

WETLAND MITRA



Journal

2022



Governor of the National
Capital Territory of Delhi

Wetland Authority of
Delhi

Department of
Environment, GNCTD

Foreword



Sh. Anil Kumar Singh

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Forests) Govt. of NCT of Delhi*

The landscape of Delhi comprises of rocky and alluvial regions supporting a network of wetlands. Wetlands are one of the most important and interlinked ecosystem with human livelihood and well-being. Wetland Authority of Delhi was constituted to act as the nodal agency for monitoring the management and conservation of these wetlands in coordination with the land owning agencies. The Authority has identified 1045 wetlands till date and has provided UID numbers to each one of them. The Authority has a unique stakeholder engagement program - Wetland Mitras, where motivated individuals/organizations have come together over the last 2 years for the conservation, maintenance and monitoring of the wetlands in Delhi. Today, we have a team of 112 Mitras who have contributed immensely for the wetlands of Delhi in various capacities. This journal is a first of its kind to acknowledge the contribution of Wetland Mitras and increase our reach to the general public. I appreciate the Wetland Authority of Delhi for taking the initiative and extend my gratitude to all the Mitras for joining hands in our endeavor to make Delhi a better city. I hope we will get more such enthusiastic individuals in the coming days and we get the opportunity to publish more such journals regularly.

Date: 14-10-2022

Place: New Delhi

PREFACE

T. C. Nautiyal

*Member Secratery, Wetland Authority of Delhi,
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Wetlands are the world's most unique and productive environments which provide a myriad of services. The ecosystem services provided by the wetlands include groundwater recharge, biodiversity harbor, carbon sequestration, flood control, multiple-use water services, nutrient removal, and pollution abatement. Wetlands are both human-made and natural. Natural wetlands include swamps, peatlands, mangroves, and/or marshes. Delhi has an urban landscape; therefore, the major chunks of the wetlands present within the jurisdiction of Delhi are human-made wetlands viz. tanks, ponds, reservoirs, and lakes. Delhi is a home to 1045 wetlands. These wetlands are vulnerable to rampant encroachment and urbanization, land use changes, pollution from domestic and industrial effluents, dumping of solid waste and other anticipated threats, if any.

Wetland Authority of Delhi was constituted on 23rd April 2019 under the Wetlands (Conservation and Management) Rules, 2017 for the protection, conservation, management, and restoration of the Wetlands of Delhi. Protection of wetlands will not only contribute to betterment in environmental quality but will also make the city resilient to any envisaged water-related hazards. The existing instrumentalist approach was insignificant for protection the Wetlands of Delhi. Hence, an institutional strategy with a mix of citizen engagement is to be adopted for the management of wetlands in Delhi. Wetland Authority of Delhi has uploaded 496 wetlands on the Wetland portal of India. Creating a wetland database will help us in focusing on the comparatively larger wetlands so that their restoration task is considered a priority. Similarly, this will help in identifying the ecologically important wetlands and protecting them further.

Wetland Authority of Delhi has currently an engagement of 112 Wetland Mitras. Community-oriented conservation of wetlands, although being a decentralized approach, this has created awareness among the local stakeholders/ neighbors and community to protect the wetlands. Institutional strategies are being adopted for the management of wetlands. These Wetland Mitras are well-placed to raise awareness and engage the community/ neighbors in an informative and educative manner, creating a ripple effect for disseminating effective information.

Society is always a stakeholder in environmental instability and change. It is an extensive acceptance that a healthy environment is necessary for the nourishment of a healthy economy in the longer term. This requires an appropriate balance of institutional strategies, a statutory framework, and voluntary action for the protection of the wetlands. As Wetland Authority of Delhi, we have committed to the protection, conservation, sustainable management, and restoration of the wetlands.

WAD, GNCTD has been active on various matters pertaining to capacity building in wetland and ecosystem restoration. This journal has been developed from the contributions that Mitras have made in sustenance of the wetlands. I extend by sincere gratitude to all the Mitras who have provided inputs throughout the development of this journal. I hope this journal is helpful and provide awareness to other locals to understand the importance of wetlands and motivates the other citizens to protect these wetlands.

Content

● Wetland Mitras: A Magic Wand Shelja Alawadhi4
● Mitras & Us... Shubhashree Chakraborty6
● Wetlands of Delhi in safe hands of Wetland Mitras Amit Kumar7
● Wetland Mitras: A New Paradigm Parth Arora	...10
● Wetlands of Delhi- Heritage Water Structures Arush Chetarjee	...11
● Wetlands & SDGs Seema Mehrotra	...13
● Delhi's Wetland Mitras Monish Kalra	...14
● Wetlands of Delhi Seema Gupta	...16
● Wetlands: Mysteries & Intricacies Shubham Maurya	...17
● Wetland Mitras: A New Initiative Aditya Singh Maghav	...18
● Wetland Mitra Program Smita	...19
● Wetlands our Responsibility Dr. Shobha Vijender	...22
● There was only Water in the Beginning Shivam Dhiran	...24
● Being A Wetland Mitra Kalyani Raj	...25
● Journey: Wetland Mitra Pradeep Kumar Kaushik	...26
● Jai Bharat, Jai Jal Vayu Gopal Singh	...27
● क्या है वेटलैंड और इसे बचाना क्यों है जरूरी? Gajender Singh Cahaudhary	...29
● वेटलैंड (आद्रभूमि) का प्रबंधन Nawwajis	...30

WETLAND MITRAS: A MAGIC WAND

Shelja Alawadhi

Fellow, Wetland Authority of Delhi, Dept.
of Environment, GNCTD



***"To nurture us, we need to
nurture wetlands"***

There is an often-heard cry that the global water crisis is the major problem of the 21st century. But it is needlessly rhetorical and intimidating. The world will turn out to be dry if we don't manage our water resources in a better way. To nurture us, we need to nurture wetlands.

My journey with wetlands started in January 2022. Being a Fellow under the Department of Environment and a member of the Wetland Authority of Delhi I figured out that the wetlands provide invaluable services which are being ignored in the economic development so far. The vulnerability to the degradation of wetlands has steeply increased. With the wetlands dying, the associated ecosystem services are also in peril.

There are 1045 wetlands that fall under the jurisdiction of GNCTD and UID numbers have been allotted to them. Although these wetlands, cover only a trivial percentage of the land but are lifelines of the urban landscapes. Wetlands are quintessential for supporting biodiversity, mitigating climate change, making cities safe and resilient, water-quality improvement, flood attenuation, aesthetics, recreational opportunities, etc., the list of benefits is long. Delhi's wetlands fall on the Central Asian Flyway, and hence; are critical for supporting the avian biodiversity. With the innumerable benefits that wetlands hold, they are considered essential for achieving SDGs.

Playing an instrumental role in the preservation, protection, conservation, and rejuvenation of the wetlands of Delhi made me realise that community participation is a must for the protection of the infringed wetlands. The Wetland Authority of Delhi was constituted in April 2019 and had 23 Wetland Mitras. Wetland Mitras in layman's language are the volunteers who engaged with the State Wetland Authority on a no-cost basis.

On the current date, we are a family of 112 Wetland Mitras. A 5-Pillar Engagement Plan was developed for the wetland Mitras viz. Conservation, Documentation, Information technology, Monitoring, and Awareness. Various activities are carried out to enable the participation of local stakeholders in wetland conservation. The fascinating part of working with Mitras is that besides bringing a platform where curious and experienced minds meet, the age bar is flexible. We have the youngest Mitras of 12 years of age with us and the eldest of 68 years, but the awakening spirit for protecting the environment is still the same. This journal is dedicated to these hardworking and passionate Mitras.

Wetland Mitras have the potential to originate a Dandi March for the preservation of the wetland ecosystems and influence the engagement of more local stakeholders to be a part of it. The more, the better. They are the torch bearer of creating awareness on the conservation of wetlands.

"We have the youngest Mitras starting from 12 years of age with us and the eldest of 68 years, but the awakening spirit for protecting the environment is still the same"

Wetlands contribute to all of the 17 SDGs, directly or indirectly, therefore synergies can be achieved by contributing to more than one SDG. The wetland is not only a critical natural resource but also, an irreplaceable component for our own survival. The imperative now is to nourish, not fight, nature.



MITRAS AND US...

Shubhashree Chakraborty
Associate Fellow, Wetland Authority of
Delhi, Dept. of Environment, GNCTD

“Wetlands are the future of the planet and the Mitras are the flag-bearers”

As a student of environment, I have grown up learning about Delhi and the various environmental hazards that the city faces. When I joined the Department of Environment, GNCTD as an Associate Fellow under Green Delhi Fellowship Program, this January, I came up with a vision to contribute my bit for the country capital. The first assignment that came my way was to map the 20 prioritized wetlands of Delhi that were in line for notification. It was later when I saw those maps attached to the documents being submitted for approval by the higher authorities did I realize the gravity of the work. It gave me the much needed boost to work harder.

Working as a part of the Wetland Authority of Delhi has been an amazing experience so far. We have worked on several aspects of wetlands from core administrative works to interesting cases and research workshops.

We have to work with some renowned environmentalists in the country and various reputed organizations/ institutes /NGOs and other govt. departments.



One of the most absorbing experiences was that of engaging with the Wetland Mitras. The diversity of age and experiences in the group of 112 Wetland Mitras is unique. It is rare to find so many like-minded people so devoted to a noble cause of maintaining, protecting and conserving the water bodies in Delhi. Mitras have been a source of motivation for us that led to the successful completion of quite a good number of online activities and a few outdoor events. The number of participants over the last few months saw a steady upward graph with many Mitras conducting their own workshops and events at their own capacities. They have further helped us develop a friendly atmosphere for exchange of ideas and thoughts and expand our outreach. It has been a thorough learning experience throughout.

Wetlands are the future of the planet and the Mitras are the flag-bearers. The journal is an acknowledgment of the marvellous contribution of our Wetland Mitras with a hope that we get the opportunity to come up with more such journals in the ensuing days.

WETLANDS OF DELHI IN SAFE HANDS OF WETLAND MITRA

Amit Kumar

Trainee Engineer, Delhi pollution Control Committee, Delhi



"Wetlands act as "kidneys for Landscape"

Delhi is home to more than 1000 water bodies, which includes lakes, ponds, constructed and natural wetlands, but due to various factors like encroachment, solid waste dumping and disposal of untreated water makes huge hurdle in keeping these precious elements alive in the capital of India.

As per Ramsar Convention, wetlands are defined as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres". Interestingly, wetlands in Delhi play several critical functions and are of utmost importance to the city. Their nature and distribution are intricately linked to the geography and the drainage of the landscape. At present, there are 1045 wetlands in the capital of the India.

Indeed, topology of Delhi makes its wetlands an essential component to its citizen. These are actively playing a critical role in biodiversity survival, take part in economic growth, climate mitigation and adaptation.

Wetlands provide water for human consumption and agriculture. Wetlands can play an indigenous role by making the area more resilient towards the changing climate to store quite a decent amount of carbon in the land.

The Ministry of Environment, Forest and Climate Change (MoEFCC) envisaged the concept of "Wetland Mitra" which includes the participation of local stakeholders in wetland conservation and wise use. Indeed, these help to create an outreach vehicle for the government and actively promote awareness on the values of wetlands. Any local citizen or group can register as a Wetland Mitra. In fact, Wetland Mitras have indigenous local knowledge, willingly dedicated and passionate to protect the wetlands. Wetland Authority of Delhi started incorporating wetland Mitras in 2019 and as of today, 112 wetland Mitras have been registered with the Wetland Authority of Delhi.

Wetland Mitras play a crucial role in providing more capacity for conservation, enhancing the sphere of influence and support, micro-level participation, and most importantly strengthening governance. These can be the extended arm of the Wetland Authority of Delhi in preserving and even rejuvenating our essential water bodies.



Moreover, to support Wetland Mitras Wetland Authority of Delhi had organized various online and offline workshops with knowledge partners to make them aware about the water bodies of Delhi. For instance, the Authority also organized field visits to make Wetland Mitras close to nature and make them learn more about wetlands. These small interactions will motivate them to conserve our wetlands. In addition, Wetland Mitras can report events at local level to the authority which otherwise are difficult to handle and in that way authority will appropriate action.

The wetlands of Delhi can be considered a nature-based solution that provides a multitude of services. Actually, Delhi's wetlands are in dire need of conservation and rejuvenation. With handholding from the Wetland Mitra program, the Wetland Authority of Delhi can move one step forward in conserving these ecosystem service providers.



**"A WORLD WITHOUT WETLANDS IS A
WORLD WITHOUT WATER"**



WETLAND MITRA: A NEW PARADIGM



Being an international marine wetland ecologist getting a chance to observe the wetlands of GNCTD through wetland Mitra gave me an insight into how the city is holding such fascinating biodiversity. The orientation and the bird walk events arranged by the authority during such pandemic times not only provided how much diversity the GNCT holds but also the ways and measures to rejuvenate these wetlands.

As a volunteer, I did cleanliness drives and awareness campaigns around the areas of Kamala Nehru ridge but was very happy to see the other volunteers trying to rejuvenate and bring back the deserted wetlands in different areas of the territory. As global citizens and India's commitment to sustainable development goals, the initiative of Wetland Mitra provided us with a voluntary opportunity to learn about diversity and motivated us to come together in building up a city forest approach.

While recently I heard about the Miyawaki forest approach because of my association as a Wetland Mitra, and it made all the volunteers think about the concept in broader terms and its long-term impact and gain. As we all GNCTD residents face a tough time during the months of October to December due to high pollution, the initiative made us contribute our best in supporting and reviving the ecosystem. As a qualified wetland ecologist, I knew that this wetland acts as sponges in absorbing pollution and acts as a carbon sink. I was probably a few early birds to register as wetland Mitra as I wanted to see the diversity of Delhi forests and wetland ecosystem which I believed did not exist much before my engagement.

As we continue to move forward the activities involved and training imparted for example the use of GIS software in analyzing the data observed would be a very proficient step in building those interested volunteers who are not only interested in the subject of wetland conservation but also would help in increasing our rate and approach as an authority in achieving the sustainable development goals.



"I was probably a few early birds to register as wetland Mitra as I wanted to see the diversity of Delhi forests and wetland ecosystem which I believed did not exist much before my engagement"

Parth Arora - Wetland Mitra

WETLANDS OF DELHI- HERITAGE WATER STRUCTURES

Arush Chatterjee
Wetland Mitra



"Water is what drew people together, parched dry throats, gave water to the paddy fields, and inspired kings to build monumental structures around them"

The modern man in his misplaced wisdom and deep-rooted arrogance has tried to conquer space and nature and even look for alternatives to our mother earth! In its quest, the moon was landed upon, the mars were explored. Nature was tampered upon and alternatives explored. But as they say, there is no place like earth. So, what was missing on the sparkling moon and the red mars or the artificial forests created in deserts? There are no prizes for guessing-its water. The elixir of life, as it is called, is the key parameter for man's subsistence. Yet, the new age scientifically advanced, digitally connected world does not realize water's true worth.

Our ancestors who are considered ancient by today's standards were perhaps more aware that its water sprouts civilizations. That is why the Indus valley civilization came up near the river Indus, the Mesopotamians near the rivers Tigris and Euphrates, and the Egyptian Civilization near the river Nile. From the great bath in Mohenjo-Daro to the temple tanks of Hampi to the baolis of Gujarat and Delhi- Indian civilization has revered water. Water is what drew people together, parched dry throats, gave water to the paddy fields, and inspired kings to build monumental structures around them. We see its example in our capital Delhi as well in the form of Agrasen-ki-baoli, Nizamuddin baoli, Gandhak ki baoli, and many such beautiful marvels.

Interestingly and right so, the baolis of Delhi are now considered wetlands. Some of the most famous of these baolis or wetlands are described below:

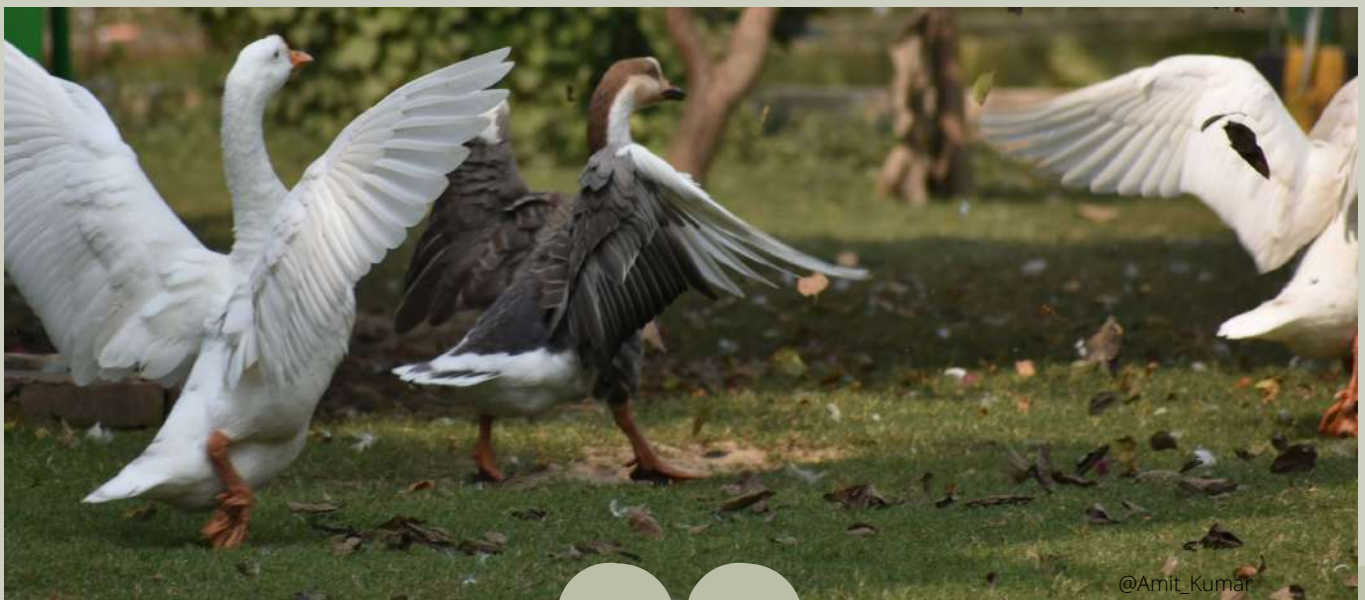
Agrasen ki Baoli: The most famous of all baolis in Delhi, it is tucked away deep inside one of the busiest commercial districts of the city-Connaught Place. Built probably in the 14th century by King Agrasen, this baoli is a three-level stepwell with 108 steps lining its interior. Rooms and niches mark the levels. It is a protected monument and a tourist spot. Made famous by the Amir Khan movie, 'PK', which was shot at this location, this beautiful wetland is a gem of an architectural wonder.

Nizamuddin Baoli: Appropriately called the “Chashma Dilkusha” or the ‘heart uplifting spring’, this charming stepwell is a revered spot by many. Built by the famous saint Nizamuddin Auliya himself, this baoli is located near his dargah in Nizamuddin. Surrounded on three sides by walls and by steps on the fourth leading to a waterbody, the water is supposed to be blessed by the Auliya himself and people believe in its curative powers.

Purana Qila Baoli: Hidden in plain sight in Purana Qila is this small baoli. Built, probably, to provide water to the fort residents, this baoli is neither ornate nor imposing, but just utilitarian. With 89 steps separated by 8 landings, this sandstone structure is 22 mt in depth. With niches lining the walls this baoli is an enchanting water body.

Arab ki Sarai Baoli: The legend goes that Humayun’s queen, Hamida Banu Begum had invited 300 artisans from Persia to build his tomb in the 1560s. They were accommodated in a Sarai(guesthouse) near Humayun’s tomb and this baoli was built to take care of their water requirements. Lost for many years, this L-shaped baoli, has recently been revived and brought to its old glory.

Gandhak ki Baoli: This quaint structure located in Mehrauli reflects the rainwater harvesting technique of the Mughal times. Built by Iltutmish in 1230 AD for the Sufi saint Qutubuddin Bakhtiyar Kaki for bathing purposes, this stepwell is a brick and lime structure and is the largest stepwell in the city. Gandhak translates to sulphur and the baoli gets its name from the source of the water, which was a sulphur spring. This forgotten waterbody stands testament to the royal patronage given to water.



WETLANDS AND SUSTAINABLE DEVELOPMENT GOALS

Seema Mehrotra
Wetland Mitra



"As a wetland Mitra, I want to spread awareness related to the protection and restoration of wetlands among neighbors and the community"

The sustainable use of water and wetlands, by protecting the service they provide is critical in enabling society to achieve sustainable social and economic development, adapt to climate change, and improve social cohesion and economic stability.

Wetlands are the solution to several challenges related to water, food & climate, and keys to meeting the SDGs. Most of the proposed SDGs are relevant in one way or the other to wetlands, but the following are of particular importance:

Goal 2: End hunger, achieve food security of improved nutrition and promote sustainable agriculture. Rice grown in wetland paddies is the staple diet of nearly three billion people across the world.

Goal 6: Ensure availability and sustainable management of water and sanitation for all: Wetlands ensure fresh water, help replenish groundwater aquifers and purify and filter harmful waste from water.

Goal 11: Make cities & human settlements inclusive, safe, resilient, and sustainable cities. Wetlands act as sponges absorbing rainfall, protecting against coastal and river flooding to partially offset the need for man-made infrastructure.

Goal 13: Take urgent action to combat climate change & its impacts Wetlands act as carbon sinks. Peat lands alone store water more than twice as much as all the world's forests.

Goal 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development. Without wetlands, the water cycle, the carbon cycle, and the nutrient cycle would be significantly altered.

Goal 15: Protect, Restore and Promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss. The benefits provided by wetlands, per unit area, have been consistently provided at a magnitude higher than for other ecosystems with the major benefit delivered through improving water security.

Due to the complexities associated with wetlands, wetlands come across as the least governed ecosystems. An audit of the functioning of Wetland Rules (2010) needs to be performed. A reality check in short. There is an overwhelming lack of awareness, of the benefits and services provided by wetlands and a widespread misconception that they are wastelands that can be refilled and converted for other purposes, including their use as garbage dumps. Being a Wetland Mitra, I was not only involved in the Awareness drives conducted by the Wetland Authority of Delhi but also participated in other activities oriented toward protecting the wetland ecosystem.

DELHI WETLAND MITRA

Monish kalra
Wetland Mitra



"Wetland Authority appoint volunteers known as 'Wetland Mitras', and I am one of them"

When I initially heard about wetlands, my only thought was, "What are wetlands?" And after conducting some research online, I learned about wetlands and their significance to both humanity and the environment. There are approximately 1,000 lakes, wetlands, and ponds that may be found in Delhi, but the majority of these are in danger due to unrelenting (both planned and unplanned) encroachment, pollution from the dumping of solid waste and construction waste, and the disposal of untreated sewage and seepage.



Delhi's wetlands must be preserved in order to increase local water supplies and strengthen the city's water resilience in the future. In compliance with the Wetlands (Conservation and Management) Rules, 2017, the Delhi Wetland Authority was constituted in April 2019. They appoint volunteers known as "Wetland Mitras", and I am one of them. We are passionate about protecting wetlands and self-motivated and eager to devote time to supporting and understanding wetlands issues and values. You will find me working as a "Wetland Mitra."

In addition to educating people about wetlands, we serve as a liaison with nearby communities. Our duties would include keeping water bodies clean; obtaining government assistance to trap sewage; and addressing other localized issues, such as encroachment, etc. The authorities arranged bird-watching sessions at Okhla Bird Century and Yamuna Bio Diversity Park to track migratory birds in addition to enhancing the city's environmental quality.



WETLANDS OF DELHI

Seema Gupta
Wetland Mitra



"I would like to thank the Wetland Authority of Delhi that they have arranged some of the activities and training for wetland Mitras"

Working for our green planet, preserving nature, preserving water bodies, and protecting our flora & fauna are in my blood. As I belong to Himachal Pradesh many people considered me a nature's child. I love to work for my nature very much as I found peace and harmony in it. As a photographer, I love to shoot nature the most. My parents used to do agriculture work so I got trained in that and since my childhood, I used to play in the lap of nature. As a wetland Mitra, I love to be a part of the authority. Whenever I get some time I did some of the plantations in the parks with my family and visited some of the wetlands to know more about them

The training provided by Wetland Authority helps me in finding new wetlands in East Delhi. EDMC has preserved the wetland at Keshav Park, CBD ground which can give a well-balanced ecosystem to the environment. This 7.4 acres of the lush green park has 1.38 acres of wetland is maintained, which is a good initiative. I along with my family inspected the location, it has an open gym for adults, a long path for easy walking, a playing area for children, and 4-5 water pools for preserving water. Keshav Park is surrounded by three and five Starhotels, two shopping malls, and some other structures. It is also known by another name Delhi Central Parks.



WETLANDS: MYSTERIES & INTRICACIES

Shubham Maurya
Wetland Mitra



"Take the initiative to deep dive and learn about the wetlands their mysteries and intricacies"

Wetlands are a vital part of our environment because they are home to plants and animals that are not found anywhere else in the world. These landscapes provide food, clean water, and protection for humans, plants, and animals alike. If you want to save the wetlands, you can get involved in conservation efforts, volunteer with wetland protection agencies, and take simple steps at home to protect the environment!

Volunteer to remove litter from your local wetlands. If you have a free weekend, search online or call your local government to find out if any organizations are doing clean-up projects. Offer your assistance if you're available, and help them by removing trash and waste from the wetlands to protect the wildlife and ecosystem. In most cases, organizations will take as many volunteers as they can get, so ask your friends if they would want to volunteer with you for the day.

Precautions Observe park rules when visiting a wetland for fun. When you do visit a wetland to hike or bike, be respectful of the park rules. Place trash in the proper receptacles, and refrain from damaging or changing the ecosystem in any way.

Never fish or hunt in a wetland area unless you are permitted to do so. This includes never removing plants, flowers, animals, or other parts of the ecosystem, like rocks, water, or sand, from the park. Reduce, Reuse, and Recycle your waste and trash. Protecting the environment helps protect the wetlands, especially since trash can make its way into the water. The best and easiest way to protect the environment is by limiting your household waste. Report illegal filling, clearing, or dumping activity if you see it occurring. Wetlands are protected areas, so if you see someone dumping waste, cutting down plants and trees, or pouring dirt into a wetland, call your state's environmental protection organization. If you're in a state park, contact a park ranger and they will be able to handle the problem. Stay safe! Don't approach anyone you see dumping, and don't let them know you saw them. You don't know how that person might react when confronted, so let law enforcement take care of it. Wetlands are fascinating worlds that open doorways to some interesting natural activity. Take the initiative to deep dive and learn about the wetlands their mysteries and intricacies. While there are several avenues for learning, there are also avenues for teaching, educating and spreading awareness.

WETLAND MITRA- A NEW INITIATIVE

Aditya Singh Maghav
Wetland Mitra

"The ultimate responsibility to take care of nature should be well understood and supported by all groups of society; children, youth, and adults to realize the tangible benefits of proper implementation of initiatives"

Wetlands! We often find it easy to quote many benefits of wetlands that are commonly known. But when it comes to taking care of it or nurturing it, we are not even half the required effort it demands. Many individuals born in the late 90s do carry some depleting memories about wetlands in their neighbourhood vicinity and somewhere miss the bliss of nature that was surreal and easily tangible. Climate change due to human activities made huge damage already and growing environmental disruption. As a matter of fact, the question arises that who will take the responsibility to redo things for nature to rejuvenate? And the answer is nature itself will do the healing but need the conscious effort of humankind.

The Wetland program not only contributes to Sustainable Development Goals 13, 14 & 15 but also brings bright hopes due to the commitment of the Delhi Government, local authorities, experts, environmental enthusiasts, and local volunteers (The Wetland Mitras).



The continuous efforts made towards the preservation and conservation of wetlands through various initiatives such as awareness campaigns, site surveys and reporting to concerned authorities, grievances, building the capacity, etc.

The connection with nature, environment, and biodiversity has been there since my childhood. Perhaps because the school premises were surrounded by the green cover and tiny ponds. It can be called as the greenest school in Delhi (KV Delhi Cantt). We witnessed a variety of bird species and amphibians during monsoon and other seasons throughout the year.

There were several wetlands in West Delhi. But due to mismanagement and ignorance, most of them are gone. The Mayapuri lake, West Delhi was one of the prominent huge wetlands in my neighbourhood. But due to construction, landfill, and blockage in catchment areas made it a soul-less piece of land. I wish the Mayapuri lake will be revived by the Wetland initiative and the next generations will also witness its surreal existence.

WETLAND MITRA PROGRAM

Smita
Wetland Mitra

"A radical feeling for the protection of the Wetland along with its ecosystem most effectively and naturally"

Wetland Mitra is a dynamic concept initiated by the Government of Delhi. In exercise of the powers of the Wetlands (Conservation & Management) Rules 2017 notified by the Ministry of Environment and Forest and Climate Change, Govt. of India 26th September 2017, the Lt. Governor of Delhi constituted Wetlands Authority for the conservation and management of wetland for the Union Territory of Delhi.

What are Wetland and why it's important? Wetlands can be defined as transitional lands between terrestrial and aquatic ecosystems where the water table is usually at or near the surface or the land is covered by shallow water (Mitsch & Gosselink 1986). The value of the world's wetlands is increasingly receiving due attention as they contribute to a healthy environment in many ways. They are the most helpful of the morphological feature, which is transitionally both part of land and water. These retain water for longer periods and take care of the lacustrine ecosystem. Because of this property, they can regulate the natural flood to an extent and control the disastrous event.

Wetlands in India Wetlands in India occupy 58.2 million hectares, including areas under wet paddy cultivation (Directory of Indian Wetlands).



The majority of the inland wetlands are directly or indirectly dependent on major rivers like Ganga, Brahmaputra, Narmada, Godavari, Krishna, Kaveri, and Tapti. Natural wetlands in India consist of the high-altitude Himalayan lakes, followed by wetlands situated in the flood plains of the major river systems, saline and temporary wetlands of the arid and semi-arid regions, coastal wetlands such as lagoons, backwaters, and estuaries; mangrove swamps; coral reefs and marine wetlands, and so on. Apart we do have the coastal wetland along with the national frontier with the ocean world.

Policy Approach to wetlands we do have a policy for the conservation of forests and the environment but still the pragmatic approach needed for wetlands is futuristic. Many wetlands are threatened by reclamation and degradation through drainage and landfill, pollution (discharge of domestic and industrial effluents, disposal of solid wastes), hydrological alteration (water withdrawal and changes in inflow and outflow), over-exploitation of their natural resources resulting in loss of biodiversity and disruption in ecosystem services provided by wetlands. The most recent in terms of formulation of the wetland policy is carried extensively under,



@Arsh_Marwaha

According to Wetlands (Conservation and Management) Rules, 2017, "wetland means 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, but 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."

Being a Wetland Mitra: The prime objective of the Wetland Mitra is to make individual efforts for the management, conservation, and sustainability of the wetland bodies which are the natural aquifers. My reasons were to join the platform where I could be part of the dedicated team effort and carry out the execution which is stratified on paper. I find the Government of Delhi has formalized the sense of conservation into the Mitras and the sense of awareness has achieved its epitome in the field of nature conservation.

I have participated in three fruitful events organized by the said authorities. Primarily the first meeting of the Mitras at Sanjay lake, secondly the birds watch at Yamuna Biodiversity Park, and finally the no plastic workshop cum fair at Tyagraj stadium.

Hope the forthcoming events add glory and factuality to the concept of the entire teamwork involved in the conservation of wetlands holistically all over India.



@Arsh_Marwaha



WETLANDS OUR RESPONSIBILITY

Dr. Shobha Vijender
Wetland Mitra



"The community should feel responsible to look after the water bodies to recharge and replenish them"

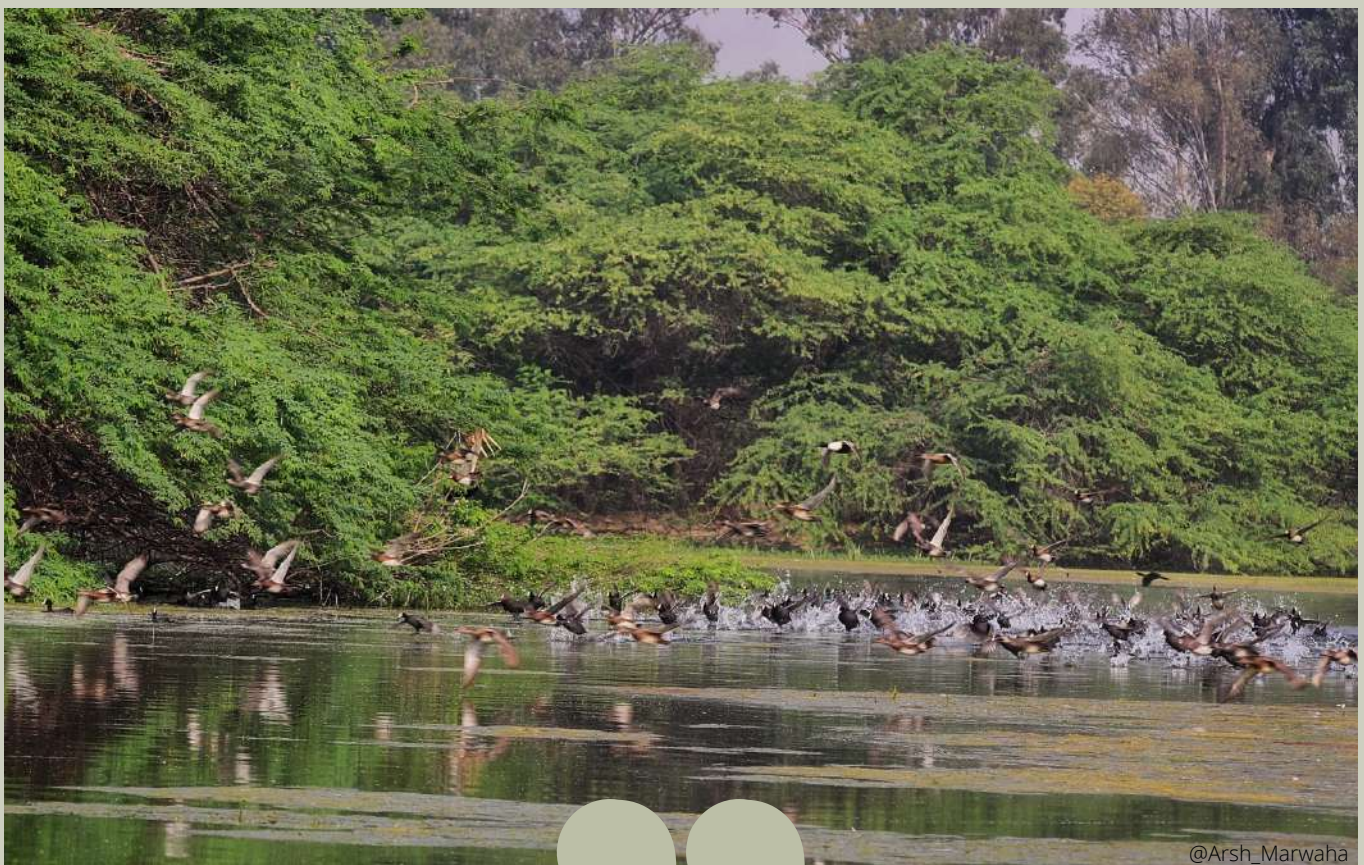
As a Wetland Mitra, I feel proud that I have consciously started to do something about our waterbodies. The gigantic task of protecting the encroached and dumped waterbodies is my mission. I understand that before going ahead to save the waterbodies vis-à-vis the environment, we must be academically sound because it is an issue to which everybody wants to contribute to, but one is not able to do anything unless and until he or she has the knowledge and proper networking.



Wetland Mitra is a concept to involve those people who have the willingness to save the water bodies. Another step after our involvement as Wetland Mitra is the work for the revival of water bodies lying in our localities – which should be assigned to the correct Wetland Mitra as their duty. Here comes the role of community participation. The main cause of the water bodies diminishing to a lesser stretch in the area is because, in the last 100 years or before, the local people were not concerned with the water bodies. Water, which seemed abundant and never-ending as a natural resource was never paid attention to. This self-centered and ignorant attitude of people neglecting the longevity of natural resources of public utility is hazardous. I feel that this time if the local community is not involved by the land-owning agencies, the outcome would be no less than disastrous.

I suggest that local people should be made aware of the consequences that dying and disappearing water bodies will have on the environment. It ought to be the hot issue of every community member and every group. Mass awareness is crucial. Secondly, a body should be formed from the community dedicated to the revival of water bodies.

The community should feel responsible to look after the water bodies to recharge and replenish them. This can ensure a moral value of preserving and protecting our resources and can form deeper bonds with the work being done. Ideally, the women and youth should lead the project as they are catalysts of change. They should be the leaders in the whole universe. Once the community-level work is decided and the waterbodies to be worked upon are divided among the Mitras, the stakeholders should meet regularly to assess the progress and limitations. The Wetland Authority of India should influence government agencies to be flexible, responsive, and inclusive. The local NGOs should be involved, and wetland Mitra should be the focal point. The Wetland Mitra could play the role of a guide, leader, and social activist in getting the work done. Let us join hands.



THERE WAS ONLY WATER IN THE BEGINNING

Shivam Dhiran
Wetland Mitra



***"Thousands have lived without love,
not one without water." — W. H. Auden***

"There was only water in the beginning" the phrase is derived from Brihadarnyaka Upanishad, which advocates that water was the source of all living things. We have often heard of different sources of water like oceans, seas, rivers, glaciers, etc., but we have one more crucial partner, which probably has been unknown to us, despite being around it more frequently than others, these are Wetlands.

A convention was held in the city of Ramsar, Iran in 1971 and came into force in 1975. It is an international treaty for the conservation and sustainable use of wetlands. It completed its 50th-anniversary last year. Ramsar convention on wetlands defines wetlands as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters". One such wetland is the horseshoe lake of Bhalsawa.

Bhalsawa Lake in the Jahangirpuri town of North Delhi has undergone various phases from being a prosperous wetland ecosystem near Yamuna River to a dumpsite. I got the precious opportunity to become a Wetland Mitra in the Wetland Authority of Delhi. Every activity in the group was a means to fulfill our greatest responsibility to Mother Nature.



I chose Bhalsawa Lake as a wetland to focus upon. A task was assigned to get the details about the wetland for which a visit was made from my side to Bhalsawa Lake and the surrounding areas. I participated in a bird walk at Yamuna Biodiversity Park organized by the authority where I got to know about many new aspects of wetlands and their importance. Like this many activities were organized to aware of the topic. Just as forests are called the lungs of the earth, wetlands are the kidneys that regulate water flow in a region and purify it, but its functionality has been put on a halt and once the saviors of villages and towns are now fighting for their survival.

BEING A WETLAND MITRA

Kalyani Raj
Wetland Mitra



I realized that working on an individual basis for a good cause does have good results but working with the government badge adds a lot more value and strength to the cause

Being an environmentally conscious person and doing bits on my own for the conservation and protection of biodiversity, I was quite happy to respond to the call for being a Wetland Mitra, although I had no clue of what it entails. The initiation meeting was quite informative and detailed the work involved. I realized that working on an individual basis for a good cause does have a good result but working with the government badge adds a lot more value and strength to the cause. The aspect which enthused me more was that the role of Mitra was expected to be versatile and multi-level and not restricted to just protecting water bodies.



Encouraged by the tasks suggested during the training session, through the All India Women's Conference, I took up a plantation program with the help of BNHS in Asola Wildlife sanctuary and involved a group of college students. When we initially started the project, we thought we would be engaged in plantation exercise or supporting afforestation. But there was a lot more than that. We learnt how BMNH is uprooting invasive plants like Baboon, lantana and desi khar in the most disruptive way, developing butterflies attracting plants and other restoration and rewilding work in the Aravali forest area. It was a great learning opportunity for me to know about the different varieties of plants, their usage, values, and biology of the plant. We also made seed balls, went bird watching, and visited the water bodies in the Aravali range.

The first assignment I took up as a Mitra was a survey of the wetland, Smritivan Park in Vasant Kunj, Delhi along with another Mitra. I might have passed through the park several times in the past but had never bothered to go in and look at the park and the wetland with an analytic eye. The survey was a real eye-opener for me. The survey form developed by the authorities is quite extensive and useful and that helped us assess the wetland from different aspects. We noticed many things which we would have otherwise ignored. The primary source of water in the lake is rainwater but sewage water from a nearby housing complex was also flowing into the lake thereby polluting the water. The lake could be attracting lot more birds than currently being visited. We also learned from the local residents that a number of wells earlier existing within the park have dried up. There is, however, the scope for recharging them. We identified the surrounding biodiversity and could also come up with a few suggestions for improvement of the water body.

Being a Wetland Mitra has so far been a great learning experience although I have not been able to do much. The interaction among the Mitras is also quite informative and I sincerely wish to be part of some meaningful project through the Wetland authority in the future.



JOURNEY: WETLAND MITRA

Pradeep Kumar Kaushik
Wetland Mitra



"The wetlands before appointments of Wetland Mitra were orphan like a baby without his/her parents"

@Arpit_gupta



Becoming a Wetland Mitra is not a thing of honor only but rather a thing of responsibility. The wetlands before the appointments of Wetland Mitra were orphans like a baby without his/her parents. Now, somebody can keep a vigil on the Wetland area so that unscrupulous people could not misuse it. It should be understood that a Wetland Mitra is having some authority in him, though may be an indirect one through the state govt. With that authority, the Wetland Mitra could play a pivotal role in the protection, conservation and sustainable management of the Wetlands of GNCTD.

But a Wetland Mitra should not lose sight of the fact that without his own wholehearted involvement in playing his role as a Wetland Mitra, the object and purpose of this drive could not be fulfilled.

If we see any Wetland in our vicinity, we could find some aspects of concerns that are hampering the growth of that Wetland and the activities of human beings, one way or the other are directly & primarily responsible in deplorable plight of that particular Wetland. Here, after noticing the same, the role of Wetland Mitra starts. It is without gainsaying to say that recruiting Wetland Mitra's is quite an innovative idea and it shows a real and sincere concern of the state govt. to save our deteriorating environment and depleting wetlands. The days are not so far when the GNCTD will become one of the place of highest concentration of well protected, conserved and highly sustained Wetlands in India.

JAL BHARAT, JAI JAL VAYU

Gopal Sing
Wetland Mitra



"We forget that the life cycle and water cycle are one - Jacques Yves Cousteau"



As we the Wetland Mitra or citizens of India, may think about our climate due to global warming wherein survival of the life of humans, wild & various type of plants and trees, etc. has become cumbersome. In this context, first of all, we may focus on JAL means water which is our lifeline and everyone has the right to access pure water secondly Vayu means air is the second lifeline of every creature. These two are very essential precious gifts of nature in the purest form to keep lives healthy. Nowadays these two precious resources/gifts of nature are deteriorating due to pollution by humanmade activities. To ensure the availability of drinking water and clean air one has owned the responsibility to prevent the pollution of water and air and it should be started by the individual itself and to encourage the people to best practices for saving each drop of water and maintaining clean environment

I humbly request to all the human beings to think about the conservation of water and to keep the balance of this precious natural resource water and its use judiciously. My feelings are there in the above article & best of my knowledge however may have some mistakes therein inadvertently and therefore request to all to excuse me for the same.

Very Thanks to wetland authority to give a chance to express to my feelings through above article.

WETLAND: PROTECTION, MANAGEMENT, CONSERVATION AND RESTORATION

Mansi Pandey
Wetland Mitra

"A river seems a magic thing. A magic, moving, living part of the very earth itself. — Laura Gilpin"



Wetlands are areas of marsh or peat land with water that is static or flowing, brackish or saline including areas of marine water the depth of which at low tide does not exceed 6m. Waterlogged soil-adapted plant life (hydrophytes), and hydric soils (not enough oxygen) are the chief characteristics of wetlands. Wetlands occupy 18.4% of the country's area of which 70% are under paddy cultivation. Hence the need of protecting wetlands is quite apparent.

Not only do wetlands control flooding, filter waste from the water, improve air quality and also a source of drinking water, and provide a livelihood. By engaging and working with the Wetland Authority of Delhi, I could get to know how wetland biodiversity can provide multifaceted benefits not only environmentally rather socially, economically, and culturally too. Wetlands are an important resource for sustainable tourism and can work wonders in providing livelihoods to the people.



@Arsh_Marwaha

Hence, Wetland Authority has accelerated my enthusiasm to conserve wetlands, has streamlined various procedures which can be adopted to protect the same, and make wetlands of Delhi replenish and become habitat to various aquatic flora and fauna, numerous species of native and migratory birds.



क्या है वेटलैंड और इसे बचाना क्यों है जरूरी?

Gajender Singh Chaudhary
Wetland Mitra



"यही वजह है कि लोक गीत-संगीत, कविताओं और फिल्मी गानों में भी पानी, तालाब, पोखर, नदी इत्यादि का जिक्र बार-बार किया जाता रहा है।"

देश का 4.63 प्रतिशत भूभाग वेटलैंड यानी नमभूमि के अंतर्गत आता है। नमभूमि या वेटलैंड का मतलब उस स्थान से है जहां पूरे वर्ष या किसी विशेष मौसम में पानी मौजूद रहता है। इससे जमीन के पानी की जरूरत पूरी होती है। पिछले चार दशक में देश के करीब एक तिहाई जैव-विविधता से भरे वेटलैंड्स खत्म हो गए। तेजी से होता शहरीकरण, खेती के बढ़ते रकबे और प्रदूषण को इसका जिम्मेदार माना जाता है। जंगल को धरती का फेफड़ा कहा जाता है क्योंकि यही जंगल वातावरण में फैले कार्बन डाइऑक्साइड को ग्रहण कर ऑक्सीजन का उत्सर्जन करते हैं। इस आधार पर कहें तो वेटलैंड्स धरती के लिए गुर्दे का काम करते हैं। इनका एक काम होता है गंदे पानी को स्वच्छ पानी में तब्दील करना।

वेटलैंड्स का अगर हिन्दी में अनुवाद करने की कोशिश की जाए तो इसके लिए कोई एक शब्द पर्याप्त नहीं होगा। वैसे वेटलैंड्स का तात्पर्य नमी वाले उन क्षेत्र या भूभाग से है जहां पूरे वर्ष या कुछ खास महीनों में पानी भरा रहता है। हमारे आसपास इन वेटलैंड्स को छोटे-बड़े तालाब, पोखर, झील और नदियों की शक्ल में देखा जा सकता है।



वेटलैंड्स हमारे उपयोग लायक पानी का एक बड़ा स्रोत होने के साथ-साथ बाढ़ से बचने में भी मानव-समाज की सहायता करते हैं। इंसानी दुनिया के बने रहने में योगदान के साथ ये जलीय जीवन का आधार हैं। जैव-विविधता को समृद्ध करते हैं। प्रकृति की खूबसूरती को उभारने वाले वेटलैंड्स का इंसानी सभ्यता और संस्कृति को समृद्ध करने में बड़ा योगदान रहा है। यही वजह है कि लोक गीत-संगीत, कविताओं और फिल्मी गानों में भी पानी, तालाब, पोखर, नदी इत्यादि का जिक्र बार-बार किया जाता रहा है।

वेटलैंड (आद्रभूमि) का प्रबंधन

Nawajis
Wetland Mitra



"कुल मिलाकर सभी कथनों पर गर हम विचार करें जैसे मनुष्य जीवन हमारे लिए अहम् है वैसे ही जलिये एवं स्थलीय जैव विविधता भी संसार में हमारे लिए बहुत बहुत अहम् है जो समय समय पर मौस्य को जीवित रखने में अपनी भूमिका निभाते आये हैं। अब हमारी भी ज़िम्मेदारी बनती है कि हम वेटलैंड (आद्रभूमि) का संरक्षण करें, एक उच्च कोटी सत्तर पर वेटलैंड का प्रबंधन स्तापित करें, बातचीत के माध्यम इ लोगों को जागरूक करें।"

समय के साथ साथ जब पृथ्वी ने अपना स्वरूप लिया तब सबसे पहले पृथ्वी पर एक कोशिकीय मानव, अन्य बहु-कोशिकाएं जीवों का उत्थान हुआ इस प्रकार धरती पर सिर्फ हमारा ही अधिकार नहीं है बल्कि विभिन्न हरित क्षेत्रों में विद्यमान करोड़ों प्रजातियों का उत्थान ही अधिकार है जितना की हम मनुष्यों का है। जैसे की हम नदियों झीलों, पहाड़ों में मिलने वाले विभिन्न पादपों एवं जीवों को देखकर हम रोमांचित होते हैं। वह हमारे वेटलैंड की नीव आते हैं। जलिये एवं स्थलीय जैव-विविधता का मिलान एक ऐसा स्वरूप है जिससे वेटलैंड की प्रबलता को अहमियत मिलती है "वेटलैंड" एक सम्पूर्ण पञ्च-स्थितिकीय तंत्र है जिसमें जाएव-विविधता का होना महत्वपूर्ण है।

सम्पूर्ण पारिस्थितिकीय तंत्र वेटलैंड को समृद्धि देती है जिसमें जलीय जीव, स्थलीय जैव की अहम् भूमिका है।

वेटलैंड आद्रभूमि संरक्षण: जैसा की हमने ऊपर कथनों में जाना वेटलैंड (आद्रभूमि) सम्पूर्ण पारिस्थितिकीय जिसमें जलिये एवं स्थलीय जैव के बारे में हमने जाना। वेटलैंड की सबसे पहले सुरक्षा हम गतमिण क्षेत्रों कर सकते हैं क्योंकि गतमिण ही है जो हमारी आद्रभूमि की पृष्ठभूमि है। गतमिण क्षेत्रों में कृषकों के साथ-साथ यहाँ के शिकिष्ट लोगों द्वारा अपनी अहम् भूमिका निभाई जानी चाहिए। वेटलैंड संरक्षण के लिए लोगन को आधुनिक जनसंचार जैसे मोबाइल फ़ोन, सोशल मीडिया, मैसेज, टीवी, नुक्कड़ नाटक, पोस्टर जैसे अन्य साधनों से जागरूकता करनी चाहिए। जैसे जैसे मानव क्रियाओं का विकास हो रहा है वैसे वैसे लोग आद्रभूमि का महत्त्व भूलते जा रहे हैं अभी ही हमारे पास एक समाया है। हमें हमारी ने बलि पीढ़ियों को सवख एवं हरित वहावरण के लिए वेटलैंड (आद्रभूमि) का संरक्षण करना होगा।

वेटलैंड (आद्रभूमि) का प्रबंधन

हमने अभी तक जाना वेटलैंड क्या है? वेटलैंड को संरक्षण कैसे प्रदान करें? अब बात करते हैं वेटलैंड को संरक्षित रखने के लिए इसका प्रबंध कैसे करें, सबसे पहले सभी लोगों को जागरूक करने के लिए वेटलैंड द्वारा ग्रामसभा नगर परिषद्, नगर पालिका, विधान सभा, जिला स्तर पर वेटलैंड मित्र प्रबंधन कमिटी तैयार करनी चाहिए जिसमें स्वैच्छिक, स्वयंसेवक, गैर सरकारी संस्था, विद्यालय छात्र और अन्य सभी वर्गों को जोरद कर वेटलैंड संरक्षण की एक "मानव चैन" तैयार करनी चाहिए। सप्ताह या महीने में अवकाश के समय वेटलैंड मित्रों को लोगों तक आद्रभूमि संरक्षण के लिए जागरूक करना चाहिए। इस प्रकार यह आद्रभूमि के विकास के लिए अहम् पहल हो सकती है जिससे हम समय समय पर वेटलैंड मित्रों को जोरद कर एक आया आयाम दे सकते हैं।





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