GuruJal

COLLABORATIVE . COMMITTED . CONSCIOUS

Water Management Initiative by

DISTRICT ADMINISTRATION GURUGRAM

Supported by

Hero we care

A Hero MotoCorp CSR INITIATIVE

INFORMATION BROCHURE

An integrated water management initiative

COLLABORATIVE ● COMMITTED ● CONCIOUS

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ACKNOWLEDGEMENTS

Water is called the elixir of life for a reason. A lot of agrarian problems in our economy revolve around water. For the last few years we have been trying to focus on water-related issues in rural India. From the last one year GuruJal start working in the water sector. The work included digging/cleaning/making of ponds and making people water conscious through behavioural change programs, while also

initiating work on Biodiversity management.

While presenting the Standard Operating Procedure for Pond Restoration and Rejuvenation, we wish to share the learnings and guidance that we have received from numerous sources and from the entire team for the larger effort of water conservation. This report manifests the actions and results of the

team GuruJal.

I am thankful to the members and the advisors of GuruJal board for their guidance and support. I sincerely extend my wholehearted thanks to Gurugram District Administration; Hero MotoCorp and all the funders and partner NGOs of GuruJal to make our program successful.

Last but not the least I welcome feedbacks/suggestions for further improvement in our earnest endeavour to serve, and be able to serve, better.

Ms. Shubhi Kesarwani,

Program Manager, GuruJal

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INTRODUCTION

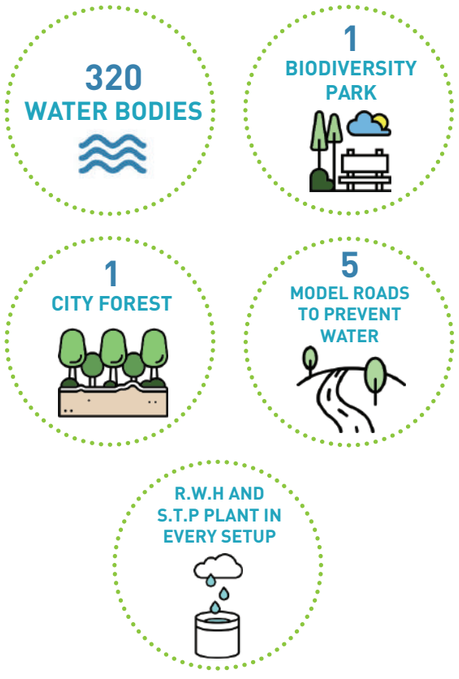
Gurugram is one of the fastest growing urban areas in India, the pace at which it is growing causes lot of degradation to its natural resources. Increase in population caused rapid urbanisation and industrialisation in the existing infrastructure and on natural resource. One of the major natural resource which degrade rapidly is it surface water source and the ground water resource. There is no perennial river flowing in the district, to meet the water demand it is depending on Yamuna Canal and ground water. In addition to this green cover of Gurugram is also decreasing day by day. As the paved area increases ground water recharge potential is decreased.

Haryana has been identified as one of the most water stressed States of the Nation. Currently, 19 out of 22 districts are declared to be in 'Dark Zone' of the country. This is primarily due to the fact that Haryana historically has been agricultural state, currently with 78.8% of the land being used for farming, and thus generating most of its revenue from agricultural produce.

In the District of Gurugram, the rate of extraction of groundwater exceeds the recharge rate by 308% (CGWB, 2009). The average depth at which ground water level is found to be at 40 meters below ground level, and yet the unabated and unabashed extraction of ground water and accompanied with the continuous release of wastewater in open streams continues.

While several institutionalized mandates and regulations have been launched, there have been several gaps that did not allow proper implementation of these mandates. Moreover, these initiatives also suffer from the lack of technological innovations.

Thus, GuruJal Society was formulated by the District Administration Gurugram in May 2019; supported by the Raman Kant Munjal Foundation (CSR initiative of Hero Moto Corp) to ensure better water management in the district.



DEPARTMENT COORDINATION

GururJal Society works with various departments in order to achieve a common goal. Some such departments are -

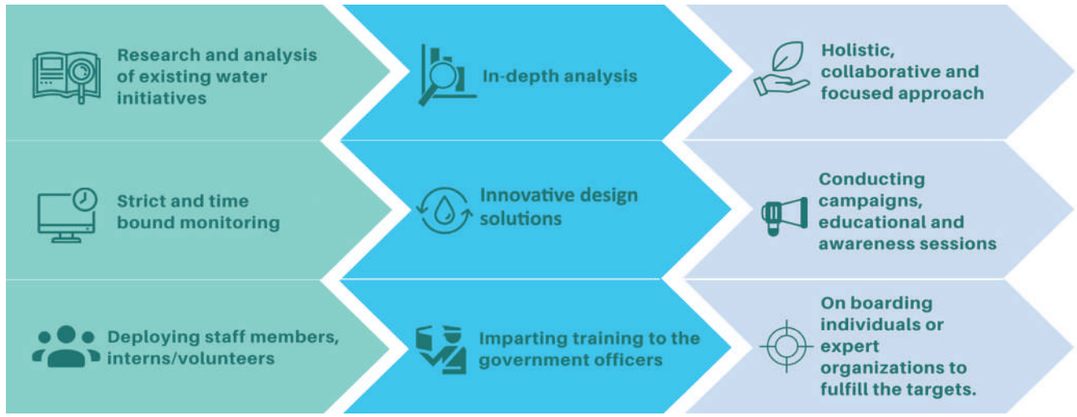
1. Agriculture Department
2. IWMP, Department of Land Resources
3. Hydrology and Soil Health
4. Horticulture Department
5. Development and Panchayat
6. Revenue and Disaster Management
7. Municipal Corporation, Gurugram (MCG)
8. Gurugram Metropolitan Development Authority (GMDA)
9. Haryana Shahari Vikas Pradhikaran (HSVP)
10. Public Health Engineering Department (PHED)
11. Irrigation Department
12. Pond and Wastewater Authority
13. Forest Department
14. District Rural Development Agency (DRDA)
15. Haryana State Industrial and Infrastructure Development Corporation (HSIIDC)
16. District Town Planner (DTP)
17. Sports Department
18. National Highway Authority of India (NHAI)
19. CEO Zila Parishad (DRDA)
20. Command Area Development Authority, Haryana (CADA)
21. Fisheries Department
22. Biodiversity Management Committee (BMC)
23. Haryana State Pollution Control Board (HSPCB)

AIMS AND OBJECTIVES

The aims and objectives of the society with respect to water-related issues are to research, analyze, avoid duplicity of efforts, centralize efforts, include stakeholders who design solutions that affect water, improve implementation of water management by following a holistic collaborative-focused approach enabling inter and intra department support, monitoring of water conservation scheme compliance, make Gurugram a water conscious district, conduct campaigns and educational awareness sessions on water scarcity and restoration, conduct water-related tests, and onboarding individuals and expert organizations to fulfill the targets.

The problem areas have been identified to be different independent understanding and priorities of departments/agencies, lack of collaboration & support, ineffective citizen engagement and limited sight into the roots, as well as the urgency of issues.

Keeping the gaps and urgency of the issue in mind, GuruJal was envisioned with the objective of "addressing the problems of ground water depletion, water scarcity, flooding and hence water mis-management in Gurugram District of Haryana".



VISION

GuruJal's vision is to encourage social responsibility; sustainable development, lifestyle, and consumerism; protection of environment; inspiring and implementing solutions to the environmental crisis that Gurugram is facing. Our values distinguish us and guide our actions.

MISSION

To collaborate with 18 + government departments to ensure water conservation and efficient water management in Gurugram, work committedly and make citizens water conscious and mobilize them towards sustainability.

OUR INTERVENTIONS

1. WATER PROOFING
2. BIODIVERSITY MANAGEMENT
3. SUPPORT A POND
4. CONNECT THE DROPS

01

WATER PROOFING

FIX THE LEAK WEEK

GuruJal is trying to bring about a change is by installing Rainwater Harvesting Systems in all government buildings of Gurugram district including schools in remote areas and conserving rainwater harvesting systems to recharge wells. To do the same, we have collaborated with Dr. Kiran Bedi's Navjyoti India Foundation, which is conducting workshops for school children to sensitize them towards the need to save water.

Total no of urinals retrofitted = **47**
Potential to save water = **7040 KL /year**

Fixing Leaks in Govt. Buildings = **20**
Potential to save water = **150 KLD**

Total No. of Aerators installed = **8650**
Potential to save water = **250 KLD**

Resolved water related complaints = **500+**
Potential to save water = **350 KLD**

Providing design consulting to citizens = **20+**
Potential to save water = **891 KLD**

Total No. of R.W.H's = 640

Potential to recharge water = 1448 million litres

Water enough for 16,053 people/year

MCG R.W.H's **413**	MC Sohna R.W.H's **76**	MC Pataudi R.W.H's **13**
MC Farukhnagar R.W.H's **8**	MC Hailey Mandi R.W.H's **6**	Rrual R.W.H's **124**

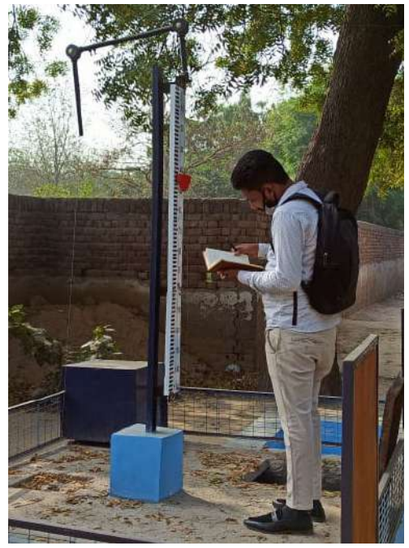
A survey revealed that if R.W.H structures within just the government schools became functional, a ground water recharge potential of 304 ML/year could be achieved through this practice.

Other government buildings have undergone a similar functionality check.

WATER PROOFING DRIVE

Images from left to right:

1. R.W.H. pipe and filter
2. Pipe valve for filteration
3. Desilting chamber
4. Maintenance check
5. Piezometer



02

According to India State of Forest Report (ISFR), Haryana State has a lowest forest cover in India i.e., 3.62% of its total geographical area and Gurugram is Southern district of Haryana with forest cover of 9.24% of its total geographical area. Worldwide Habitat Destruction is the major cause of Biodiversity loss similarly in Gurugram District the major reason behind the decreasing population of wild flora and fauna is the loss of their habitat that is majorly caused by deforestation, Clearing areas for agricultural purposes, overpopulation, mining activities and so on.

Biodiversity Management has currently set a target of restoring 1239 hectares of degraded land by planting saplings of native plantation of degraded area that will increase the current forest cover of the district from 9.24% to 10.24%. It is estimated to produce enough oxygen for 5400 people a year.

PLANTATIONS

MCG Plantations	MC Sohna Plantations	Rural Plantations
62,029	**25,500**	**2904**

AIMS

To increase the forest cover and to maintain the local Biodiversity of the Gurugram district by Intensive Afforestation and by developing pockets of Biodiversity zones in the form of Biodiversity Park and Ecological zones near the pond sites of the district with the help of community participation.

OBJECTIVES

1. To conserve and protect the natural habitat for wild flora and fauna
- To Serve as nature reserve for the conservation of lost natural habitation of the city.
- To Serve as a hub for education, cultural and conservation activities.
- To Preserve Endemic and Endangered Flora and Fauna

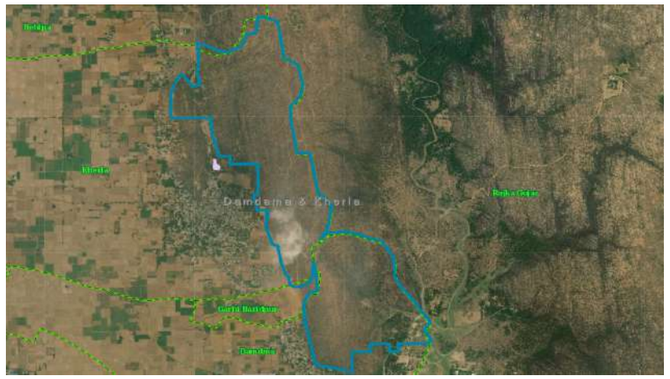
2. To increase the Quality of Local Environment
- To mitigate climate change impact.
- To Buffer local weather and serve as a sink for CO2 and urban pollutants.

3. To promote Eco-Tourism
- To Create livelihoods for local communities
- To create a revenue model for the local villagers.

BIODIVERSITY MANAGEMENT

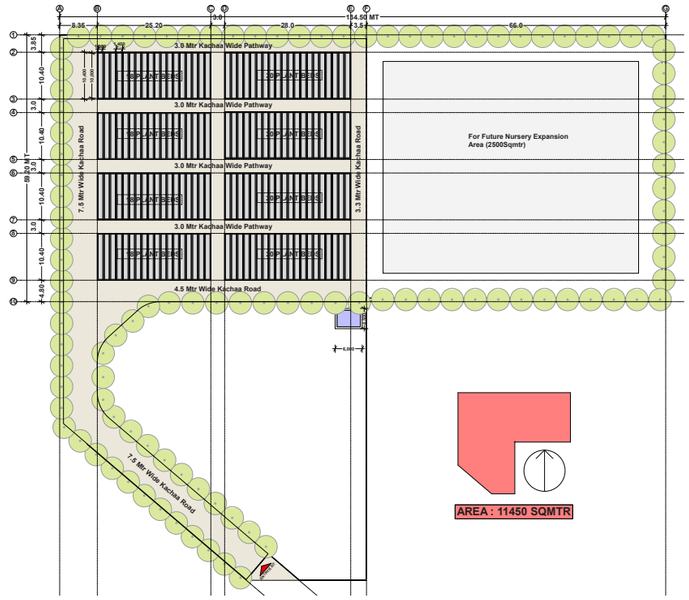
- Development of Damdama and Kherla Biodiversity Park
- Plantation Drives in Urban and Rural area

DAMDAMA & KHERLA BIO-DIVERSITY PARK



Damdama and Kherla villages are located in Sohna block of Gurugram district in Haryana. They are situated about 25 km towards south from district headquarters Gurugram and 10 km from sub-district headquarters Sohna. Total existing population of Damdama and Kherla villages is approximately 4,005 and 5,800 respectively (as per the data provided by Sarpanch of the villages). Damdama and Kherla villages consists almost 420 acres of Aravalli hills area. Aravalli's are the oldest mountain ranges. They used to be an ecologically rich region but have gradually witnessed the depletion in the biodiversity over the years due to encroachment and other human interventions. In order to conserve the ecology of the region, Biodiversity Park has been proposed in the Aravalli area of Damdama and Kherla village.

NURSERY DEVELOPMENT



Area of the nursery - 3 Acres

Location - 28°18'37.21"N, 77°7'32.05"E

Village - Damdama

Khasra number - 22//3, 7//23 and 7//24

METHODOLOGY

- Resolution Collection
- Pre-Study and Exposer Visits
- Nursery Development
- Detailed Project Report
- Demarcation of the Proposed area
- Community Mobilization and IEC activity
- Fencing of the Proposed area
- Earth work- Cleaning, Pruning &Uprooting and Landscaping
- Plantation Drive
- Operation and Maintenance

Production Unit I - 76 Beds

Production Unit II - 76 Beds

Production Unit III - 76 Beds

Production Unit IV - 76 Beds

03

SUPPORT A POND

Support a Pond is the dedicated discipline for undertaking the restoration and rejuvenation of enclosed water bodies in a local community with an understanding between government departments, corporates, communities and individuals, in a systematic and holistic fashion.

TECHNOLOGIES

1. Root Zone Technology
2. DEWATS
3. Moving Bed Bi-Reactor
4. Phytoremediation
5. Bio-Filters with Ozonation
6. Advanced Eco Reactors

For,
Area - 1 acre
Rainfall - 560mm

Amount of water recharged = **8247 Kilo Litres/Year**

Amount of waste water treated = **18,250 Kilo Litres/Year**

Amount of water stored in pond = **18,250 Kilo Litres/Year**

Ongoing Ponds = 88

Potential to recharge water = 2085 million litres

Water enough for 40,620 people/year

Pond Profiling **98**	Panchayati Raj **18**	MCG Ponds **25**	MCF Ponds **11**
MC Sohna **28**	MC Hailey Mandi **2**	MC Farukhnagar **2**	MC Pataudi **2**

POND REJUVINATION AND RESTORATION PROCESS

- Pond Profiling
- Project Feasibility Assessment
- Administrative Approvals
- Detailed Project Report
- Financial Approvals
- Community Mobilization
- Cleaning and Levelling
- WWTP
- Landscaping and Beautification
- Operation and Maintenance
- Monitoring and Evaluation

04

Through connect the drops intervention, our aim is to mobilize the community, spread awareness by doing focussed workshops, giving people the right content, information, tool and supporting them to adopt more water sensitive approaches in their respective domains.

We envision "Connect the Drops" as a water conservation and awareness campaign, which aims to bring together diverse contributors of the community and Connect them with a single motivation i.e. to protect and preserve Water.

The campaign focuses on the following aspects:

A. Designing well-researched modules having information about rights, duties, processes and compliances related to minimizing water wastage, promoting water conservation and suggesting innovative ways of conservation in the respective domains as an individual and as an organization.

B. Delivering experiential workshops for the following stakeholders; schools, corporates, government offices, panchayats, villagers, RWAs and builders . Sensitizing them about the water crisis and making them conscious about water conservation.

14045 People Reached

160	Focused Workshops
82	Capacity Building and Review Meetings
339	Public Outreach Events
22	Community Mobilisation Events


Community Mobilization Van


Interactive session with Dr. Kiran Bedi


Medawas (Focused Workshop)


Capacity Building Session

01

MOJOBAD,
Pataudi

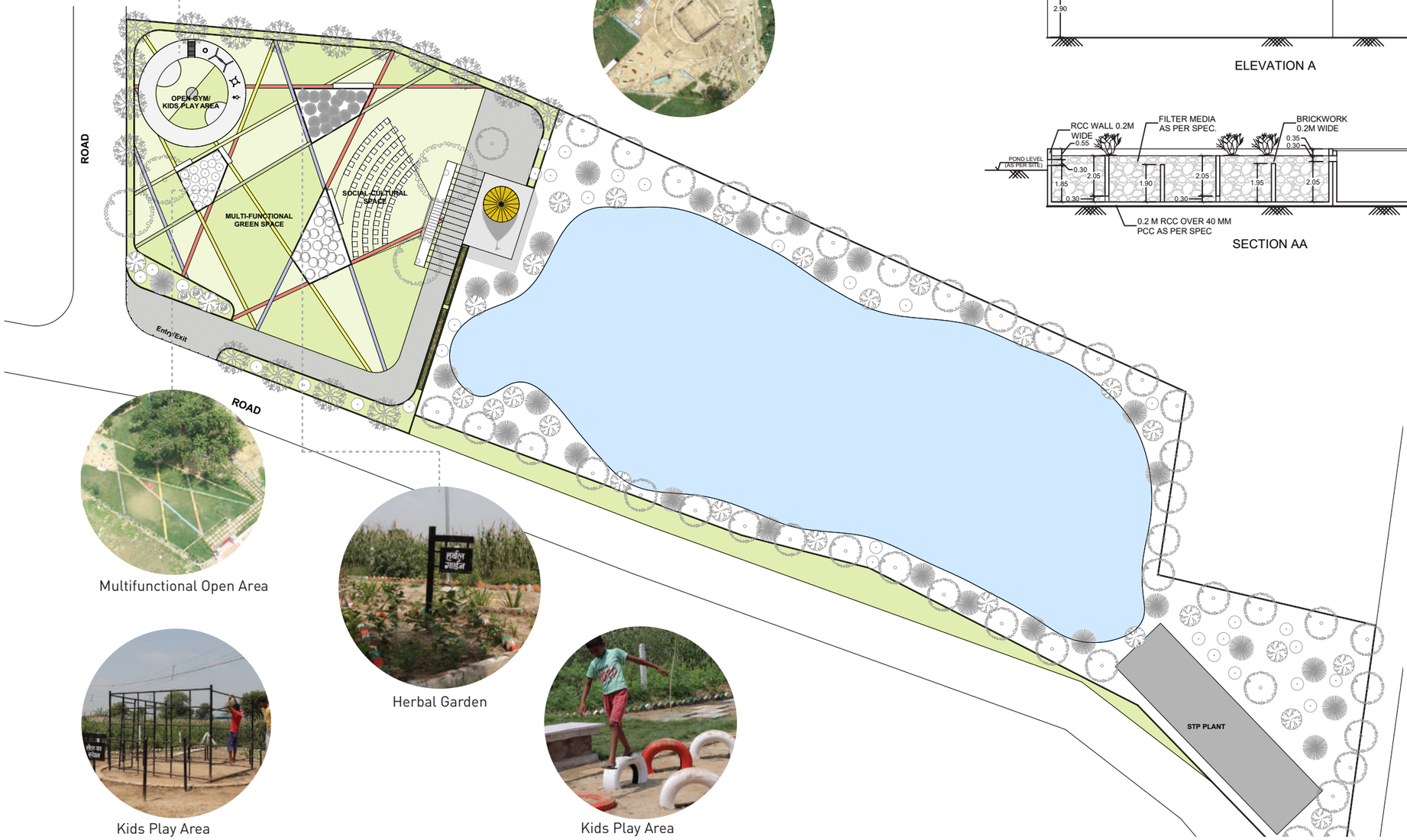
The park is a small communal space located in Mojabad village in Pataudi, Gurugram with an adjacent pond. Rejuvenation of the site started with the idea of providing different kind of spaces and flexible spaces which can be transformed for festival fairs, events etc. The barren ground had a negative effect on the micro-climate as well as adverse effects on the ecology.

The open area is home to a small but sufficient herbal garden, a kid's play area with open gym and seating under the shade of aged trees. A small open kitchen was built on site to cater to the community events and community values that exist. The park is surrounded by bio-swales filled with gravel as natural drains and the site is equipped with solar lights for the night time. The plantation of native flora species like the sacred fig, jetropha and neem trees have resulted in the return of various birds and butterflies and created a naturally cooler micro-climate. Small recharge pits with lilies further the cause of ground water recharge.

A once desolate space has now become the site for social, cultural and developmental growth.

Site Plan

Area: 1.2 acre

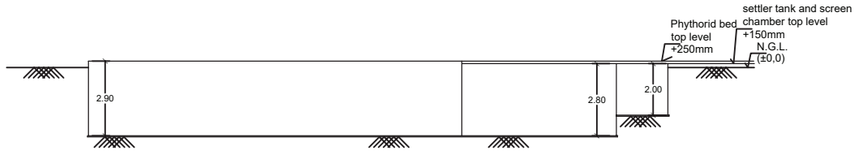


Multifunctional Open Area

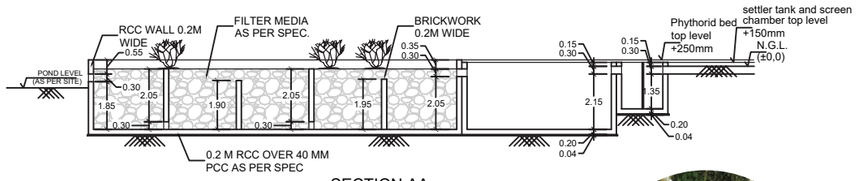
Herbal Garden

Kids Play Area

Kids Play Area



ELEVATION A



SECTION AA

Canna Plants ontop of the WWTP

The 4 chambers of the WWTP

The sewage containminated pond water not only polluted the ground water but also the crops it was irrigating.

The Waste Water Treatment Plant (WWTP) installed on site filters 100,000L of waste water per day. It handles all types of domestic waste water. The WWTP plant has 4 internal chamber that pass water through one another in a sinusodial manner. The chambers are lined with fine, medium and coarse aggregate to filter the water. Canna Plants are grown on top to aid the filteration process.

02

KHENTAWAS,
Fahrukhnagar

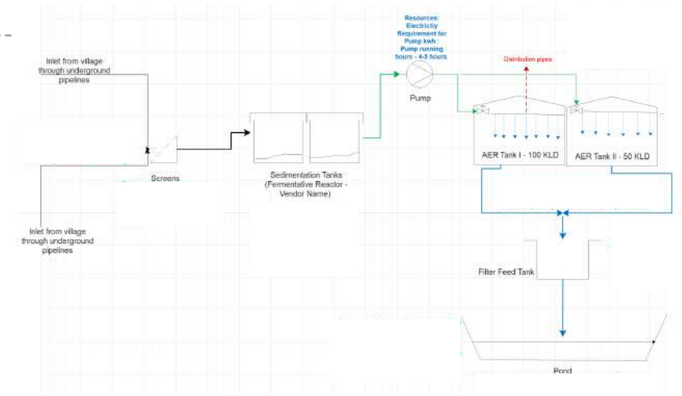
Khentawas is a village in Farukhnagar, Gurugram. This pond was rejuvinated under the Support A Pond vertical of GuruJal. The waste water of the village was being drained into the pond rendering it useless for ground water recharge and community use. In order to rejuvinate the pond to it's maximum potential, the site next to it was developed for the community.

The open area has a kid's play area with swings and some open gym equipment, Kota stone covered seating along with Red Sandstone seating-cum-planters scattered across the site and a gravel path to walk on. The park's boundary is decoarated with recycled glass bottles. The plantation of herbal plants like pathar chatt, tulsi, aloe vera and kadi patta. The site also has plants like neem, marigold, sheesham and gulmohar. The walls were beautifully painted with yoga asanas while the floor has games for the young children of the village.

The site is not scattered with joyus children and various community gatherings. The treatment plant has empowered the fields around to be irrigated with clean water.

Site Plan

Area: 1.5 acre



We have installed WWTP of capacity 150 KLD with advanced ECO Reactor technology. The plant is based on the basic principle of trickling filter, where the wastewater is sprayed over a bed of numerous layers of gravels, bio-filters such as coconut husks that are also initiated with enzymes that treat the water, that provide both physical and biological filtration. Treated water is then disposed into the pond.

03

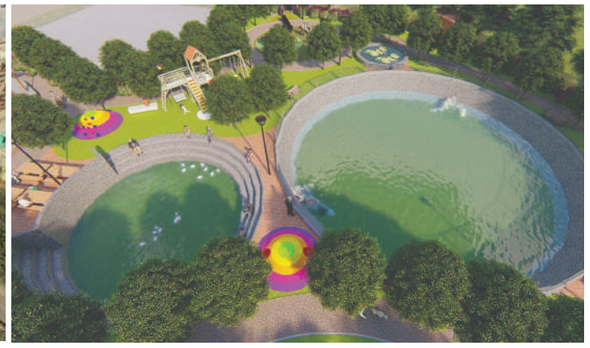
NATHUPUR,
Gurugram

In Nathupur, it was observed that only rainwater and discharge from temple adjacent to the pond finds its way to the pond. Currently, pond is filled by solid waste, construction and demolition waste which is dumped by households located within the vicinity of the pond. Pond is used for parking of vehicles by the nearby households. Currently the pond is filled by solid waste, construction and demolition waste.

Within a course of two decades the pond area has decreased by approximately 0.26 acres, due to the recent construction of a Water Boosting Station within the pond area and also encroachment by the nearby settlement.

Hence, for the restoration and rejuvination of Nathupur, not only does the encroachment need to be removed but the pond needs to be given it's designated area.

Existing condition of the site.



Proposed rejuvination of the site.

Site Plan

Area: 1.3 acre

Pathway

Kid's Play Area

Lotus Pond

Pond #1

Public Area

04

BHONDSI,
Gurugram

In Bhondsi, it was observed that there is a large water body that has been polluted by not only waste water but also plastic, glass and other such garbage. While there is a boundary in place around the site, it doesn't stop the pond from being dirtied and polluted.

Currently, the pond has an incomplete walking path around the pond which gets submerged under the water after a point. While it has two entries, both only allow the user to acces the parts of the pond directly infront of them. A shaded and dense cover of large trees exists but lacks seating for it to be properly utilised by the village.

Hence, for the restoration and rejuvination of Bhondsi, our goal is to connect and create one continuous walking path, built a proper seating area and create an interactive slope for the children. We also aim to create a multi-functional space for people of all ages to interact and co-exist at the same time.

Site Plan
Area: 1.1 acre

Kids play area along the slope

Kids play area along the slope

Stepped seating like amphitheatre with planters

Seating spaces for the elderly surrounded by vegetation

Terraces with different activities like seating, kids play, vegetation

Landmark with Bhondsi at the entrance

Existing pavement with added green spaces and planters

05

CHAUMA,
Gurugram

Proposed rejuvination of the site.

Chauma Pond is located in Chauma near village which falls under the jurisdiction of Municipal Corporation of Gurugram. After visiting the site, it was observed that rainwater is accumulated in the pond and no direct drains are directed into the pond. Plastic and organic waste are dumped near the pond.

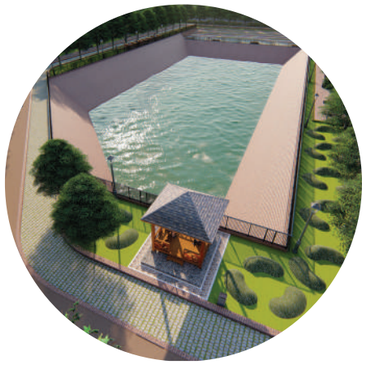
Landscaping and beautification are the last to be executed on the ground under restoration and rejuvenation of pond. Landscaping and beautification are not only planting the flora but is also creating a biodiversity zone around the pond area. Major reason of biodiversity loss in any area is habitat destruction, overexploitation of natural resources like water, climate change, pollution and invasive species. So, to maintain the Biodiversity richness we have to focus on these issues.

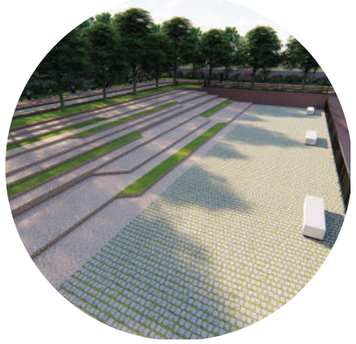
One of the main goals was to connect the life of the village to the growing recreational use of the pond itself and to revive the importance of water and nature from ancient India to the present and future.

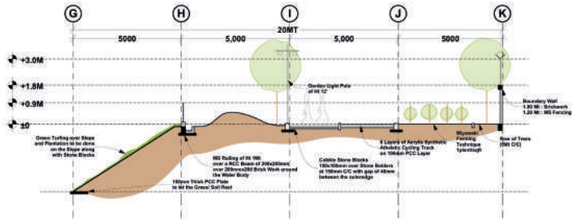
The main purpose of landscaping is to create a joyful environment around the pond and give the residents a healthy atmosphere, good appearance, and natural beauty but also adopting the sustainable measures to use our resources efficiently. The goal also is to maximize the rainwater retention and to reduce the heat island effect further reducing the overall energy consumption. Another important goal of the landscape is to rejuvenate the spaces, or water bodies which were then treated as a dump yard or an unsafe site to transform into socially active public spaces.

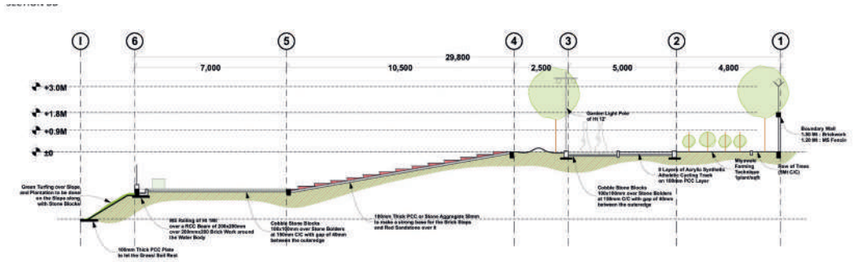
Site Plan

Area: 2 acre









CONCEPTUAL DESIGN LAYOUT

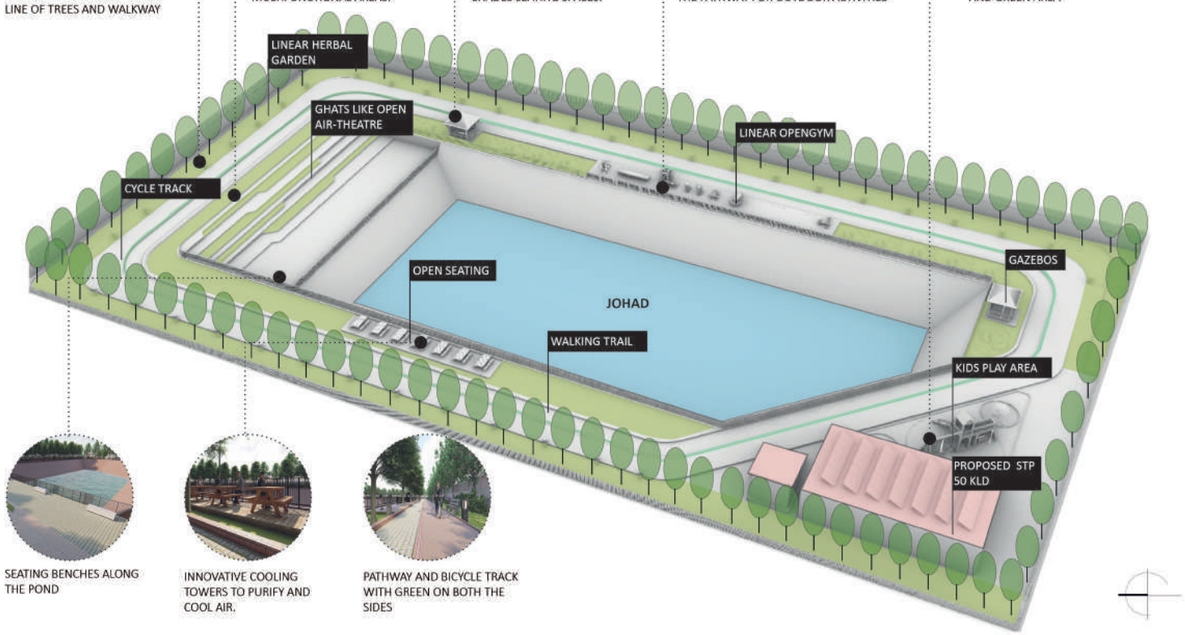
LINEAR HERBAL GARDEN OR MIYAWAKI TECHNIQUE ALONG LINE OF TREES AND WALKWAY

OUTDOOR AMPHITHEATRE LIKE MULTIFUNCTIONAL AREAS.

GAZEBOS LIKE STRUCTURES FOR SHADES SEATING SPACES.

LINEAR OPEN GYM EQUIPMENTS ALONG THE PATHWAY FOR OUTDOOR ACTIVITIES

KIDS PLAY AREA WITH SWINGS AND GREEN AREA



SEATING BENCHES ALONG THE POND

INNOVATIVE COOLING TOWERS TO PURIFY AND COOL AIR.

PATHWAY AND BICYCLE TRACK WITH GREEN ON BOTH THE SIDES

Currently, the village pond of Chauma receives untreated wastewater from the community that surrounds it and also receives runoff generated during rainfall events. However, there can be a provision of diverting the sewage generated by the surrounding residential units around the pond.

The physical state, as also mentioned in the pond profiling, is that the pond is completely eutrophied. This suggests that the pond receives a large amount of nutrients that leads to pollution of the surface water and it also poses a hazard as this has a large potential of polluting the groundwater table. As such, it is imperative that the incoming wastewater to the pond is treated. It is therefore recommended that a 100 KLD Fluidised Aerobic Bioreactor (FAB) is proposed.

06

SUBASHNAGAR, Gurugram

Proposed rejuvination of the site.

Subhash Nagar Pond is located in Old Gurugram area near Guru Dronacharya Engineering College which falls under the jurisdiction of Municipal Corporation of Gurugram. The pond is easily accessible by Old and New railway road, with paved roads leading to a booster station that is built adjacent to the pond area.

After visiting the site, it was observed that the wastewater from the neighbourhood is directly discharged into the pond without any treatment, which is accompanied with dumping of solid waste, construction and demolition of waste takes place in pond. Moreover, cattle wadding is also prevalent within the pond and due to high organic loading, pond weeds have developed within the pond and adjacent to the pond site. The images below show the incoming of wastewater into the pond and also cattle wadding into the pond.

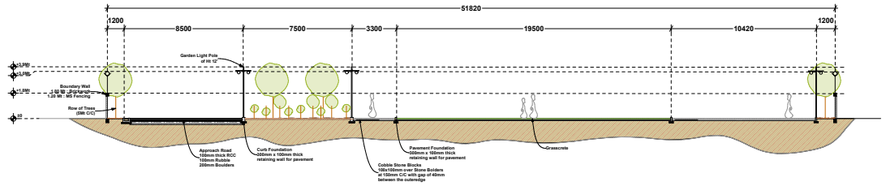
After reviewing the historical images of pond, it is observed that the pond area has decreased by about 3 acres within two decades. The pond periphery has scattered temporary settlements that are currently discharging all of their waste, both solid and liquid into the pond. These temporary settlements need to be removed as it is compromising the space of the pond, and possibly contributing to obstructing the natural flow in the pond. These illegal settlements not only contribute to increasing the organic loading of the wastewater flowing into the pond, and the demand to these settlements remain unmapped, and therefore the accurate estimation of the total generation of wastewater would be compromised.

Site Plan

Area: 5.65 acre

The S.T.P technology used is the Advanced Eco Reactor. First, the influent enters the sedimentation tanks. Biological agents like enzymes are used along with bacteria's that are able to digest the organic content in the incoming influent. The influent then undergoes physical filtration with the finest at top of the filter to the coarsest at the bottom of the filter. The water is then sprayed across the filter material. Prior to the final discharge of the treated effluent to the water body, the water is mixed with chlorine for extended disinfection effect.

Pathway and Seating



Tensile Flexible Structure

Cooling Towers

Aerial View of the Site

IMPACT

The temperature of the air above and near water body is different from the temperature over the land because the water has a different system of cooling and heating. Water bodies are believed to be the best radiation absorbers.

Usually, studies declare that temperatures closed to and downwind from water bodies are getting reduced about 1-2°C in comparison to surrounding areas, with the highest amount of temperature reduction observed through the day. A study showed that the cooling pond effect over the warmest part of a day, have decreased sensible heat flux; since the surface of the lake was somehow cooler than the grass cover of the surrounding park, and the daytime cooling influences were clearly obvious under both sultry and hot-and-dry weather conditions.

Therefore, the position of water body in residential district has less effect on the average temperature and relative humidity, but there is obviously effect on the water around areas, where the air temperature can be degraded 2°C and relative humidity enhanced 5% in 10 meters scope.

Water bodies have also been proven to be influential methods of decreasing urban temperatures. A water body temperature is capable of being lower than the surrounding urban environment around 2-6°C. According to these findings; one may conclude that the rise of evapotranspiration in cities, that has roots in vegetation and water body, can efficiently mitigate the influence of the urban heat island.

GROUND WATER RECHARGE

MOJABAD	KHENTAWAS	NATHUPUR	BHONDSI	CHAUMA	SUBASH NAGAR
Ground Water Recharge - **5772.9 KL/ annum**	Ground Water Recharge - **9071.7 KL/ annum**	Ground Water Recharge - **7999.6 KL/ annum**	Ground Water Recharge - **14,019 KL/ annum**	Ground Water Recharge - **5772.9 KL/ annum**	Ground Water Recharge - **65,976 KL/ annum**

AWARDS & PUBLICATIONS

AWARDS

1. Skoch Award 2019

– Winner

2. UN Water Change Maker's Awards

– Semi Finalist 2020

3. JPal South Asia

– Presenter for Glocal Evaluation Week 2020

4. Abstract selected for Singapore International Water Week – 2021

5. Compendium for Best Water Practices, I am Water Conscious Parameters, Standard Operating Procedure for Pond Restoration and Rejuvenation

– NITI Aayog 2021

6. Environment and Social Development Association – World Environment Sumit

– Winners and Presented 2020

7. Environment and Social Development Association

– Presented in Global Water Congress 2020

PUBLICATIONS

1. Drainage Report with MCG

2. Flood Management Report with MCG

3. RWH Proposals for District of Palwal

4. Restoration and Rejuvenation Proposal for Pond – District of Jhajjar

5. Jal Shakti Museum Proposal submitted

MEDIA COVERAGE

नगर निगम गुरुग्राम एवं गुरुजल का वृक्षारोपण अभियान जोरों पर

अमर भारती संवाददाता
(06-07-2020)

गुरुग्राम। हमारी प्रतिरक्षा सबसे महत्वपूर्ण संपत्ति है और इसके मूल्य के बारे में जागरूक होने का सबसे अ%छा समय है। स्व%छ हवा का होना बहुत महत्वपूर्ण है और इसे और मजबूत करना है और मॉनसून का लाभ उठाने के लिए नगर निगम गुरुग्राम, गुरुजल द्वारा विभिन्न आरडब्ल्यूए और एनजीओ के साथ मिलकर सामुदायिक और स्वामित्व वाली परियोजना बनाने के लिए वृक्षारोपण में भागीदारी कर रहे हैं। वृक्षारोपण अभियान में, 218 आरडब्ल्यूए एवं एनजीओ भाग ले रहे हैं जो जून, जुलाई और अगस्त 2020 में आयोजित किया जा रहा है। वृक्षारोपण अभियान के दौरान सभी संयुक्त रूप से इस मानसून के मौसम में 80000 पौधे लगाने के लिए तैयार हैं। 27 व 28 जून को वृक्षारोपण अभियान के पहले सप्ताह में नगर निगम की नर्सरी से लगभग 22 आरडब्ल्यूए व एनजीओ ने 4000 पौधों का संग्रह किया था और 4 व 5 जुलाई को वृक्षारोपण अभियान के दूसरे सप्ताह में 58 आरडब्ल्यूए व एनजीओ ने 13,000 पौधे प्राप्त किए। गुरुग्राम में नगर निगम की प्रत्येक नर्सरी में 2 नेहरू युवा केंद्र के स्वयंसेवकों को शामिल करके गुरुजल द्वारा एक सुगम समन्वय स्थापित किया गया है। पौधे हमें ऑक्सीजन, आश्रय, फल, लकड़ी आदि प्रदान करते हैं तथा हमारे पर्यावरण को स्व%छ बनाते हैं और एक प्रमुख बात जो विभिन्न अध्ययनों में दिखाई गई है कि पौधों के सुधार में महत्वपूर्ण भूमिका है मानसिक स्वास्थ्य। अध्ययन में पाया गया है।

पंजाब केसरी (गुड़गांव) (28-07-2020)

अभियान के तहत 26 हजार से अधिक पौधों का वितरण

गुड़गांव, 27 जुलाई (ब्यूरो): नगर निगम गुरूग्राम एवं गुरूजल गुरूग्राम द्वारा चलाए जा रहे विशेष पौधारोपण अभियान के 5वें सप्ताह में 19 आरडब्ल्यूए एवं 3 एनजीओ के प्रतिनिधियों ने नगर निगम गुरूग्राम एवं वन विभाग की नर्सरियों से 7048 पौधे प्राप्त किए। इन्हें मिलाकर अब तक 26428 पौधों का वितरण किया जा चुका है। नगर निगम गुरूग्राम की अतिरिक्त आयुक्त-4 जसप्रीत कौर ने बताया कि इस विशेष पौधारोपण अभियान के प्रति गुरूग्राम के नागरिक सकारात्मक प्रतिक्रिया दिखा रहे हैं। गुरूग्राम शहर के आरडब्ल्यूए एवं एनजीओ का एक अच्छा अनुपात इस अभियान में बढ़ चढ़कर भाग ले रहा है।

पौधारोपण करते हुए।

अभियान के तहत अब तक 280 से अधिक आरडब्ल्यूएध्एनजीओ के पंजीकरण प्राप्त हुए हैं, तथा पंजीकरण की प्रक्रिया लगातार जारी है। अब तक लगभग 146 आरडब्ल्यूए, एनजीओ ने नगर निगम गुरूग्राम की चार नर्सरियों से पौधे प्राप्त किए हैं। इनमें संस्कृत अपार्टमैंट, मैप्सको कासा बेला, सैंटर ग्राउंड न्यू कॉलोनी, आरओएफ अलायाज, पैराडाइज ऑनर्स एसोसिएशन, ऑरा रेजिडैंट्स वियर्स एसोसिएशन, एसएस हिबिस्कस अपार्टमैंट ऑनर्स एसोसिएशन, पुनर्वास एवं सशक्तिकरण, हेरिटेज वन कॉन्डोमिनियम्स एसोसिएशन आदि शामिल हैं। अतिरिक्त आयुक्त ने बताया कि इस मानसून के दौरान नगर निगम गुरूग्राम एवं गुरूजल का लक्ष्य एक लाख पौधों का वितरण करना है। अभियान के तहत आरडब्ल्यूए, एनजीओ को पौधे लगाने और इनकी जिम्मेदारी लेने के लिए प्रोत्साहित किया जा रहा है। केवल पौधारोपण करना ही अभियान का उद्देश्य नहीं है, बल्कि उन पौधों की देखभाल के माध्यम से उनको पूर्ण विकसित पेड़ में पोषण करना भी इस अभियान का मुख्य लक्ष्य है। इस प्रकार सभी के संयुक्त प्रयासों से गुरूग्राम को प्रदूषण रहित हरा.भरा शहर बनाने में सफलता मिलेगी।

निगम एवं गुरूजल द्वारा संयुक्त रूप से चलाया जा रहा हैविशेष पौधारोपण अभियान

The biodiversity park is slated to come up on 420 acres of the Aravallis in Damdama and Khe[dla] villages, under the supervision of the GuruJal society.

45 native species t[o] be planted in park

Suparna Roy
suparna.roy@htlive.com

GURUGRAM: Work on developing a biodiversity park in the city, across 420 acres of the Aravallis in Damdama and Khedla villages, has started, with the GuruJal society and the Gurugram district administration focussing on native Aravalli flora and fauna. The team has identified over 45 native plants and shrubs species that can survive in this particular region of Aravallis and will plant these after receiving approvals from the forest department.

As a part of the park project, the GuruJal society conducted a nature walk on Sunday to engage citizens and spread awareness about the importance of native plant species.

...ogy of the area will get better protection from pressures of local communities living in that region."

A few over 100 people took part in the eight-kilometre-long walk on Sunday morning. District town planner Sanjay Kumar and Sohna block development and panchayat officer Parvinder Singh were also in attendance.

Osho Kalia, a member from GuruJal Society who participated in the walk, said, "This walk was planned to interact with the nature lovers/participants and to take their feedback on what they see, smell or feel about the area which will help us with the ongoing pre-study for development of Damdama-Khedla biodiversity park, which is a part of CM's announcement."

Manohar Lal Khatt[ar] announced the develop[ment of] a biodiversity park, un[der] ...diversity Management ... to increase the forest c[over] to conserve the native f[lora and] fauna in the Gurugram ...

The GuruJal team ... coordinating with lo[cal pan]chayats to keep a c[heck] whether check da[ms are] present in the area a[nd take] stock of the functional ... any. According to the e... of the GuruJal team, t[he biodi]versity park, once de[veloped,] will help with conser[ving] 1,104 kilolitres of wate[r] and help in over 67,5[3...] of carbon sequestrati[on] years.

Officials said that t[he] plant species that the[y] increasing in the are[a] dhau (Anogeissus P...

...वों में तालाबों का जीर्णोद्धार जारी

...गुरुग्राम: जिला उपायुक्त ... अध्यक्षता में मंगलवार ...लय सभागार में गुरुजल ...हली बैठक आयोजित ... गुरुजल सोसायटी के ...ला विकास एवं पंचायत ...रवान ने सोसायटी के ... तक किए गए कार्यों व ...ओं की रूपरेखा प्रस्तुत

...या गया कि गुरुजल ...ले में अब तक छह ...र किया जा चुका है। ...के जीर्णोद्धार का कार्य

...क जिन छह तालाबों ... जा चुका है उनमें

गुरुजल सोसायटी की पहली बैठक की अध्यक्षता करते उपायुक्त डा. यश गर्ग ● जागरण

जिले के गांव खेड़ला व दमदमा में बायोडायवर्सिटी पार्क को लेकर एक योजना बनाई गई है। यह पार्क 420 एकड़ के क्षेत्र में विकसित किया जाएगा। इसे विकसित करने को लेकर जमीन का सर्वे किया जा रहा है।

नरेंद्र सारवान ने बैठक में बताया कि

जाएगा। इसके अलावा, गुरुग्राम महानगर विकास प्राधिकरण व वन विभाग द्वारा संयुक्त रूप से गांव सकतपुर व गैरतपुर बास में 500 एकड़ भूमि पर सिटी फारेस्ट विकसित करने को लेकर भी प्रयास किए जा रहे हैं। बैठक में गुरुजल सोसायटी के प्रतिनिधियों ने प्रजेंटेशन के माध्यम से अब तक परियोजना के तहत किए गए कार्यों का ब्योरा प्रस्तुत किया।

बताया कि जिले में गुरुजल सोसायटी द्वारा 320 तालाबों के जीर्णोद्धार करके इनके सुंदर बनाने का लक्ष्य रखा गया है। यह कार्य चरणबद्ध तरीके से किया जाएगा। उपायुक्त ने जिले में घटते भू-जल स्तर को लेकर चिंता जाहिर की। बैठक में अतिरिक्त उपायुक्त प्रशांत पवार, मुंजाल फाउंडेशन से सीओओ रवि पाहुज...

Gurujal initiative restores Farrukhnagar village pond

HT Correspondent
htreporters@hindustantimes.com

GURUGRAM: A pond in Khentawas village of Farrukhnagar block that was severely polluted and unusable was restored and inaugurated on Saturday.

It was the second natural water body to be restored under the Gurujal initiative project. The Mojabad pond in Pataudi was revived in September 2020.

Minister of state (independent charge) for statistics, programme implementation and planning Rao Inderjit Singh inaugurated the restored pond site through video conference.

The 1.25-acre water body in Khentawas was among the 72 water bodies identified for restoration in different blocks of the district. Currently, 14 such water bodies in sites like Kasan, Dhaula, Wazirpur, Navada, Dharampur and Khentawas, are under restoration.

"The Khentawas pond will recharge groundwater by up to 19.7 million litres in a year," said Shubhi Kesarwani, director, Gurujal.

> The Khentawas pond will recharge groundwater by up to 19.7 million litres in a year. A sewage treatment plant (STP) has also been constructed at a cost of ₹70 lakh to recycle the water.
>
> SHUBHI KESARWANI, Gurujal director

The village is situated about 18kms from Gurugram and has 400 households, with a population of more than 2000. Untreated water of the village would be discharged into the pond.

The Gurujal team began the restoration work last year with desilting and levelling the pond bed. "Thereafter, a 150 kilo litres a day (KLD) capacity sewage treatment plant (STP) was constructed at a cost of ₹70 lakh to recycle the water," said Kesarwani.

The treatment will remove large coarse material or suspended solids before being pumped into filtration tanks and then to a holding tank before being released into the pond. The team also planted saplings of neem, sheesham, jamun, gulmohar and tamarind, among others, in an effort to beautify the pond.

Amit Khatri, deputy commissioner, said that the local population will be responsible for the maintenance of the treatment plant and pond.

Minister Rao Inderjeet Singh also supported traditional methods of water conservation to recharge groundwater.

READ: Work ongoing to revive 15 water bodies

नेचर फोटोग्राफी वॉक का हुआ आयोजन

गुरुग्राम। जिला गुरुग्राम में जोहड़ो को पुनर्जिवित एवं जैव विविधता के बचाव के लिए कार्य कर रही गुरुजल सोसायटी द्वारा आज दमदमा और खेड़ला गांव की अरावली की पहाड़ियों में नेचर फोटोग्राफी वॉक का आयोजन किया गया। इस कार्यक्रम की जानकारी देते हुए गुरुजल सोसायटी से एसोसिएट अंजलि शर्मा ने बताया कि कार्यक्रम में डीटीपी प्लानिंग के ऑफिसर संजय कुमार एवं बीडीपीओ सोहना से परविन्दर सिंह मौजूद हुए। अंजलि ने आगे बताया कि इस वॉक में लोगों को प्रकृति से जोड़ने एवं पोलिथीन इस्तेमाल न करने के लिए जागरुक किया। इस अवसर पर सिडार इंस्टीट्यूट सुनील हरसाना ने पौधों की विभिन्न प्रजातियों की जानकारी दी एवं नवज्योति इंडिया फाउंडेशन से चांदनी बेदी, सोमदत्त व उनकी टीम ने दमदमा और खेड़ला गांव के आम जनता और युवाओं को एकत्रित करने एवं वॉक को सफल बनाने में पूरा सहयोग दिया। इस कार्यक्रम में लगभग 118 लोगों ने नेचर फोटोग्राफी वॉक में भाग लिया। कार्यक्रम में गुरुजल पूरी टीम ने विशेष योगदान दिया।

तालाब प्रशासन ने बनवाया, पार्क को सजा रहे गांव के बच्चे

गुरुजल योजना के तहत 3 गांवों के तालाब और उनके आसपास के इलाके का हुआ कायाकल्प, ग्रामीण भी कर रहे मदद

मौजाबाद गांव में तालाब को जीवंत कर दिया गया है। यहां पार्क भी बनाया जा रहा है, जिसमें वेस्ट मटीरियल का खूबसूरती से यूज हो रहा है

वेस्ट मटीरियल से सजावट

Damdama bio park: Report to be ready in six months

The project involves creating a native Aravalli forest on over 400 acres in Khedla village in Sohna; park to come up in five years

Prayag Arora-Desai

GURUGRAM: Work on creating a detailed project report (DPR) for an upcoming biodiversity park near Damdama lake began on Saturday, with staffers from the district administration's Gurujal department undertaking the first field survey of an eco-restoration site in Khedla village, in Sohna block, about 25 kilometres from the district headquarters.

The proposal, being implemented under the Centre's Jal Shakti Abhiyan, involves creating a native Aravalli forest on approximately 400 acres of hilly land over the next five years, officials said.

Gurujal staffers on Saturday said that preparing the DPR would take at least six months, and that a final report would be submitted to the state government for approval by March next year. In the interim, environmental engineers, civil engineers, biodiversity specialists working under the Gurujal initiative will conduct extensive surveys to assess the current status.

In addition, a socio-economic assessment of Damdama and Khedla villages, whose 1,500-odd residents (as per the Census 2011) continue to depend on the forests for grazing animals and collecting fuelwood, will be conducted. Narender Raghav, sarpanch of the Khedla gram panchayat, said, "In other parts of the district, common lands are being privatised and encroached upon. That's not what we want for our village. We agreed to give our common lands for the project because we hope to create employment for the village youngsters and also to give them a sense of pride."

Damdama Lake in Sohna.

Sachin Kumar, technical manager, Gurujal, said, "The total area of Damdama and Khedla villages is about 500 acres, of which 400 acres of common village land — which comes under the ownership of the two gram panchayats — will be restored. The area has the potential to a be rich forest with native vegetation. As part of our fieldwork over the next six months, we will be creating plantation management plan to identify which native species are to be planted, and how to control the growth of invasive weeds and trees. By March we are also hoping to set up a nursery on the site."

Sunil Harsana, an independent ecologist from Faridabad's Mangar village, who led Saturday's survey of Khedla site, said, "This particular area has a richer presence of native rootstock than other Aravalli patches in Gurugram, such as Bandhwari, which have been denuded due to mining and real estate."

Over the next six months, field staff will divide the area into 50 acre plots, which will be surveyed independently. The local biodiversity management committee will aid the staff in creating a local biodiversity register.

Following this, the Gurujal department will seek administrative approval for preparation of the DPR, after which the forest and land revenue departments will demarcate the area for eco-restoration. This will be followed by construction of a boundary wall, setting up of a nursery, and plantation drive.

Upcoming biodiversity parks

Damdama-Khedla Biodiversity Park (under Gurujal)
Area: 400-500 acres
Distance from city: 25km
Number of saplings: 2.5 lakh species
Contribution to green cover: 2.02 sq km

Kasan Biodiversity Park
Area: 300 acres
Distance from city: 16km (2km from sub-district headquarters in Manesar)
Number of saplings: 1.1 lakh species
Contribution to green cover: 1.21 sq km

Urban City Forest
(Saktpur, Shikohpur, Gairatpur Bas and Naurangpur villages)
Area: 2,000 acres
Distance from city: 15km
Number of saplings: 8 lakh species
Contribution to green cover: 8.09 sq km

Damdama Lake shrinking

Amarujala 3rd-Jan-2021

अपशिष्ट जल प्रबंधन के लिए तैयार हुआ जोहड़

गुरुग्राम। केंद्रीय राज्य मंत्री राव इंद्रजीत सिंह ने शनिवार को खैंटावास गांव में जीर्णोद्धार किए गए जोहड़ का वीडियो कॉन्फ्रेंसिंग के माध्यम से उद्घाटन किया। जोहड़ का जीर्णोद्धार गुरुजल परियोजना के तहत किया गया है। इस अवसर पर आयोजित कार्यक्रम में बादशाहपुर के विधायक राकेश दौलताबाद ने बतौर विशिष्ट अतिथि शिरकत की। इस मौके पर केंद्रीय मंत्री राव इंद्रजीत सिंह ने कार्यक्रम की अध्यक्षता करते हुए कहा कि घटता भूजल स्तर हम सभी के लिए चिंता का विषय है।

ऐसे में जरूरी है कि हम जल संचयन के परंपरागत तरीकों को अपनाते हुए भूमिगत जल स्तर में सुधार लाने के लिए एकजुटता से प्रयास करें। उन्होंने कहा कि लगभग 20-25 साल पहले गांवों में जल संचयन के परंपरागत तरीकों का प्रयोग किया जाता था। जोहड़ भी इन परंपरागत तरीकों का ही एक उदाहरण हैं। उन्होंने कहा कि इस जोहड़ के जीर्णोद्धार में गांव के बुजुर्गों से लेकर नौजवानों, माताओं, बहनों व बच्चों ने अपना सहयोग दिया। जोहड़ से ग्रामीणों को काफी फायदा मिलेगा। इसमें न केवल साफ पानी एकत्रित होगा बल्कि इसका इस्तेमाल लोग खेतों में सिंचाई आदि के लिए भी कर सकेंगे। ब्यूरो

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