



Water *Watch*



ISSUE 02

Quality Matters



శ్రీ వేదంక
 ఈ ధార ప్రదేశానికి చెందిన
 ఎవరినీ ఆక్రమించరా నోబద్దయి!
 జిల్లా పరిషత్
 విజయవాడ

Understanding the
VIZAG'S WATERBODIES

ATMOST PRIORITY 

Greater Visakhapatnam Municipal Corporation (GVMC) launched a new campaign - 'Eco-Vizag' to promote cleanliness among the citizens and also to continue the fight against pollution as well as plastic in Visakhapatnam. As part of this campaign, the focus will be laid on five components, eco-cleaning, greenery, water conservation, plastic ban and pollution reduction.



This Water Watch by Centre for Urban Water Resources (CURE), DHAN Foundation is a contribution to the noval Eco-Vizag Campaign; Particularly to the Eco-Blue Component.

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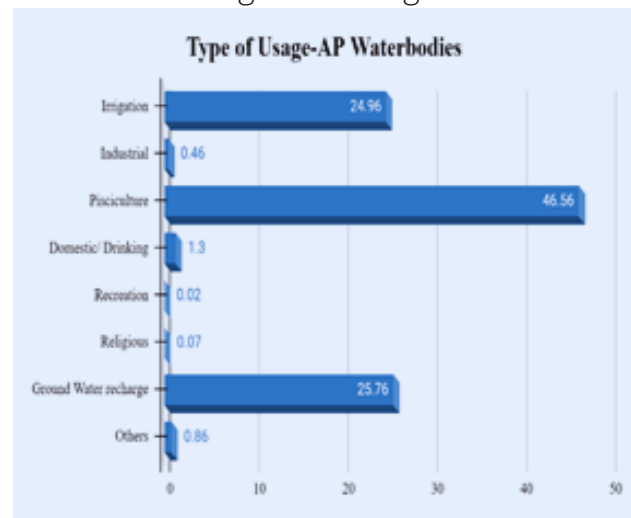
1.0 Understanding the Andhra Pradesh's waterbodies

Thanks for the first-ever census on waterbodies by Minor Irrigation (Statistics) Wing of Ministry of Jal-Shakthi, Government of India. According to the report, State of Andhra Pradesh has a total of 1,90,777 water bodies, Of which 59.5% are tanks; 7.4% are ponds; 30.1% are Conservation structures like check dams; 0.4% are the reservoirs and the remaining 2.6% are in other category.

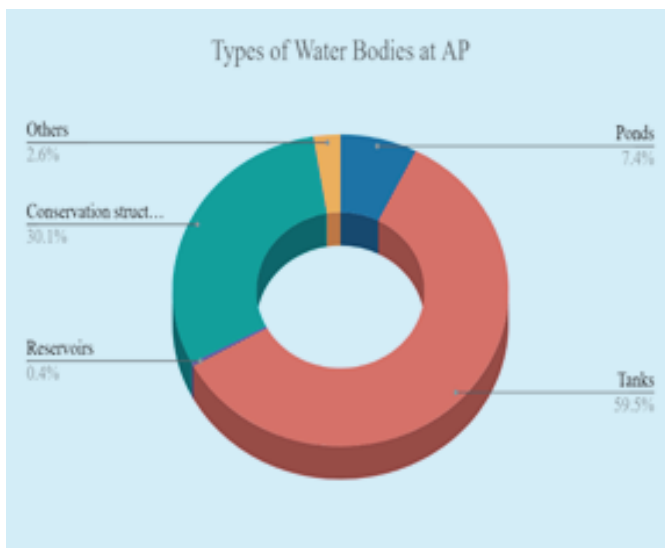
Out of 1,90,777 water bodies, 78.2% water bodies are in use whereas the rest 21.8% (41,498) are not in use on account of being dried up, siltation, destroyed beyond repair, salinity, and other reasons. AP government has also reported encroachment in 3,920 water bodies, out of which 51.8% (2,032) are tanks. In the General AP context, The usage of waterbodies are around 46.5% is for pisciculture; 25% for Irrigation, and followed by Ground water recharge and Industrial usage.

The notable statics are out of 1,90,777 water bodies, the majority, around 99.7% (1,90,263) are in rural areas and the remaining 0.3% (514) are in urban areas. So urban Andhra Pradesh has around 514 waterbodies.

According to the toposheet by Survey of India, The present Greater Vishakhapatnam Municipal Corporation is blessed with 179 waterbodies by tolerating the earlier urbanization due to the oldest shipyard which is the only natural harbor on the eastern coast of India. The demarcated waterbodies are an important part of the urban ecosystem. They perform significant environmental, social, and economic functions from being a source of drinking water and recharging groundwater to supporting biodiversity and providing livelihoods for the most vulnerable urbanites. Waterbodies are a kind of living heritage that host several biodiversity's for thousands of years but rapid unplanned urbanization altered and abused the living Bio-heritage.



Rapid changes in the catchment properties by pouring concrete and making as an impervious layer facilitate the higher flow of stormwater to the natural drain with the high intensity. On the contrary, National Disaster Management Authority (NDMA) report says, the capacity of natural drains has decreased due to encroachments, resulting in flooding. In both cases,



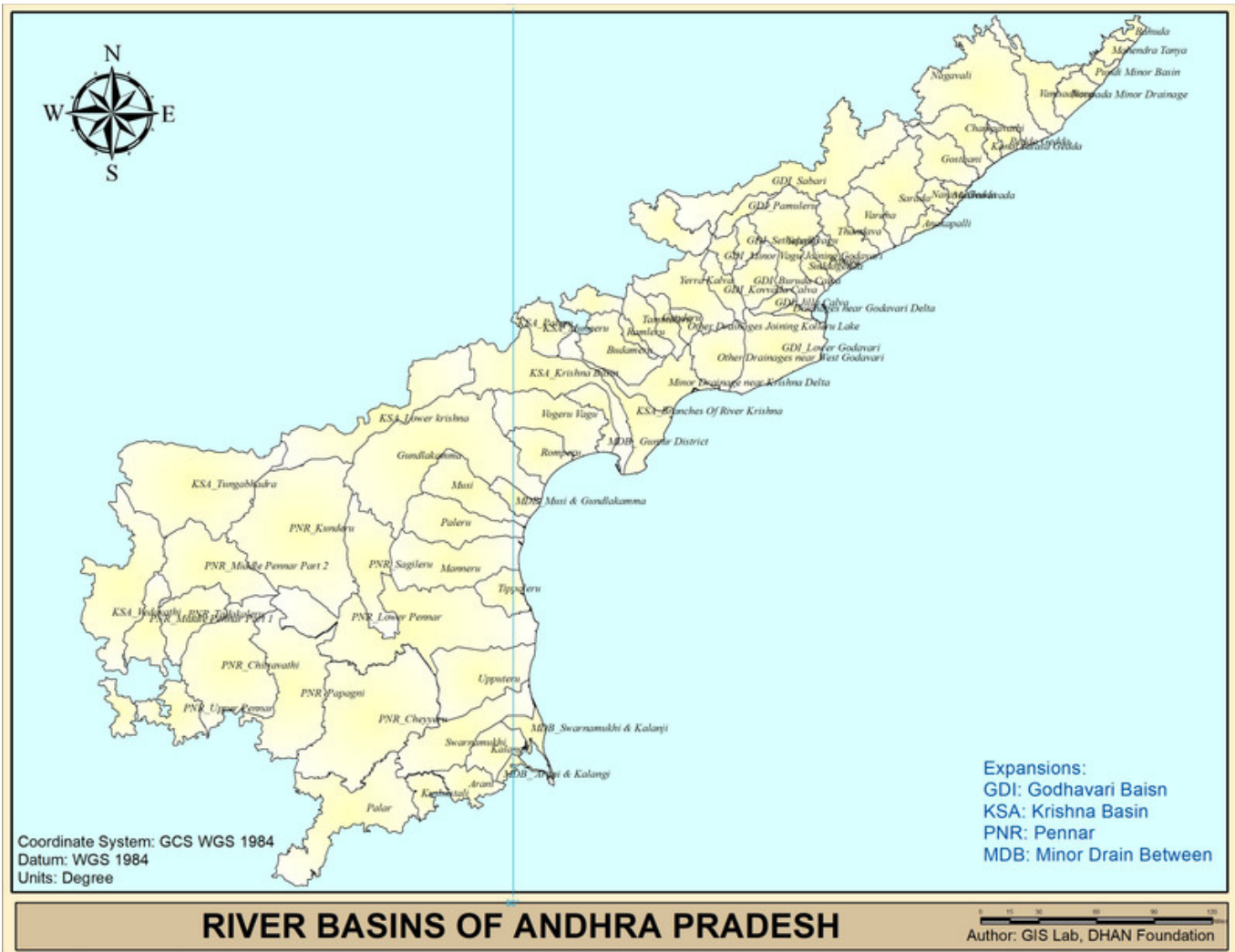


Understanding the Andhra Pradesh's waterbodies

Urban water bodies and its drains have been a victim of unplanned urbanization in India, because of which they face several threats such as encroachment, disposal of sewage, groundwater decline leading to fall in the level of water, absence of administrative framework, and very importantly community participation.

Community participation is the sustainable key for not only to conserve but also the reduce the point sources of contaminants;

to create an ownership on the urban water commons. The challenges on community ownership are due to many reasons like Migrated population, Poor knowledge of the local topology, no direct relation with waterbodies unlike rural areas, and poor availability of data. This Water Watch issue is to create a primary database on the waterbodies of Greater Vishakhapatnam Municipal Corporation which can be an effective tool to influence the local policy by the local community.





2.0 Understanding the Vizag's Water:

How many waterbodies does Visakhapatnam City have? A common question raised to Vizagites from Children to senior citizens. Most of them says, they have never seen such waterbodies in Vizag or they will list a few waterbodies

1.Meghadrigedda Reservoir: they know Meghadrigedda because it's a main drinking water resource for Vizag, importantly it is also a popular recreational spot for locals located on the outskirts of the city.

2.Mudasarlova Reservoir: Due to the presences of park, Children identify this reservoir which is another essential water body that provides water for irrigation and other purposes.

3.Gangavaram Lake: This small lake is located near the Gangavaram Port area in Visakhapatnam.

4.Peddacheruvu: Peddacheruvu is a small pond located in the center of the city, near MVP Colony. It is a popular spot for locals to spend their leisure time.

5.NAD Lake: Located near Naval Armament Depot (NAD), this lake is a small water body within the city's limits.

So in and around 5-10 waterbodies are known to most of the Vizagites. But according to the Survey of India Toposheet, The GVMC boundary holds 179 waterbodies. **why this knowledge gap?** How can we create a knowledge base on the waterbodies of Vizag? The answer is rest in understanding the hydrology, geology, and Morphology of Vizag City.





2.1 Administrative Understanding:

In general Visakhapatnam, often referred to as Vizag, is a city with several unique aspects that make it stand out from other places in India. Here are some of the key factors contributing to the uniqueness of Vizag:

Natural Beauty: Vizag is blessed with breathtaking natural beauty. The surrounding Eastern Ghats and lush greenery support a diverse range of flora and fauna. The coastal waters around Vizag support a thriving marine ecosystem.

Strategic Location: Vizag is strategically located and serves as a significant port city on the east coast of India as a major gateway for cargo handling and export-import activities. The region surrounding Vizag is known for its rich mineral resources.

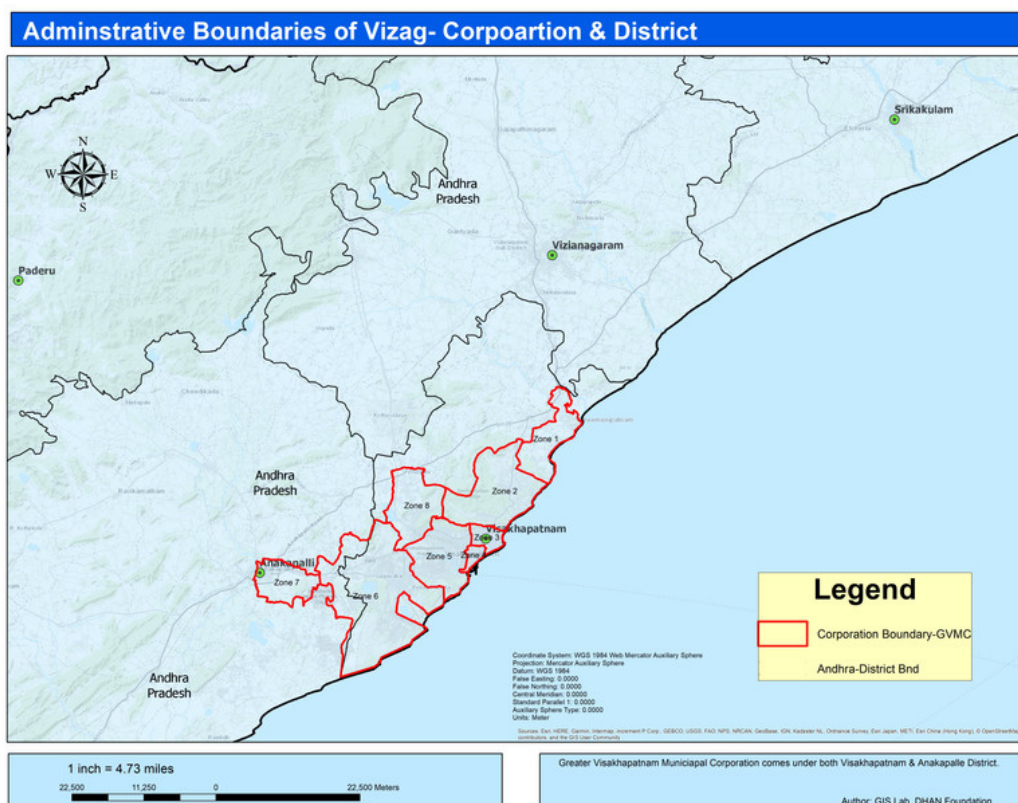
Industrial Hub: Vizag is a major industrial center, housing various industries such as steel, petrochemicals, shipbuilding, and manufacturing.

It is home to several public sector undertakings, including Visakhapatnam Steel Plant (Rashtriya Ispat Nigam Limited), Hindustan Petroleum Corporation Limited (HPCL), and Bharat Heavy Electricals Limited (BHEL), among others.

Cultural Heritage: The city has a rich cultural heritage and is known for its historical significance. Vizag has ancient Buddhist sites like Thotlakonda and Bavikonda, which attract history enthusiasts and spiritual seekers.

Naval Presence: Vizag is an important naval base for the Indian Navy, hosting the Eastern Naval Command headquarters.

These unique attributes facilitated either the conservation or destruction of inland waterbodies of Vizag. The present administrative boundaries of Greater Visakhapatnam Municipal Corporation (GVMC) are extended to two administrative districts of Andhra Pradesh as Visakhapatnam District and the Anakapalli District. The GVMC is bifurcated into 98 wards with 8 zones.



2.2 Hydrological Understanding:



There is a myth that Vizag receives a high amount of rainfall because of the coastal nature. While comparing the rainfall data with Chennai, Bhubaneswar, and Kolkata having an average of 1600mm. But Vizag's average rainfall is 1000-1100mm which is slightly less than the national average. In general, Visakhapatnam experiences a tropical wet and dry climate with a distinct monsoon season.

Monsoon (southwest) Season (June to September) brings the bulk of the annual rainfall which helps replenish water sources and supports agriculture.

Post-Monsoon Season (October to November) where the rainfall gradually decreases.

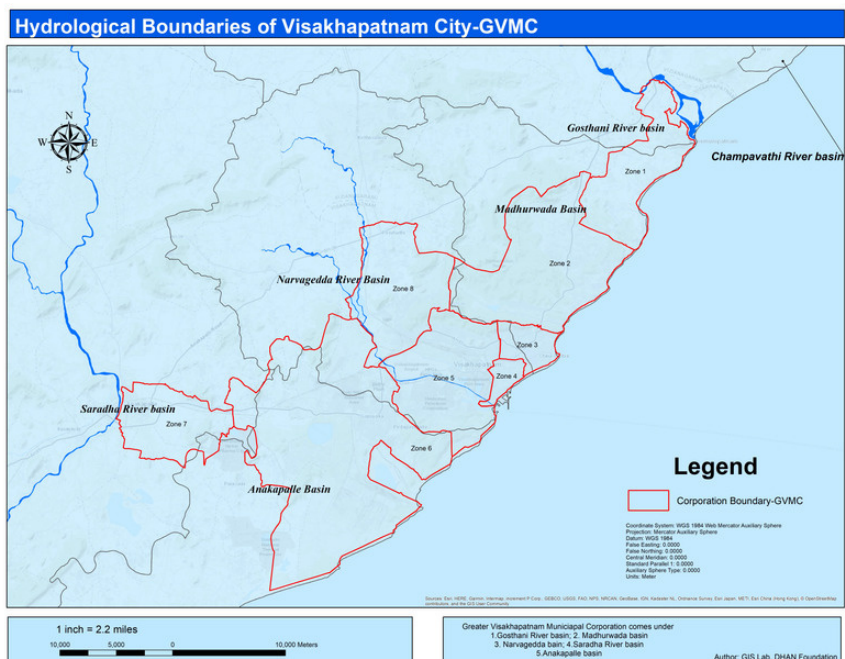
Winter Season (December to February) experiences cooler temperatures during this period, and rainfall is generally scarce.

Pre-Monsoon Season (March to May) is characterized by rising temperatures and increasing humidity.

It's important to note that the average patterns are affected due to El Niño or La Niña events, which can influence weather patterns and monsoon strength. In the recent June 2023, heatwaves in Vizag records an all-time high maximum temperature of 43.4 degrees Celsius at Waltier station and Visakhapatnam airport recorded 44.6 degrees Celsius, the highest in 28 years. This rainfall, temperature, and humidity play a vital role in the hydrological health of water bodies.

Beyond the administrative boundaries, it is necessary to understand the hydrological boundaries of Vizag. A river basin, also known as a watershed or catchment area, is a fundamental geographical concept where the portion of land drained by a river and its tributaries play a crucial role in various

aspects of the environment, ecology, and human activities. The GVMC administrative boundaries are overlapped with the five river basin boundaries.



Gosthani River Basin: The part of Bheemli that is in Zone 1. Gosthani River basin originates in the Ananthagiri Hills of the Eastern Ghats and flows and terminates into the Bay of Bengal near Bheemunipatnam.

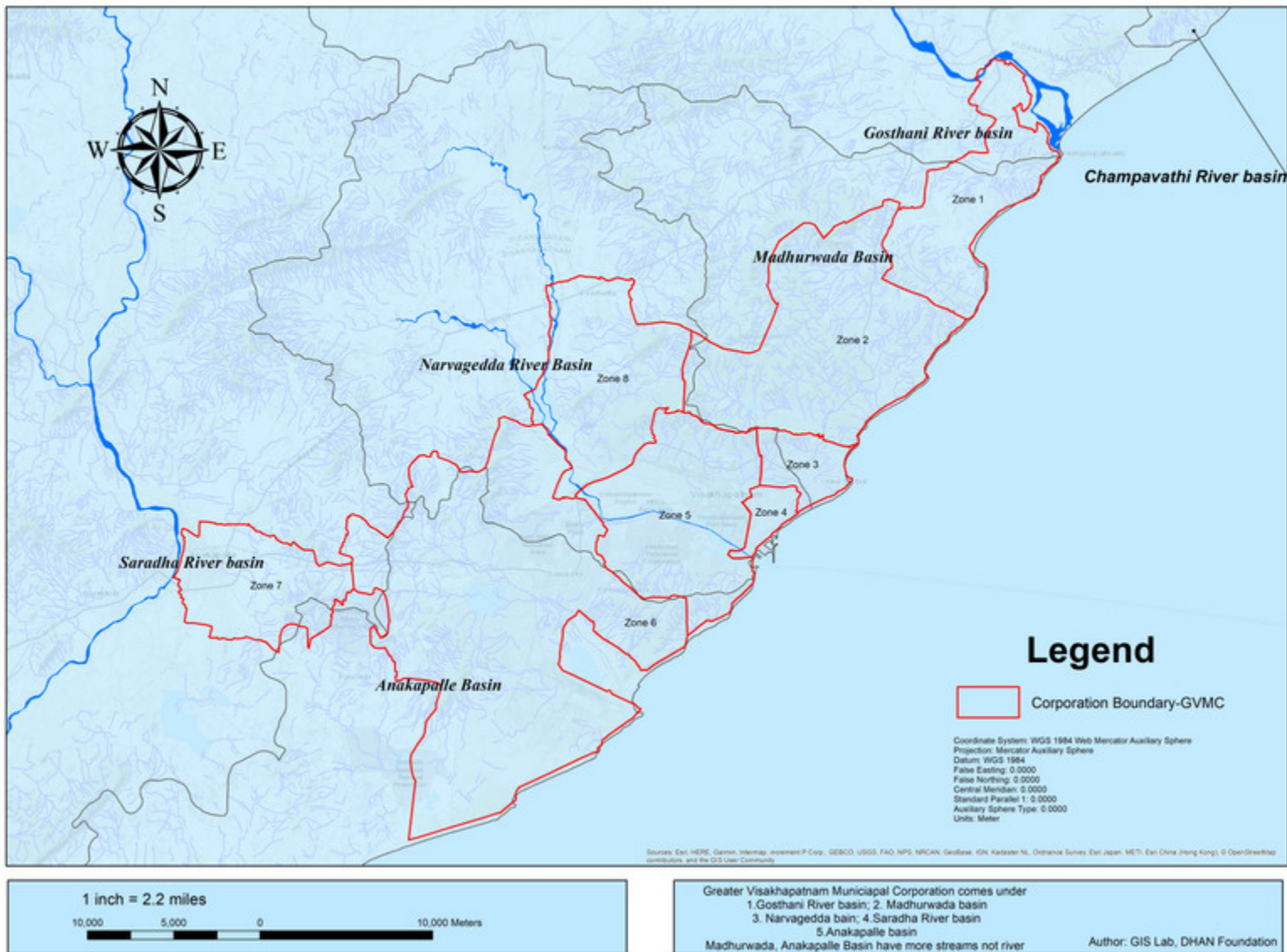
Madhurawada Basin: According to the Irrigation department, the small geographical hill-locked area is act as a small area called Madhurawada Basin. Most parts of Komathi, Mardhurawada, and Rushikonda come under the Madhurawada basin. there are small local streams or drainage patterns in the Madhurawada area.

Narvagedda River basin: Most of the core Vizag comes under this basin. Penduruthi to Yarada Beach is part of this basin.

Saradha River basin: One of the big basin is shared only with the Anakapalli City Area which is recently added to GVMC boundary.

Anakapalli Basin: According to the Irrigation department, the small geographical hill-locked area is act as a small basin called Anakapalli Basin. The Port and navy area comes under this basin.

Streams patterns of Visakhapatnam City



River basins and hillock basins serve as natural units for managing water resources. Proper management of river basins is essential for the equitable distribution of water for drinking, agriculture, industry, and other needs. Unfortunately, the urban planning of GVMC ended up receiving water from far resources. GVMC's overlapping basins are home to diverse ecosystems, including forests, wetlands, and aquatic habitats. Basins can help regulate water flow and prevent flooding. Proper management and conservation of river basins are crucial for sustainable development, ensuring a balance between human needs and ecological health.





2.3 Geographical Understanding:

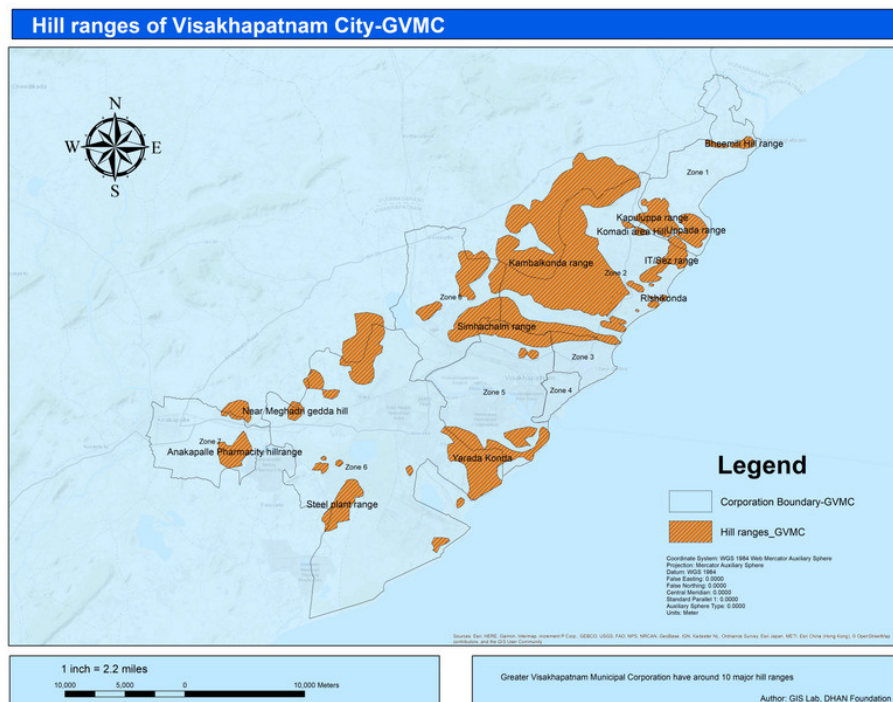
The region in and around Visakhapatnam is known for its mineral wealth. Bauxite, limestone, beach sand minerals, and manganese are among the important minerals found in the area. These resources have contributed to industrial development and economic activities in the region. The geology of Visakhapatnam is influenced by its location along the eastern coast of India and its proximity to the Bay of Bengal. Visakhapatnam is the only place where the Eastern Ghats met the sea. The region's geological history spans millions of years, leading to the formation of various rock types including gneisses, granites, and schists.

Visakhapatnam's coastline is characterized by sandy beaches, rocky shores, and estuaries. Beach sand minerals like ilmenite, rutile, zircon, and garnet are often found along the coastline. The city is home to several estuaries and mangrove ecosystems. These areas are formed at the confluence of rivers and the sea, resulting in unique geological and

ecological conditions. Mangroves play a crucial role in stabilizing coastlines, preventing erosion, and supporting diverse marine life.

The entire eastern coast of India, including Visakhapatnam, lies within a seismically active zone. The movement of the Indian tectonic plate towards the Eurasian plate has led to significant seismic activity in the region, including earthquakes. This geological activity is related to the broader process of plate tectonics. Visakhapatnam and its surroundings are also home to geological sites of significance. The Erra Matti Dibbalu (Red Sand Dunes) and Borra Caves are notable geological attractions that showcase the diverse geological history of the region.

Almost 10 hill ranges are at present GVMC area, this is one of the major components to consider in the water budgeting of the City. This also decides the morphology of the waterbodies. These hills may be protected as the effective catchment area.



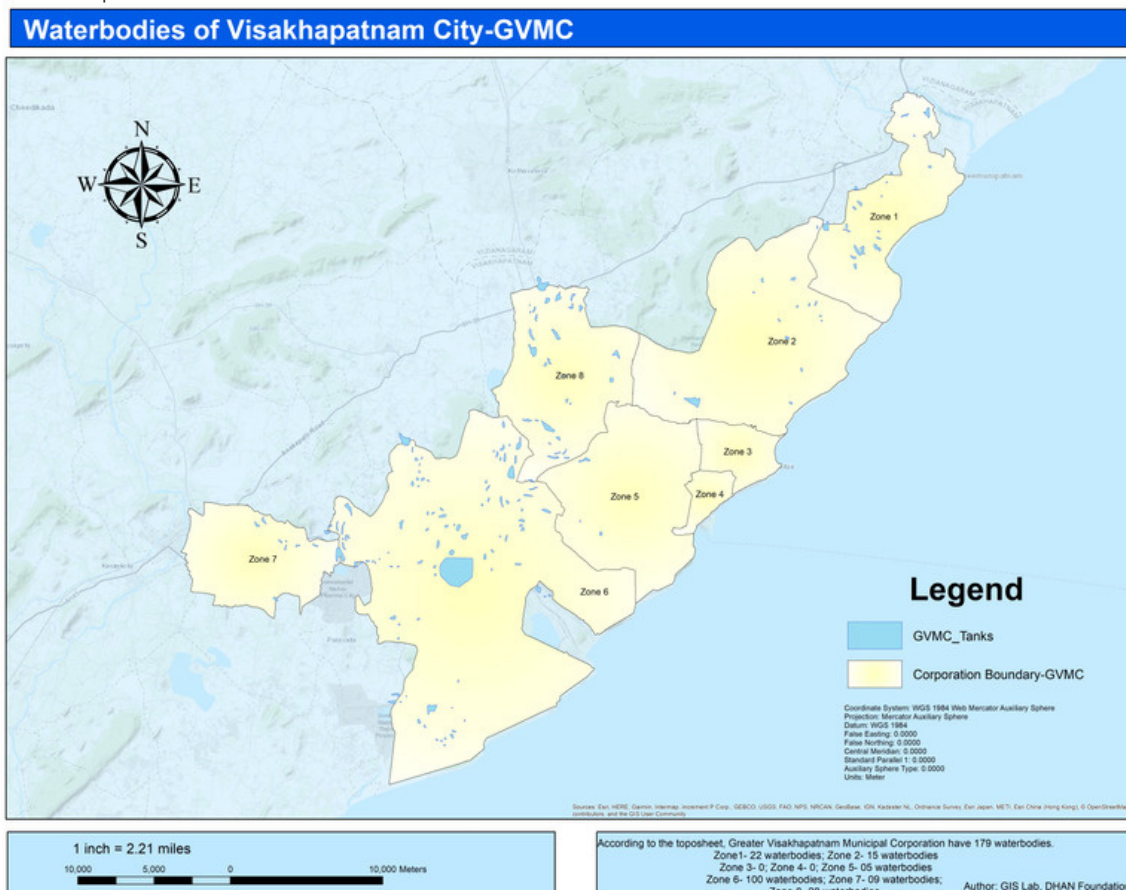
3.0 Present Status of water bodies in Visakhapatnam:



The hydrological and geological character of Visakhapatnam decides the health of water bodies. But there are several other factors that influence the health of water bodies. Some Tier I & II cities in India have adopted integrated approaches to manage urban water resources, including waterbodies. This involves sustainable planning, wastewater treatment, rainwater harvesting, and other measures to improve water quality and availability. But in context to Vizag, Except a few, Many urban waterbodies have suffered due to a lack of proper maintenance and neglect. This includes inadequate waste management particularly C&D waste around water bodies and insufficient efforts to control pollution and invasive species. Land reclamation for the development and construction of buildings and infrastructure can lead to the reduction of waterbody size and alteration of their natural flow patterns.

The Union, state governments, and Urban Local Bodies have implemented many policies and regulations aimed at protecting and restoring urban waterbodies. However, enforcement and implementation challenges remain in many cases related to Vizag waterbodies. Recognizing the importance of urban waterbodies for environmental and recreational purposes, there have been efforts by GVMC and other Community organizations, and government bodies to restore and conserve these waterbodies. Here In this Water watch, we are attempting to document the waterbodies of five zone of GVMC. This assessment is done by extracting waterbodies from the Toposheet of Survey of India and followed by a direct field visit and a Focused Group discussion with the locals around the waterbodies.

In this water watch, we attempt to document the waterbodies of Zone 1, Zone 2, Zone 3, Zone 4, Zone 5.





Name of the Pond: **Citivalasa Chilapetta Cheruvu**
 Area: Citivalasa
 Ward No: 1
Specification: One of the biggest water bodies of GVMC. The whole Bheemlipatinam settlements are around the waterbody. heavy sewage inflow.
Present Condition: Invasive species both Prosopis and water Hycianth are present. Bund strengthening is needed in concern to act as a better flood carrier.

Thagarapuvalasa, Andhra Pradesh, India
 Bheemili - Thagarapuvalasa Rd, Adarsanagar, Thagarapu
 Andhra Pradesh 531163, India
 Lat 17.925957°
 Long 83.431254°
 08/12/22 04:24 PM GMT +05:30



Name of the Pond: **Kaladapalem cheruvu**
 Area: Boyapalem
 Ward No: 4
Specification: Rocky base surface with stone bunding which holds very less water.
Present Condition: Waterbody is fenced by the private.

Visakhapatnam, Andhra Pradesh, India
 Unnamed Road, Visakhapatnam, Andhra Pradesh 531163
 Lat 17.863259°
 Long 83.385599°
 03/12/22 12:03 PM GMT +05:30



Name of the Pond: **Chilapaiya Cheruvu**
 Area: Nimmdipette
 Ward No: 2
Specification: Located in the centre of the road junction. Act as the flood carrier. More Construction debris is dumped in the water bodies.
Present Condition: Heavily silted and Invasion. Need of desilting and bund strengthening.

Visakhapatnam, Andhra Pradesh, India
 WC8F+CX, Visakhapatnam, Andhra Pradesh 531163
 Lat 17.914236°
 Long 83.424973°
 08/12/22 11:57 AM GMT +05:30



Name of the Pond: **Nathipaidaiyu cheruvu**
 Area: Koppulupada area
 Ward No: 4
Specification: waterbody is present in the channel area.
Present Condition: Waterbody is acting as the storm drain.

Visakhapatnam, Andhra Pradesh, India
 V96M+PXM, Visakhapatnam, Andhra Pradesh 531163
 Lat 17.860999°
 Long 83.385229°
 03/12/22 12:00 PM GMT +05:30



Name of the Pond: **Gayathrigudi Cheruvu**
 Area: Kumarapalem
 Ward No: 2
Specification: A Square-shaped Pond acts as the flood carrier. The surrounding areas are developing in the fast phase.
Present Condition: urgent Desilting, Bund strengthening is needed for future flood regulators.

Visakhapatnam, Andhra Pradesh, India
 Plot No 52, Novus Dutch County, Kumarapalem,
 Bheemunipatnam, Visakhapatnam, Andhra Pradesh 531163
 Lat 17.896797°
 Long 83.434788°
 08/12/22 04:42 PM GMT +05:30



Name of the Pond: **Tadi Gedda**
 Area: Kothavalasa
 Ward No: 4
Specification: Surrounded by Agricultural land. natural bund formation pattern is available.
Present Condition: Heavily silted, Water holding capacity is very less.

Visakhapatnam, Andhra Pradesh, India
 Unnamed Road, Visakhapatnam, Andhra Pradesh 531163
 Lat 17.874683°
 Long 83.38899°
 03/12/22 12:46 PM GMT +05:30



Name of the Pond: **Boyapalem**
 Area: Jeyendhra colony boyapaleam
 Ward No: 4
Specification: Long bund with pockets of agriculture. No sluices are surplus found.
Present Condition: Biggest waterbody with 100% invasive species like water hyacinth and bunds are high prosopis invasion

Kapulupada, Andhra Pradesh, India
 V87C+CGR, Uppada, Visakhapatnam, Andhra Pradesh 531163
 India
 Lat 17.863465°
 Long 83.371441°
 03/12/22 11:40 AM GMT +05:30



Name of the Pond: **Bodlapalem Cheruvu**
 Area: Bodlapalem
 Ward No: 4
Specification: A fully functional irrigation pond with siltation and invasive species.
Present Condition: The partial command area is converted into plots. The purpose of waterbody is slowly deteriorating.

Visakhapatnam, Andhra Pradesh, India
 Unnamed Road, Visakhapatnam, Andhra Pradesh 531163
 Lat 17.885098°
 Long 83.389875°
 03/12/22 01:22 PM GMT +05:30



Name of the Pond: **Padradesipaleam Cheruvu**
 Area: Paradesipalem
 Ward No: 4
Specification: Heavy Siltation with more invasive Species and the eroded bund
Present Condition: Immediate desilting and Bund strengthening are in need to arrest the flood drain.

Name of the Pond: Devula Cheruvu
 Area: Uppada
 Ward No: 4
Specification: The twin waterbody is located near to big residential complex of Villas. The waterbody is cut by the road, One side is well maintained and the other side is complete with invasion.
Present Condition: Prosopis removal and desilting off waterbody is needed.



Name of the Pond: **Khambala Cheruvu**
 Area: Nagarpalem
 Ward No: 4
Specification: One of the biggest pond. Effectively utilized for agriculture
Present Condition: Prosopis removal is necessary for the bund, Surplus weirs need to be restored.

Name of the Pond: **Nerla Cheruvu**
 Area: Nerlavarsa
 Ward No: 4
Specification: The land use and land cover of the surrounding area to the waterbody is completely changed into residential plots. But the waterbody remains biodiversity-rich.
Present Condition: Desilting and invasion removal are necessary. This may be converted as a recreational spot.



Name of the Pond: **Kotha Cheruvu**
 Area: Uppada
 Ward No: 4
Specification: One of the biggest ponds like Khambala Cheruvu. Effectively utilized for agriculture
Present Condition: Prosopis removal is necessary for the bund, Surplus weirs need to be restored.

Name of the Pond: **Borapetta Pond**
 Area: J V Agrohram Borapetta
 Ward No: 4
Specification: Landuse is changed. Compound constructed
Present Condition: Lost waterbody..



Name of the Pond: **Marricheruvu**
 Area: Uppada
 Ward No: 4
Specification: located in a highly developing area. Due to the effective catchment area, Water presence is mostly at FTL
Present Condition: Desilting and Bund strengthening is needed to ensure effective storage

Name of the Pond: **Chimaiya Cheruvu**
 Area: Tallavalasa
 Ward No: 4
Specification: Biodiversity-rich waterbody. the potential mix of poultry waste which is close to the bund.
Present Condition: Bunds are with the heavy invasion of Prosopis. desilting is needed to retain its original shape.





Name of the Pond: **Bangarammathalli Cheruvu**
 Area: Tallavalasa
 Ward No: 4
Specification: located exactly in the GVMC border, long bund with fish culture.
Present Condition: well maintained and highly invested waterbody.



Name of the Pond: **Pedda Cheruvu**
 Area: Radilapalem
 Ward No: 4
Specification: A big waterbody with a command area. Orchards are the growing trend in this area. A well-maintained one.
Present Condition: Effectively used for agriculture



Name of the Pond: **Kondaa Tank**
 Area: Tallavalasa
 Ward No: 4
Specification: Acts as the flood carrier, Bunds are completely stone-pitched with concrete. Huge drain issue in the Surplus course.
Present Condition: Huge investments of about 2 crores are Spent by CSR. Acts as a better recreation spot



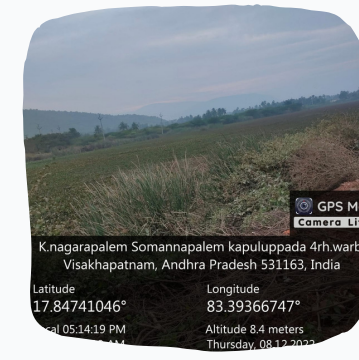
Name of the Pond: **Gedda layout**
 Area: K.uppada
 Ward No: 4
Specification: Fenced by VMDRA and declared as the urban expansion layout
Present Condition: Lost waterbody



Name of the Pond: **Badava Cheruvu**
 Area: Radilapalem
 Ward No: 4
Specification: fully covered with agricultural land. High potential waterbody for agriculture. High possibility of encroached cultivation.
Present Condition: Bunds are with the high invasion of the Prosopis Juiflora Invasion. Desilting of the tank is necessary.



Name of the Pond: **Sovathra cheruvu**
 Area: Sovathandra nagar
 Ward No: 5
Specification: Lost waterbody
Present Condition: Converted as the housing board colony.



Name of the Pond: **Ootapalem Cheruvu**
 Area: Radilapalem
 Ward No: 4
Specification: A big waterbody with a command area. Paddy cultivation at the command area.
Present Condition: Heavy sewage inflow. 100% covered with the water hyacinth. Bunds are at the road level. serious need for desilting and arresting sewage inflow.



Name of the Pond: **Botavanipalen Cheruvu**
 Area: Botavanipalen
 Ward No: 5
Specification: High sewage flow due to No UGD connection for apartments; waterbody is with more invasive species, Bunds are eroded; No command area
Present Condition: Sewage and construction debris are found in all directions of tank.



Name of the Pond: **RTC colony Cheruvu**
 Area: Malliyapalem RTC colony
 Ward No: 5
Specification: sewage-fed waterbody desilting. Deep sand mining happened.
Present Condition: Spot for dumping the construction debris and acting as the sewage carrier.



Name of the Pond: ***not identified**
 Area: RTC colony
 Ward No: 5
Specification: Heavily silted and the land is recovered from the encroachment. The less water spread area is act as the sewage carrier
Present Condition: The board is installed in the name of the District Magistrate to stop the encroachment. Immediate restoration is needed.



Name of the Pond: **Babellama Gramadevatha cheruvu**
 Area: Bakkannapalem
 Ward No: 6
Specification: A well-invested waterbody with one side stone pitching and proper channel for inlet and outlet. Tree planation is done by the locals
Present Condition: Invasive Species are considerably high. Local grama associations and youth groups are maintaining it regularly



Name of the Pond: **Madurawada Cheruvu**
 Area: Madurawada
 Ward No: 5
Specification: From 1979 onwards, The water spread area is converted as Zilla Parishad High School
Present Condition: Lost water body



Name of the Pond: **Rathanagiri housing board Cheruvu**
 Area: Ysr station PM Palam housing board colony
 Ward No: 6
Specification: Located in the housing board area, Locals predict that this land is sold to Housing Board in the early 80s.
Present Condition: Waterboy doesn't exist but due to low elevation, the slurry and the Pig Population are evident for the waterbody.



Name of the Pond: **Prasad Gedda**
 Area: Prasad college area
 Ward No: 5
Specification: A Strom water drain with the area of water stagnation
Present Condition: Most of the sewage from Komadi, Bakkannapalem Housing board are entering this drain.



Name of the Pond: **Chinnathota cheruvu**
 Area: K3 colony komathi colony
 Ward No: 6
Specification: Lost waterbody Present
Condition: Converted into Kommadi Cricket ground



Name of the Pond: **Komathi chinna cheruvu**
 Area: Komathi village
 Ward No: 6
Specification: Recently Bund got strengthened. Pipe-based sluices are present.
Present Condition: This waterbody still has a command area. Due to Pisciculture & irrigation, this waterbody still creates livelihood opportunities



Name of the Pond: **Yendada Cheruvu**
 Area: Yendada
 Ward No: 8
Specification: Once upon a big waterbody is reduced due to urbanization. GVMC spends around 117Lakhs for stone pitch and walking track. The catchment area is the Kombalakonda range.
Present Condition: Weeds are very heavy. Acts as the great flood carrier on rainy days.

These waterbodies are mostly at north of Visakhapatnam. In the second edition, we cover the rest of the water bodies.



Conservation of Visakhapatnam Waterbodies is a critical endeavor to ensure sustainable urban development, preserve biodiversity, and enhance the quality of life for urban residents. Over the years, various strategies and initiatives have been implemented to address the challenges faced by urban waterbodies. Based on the three decades of experience of the DHAN Foundation, The key approach to conserving urban waterbodies is

01

COMMUNITY-LED RESTORATION

The local waterbodies need to be owned, governed, and managed by the local residents and the traditional community of the waterbody. The contractor-based restoration projects are always a concrete-based, high-budget solution. The further details are explained in the next chapter.

02

INVENTORIES AND MAPPING

Conducting comprehensive inventories and mapping of urban waterbodies helps in identifying their current status, threats, and conservation priorities. The Centre for Urban Water Resources (CURE) of DHAN Foundation, already made a Geographic Information System (GIS) technology-based database for the urban waterbodies of Visakhapatnam.

RECREATE THE PURPOSE OF URBAN WATERBODIES

Previously, Most Urban waterbodies are used for irrigation but due to urbanization now we are in need to redesign it according to the local ecosystem. Balancing conservation with sustainable use and responsible recreational activities ensures that urban waterbodies continue to benefit the local community. Developing walking paths, Tree plantations, and birdwatching areas can create incentives for conservation.

04

ENCROACHMENT EVICTION

Strong community institutions and legal frameworks are essential for the protection and conservation of urban waterbodies from the encroachment. The National Lake Conservation Plan (NLCP) and the Wetlands (Conservation and Management) Rules, 2017, provide guidelines for the management and restoration of waterbodies.

05

COLLABORATION AND PARTNERSHIPS

The local community institution needs to be promoted for each waterbody. They require a responsible collaboration between government agencies, non-governmental organizations (NGOs), research institutions, CSRs, and local philanthropists. Partnerships can bring together diverse expertise and resources. CURE already demonstrated this model in Madurai and Chennai by restoring around 40+ urban waterbodies.

It's important to note that effective conservation of urban waterbodies requires a multi-faceted approach tailored to the specific challenges and characteristics of each waterbody and city. While progress has been made, Community-led restoration only ensures the long-term health and sustainability of urban waterbodies in India.



— 5.0 DHAN’s Experiences: Community-led restoration for Urban waterbodies.

Community-led waterbody conservation is key for DHAN Foundation. In the last two decades, 6500+ vayalagam (exclusive for Water user) institution have been federated as 71 block level people Institution by which 4500+ traditional waterbodies have been restored across different landscapes of the nation. The major learnings of community institution for water resolved many macro & micro affairs. Some of them are:

I

Local Owned and Governed

When communities take the lead in conserving waterbodies, they develop a sense of ownership and empowerment. They become active stakeholders in the preservation of their natural resources, leading to a stronger commitment to sustainable practices and long-term stewardship.

II

Sustainable Resource Management

Communities that are directly dependent on waterbodies for their livelihoods have a vested interest in ensuring the sustainability of these resources. By involving locals in conservation efforts, there is a higher likelihood of adopting responsible and sustainable resource management practices that balance ecological needs with human requirements.

III

Customized Solutions

Local communities possess intimate knowledge of their waterbodies, including seasonal patterns, local flora and fauna, and usage patterns. This knowledge enables them to develop tailored conservation strategies that are both effective and culturally relevant, resulting in more successful outcomes.

IV

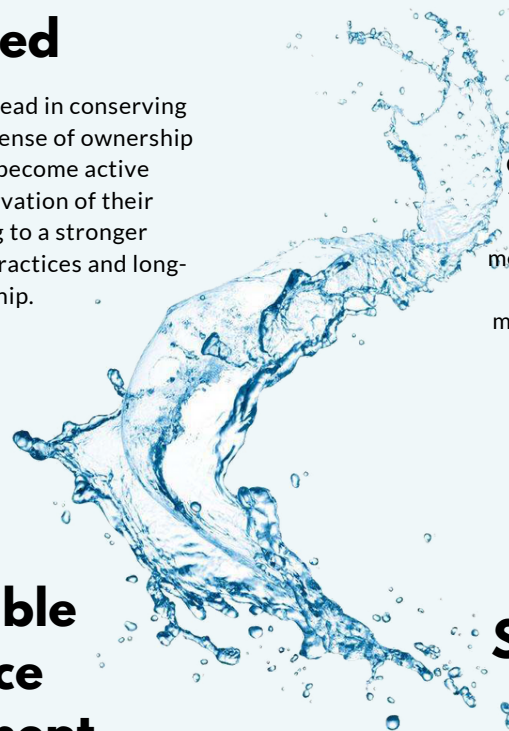
Community contributions & Cost-Effectiveness

Community-led initiatives often require less financial investment compared to top-down approaches, as volunteers and community members often contribute their time, labor, and resources. This makes conservation efforts more cost-effective and sustainable in the long run.

V

Social Cohesion and Collaboration

Collaborative conservation efforts bring communities together, fostering a sense of unity and shared purpose. This can lead to strengthened social bonds, improved communication, and increased cooperation among community members, which can extend beyond conservation efforts to other aspects of community development.





VI

Educational Opportunities

Community-led conservation projects offer valuable opportunities for environmental education and awareness. Participants, especially younger generations, learn about the importance of waterbody ecosystems, biodiversity, and the interdependence of human and natural systems.

VIII

Adaptation to Change

Communities that actively engage in conservation efforts are more likely to adapt to changing environmental conditions and external pressures. By understanding and responding to shifts in water availability, pollution levels, or climate impacts, communities can adjust their practices to maintain the health of waterbodies.

VII

Mitigation of Conflicts

Involving local communities in waterbody conservation can help mitigate conflicts that may arise due to resource scarcity or competing interests. Open dialogue and participatory decision-making can lead to more equitable solutions and reduce the likelihood of disputes.

IX

Long-Term Commitment

Community-led conservation initiatives often result in a longer-lasting commitment to the cause. Locals are invested in the well-being of their environment for future generations, fostering a legacy of responsible stewardship.

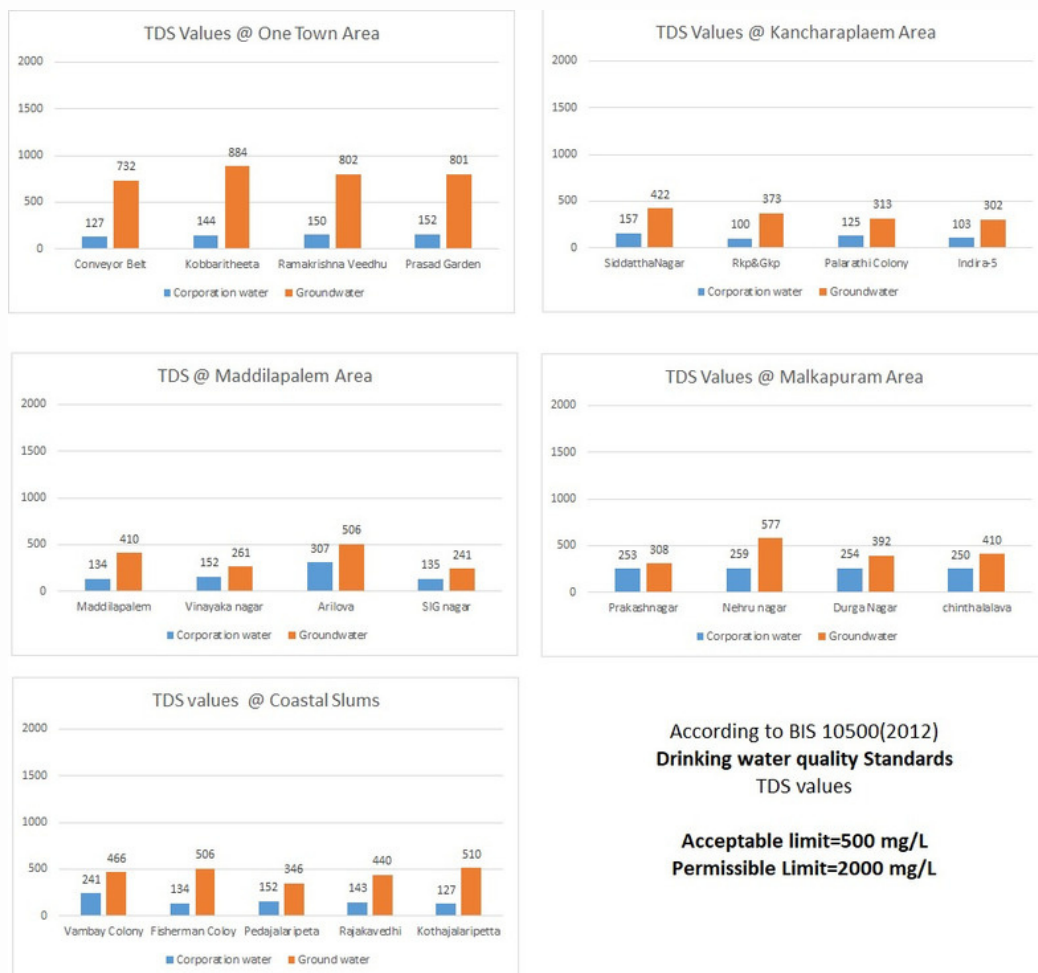


6.0 Baseline Assessment Water and Scenario Analysis



Quality of drinking water is a serious concern in urban areas of India, with cities facing problems of water contamination time to time. Better information is required on where the issues lie and what is needed to effectively and efficiently take action to protect and improve water quality. This water quality assessment would provide policymakers and other stakeholders with information they need in order to make informed decisions to address water issues. A spatial temporal assessment of the GVMC water quality to

provide an understanding of the relative condition of water quality in different sources of water supplies such as Corporation water and Groundwater which are all utilised for drinking purpose. In order understand the Scenario, we collected the 42 samples in 21 locations of GVMC area. Tota Dissolved Soilds (TDS) parameter is taken for consideration. This is parameter is an indicative values of waterquality and the biological paramnters are not tested.



Inferences: The Corporation supplied water is safe and healthy for drinking where values are ranges from 100mg/L to 250mg/L. Most of the Groundwater are crossing the acceptable limits;Filtration is needed before consuming the Groundwater.

Nature Camp!

FOR SLUM KIDS OF VIZAG



"Who am I?"

"What makes me happy?"

In search of an answer, 3 batches of 100+ urban kids from Visakhapatnam slums explored Forest, Coast, Agriculture land and hills followed by meeting senior scientists of CMFRI, Professional scuba divers, Research scholars of Andhra University, Sanitation Workers, Agriculturalist, Doctors, Auto Drivers and mentally challenged orphans. These Life Learnings are from nature and the peoples beyond their academic books.





DHAN FOUNDATION

A professional development organization, spread in 19,016 villages in 16 states of India, working for the upliftment of the poor and the disadvantaged segment of the community. The institution has reached 2.40 Million poor households. DHAN follows 'Enabling approach' and 'Institution Building Approach' which lays emphasis on self-help, mutuality, community ownership, and control over resources by the community.



DHAN VIZAG REGION

Working with 33,000+ families, 1,500+ adolescents, 400 physically challenged persons from the vulnerable for 22 years with the strong social capital of Slum and the coastal communities. Over a period, it became a sustainable community managed, owned and controlled people institutions. Geographically, DHAN Vizag region is working in 67 wards, and 157 slums of Greater Visakhapatnam Municipal Corporation (GVMC).



CENTRE FOR URBAN WATER RESOURCES

DHAN Foundation's Centre for Urban water resources (CURE) launched its second centre at Visakhapatnam.

CURE is working on Urban water security and to enhance the quality of life of vulnerable at Urban and Peri-Urban areas. CURE's major works on Surface bodies renovation, Spring Shed management, Environmental Education, Roof Water Harvesting, Action researches, GIS studies for local action.



FOR SUGGESTIONS AND COMMENTS:

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