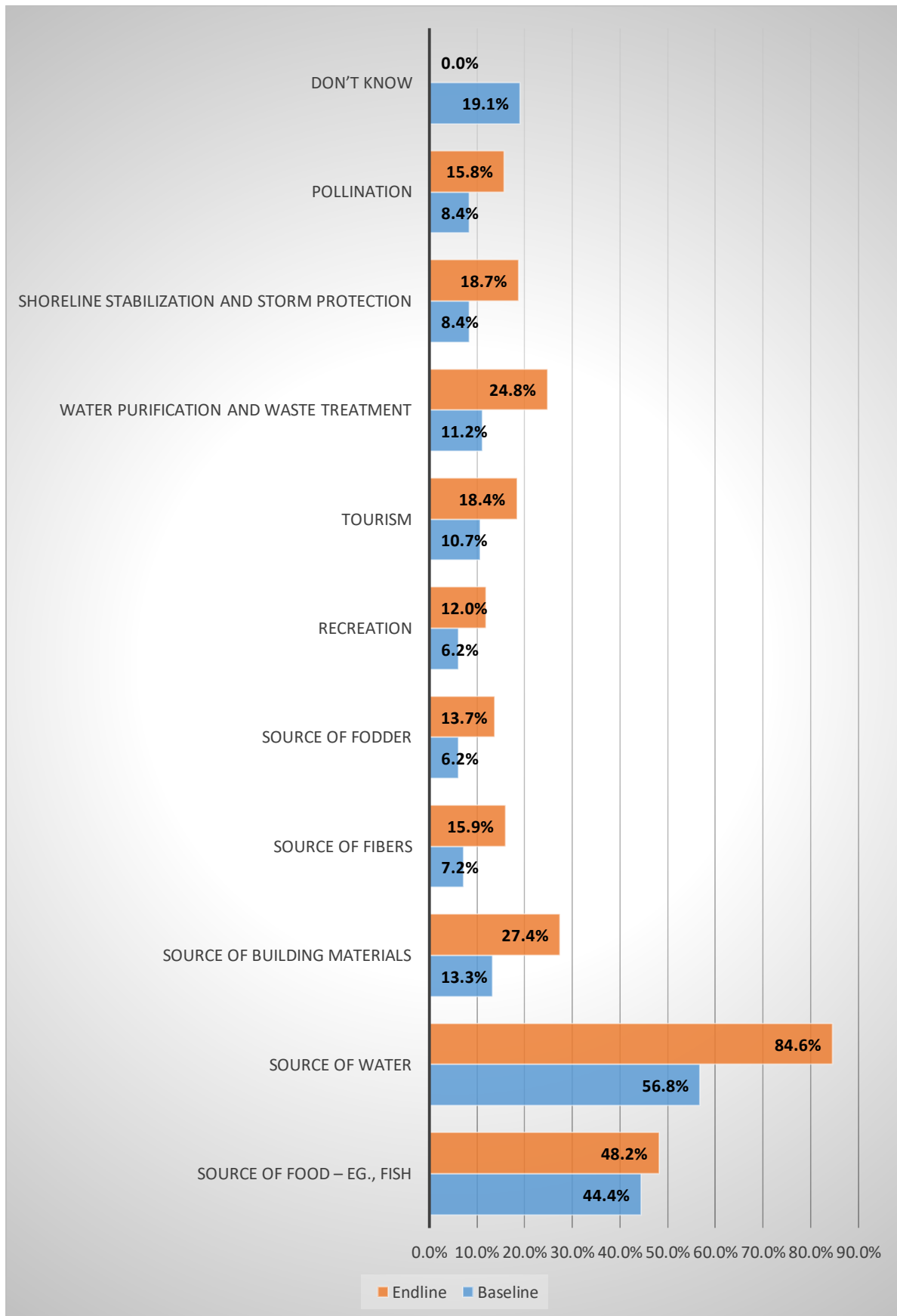


Figure 22: Awareness on socio-economic benefits of Wetlands for society among students

## Awareness on socio-economic benefits of Wetlands for society (among Community Members)

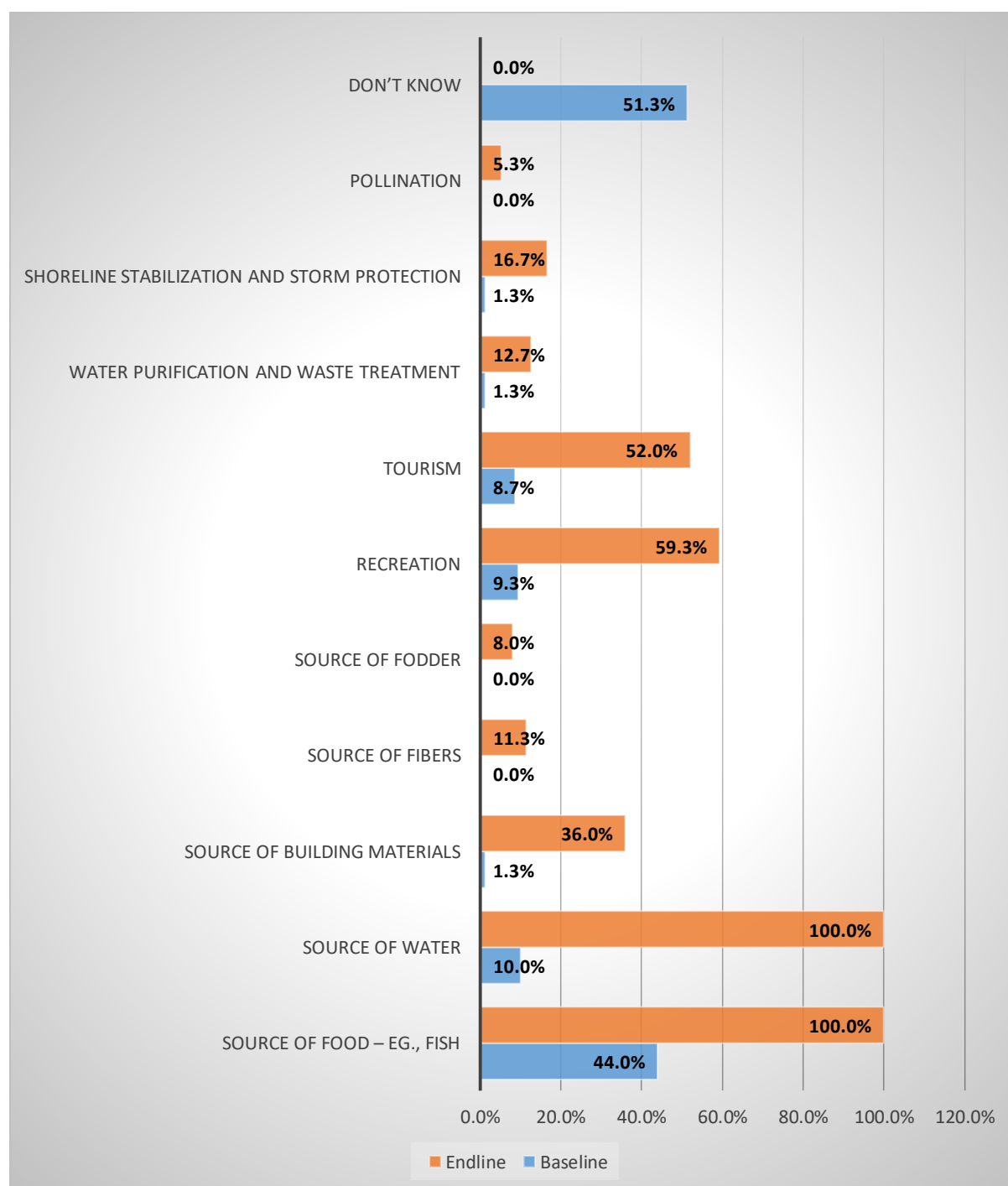


Figure 23: Awareness on socio-economic benefits of wetlands for society (among community members)

The “don’t know” category became zero in the endline for both the types of respondents. This means the programme was effective in making sure that every respondent gained knowledge on at least a few benefits of wetlands to improve the socio economic factors.

Overall, only about 12.4% of all the respondents had knowledge on various socio economic benefits of wetlands to the community prior to the awareness programme. This increased to 34% after the project’s awareness programme.

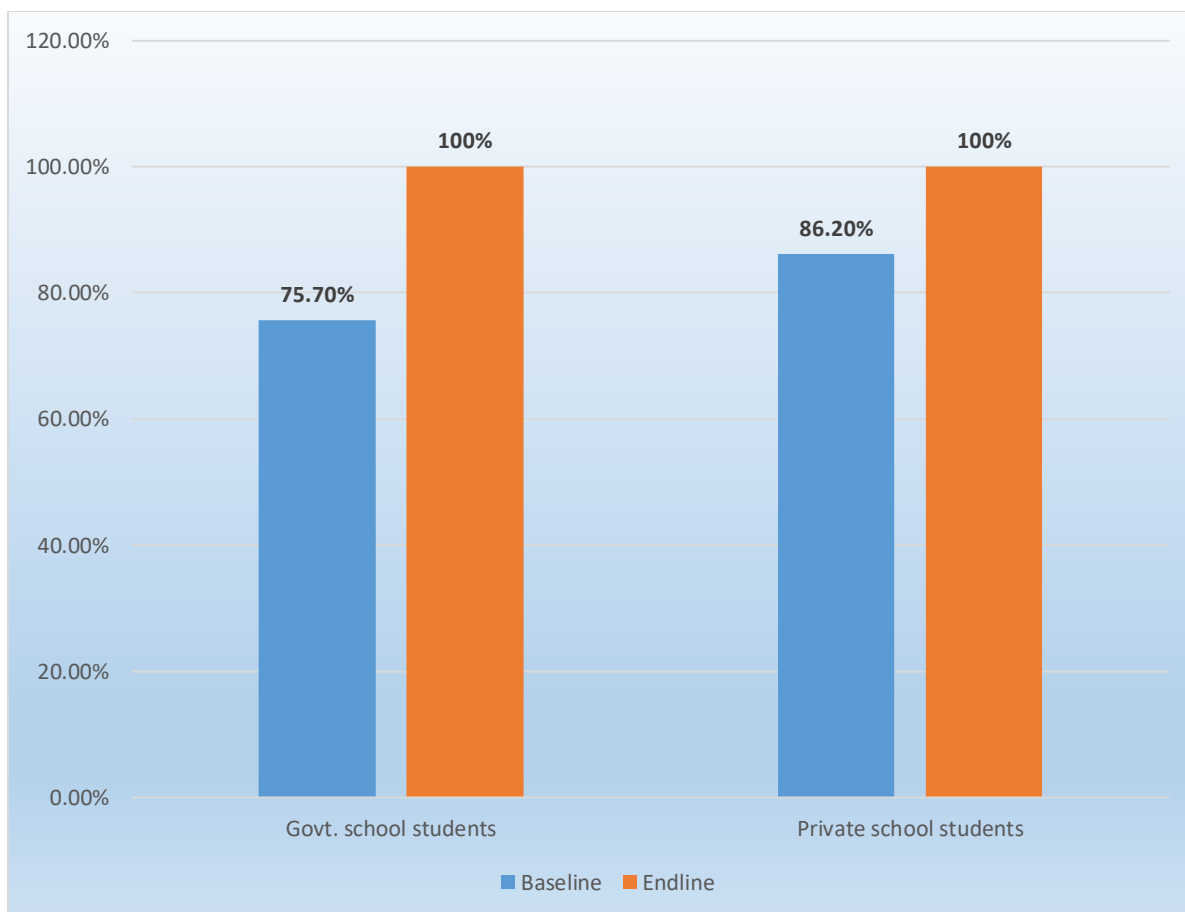


Figure 24: Awareness on minimum one socio-economic benefits of wetlands by Types of Schools

In the above graph, it can be noted that during the baseline study, students from private schools had slightly better awareness on at least one type of socio-economic benefits of wetlands compared to government school students. However, the difference is only minimal (about 9%). However, during endline, in both the types of schools, 100% of the students became aware of the same.

#### **Awareness on Benefits of Wetlands for Environment**

The socio-economic benefits of wetlands to people living near project sites is direct and almost immediate, whereas the environmental benefits are indirect and not immediate.

Among students, in the baseline study, the awareness regarding the role of wetlands in storms and flood control, drought prevention, heat wave reduction and act as green corridors ranged between 23 per cent and 28 per cent. Awareness about other benefits were below 15 per cent. And, 28 percent of students said that they did not know of any socio-economic benefits from wetlands.

There was a marked improvement reported in the endline survey. Awareness about storms and flood control, drought prevention, heat wave reduction and acting as green corridors increased from 32 per cent to nearly 60 per cent.

Among community members, the awareness about socio-economic benefits was really low in the baseline study, and 82 per cent of the respondents said they did not know about the benefits. Following the awareness programme, a higher percentage of community members reported awareness of different socio-economic benefits. While “don’t know” responses dropped to zero, there were 100 percent responses for awareness regarding drought prevention.

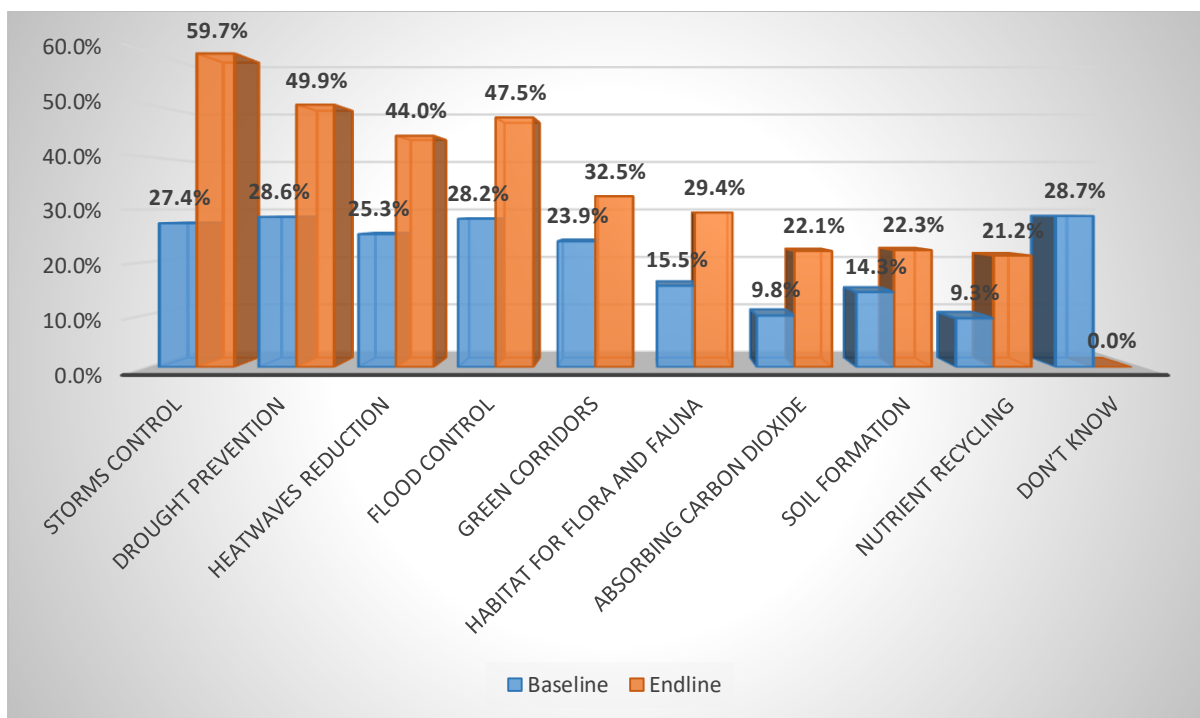


Figure 25: Awareness on benefits of wetlands for environment among students

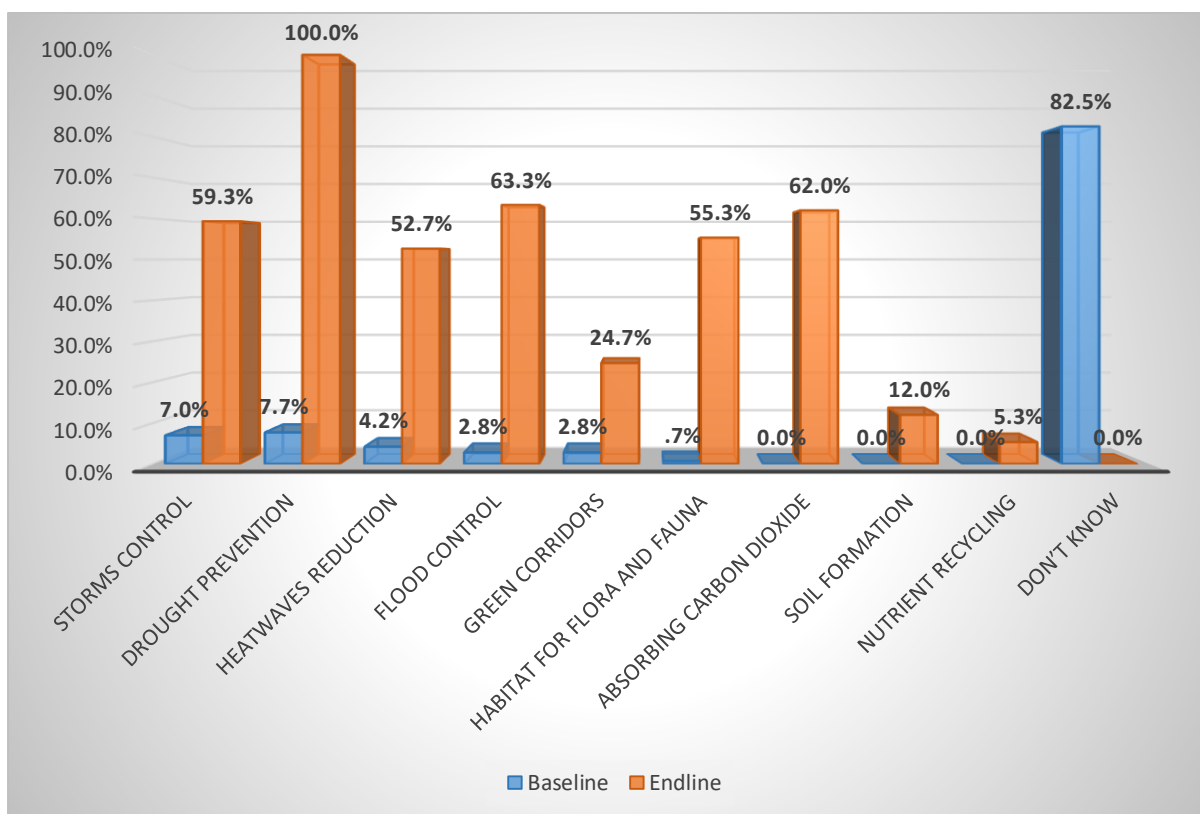


Figure 26: Awareness on benefits of wetlands for environment (among community members)

Overall, only about 11.5% of all the respondents knew key environmental benefits of wetlands prior to the awareness programme. This increased to 42.4% after the project's awareness programme. There was no significant difference in awareness level with regard to knowing at least one key environmental benefit of wetlands across students from government and private schools.

## Awareness on cultural benefits of wetlands

People living in the cities, which are increasingly becoming concrete jungles, tend to be disconnected from nature. Even the greenery within the city lacks the wholesome visual spectacle that organic Nature could offer. The wetlands offer spaces for recreation and spiritual connection. Once people become aware of the benefits and have also experienced the benefits, they will oppose and resist the degradation of the wetland. The real estate value of the land in urban areas often blinds people to the long-term cultural benefits of wetlands, and they become complicit in their encroachment. The Pallikaranai marsh is a case in point.

In the baseline, the percentage of students aware of the cultural benefits hovered between 15.9 per cent (recreational) and 38.2 per cent (educational), with 32.9 percent of students saying that they did not know of any cultural benefits. This improved to 32.4 per cent and 67.6 per cent in the endline and 0 per cent students saying they did not know of benefits.

Among community members, in the baseline study, only recreational benefit was cited by 17.3 percent of respondents, and other benefits were negligible and often zero per cent. Eighty percent of respondents said they did not know of any benefits. After the awareness programme, the results were encouraging as the percentage of respondents citing benefits was in the range of 41.4 percent and 76.4 per cent. Every respondent was able to cite one or more benefits after the awareness campaign.

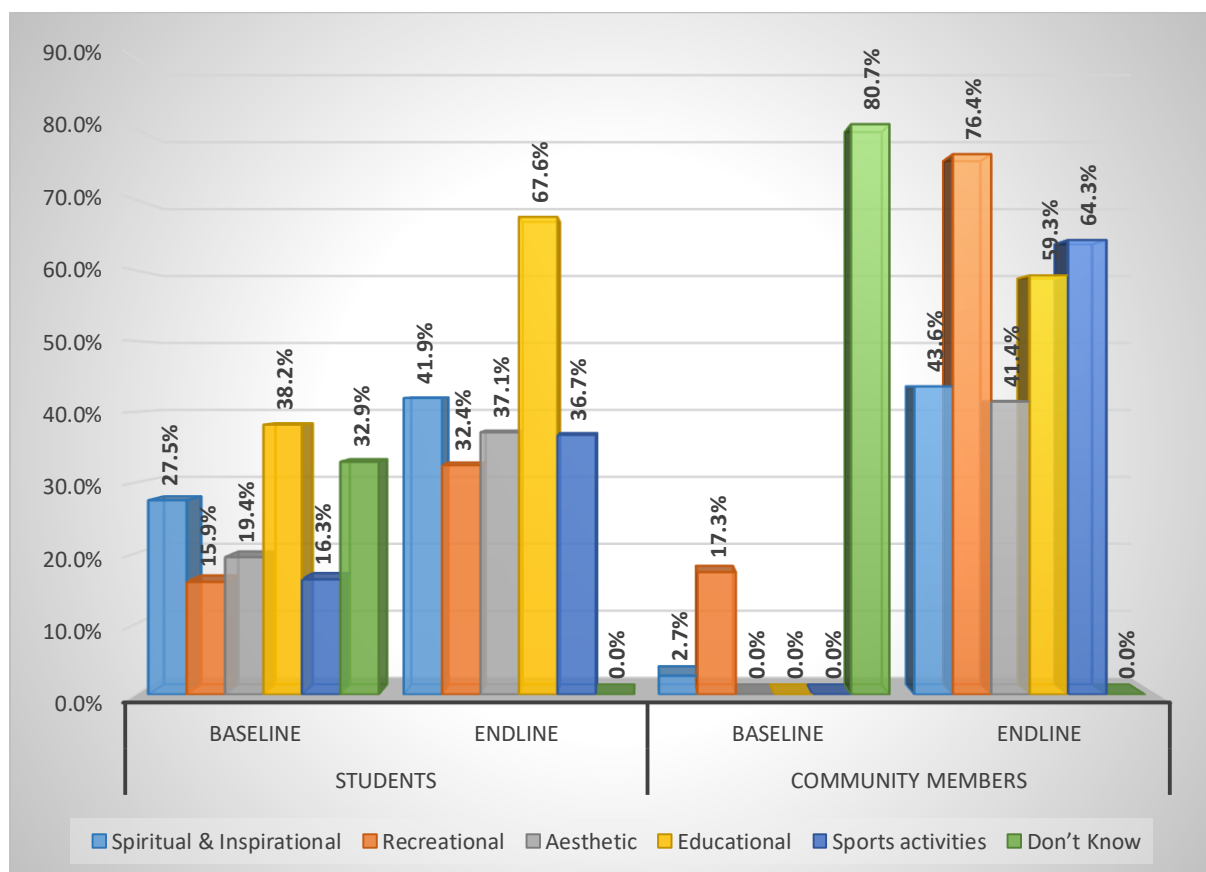


Figure 27: Awareness on cultural benefits of wetlands

Overall, only about 13.7% of all the respondents knew key cultural benefits of wetlands prior to the awareness programme. This increased to 50.1% after the project's awareness programme. There was no significant difference in awareness level with regard to knowing at least any one key cultural benefit of wetlands across students from government and private schools.

### 3.4 Ways of Protecting Wetlands

#### Awareness on existing threats to wetlands

Wetlands are vulnerable to a number of threats. Some threats arise out of human activities, and many of them are deemed necessary for overall economic growth and development. Some threats can be traced to environmental factors such as climate change, introduction of non-native species (which are sometimes weeds), and disturbance to hydrological balance, etc.

On existing threats, the respondents were aware of pollution and tree-felling, and this knowledge can be attributed to the overall awareness about pollution and tree-felling as causes for environmental problems. Awareness about wetland-specific threats was found to be low in the baseline study, and after the awareness campaign the increase in awareness has been modest, indicating more needs to be done in this regard.

With inputs, the respondents were able to learn and recall threats caused by human encroachment, indiscriminate and uncontrolled silting and dredging.

Among students, tree-felling (23.6 per cent), pollution (35.2 per cent), and weed infestation (18.2 per cent) increased to 44.5 per cent, 62.4 percent and 30.6 percent in the endline study after the conduct of the awareness programme.

For the community members, like in some of the previous tables, the baseline numbers were quite low, but after awareness campaigns were conducted, the endline numbers increased substantially.

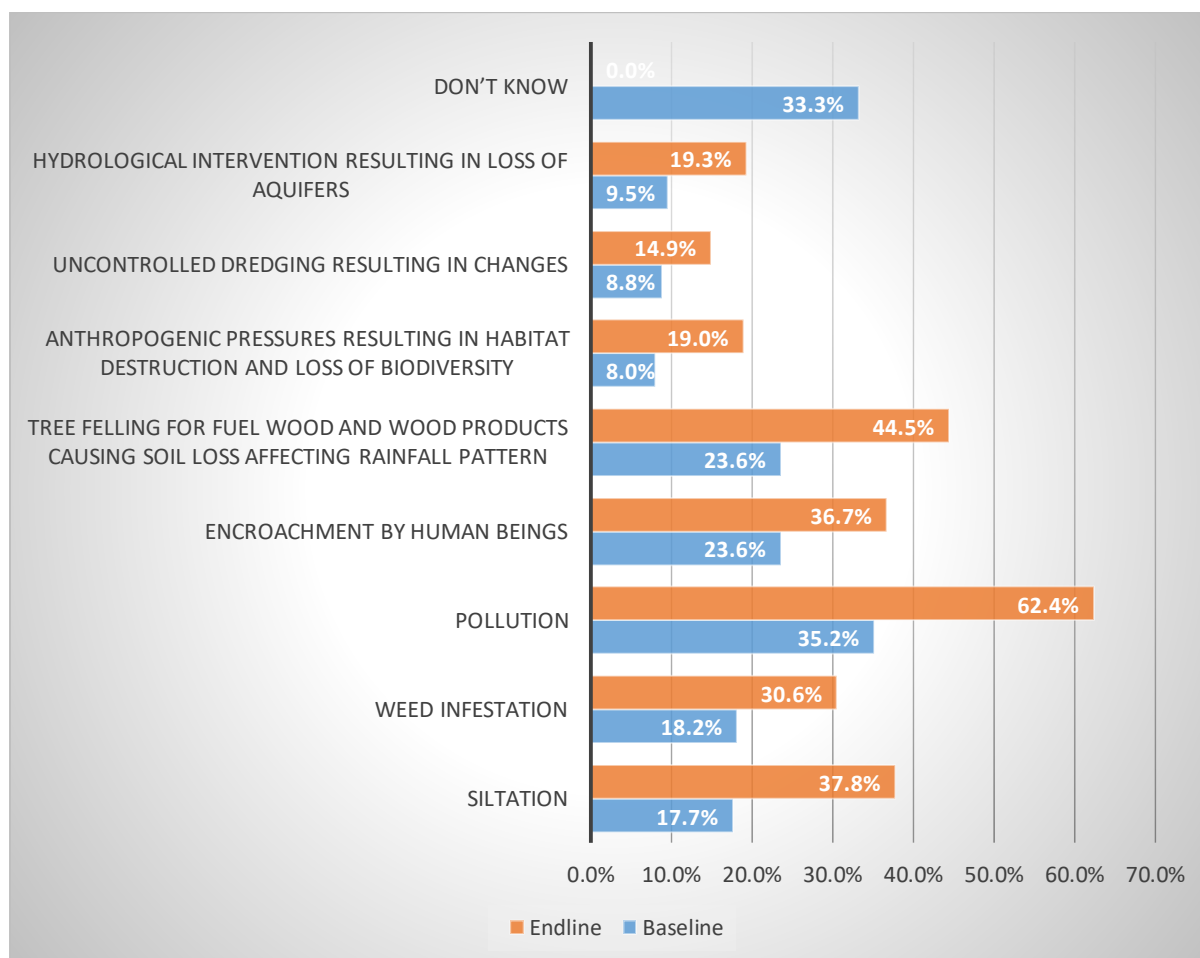


Figure 28: Awareness on existing threats to wetlands (among students)

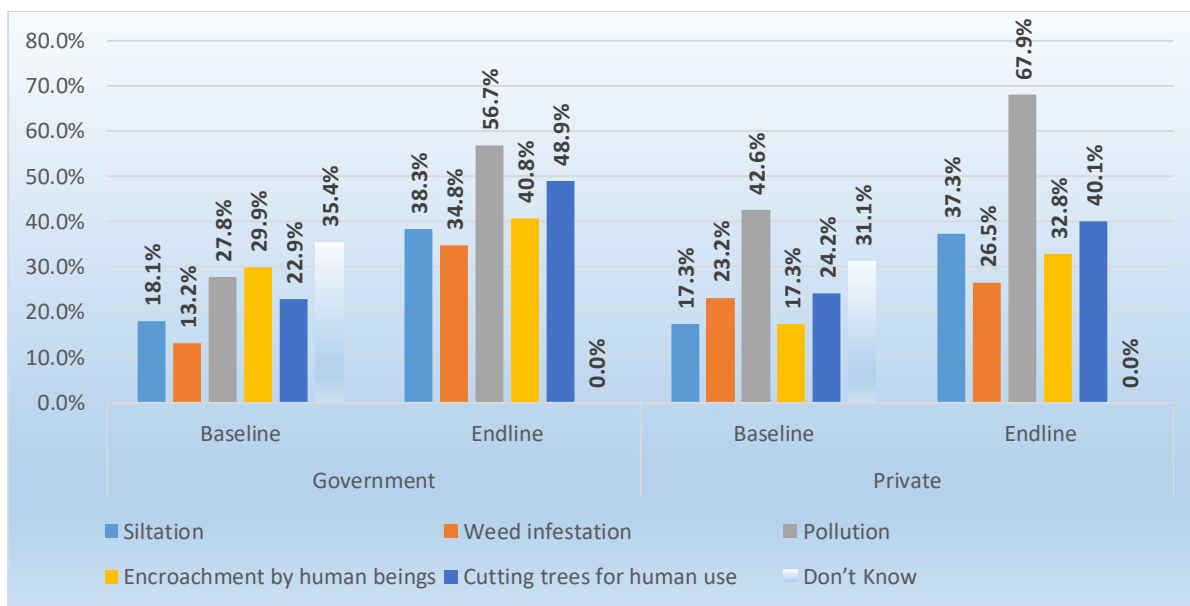


Figure 29: Awareness level on existing threats to wetlands across students in Government and Private schools

The above picture shows the baseline and endline awareness levels on various threats to wetlands across students from government and private school students. It is clear that except the higher level of awareness of pollution as a threat among private school students, the knowledge of all the other types of threats to wetlands were near equal among students from both types of schools during baseline.

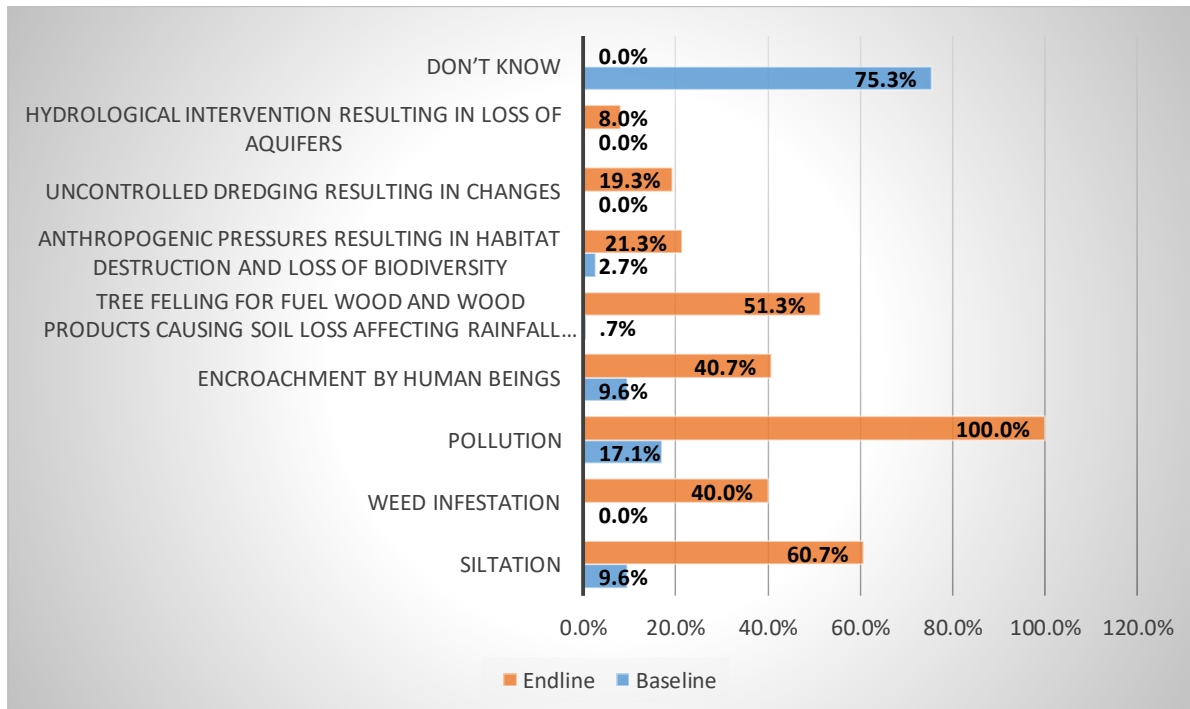


Figure 30: Awareness on existing threats to wetlands (among community members)

Overall, prior to the project's awareness programme, only about 11.5% of all the respondents were aware of various existing threats to the protection of wetlands, whereas this has increased to 37.9% through the programme.

## Awareness on things to avoid, to protect wetlands

With appropriate inputs through an awareness campaign, both students and community members were able to tell what one should avoid doing to protect wetlands. Every respondent (100 percent) in both the categories (students and community members) were able to say that dumping of waste in wetlands and the poaching of birds and animals should not be done in order to protect wetlands.

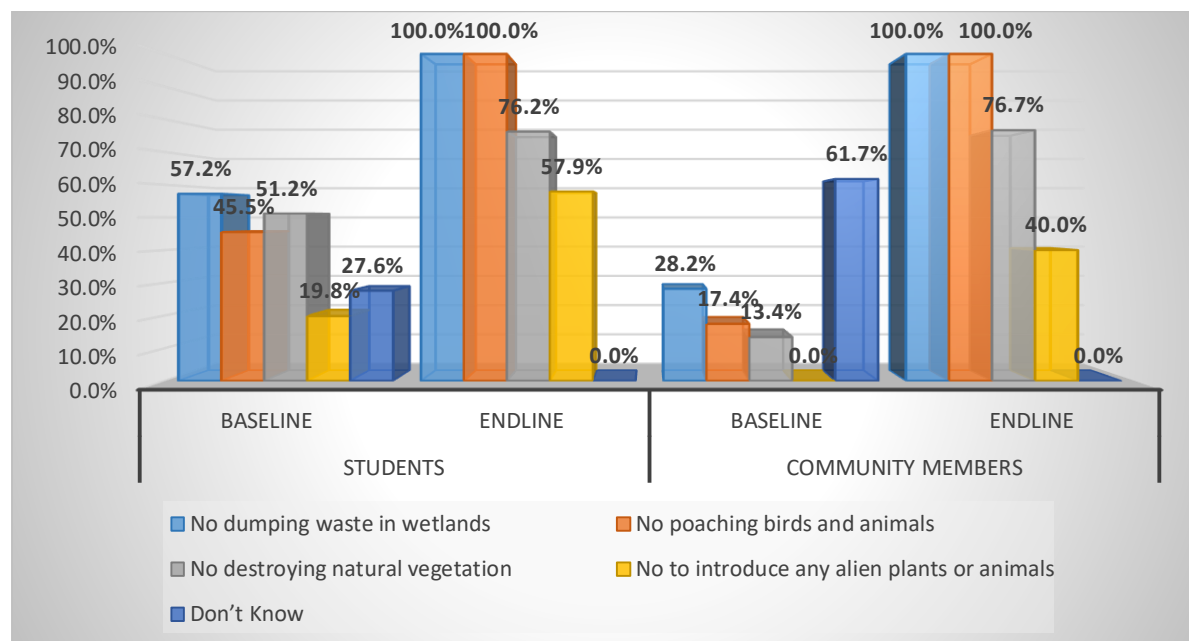


Figure 31: Awareness on things one should avoid to protect wetlands

Overall, prior to the project's awareness programme, only about 29.1% of all the respondents were aware of various practices that one should avoid for the protection of wetlands, where this was increased to 81.4% through the programme.

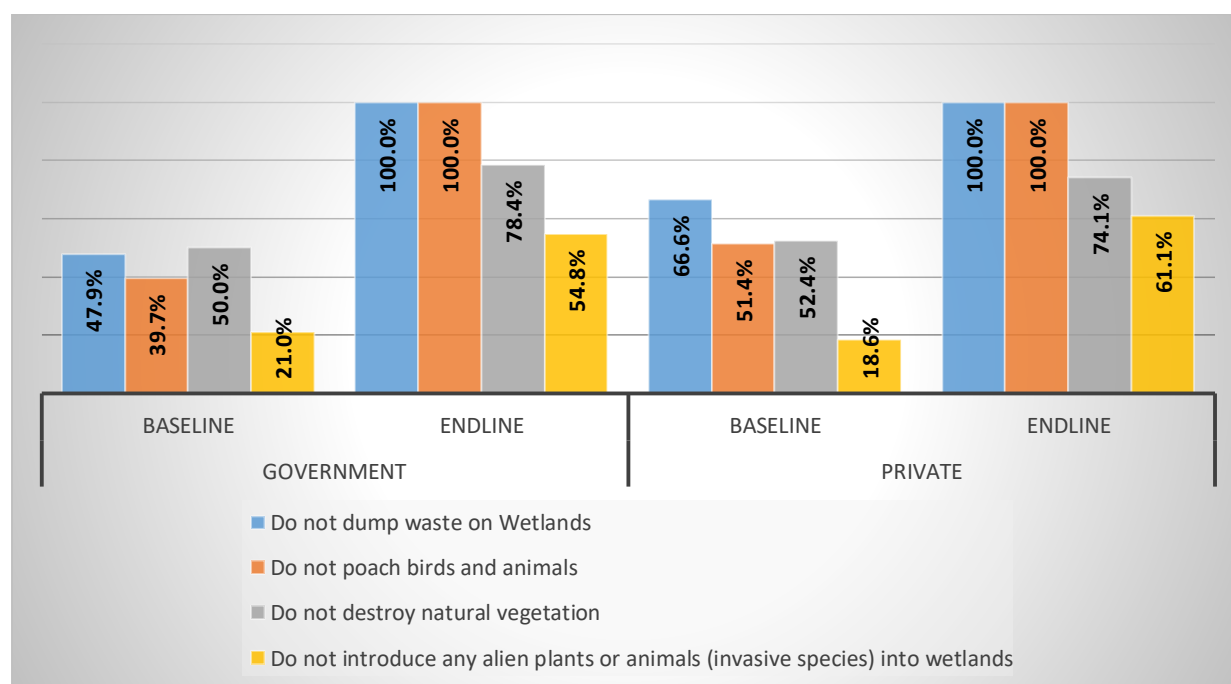


Figure 32: Awareness on things one should avoid to protect wetlands by type of schools

There has been a marked improvement in awareness of activities that are harmful for the conservation of wetlands. There were not any major differences between government and private schools in this regard. The awareness campaign and other initiatives could effectively drive home the points regarding dumping of waste and poaching birds and animals and therefore there was 100 per cent awareness reported. Regarding the importance of destruction of natural vegetation and not introducing any invasive species of alien plants or animals, the level of awareness was between 54 and 78 percent.

### Role as a citizen to protect wetlands

The role of citizens in protecting wetlands cannot be underemphasised. Citizen role and participation in the conservation and restoration of wetlands is a crucial and critical component in the government's strategy.

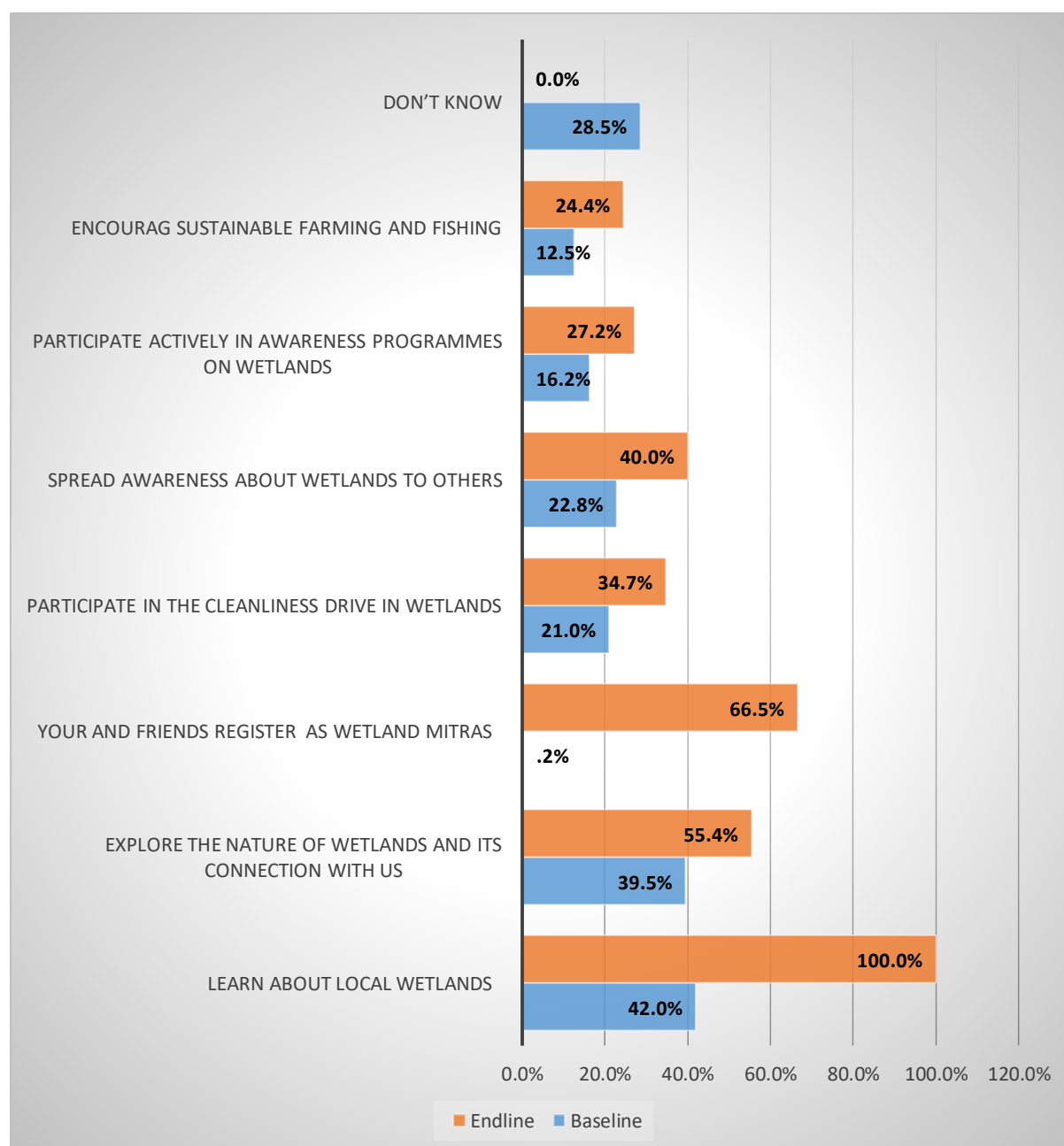


Figure 33: Role as a citizen to protect wetlands (Response from students)

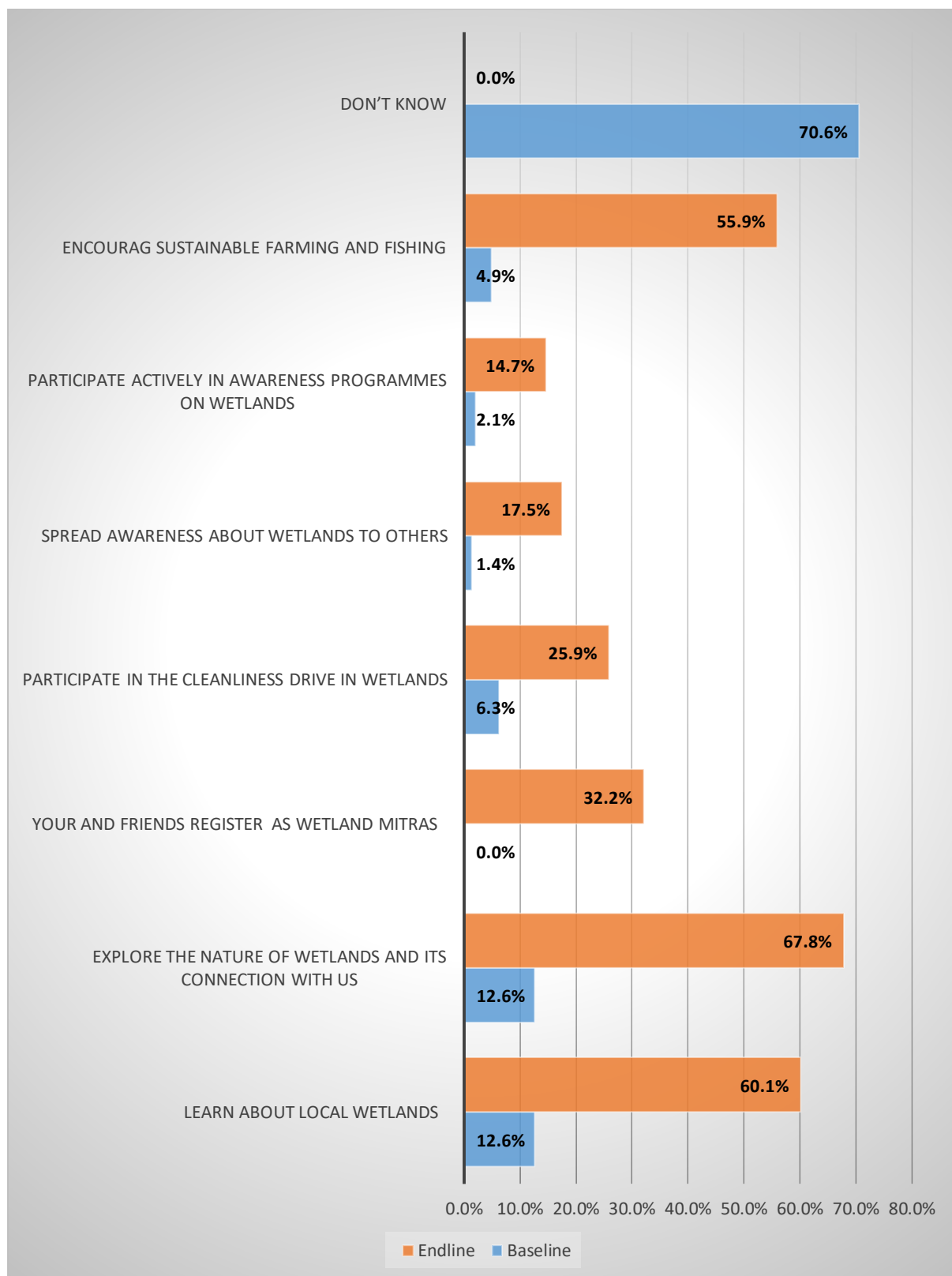


Figure 34: Role as a citizen to protect wetlands (Response from community members)

Overall, prior to the project's awareness programme, only about 13.9% of all the respondents were aware of their role as citizens for the protection of wetlands, where this was increased to 44.5% through the programme.

## 4. Key Findings and Recommendations

The study findings helped to identify the key areas of gaps in awareness level on conservation of wetlands across students and community members. They are as below:

### 4.1 Gaps in the awareness level on conservation of wetlands among students and community

1. **Lack of basic level of knowledge and understanding about the meaning of wetlands:** An important finding in the study was that 43.6% of the students interviewed across 6 schools in 3 locations and 26.7% of community members interviewed across 3 communities had basic understanding of what a wetland is or were aware of its meaning (though not the scientific / conceptual definition). There were not any significant differences in the awareness level across 3 locations and schools surveyed. The majority of the people believed that wetlands (particularly those situated in their locality) were some kind of barren land meant for storing sewage / wastewater.
2. **Severe lack of fundamental knowledge regarding types of wetlands and its key benefits:** Awareness and understanding of the different types of wetlands and their socio-economic, environmental, and cultural benefits remain significantly limited among students across both government and private schools. Strengthening this foundational knowledge is essential to enabling students to adopt responsible behaviours and actively contribute to wetland conservation efforts.
3. **Lack of systems / institutions to provide education on wetlands especially for community members:** While one would expect schools to be an important and credible source for scientific and relevant information regarding wetlands, but that was not the case. The local bodies could be a potential source for outreach to the local communities. No such effort has been made by the local bodies. As a result, there was a lack of IEC/ BCC framework for bringing behavioural change among the students and community.
4. **Lack of ownership and responsibility in the community towards protecting the wetlands. (people feel they have nothing to do with the wetlands):** For any outreach and communication programme to succeed there is a need for inculcating a sense of ownership and responsibility in the community. In the absence of any structured programme, this was not present. Other than fishing, the community members lacked awareness regarding the economic & livelihood opportunities such as eco-tourism arising out of wetlands.
5. **Role of government agencies and civil society:** The long-term conservation and sustainable management of wetlands fundamentally depends on the systematic initiation and implementation of well-designed conservation and mitigation programmes. Such efforts require the active involvement of both government agencies and civil society organisations through clearly defined roles, resource allocation, and collaborative frameworks. Government institutions must lead by establishing supportive policy environments, regulatory mechanisms, and financial provisions, while civil society actors play a critical role in facilitating community engagement, raising public awareness, and ensuring local knowledge and concerns are integrated into planning and implementation processes.

## 4.2 Recommendations

The wetlands awareness initiative implemented by Citizen consumer and civic Action Group (CAG) under the Tamil Nadu Wetlands Mission has clearly demonstrated that targeted, culturally sensitive awareness programmes can lead to significant improvements in public understanding and engagement with wetland ecosystems. The project saw a 30–70% increase in awareness across key indicators among students and community members.

However, the data also reveals that while practical knowledge (e.g., dos and don'ts) is absorbed quickly, awareness of long-term environmental and cultural benefits, as well as citizens' roles in conservation, remains relatively low. This highlights the need for systemic, sustained interventions rather than one-off campaigns.

### 1. Institutionalise Wetland Education

- Integrate wetland-related content into the **state school curriculum** under environmental science and social studies.
- Mandate **experiential learning components** such as field visits, wetland monitoring projects, and eco-club activities in schools near wetlands.

### 2. Create a Permanent IEC & BCC Framework

- Establish a **state-level Wetlands Communication Cell** under the Tamil Nadu Wetlands Mission to design and roll out year-round Information, Education, and Communication (IEC) and **Behaviour Change Communication (BCC)** campaigns.
- Develop graded IEC content (basic to advanced) for different stakeholder groups—students, community members, officials, and educators.

### 3. Enable Community Stewardship Models

- Formalise and fund **community-based wetland stewardship groups** (such as Wetland Mitras) with specific roles in awareness, monitoring, and maintenance.
- Encourage Gram Sabhas and Ward Committees to adopt wetlands as part of their local environmental planning.

### 4. Leverage Digital Tools for Mass Reach

- Promote and expand digital platforms like the **Wetland Mitra App** to act as tools for citizen reporting, knowledge sharing, and volunteering.
- Use social media and mobile networks to disseminate region-specific content on wetland biodiversity, threats, and government schemes.

### 5. Annual Wetland Literacy and Action Calendar

- Notify an **annual calendar of wetland-centric events**, tying in with World Wetlands Day, Earth Day, and State Environment Week, linked to on-ground actions such as wetland clean-ups, plantation drives, and biodiversity mapping.

### 6. Build Capacity of Key Stakeholders

- Institutionalise **wetland awareness modules** in training for teachers, Panchayat Raj Institutions (PRIs), urban local bodies, and frontline forest and environment officials.

- Provide microgrants to schools and local CSOs to innovate on wetland engagement tools and events.

#### **7. Promote Eco-Sensitive Livelihood Opportunities**

- Explore **eco-tourism, birdwatching trails, and local handicrafts** as sustainable livelihood options for communities near wetlands.
- Align wetland protection with employment schemes like MGNREGS for activities such as native plantation, desilting, and fencing.

### **Conclusion**

Wetlands are not just ecosystems, they are lifelines, especially for urban resilience and community well-being. The campaign's success provides strong justification for mainstreaming wetlands into Tamil Nadu's environmental policy, education framework, and local governance mechanisms.

Policymakers have a critical opportunity to act now: to scale and sustain these efforts by embedding wetlands into state planning processes, school systems, and community structures. A systemic, participatory approach is essential, not just to protect wetlands, but to empower citizens as custodians of their local ecosystems.

# Annexure

## 1 Wetland Awareness programme - Government Project Approval letter



தமிழ்நாடு மாநில ஈரநில ஆணையம்  
TAMIL NADU STATE WETLAND AUTHORITY



Ref.No.TNSWA2/428/2024

Office of the Principal Chief Conservator of  
Forests and Member Secretary,  
No.1, Jeenis Road, Panagal Maaligai,  
Saidapet, Chennai – 600 015.

Dated: 22.01.2025.

Sub: Wetlands – Tamil Nadu Wetlands Mission – Memorandum of  
Understanding (MoU) signed between Tamil Nadu Wetlands  
Mission and Citizen consumer and civic Action Group (CAG),  
Chennai for conducting awareness activities - Regarding

Ref: Memorandum of Understanding (MoU) between Tamil Nadu  
Wetlands Mission and Citizen consumer and civic Action Group  
(CAG), Chennai, Dated 07.01.2025.

\*\*\*\*\*

It is informed that the Memorandum of Understanding (MoU) between  
Tamil Nadu Wetlands Mission and Citizen Consumer and Civic Action Group (CAG),  
Chennai has been signed for conducting awareness activities at Ennore creek,  
Pallikaranai Marshland and Pulicat lake areas (copy enclosed). Hence the District  
Forest Officer / Wildlife Warden are requested to render necessary support and  
permission to the team of Citizen Consumer and Civic Action Group (CAG), Chennai  
for conducting the awareness activities in the said wetland areas.

Sd/- G Kiran  
for Principal Chief Conservator of Forests  
and Member Secretary  
Tamil Nadu State Wetland Authority

To

The District Forest Officer, Chennai / Thiruvallur.

The Wildlife Warden, Chennai

Copy to

The Executive Director, Citizen Consumer and Civic Action Group (CAG), Chennai.

/ true copy / by order /

P. Karthikeya  
Superintendent 22/1/25

22/1/25

## 2. Baseline / Endline Survey Questionnaire

### Awareness Programme on Importance of Wetlands in Chennai by CAG India

#### Introduction

Greetings!! My name is \_\_\_\_\_. I am from the research team of CAG India (Citizen Consumer and Civic Action Group), Chennai. We are conducting a survey on 'Awareness programme on importance of wetlands in Chennai'. The aim is to understand the level of knowledge and awareness impacted by the awareness programmes conducted by CAG India on importance of wetlands.

In this regard, I would like to request you to share with us your experience and views regarding the importance of wetlands in your locality. Your perspective will help us to understand and develop appropriate strategies to enhance the knowledge and awareness on wetlands across various segments of the target population in the community. This interview may take around 30 minutes. Your opinion and details will be kept confidential and used only for research purposes.

|                                                            |        |                    |                                                                    |
|------------------------------------------------------------|--------|--------------------|--------------------------------------------------------------------|
| Do you agree to participate in the discussion?             | 1. Yes | 2. No              | If yes, proceed. If no, say thank you and terminate the interview. |
| Location                                                   | 1      | Pallikaranai Marsh |                                                                    |
|                                                            | 2      | Pulicat lake       |                                                                    |
|                                                            | 3      | Ennore Creek       |                                                                    |
| Type of respondent                                         | 1      | Student            |                                                                    |
|                                                            | 2      | Community member   |                                                                    |
|                                                            | 3      | School Teacher     |                                                                    |
|                                                            | 4      | NGO                |                                                                    |
|                                                            | 5      | Researcher         |                                                                    |
| Specify the nature of survey you have participated with us | 1.     | Baseline only      |                                                                    |
|                                                            | 2      | Endline only       |                                                                    |
|                                                            | 3      | Both the surveys   |                                                                    |

#### IDENTIFICATION DETAILS

|    |                                              |       |                                    |  |
|----|----------------------------------------------|-------|------------------------------------|--|
| 1. | Name of Respondent                           | _____ |                                    |  |
| 2. | Respondent code                              | _____ |                                    |  |
| 3. | Address of the respondent                    |       |                                    |  |
|    | Door No. & Street                            |       | District                           |  |
|    | Area/location                                |       | Pin Code                           |  |
|    | Town                                         |       | Contact Number                     |  |
| 5. | Age of respondent                            |       | _____ years (only completed years) |  |
| 6. | Gender                                       | 1     | Male                               |  |
|    |                                              | 2     | Female                             |  |
|    |                                              | 3     | Other gender                       |  |
| 7. | Education ( <i>highest completed grade</i> ) | 1     | Illiterate                         |  |
|    |                                              | 2     | Neo literate (can sign)            |  |
|    |                                              | 3     | Primary (Class 1–5)                |  |

|     |                                                                                                               |            |                                                 |                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------|-----------------------------------------------------------------|
|     |                                                                                                               | 4          | Middle (Class 6–8)                              |                                                                 |
|     |                                                                                                               | 5          | Secondary (Class 9–10)                          |                                                                 |
|     |                                                                                                               | 6          | Higher Secondary (Class 11–12)                  |                                                                 |
|     |                                                                                                               | 7          | Undergraduate degree                            |                                                                 |
|     |                                                                                                               | 8          | Postgraduate                                    |                                                                 |
|     |                                                                                                               | 8          | Professional                                    |                                                                 |
|     |                                                                                                               | 99         | Others _____                                    |                                                                 |
| 8.  | If UG/PG, which discipline you studied?                                                                       | 1          | Science (B.Sc., M.Sc., etc.)                    |                                                                 |
|     |                                                                                                               | 2          | Arts / Commerce (B.A., M.A, B.Com, M. Com, MBA) |                                                                 |
|     |                                                                                                               | 3          | Engineering                                     |                                                                 |
|     |                                                                                                               | 4          | Others                                          |                                                                 |
| 9.  | Primary occupation of the head of household (Choose any one option which brings maximum income to the family) | 1          | Agriculture                                     | For student, this is question is applicable for his/her parents |
|     |                                                                                                               | 2          | Agriculture daily wage worker                   |                                                                 |
|     |                                                                                                               | 3          | Animal husbandry/dairy                          |                                                                 |
|     |                                                                                                               | 4          | Government employee                             |                                                                 |
|     |                                                                                                               | 5          | Private sector employee                         |                                                                 |
|     |                                                                                                               | 6          | Small business / Self employed                  |                                                                 |
|     |                                                                                                               | 7          | Housewife                                       |                                                                 |
|     |                                                                                                               | 8          | Student                                         |                                                                 |
|     |                                                                                                               | 9          | Retired                                         |                                                                 |
|     |                                                                                                               | 10         | Unemployed                                      |                                                                 |
|     |                                                                                                               | 11         | Others, specify _____                           |                                                                 |
| 10. | Ownership of house                                                                                            | 1          | Rental / Lease                                  |                                                                 |
|     |                                                                                                               | 2          | Own                                             |                                                                 |
| 11. | Duration of stay in this region                                                                               | _____years |                                                 |                                                                 |

## 1. AWARENESS ON WETLANDS – MEANING AND TYPES

| Q. No. | Indicator                              | Code | Options                                                                                                                                                                                                                                                    | Instructions                                                                           |
|--------|----------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 12.    | Do you know what a wetland is?         | 1    | Yes                                                                                                                                                                                                                                                        |                                                                                        |
|        |                                        | 2    | No                                                                                                                                                                                                                                                         |                                                                                        |
| 13.    | If yes, how will you define a wetland? | 1    | An area 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 meters. | Select any one most appropriate option based on the respondent's definition of wetland |
|        |                                        | 2    | It does not include river channels, paddy fields, human-made water bodies/tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt                                                         |                                                                                        |

|     |                                                                                              |    |                                                                           |  |
|-----|----------------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------|--|
|     |                                                                                              |    | production, recreation and irrigation purposes;                           |  |
|     |                                                                                              | 3  | Wetlands notified under the rules by the Central / State / UT government. |  |
|     |                                                                                              | 4  | Any other, specify                                                        |  |
| 14. | What are the different types of inland wetlands that you are aware of? (Multiple response)   | 1. | Marsh lands                                                               |  |
|     |                                                                                              | 2. | Coastal wetlands                                                          |  |
|     |                                                                                              | 3  | Mudflats                                                                  |  |
|     |                                                                                              | 4  | Mangroves                                                                 |  |
|     |                                                                                              | 5  | Any other, specify                                                        |  |
| 15. | What are the different types of coaster wetlands that you are aware of? (Multiple response)  | 1  | Saltwater Marshes                                                         |  |
|     |                                                                                              | 2  | Estuaries                                                                 |  |
|     |                                                                                              | 3  | Mangroves                                                                 |  |
|     |                                                                                              | 4  | Lagoons                                                                   |  |
|     |                                                                                              | 5  | Coral Reefs                                                               |  |
| 16. | What are the different types of man-made wetlands that you are aware of? (Multiple response) | 1  | Fish ponds                                                                |  |
|     |                                                                                              | 2  | Rice Paddies                                                              |  |
|     |                                                                                              | 3  | Salt Pans                                                                 |  |
| 17. | Please mention your primary source of this information.                                      | 1  | Studied in schools / colleges                                             |  |
|     |                                                                                              | 2  | Studied in news papers / journals                                         |  |
|     |                                                                                              | 3  | Attended awareness campaign / workshop                                    |  |
|     |                                                                                              | 4  | TV / Radio programme                                                      |  |
|     |                                                                                              | 5  | Social Media                                                              |  |
|     |                                                                                              | 6  | Any other, specify.                                                       |  |
| 18. | What are the types of plants that grow in wetlands in Tamil Nadu?                            | 1  | Milkweed                                                                  |  |
|     |                                                                                              | 2  | Bald Cypress Trees                                                        |  |
|     |                                                                                              | 3  | Mangroves                                                                 |  |
|     |                                                                                              | 4  | Cattails                                                                  |  |
|     |                                                                                              | 5  | Any other                                                                 |  |
| 19. | What are the types of animals that live in wetlands in Tamil Nadu?                           | 1  | Fish,                                                                     |  |
|     |                                                                                              | 2  | birds                                                                     |  |
|     |                                                                                              | 3  | Reptiles and amphibians (snakes, frogs, etc)                              |  |
|     |                                                                                              | 4  | Any other, specify                                                        |  |

## 2. AWARENESS ON KEY BENEFITS OF WETLANDS

| Q. No. | Indicator                                                                      | Code | Options                                                                                                                         | Instructions |
|--------|--------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------|--------------|
| 20.    | Mention the key socio-economic benefits of wetlands for the society/community? | 1    | Source of food – eg., fish                                                                                                      |              |
|        |                                                                                | 2    | Source of water (50% of Worlds' drinking water comes from groundwater and wetlands are the major source of groundwater recharge |              |
|        |                                                                                | 3    | Source of building materials – eg., non-timber wood                                                                             |              |
|        |                                                                                | 4    | Source of fibres (for textiles)                                                                                                 |              |
|        |                                                                                | 5    | Source of fodder                                                                                                                |              |
|        |                                                                                | 6    | Recreation                                                                                                                      |              |
|        |                                                                                | 7    | Tourism – as a source of livelihood                                                                                             |              |
|        |                                                                                | 8    | Water purification and waste treatment                                                                                          |              |
|        |                                                                                | 9    | Shoreline stabilization and storm protection (erosion control)                                                                  |              |
|        |                                                                                | 10   | Pollination                                                                                                                     |              |
|        |                                                                                | 11   | Any other, please specify                                                                                                       |              |
| 21.    | Mention the key benefits of wetlands for Environment / climate?                | 1    | Storms control: Coastal wetlands protect coastlines from storm damage                                                           |              |
|        |                                                                                | 2    | Drought prevention: Marsh wetlands help fights Drought through storing excess water and replenish low flows in times of drought |              |
|        |                                                                                | 3    | Heatwaves reduction: Wetlands helps in regulate local climate, cooling the atmosphere in case of high temperature               |              |
|        |                                                                                | 4    | Flood control: Wetlands work as sponge, soaking up intense rainfall, helping recharging ground water.                           |              |
|        |                                                                                | 5    | Green corridors: Can reduce 'heat island' effect in cities                                                                      |              |
|        |                                                                                | 6    | Habitat for flora and fauna – plants and animals – important for biodiversity                                                   |              |
|        |                                                                                | 7    | Absorbing carbon dioxide                                                                                                        |              |

|     |                                                |    |                                                                                  |  |
|-----|------------------------------------------------|----|----------------------------------------------------------------------------------|--|
|     |                                                | 8  | Soil formation (Sediment retention and accumulation of organic matter)           |  |
|     |                                                | 9  | Nutrient recycling (Storage, recycling, processing and acquisition of nutrients) |  |
|     |                                                | 10 | Any other, specify.                                                              |  |
|     |                                                |    |                                                                                  |  |
| 22. | Mention the key cultural benefits of wetlands? | 1  | Spiritual & Inspirational                                                        |  |
|     |                                                | 2  | Recreational                                                                     |  |
|     |                                                | 3  | Aesthetic                                                                        |  |
|     |                                                | 4  | Educational                                                                      |  |
|     |                                                | 5  | Sports activities                                                                |  |
|     |                                                | 6  | Any other, specify                                                               |  |

### 3. WAYS OF PROTECTING WETLANDS

| Q. No. | Indicator                                                                   | Code | Options                                                                                                                          | Instructions |
|--------|-----------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------|--------------|
| 23.    | What are the threats existing for wetlands?                                 | 1    | Siltation – soil or sand that settles in the bottom and blocks flow of water                                                     |              |
|        |                                                                             | 2    | Weed infestation – wild plants that grow and spread rapidly – often causing harm                                                 |              |
|        |                                                                             | 3    | Pollution - discharge of waste Water, industrial effluents, Surface run-Off Etc                                                  |              |
|        |                                                                             | 4    | Encroachment by human beings (for real estate / Agriculture)                                                                     |              |
|        |                                                                             | 5    | Tree felling for fuel wood and wood products causing soil loss affecting rainfall pattern.                                       |              |
|        |                                                                             | 6    | Anthropogenic pressures resulting in habitat destruction and loss of biodiversity.                                               |              |
|        |                                                                             | 7    | Uncontrolled dredging resulting in changes.                                                                                      |              |
|        |                                                                             | 8    | Hydrological intervention resulting in Loss of aquifers                                                                          |              |
|        |                                                                             | 9    | Any other, specify                                                                                                               |              |
| 24.    | What are the things / practices you should avoid?                           | 1    | Do not dump wastes on wetlands                                                                                                   |              |
|        |                                                                             | 2    | Do not poach birds and animals                                                                                                   |              |
|        |                                                                             | 3    | Do not destroy natural vegetation                                                                                                |              |
|        |                                                                             | 4    | Do not introduce any alien plants or animals (invasive species) into wetlands. (E.g., Release of aquarium fishes into a wetland) |              |
|        |                                                                             | 5    | Any other, specify                                                                                                               |              |
| 25.    | As a citizen, what can be your role in protecting the wetland in your area? | 1    | Learn about wetlands in your area                                                                                                |              |
|        |                                                                             | 2    | Explore the nature of wetlands and raise awareness of the connection between us, the soil and other living things                |              |
|        |                                                                             | 3    | Register your group of friends as Wetland Mitras and help maintain wetlands                                                      |              |
|        |                                                                             | 4    | Conduct / participate in the cleanliness drive to clean the wetlands                                                             |              |

|  |  |   |                                                                                                          |  |
|--|--|---|----------------------------------------------------------------------------------------------------------|--|
|  |  | 5 | Spreading awareness about wetlands and their importance in my community                                  |  |
|  |  | 6 | Active participation and engagements with local authorities in programmes related to protecting wetlands |  |
|  |  | 7 | Encouraging sustainable farming and fishing.                                                             |  |
|  |  | 8 | Any other, specify                                                                                       |  |

#### 4. AWARENESS ON GOVERNMENT INITIATIVES TO PROTECT WETLANDS

| Q. No. | Indicator                                                           | Code | Options                                                                                                                                | Instructions             |
|--------|---------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 26.    | When is World Wetlands Day?                                         | 1    | Right answer (i.e., 2 <sup>nd</sup> February)                                                                                          | 2 <sup>nd</sup> February |
|        |                                                                     | 2    | Wrong answer                                                                                                                           |                          |
| 27.    | Are you aware of the Tamil Nadu Wetland Authority in Tamil Nadu?    | 1    | Yes                                                                                                                                    |                          |
|        |                                                                     | 2    | No                                                                                                                                     |                          |
| 28.    | Have you heard of Ramsar Sites?                                     | 1    | Yes                                                                                                                                    |                          |
|        |                                                                     | 2    | No                                                                                                                                     |                          |
| 29.    | If aware, please specify                                            | 1    | It is an international agreement on the conservation of wetlands and their wise use. This is also known as the Convention on Wetlands. |                          |
|        |                                                                     | 2    | Any other, specify                                                                                                                     |                          |
| 30.    | Anything else you would like to share about wetlands? Please share. |      |                                                                                                                                        |                          |

### 3. IEC tools (Pamphlets)

(a) Why are wetlands important to us? (English and Tamil)



Protecting Wetlands For Our Common Future

## Why are wetlands important to us?



50% of worlds' drinking water comes from groundwater and wetlands are the major source of groundwater recharge.



Natural water filters  
(removes dangerous pollutants from water)



Support livelihoods and directly provide income to millions of families. (fishing, agriculture, horticulture, tourism)



Protect from natural disasters like floods, droughts, tsunamis and cyclones.



Reduce threats of global warming.



Reduce soil erosion.(protecting fertile upper layers of the soil important for production)



Provide home to a wide variety of microorganisms, plants and animals.



Important for our survival and the environment. Acts as recreational sites.

நமது வதிகாலதீதற்காக ஈரநிலங்களைக் காப்போம்

## ஈரநிலங்கள் நமக்கு ஏன் முக்கியம்?



உலகத்தின் குடிநீரில் 50%, நிலத்து நீரிலிருந்து கிடைக்கிறது. மேலும், நிலத்து நீர் செறிவுடனுக்கு முக்கிய ஆதாரமாக ஈரநிலங்கள் விளங்குகின்றன.



இயற்கை நீர் வடிவங்களாகச் செயல்பட்டு, மாசுக்களை அகற்றுகின்றன.



வாழ்வாதாரத்தை அதிகரித்து பல்லாயிரக்கணக்கான குடும்பங்களுக்கு வருமானம் அளிக்கின்றது. (மீன்பிடித்தல், மீவளமும், தொட்டிக்கலை, சுற்றலு)



வெள்ளம், வறட்சி, சுளாமி மற்றும் புயல்கள் போன்ற இயற்கை பேரழிவுகளிலிருந்து பாதுகாக்கிறது.



புவி வெப்பமயமாதலைக் குறைக்கின்றது.



மண் அரிப்பைக் குறைக்கின்றது (உற்பத்திக்கு முக்கியமான வளமான மேல் மண் அடுக்குகளைப் பாதுகாக்கிறது).



பல்வேறு வகையான நுண்ணுயிரிகள், தாவரங்கள் மற்றும் விலங்குகள் வாழ வழி வகுக்கின்றது.



நமது உயிர்வாழ்விற்கும் சுற்றுச்சூழலுக்கும் முக்கிய இடங்களாகத் திகழ்கின்றன. ஈரநிலங்கள் பொழுதுபோக்குத்தலங்களாகச் செயல்படுகின்றன.

(b) How should we take care wetlands? (English & Tamil)



Protecting Wetlands For Our Common Future

## How should we take care of wetlands?

### Do's



Learn and explore the nature of the wetlands, its importance and benefits.



Be a "Wetland Champion" – do your part to protect them.



Participate in campaigns and spread awareness on wetlands with your social group.



Register your group of friends as 'Wetland Mitras' and help maintain wetlands.

### Don'ts



Do not dump wastes on wetlands.



Do not poach birds and animals.



Do not destroy natural vegetation.



Do not introduce any alien plants or animals (invasive species) into wetlands.  
(E.g., Release of aquarium fishes into a wetland)

நமது ஷ்ரீநாகலத்திற்காக ஈரநிலங்களைக் காப்போம்

**ஈரநிலங்களை நாம் எப்படி பாதுகாக்க வேண்டும்?**

**செய்ய  
வேண்டியவை**



ஈரநிலங்களின் தன்மை, அதன் முக்கியத்துவம் மற்றும் பலன்கள் ஆகியவற்றைக் கற்றுக்கொள்ளுங்கள்.



ஒரு ஈரநில பாதுகாவலராக இருங்கள் - அவற்றைப் பாதுகாக்க உங்கள் பங்கைச் செய்யுங்கள்.

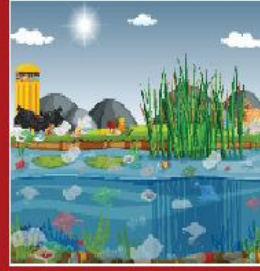


பிரச்சாரங்களில் பங்கேற்று ஈரநிலங்கள் குறித்த விழிப்புணர்வை உங்கள் சமூகக்குழுவில் பரப்புங்கள்.

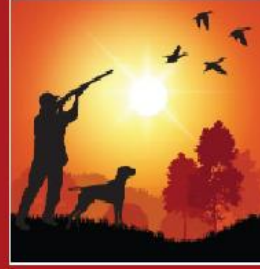


உங்கள் நண்பர்கள் குழுவை "ஈரநில நண்பர்கள்" - ஆகப் பதிவுசெய்து, ஈரநிலங்களைப் பராமரிக்க உதவுங்கள்.

**செய்யக்கூடாதவை**



ஈரநிலங்களில் கழிவுகளைக் கொட்டாதீர்கள்.



பறவைகள் மற்றும் விலங்குகளை வேட்டையாடாதீர்கள்.



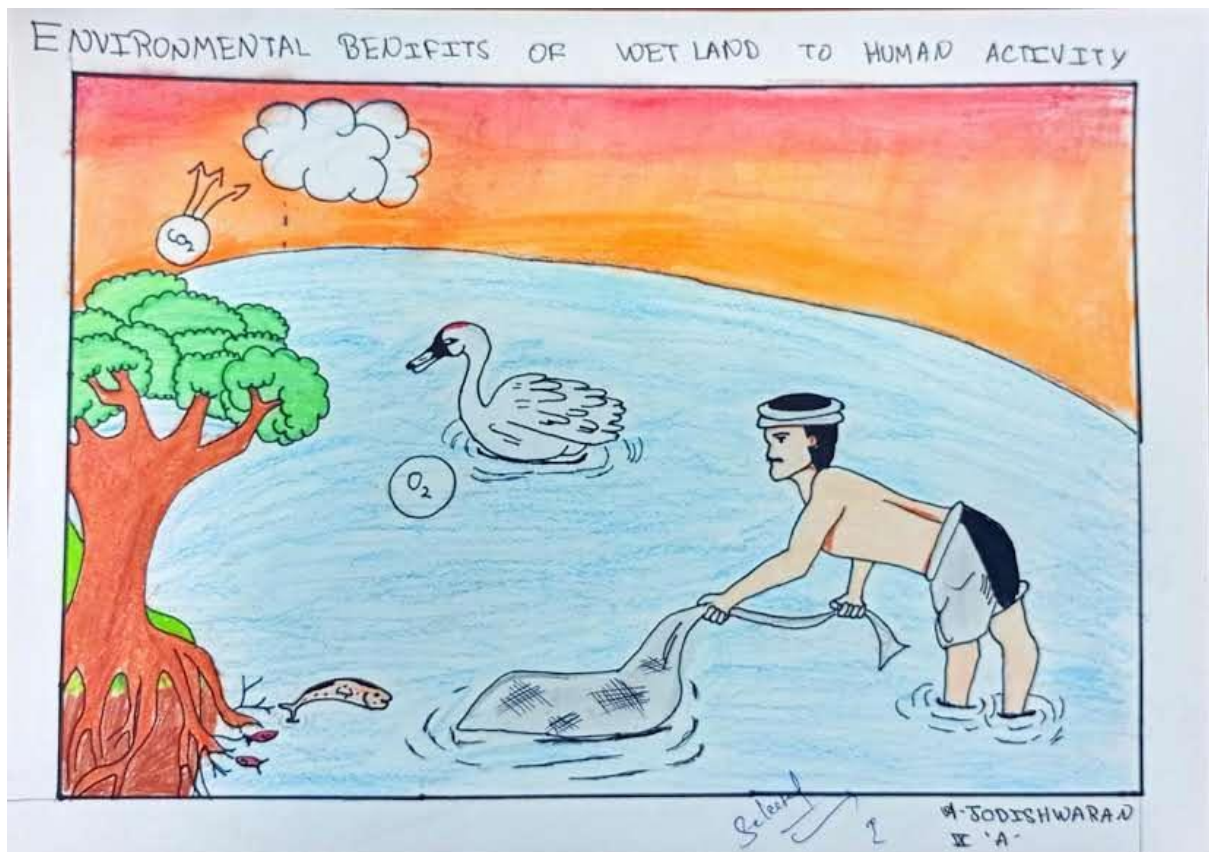
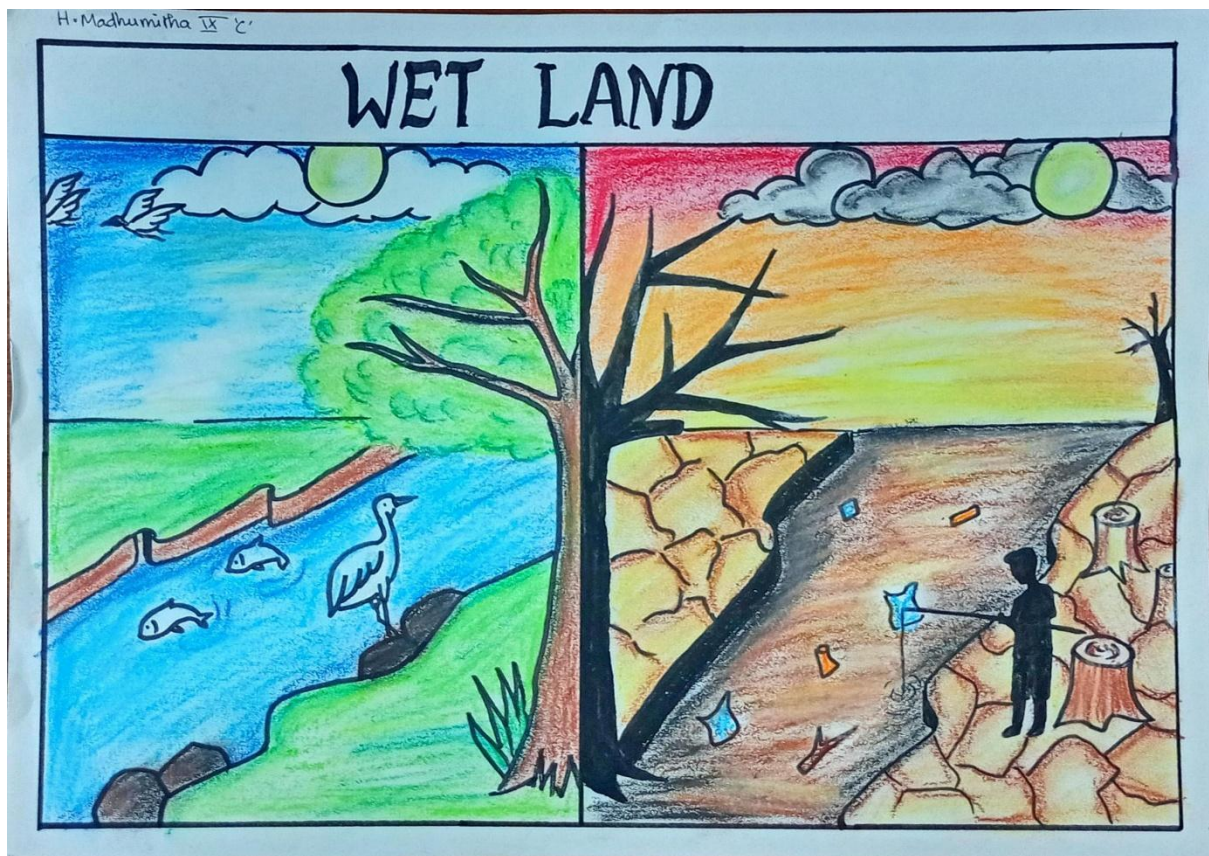
இயற்கைத் தாவரங்களை அழிக்காதீர்கள்.

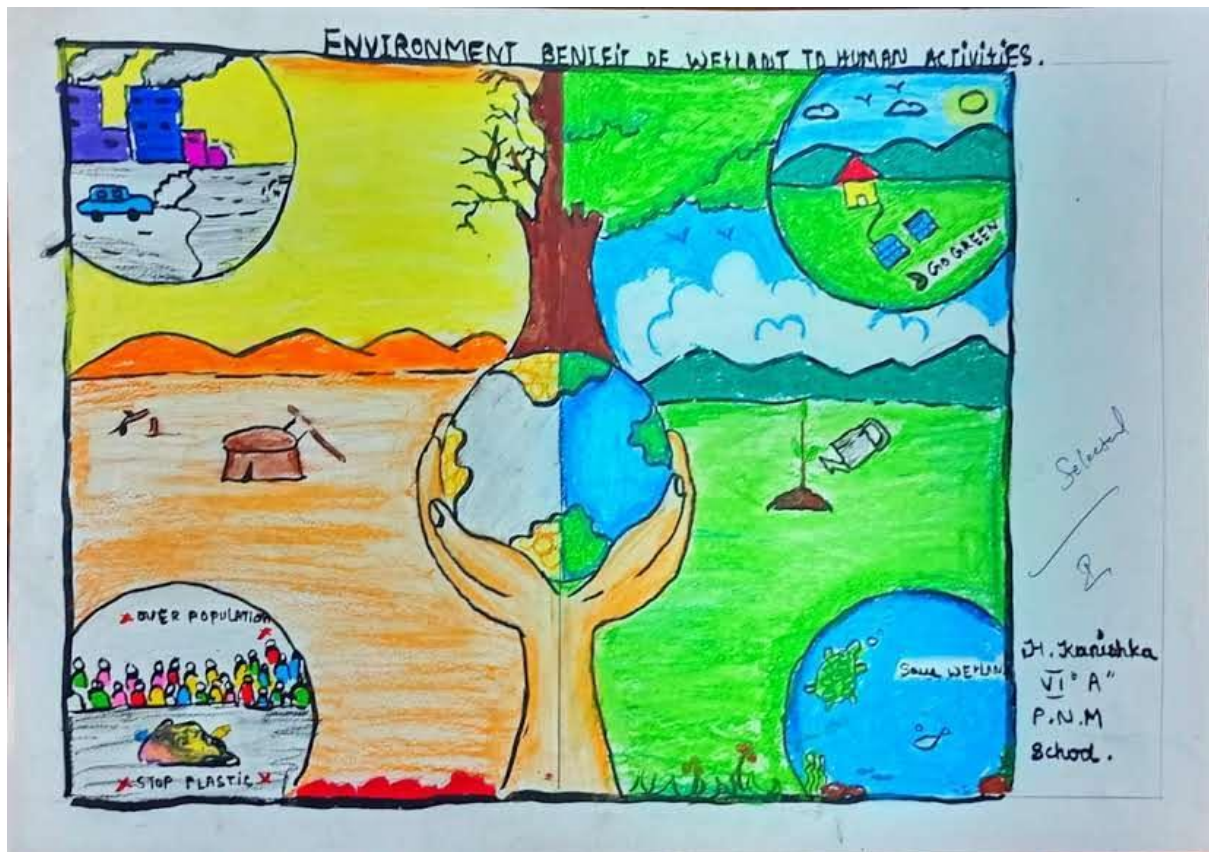


ஈரநிலங்களுக்குள் அந்நியதாவரங்கள் அல்லது விலங்குகளை அறிமுகப்படுத்த வேண்டாம்.

(உதாரணமாக, மீன்காட்சியகத்தில் வாழும் மீன்களை ஈரநிலத்தில் விடுவது)

#### 4. Drawings from the competition





## 5. Essays from the competition

|                        |  |
|------------------------|--|
| NAME : E. LATHIGA      |  |
| STD : IX - B           |  |
| SCHOOL : P.N.M. School |  |
| DATE : 19/02/25        |  |

WETLAND FOR OUR  
COMMON FUTURE

"Save wetland  
Save the future of the earth"

|                                                     |
|-----------------------------------------------------|
| <u>INDEX</u>                                        |
| * INTRODUCTION                                      |
| * WETLANDS ARE<br>SAFELY HAVEN TO BIODIVER-<br>SITY |
| * WET ENSURE WATER<br>SECURITY                      |
| * IMPORTANCE OF<br>WETLAND                          |
| * IMPACT OF WETLAND                                 |
| * CONCLUSION                                        |

Introduction :  
A world wetland day annually  
celebrated on 2<sup>nd</sup> february. The world wetland

day aim rise global awareness to the vital role wetland in future, people, Nature and culture. Reminded us the benefit of wetland provide Biodiversity and human well-being.

Wet lands are Climate Super-hero.

\* Wet land flora are vital to both adaptation and migration. Mangrove forest and Seagrass Meadows to protect Shore line from. Storm Surges and Increasing Sea level.

\* Mangroves are also called Super hero. to capturing carbon and storing carbon.

Wet land Ensure water Security

\* Almost all the fresh-water drawn directly from the wetland. wetland plays crucial role to water purification

Storage and Sea level rising.

### Importants of wetland.

Wetland are vital to human being and It has so many benefits.

they are:

- \* food or wildlife
- \* Economic benefits

### Impact of wetland:

\* It have benefit to all human being biodiversity, like food, water ect.

### Conclusion:

Wet land are Vital to biodeversity and Support biodiversity and human being.

benefit.

It provide many benefits to human.

"Wet land are kidney of the earth"

## PROTECTING WETLANDS FOR OUR COMMON FUTURE : ROLES AND RESPONSIBILITIES OF AN INDIVIDUALS

Wetlands are Vital ecosystem that provide Numerous benefits to both Environment and Humanity. These vital ecosystem is essential for maintaining biodiversity, regulating water cycle and offer natural buffer against the climate change. As a Individual we have a crucial role to protect our precious ecosystem for our common future.

### Understanding The Importance of Wetlands:

Before we dive into roles and responsibilities of an Individual, it's essential to know about the significance and the importance of the wetlands. These ecosystem provide a wide range for Plants and animal species. Wetlands are also essential for water filtration, flood control and Carbon sequestration. According to the Ramsar Convention,

Wetlands are very essential for human well-being, supplying water to plants and recreational opportunities.

### ROLES AND RESPONSIBILITIES OF INDIVIDUALS:

As a Individual, We have a moral obligation to protect wetland for our future generation.

Here are some ways we can make a differences.

1. RAISE AWARENESS: Educate friends, family and community members about the Importance of the wetlands and the threats they face. Share Article videos, personal experiences to inspire them and to take action.
2. MAKE ECO FRIENDLY CHOICES: Reduce your Carbon footprint by using public transports, carpooling or using electric vehicles. Use products with minimal packaging and Avoid buying products which contain palm oil.
3. PARTICIPATE IN CITIZEN SCIENCE: Join Local research projects, wildlife report community and join community based on monitoring

initatives. This helps the scientists and the conservationists better support and develop and implement effective conservation strategies.

### IN CONCLUSION:

Protecting our wetlands is a critical issue that requires the involvement of an Individuals, government, organization and NGO's Local Communities. As a Individual, we have a power to raise possitive impact by Raising Awareness, Making Eco-friendly Choices, participating in citizen science, Advocating for policy change and supporting conservation efforts etc.,.

Together, we can develop, protect and ensure a long term health and resilience of this vital ecosystem.

Thank You !

.x — x — x.

கடினரை

எ.ர நிவங்கன்

அய்யர் : ச. அண்ணா ஸ்வாமி  
உதய : 111 - 2

குறிய சபுகம்

- \* முன்னரை :
- \* எ.ர நிவங்கன் ஸ்வாமி ரண்ட.
- \* எ.ர நிவங்கன் உதைகள்.
- \* எ.ர நிவங்கனை பாதகாபதற்கான உதிரைகள்
- \* முன்னரை.

\* முன்னரை :

பிரமாரி அரண்டாம் தேதி 01க எ.ர நிவ தினமாக கொண்டாடப்ப  
த்கின்ற . 01கில் காண்பிடும் நிவ பிரதேசங்களை பரிசுறு தன்மைகள்  
கொண்டதாக காண்பிடக்கின்றன. அதில் அந்த எ.ர நிவம் ரண்ட. ஆடு  
உதையாகும் . சேனா நிவம் அலகு சகதி நிவம் ரண்ட பக்களால்  
அமைக்கப்படுகின்றன.

\* எ.ர நிவங்கன் ஸ்வாமி ரண்ட :

எ.ர நிவம் ரண்ட 5 உர் அயர்கை சுந்த சூழல் அமைப்பாகவே  
காண்பிடக்கின்றன. சந்தையமாகவே அலகு பிரந்தமானகளை  
நீரினால் மேய்ப்பு நிவங்களும். அவை தன்னி அலகு உய்  
நிறை அலகிய பிரதேசங்களாக காண்பிடும். நிசீசு கமரோன்  
ரண்டவரின் கருத்துப்படி அரைப்பாதி ரெளண்ட நிவம் அரைப்பாதி  
கூல் நிவம் ரண்டப்பதையாக காண்கும் அடல எ.ர நிவங்கன்  
ரண்ட கூறுகின்றன.

\* எ.ர நிவங்கன் உதைகள் :

அயர்கையை பாதகாபதற்கான நிகழ்த்து பக்களாக எ.ர நிவங்கன்  
அமைக்கின்றன. அவை

- \* கல எ.ர நிவங்கன் .
- \* நதி எ.ர நிவங்கன் .
- \* குறி எ.ர நிவங்கன் .

1) கூழ் ஈர நிலங்கள் :  
கூழ் ஈர நிலங்கள் கடலோர சூழலில் காணப்படும். அடிமற்ற  
கடல் நீர் வரப்புகளை எண்ணாத கால முடியும்.

2) நீர் ஈர நிலங்கள் :  
நீர் ஈர நிலங்கள் அலகன், நீர்மீட்டர்கள் மற்றும் நீர்நிலைகளைக்  
அடையவில் அமைந்த தண்ணீர் கொண்ட ஈர நிலங்களாகும்.

3) உறி ஈர நிலங்கள் :  
உறி ஈர நிலங்கள் ஈரிகள் மற்றும் தாதுகளைப் பயன்பற்றினால்  
உருவாகும் பெருமளவு. மதுவக உப்புத்தன்மை எண்ணாத  
கால முடியும்.

\* ஈர நிலங்களை பாதுகாப்பதற்கு உழைப்புகள் :  
கடல் அலைகளில் கொரத் தாதுகளில் கிடைத்து பாதுகாக்கின்ற  
பல உதையான உயிரினம் மெரியூர் மற்றும் மெரிநாட் பறவையின்  
உயிரும், சிறு சூழலில் உயிரை மாசுகளை உறிஞ்சி கொள்ளுதல்,  
மண்ணிழிப்பைத் குஞ்சும், உரும் பரிசுத்த உயிர் நீராது  
செயல்படுதல், திடீர்தடி நீர் மட்டத்தை உயர்த்தல். கூழ் தாதுகளில்  
செயல்படுதல். கிந்த கூழ் கொதி அலை பல்பெறு  
உயிரினங்களுக்கே ஈர்க்கும் அளவிற்கு பெரிய அளவிலான உணவை  
உயர்த்தும் தொகுதிகளாக செயல்படுத்திற்று. ஈர நிலங்கள்  
வேதி பொருள்கள் கலப்பினால் அகச்சினை குறைந்த குறிப்புகள்.

முடிவுரை :  
இயற்கை எங்கு தந்த அருட் தொலைகளில் அன்றாகவே  
கிந்த ஈர நிலங்கள் காணப்பட க்கின்றன. அன்ற ஈர நிலங்களை  
பாதுகாப்பது மனிதர்களுடைய கடைமை என்ற உணர்ந்த  
செயற்பட வேண்டும்.

இயற்கை எங்கு கிடைத்த தந்தது அதை கெடுத்து  
விடபால் நாம் எதிரக போவது.

ஈர நிலங்களை பாதுகாப்போம்.  
இயற்கை உயிர்களை எதிரக செய்வோம்  
4மி தாயை குறிப்பிடுவோம்  
நன்றி !



# CAG

Citizen consumer and civic Action Group

No.103 (First Floor), Eldams Road, Teynampet,  
Chennai 600 018

T: +91(44) 2435 4458 | 2435 0387

[helpdesk@cag.org.in](mailto:helpdesk@cag.org.in)

[www.cag.org.in](http://www.cag.org.in)



@CAGChennai

