



PUBLISHED ON 1ST MAY 2024, ISSUE NO: 02-24

Green Pages

NEWSLETTER OF GREEN CIRCLE, BANGALORE

For private circulation only





Green Circle Activities Diary

Date	Activities/programmes/events
04.05.24	Bimonthly Board of Trustees meeting
06.05.24	Drainage water pouring in Avalahalli lake - issue was taken up with PDO, Singanayakkanahalli. PDO assured to take action. GC requested to have STP away from lake as per experts advice
10.05.24	In order to explain the residents and potential CSR grantees, GC came out with a 3D model of the landscape covering the lakes and rajakaluve. The model was designed by the students of Civil Engineering department Eco club of BMS Institute of Technology
12.05.24	We carried out a survey of unauthorised garbage dump on both sides of the Doddaballapur road from BMS to Rajanakunte
17.05.24	GC had posted the garbage status on X handle and decided to regularly post and repost issues related to environmental issues
19.05.24	GC birders spotted a massive fishkill while visiting Hesaraghatta lake. The issue was taken up on X with KSPCB which responded to our initiative. We highlighted the issue in Media also. KSPCB found out that the fishkill was due to overflowing of tank in Animal Husbandry Dept's collection centre. Letter was served to the department. In this way, we were instrumental in saving a pure water lake which supplied to the whole of bangalore
22.05.24	BMS IT Civil Engg depts eco club organised an event to award the best contributors to nature wherein Green Circle presented Appreciation Certificates to the 3D model making team
23.05.24	Green Circle receives copy of the Avalahalli rajakaluve Survey report from Tehsildar. Survey clearly marks the rajakaluve route from Krishna Sagara lake to Avalahalli lake
28.05.24	100 volunteers from BMS IT & SA participate in Green Circle voluntary work for Plogging at Avalahalli Lake and Tree watering at our Tree Plantation Site
05.06.24	World Environment Day celebrated at Peoples Trust, Sriramanahalli village. 100 Students from Sai Shankar Vidya Shala School run by Peoples Trust. A drawing competition was organised and 14 prizes were given. An exhibition was conducted which was visited by all students of the school. A plogging drive was also organised at nearby Naniah van. A PPT presentation was made by V Selvarajan on Single Use Plastic ban
08.06.24	Green Circle was allotted a stall at Rotary Club of Yelahanka's start up program for Social entrepreneurship called BASIS 3.0 in which we displayed the 3D model of Rajakaluve landscape. About 500 visitors participated and saw our efforts. We also attended a counselling session where we were given guidance for obtaining CSR grant for carrying out the cleaning work of the lake and rajankaluve
14.06.24	We have met the PDO Singanayakkanahalli and requested in writing to complete the rejuvenation of Rajakaluve as per Survey report. PDO has informed that 4 residents have objected to the proposal as the Rajankaluve passes through their premises as per survey report.
16.06.24	Bimonthly Board of Trustees meeting
22.06.24	GC team participated in the Tree planting drive at Naniah Van at Sriramanahalli
30.06.24	During the review period, we had released 4 YouTube videos, conducted several nature walks posted several X posts

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Roadblock to Avalahalli Rajakaluve completion

Dr P Vidhyasagar Arya, Director, Research & Comm, Green circle



Rajakaluve and Kaluve play a vital role to collect the rainwater and transfer the excess water from one lake to another. It is designed to follow the natural gradient of the land. The kaluve connecting the Krishnasagara Lake and Avalahalli lake follow the same pattern. However, due to "development activities" resulting in encroachment of a portion of the kaluve hampered in its natural flow being affected and flooding the nearby BDA-approved layouts such as MS Ramiah County during monsoon seasons.

Green Circle, with the help of a group of volunteers, felt a survey of the kaluve is the first step in determining its course. With the backing of Singanayakanahalli Panchayat, Green Circle petitioned the Revenue Minister Dr Krishna Byre Gowda who enthusiastically signed it. Later with our consistent follow ups, ADLR and the Tahsildar conducted the survey and provided the survey report. We came to know that 4/5 individuals have contacted the Tahsildar to prevent him from removing the encroachment.

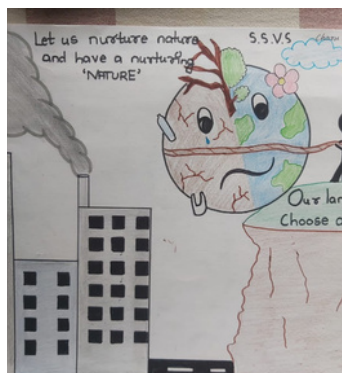
Green Circle has taken it up with the authorities the task of clearing the encroachment for the smooth transfer of water between these lakes and prevent flooding. We have taken up the issue of Kaluve encroachment and raw sewage discharge into the Avalahalli lake through IPGRS website of the Government of Karnataka by raising a grievance ID and followed it up through X. We are happy to inform that the Officer on Special Duty Dr Vaishnavi has favourably responded about stopping the raw sewage flowing into the Avalahalli lake. Our efforts will continue till the Kaluve is cleared of its encroachments.

Rajakaluve rejuvenation under progress





Green Circle, Bangalore in action





Nature-based carbon removal

Dr Vaithianathan Kannan,

Wildlife Biologist & Environmental Consultant

Nature-based carbon removal refers to strategies that utilize natural processes to capture and store carbon dioxide (CO₂) from the atmosphere. These methods are crucial in mitigating climate change, given their potential to significantly reduce atmospheric CO₂ levels. This essay delves into various nature-based carbon removal strategies, their effectiveness, challenges, and future prospects.

Types of Nature-Based Carbon Removal

1. Afforestation and Reforestation

Afforestation involves planting trees on lands that have not been forested for a long time, while 'reforestation' refers to replanting trees on recently deforested lands. Trees absorb CO₂ through photosynthesis, storing it in their biomass and the soil. These methods can sequester significant amounts of carbon; estimates suggest global reforestation could capture up to 205 gigatons of CO₂ over several decades.

2. Soil Carbon Sequestration

Practices such as no-till farming, cover cropping, and agroforestry enhance the amount of carbon stored in soils. Healthy soils with high organic content act as carbon sinks, potentially sequestering 2-5 gigatons of CO₂ annually. These practices also improve soil health and agricultural productivity, providing co-benefits.

3. Wetland Restoration

Wetlands, including peatlands, mangroves, and salt marshes, are among the most effective carbon sinks. They sequester carbon through the accumulation of plant material in waterlogged conditions, which slows down decomposition. Wetlands restoration can sequester 0.5-1 gigaton of CO₂ annually while also providing flood protection and biodiversity benefits.

4. Ocean-Based Solutions

Blue carbon ecosystems such as mangroves, seagrasses, and salt marshes play a vital role in sequestering carbon. The potential for ocean-based carbon removal includes techniques like ocean fertilization, where nutrients are added to stimulate phytoplankton growth, though this remains controversial due to ecological risks.

Effectiveness and Potential

Nature-based solutions (NbS) have a significant potential for carbon sequestration: Afforestation and reforestation could capture up to 10-15 gigatons of CO₂ per year at their peak. Soil carbon sequestration techniques could provide 2-5 gigatons annually. Wetland restoration** could offer 0.5-1 gigaton per year. Combined, these methods could provide up to one-third of the carbon dioxide reductions needed by 2030 to keep global temperature rise below 2 degrees Celsius.

Challenges and Limitations

Despite their potential, several challenges hinder the large-scale implementation of nature-based carbon removal strategies:

1. Land Availability and Competition

Large-scale afforestation and reforestation require substantial land, potentially conflicting with agricultural production and biodiversity conservation.

2. Permanence and Monitoring

Ensuring the permanence of sequestered carbon is challenging. Forests are vulnerable to fires, pests, and deforestation, which can release stored carbon back into the atmosphere. Reliable monitoring and verification systems are needed to track carbon sequestration accurately.

3. Ecological and Social Impacts

Some projects, if not well-planned, can lead to negative ecological impacts, such as monoculture plantations that reduce biodiversity. There are also social implications, particularly regarding land use rights and the potential displacement of local communities.

4. Economic and Policy Barriers

Funding and incentives for nature-based solutions are often inadequate. Policies need to be strengthened to support NbS, including providing financial incentives and integrating these solutions into national and international climate strategies

Continued in page 6.



Selva's space



DR V SELVARAJAN
Chairman, Green Circle

Hi friends,

The first quarter of year 2024-25 was full of activities. We concentrated on more activities in our Dwarka Delhi Chapter and Nainital Chapter. Pleased to say that we have revamped our Sattal unit and renamed it as Nainital Chapter at the request of our members there. Dwarka Chapter had been very active with a Green Manifesto, a painting competition and some joint awareness campaigns. Green Circle Bangalore has been concentrating on the ongoing Tree planting project and Rajakaluwe restoration. We have since got the accounts of Green Circle audited for the year 2023-24. With your support we have reached this height, but we have a long way to go. We seek financial and physical support from donors and well wishers like you for carrying out more activities. By the way, I am pleased to inform you that personally I have completed editing 100 issues of South Express (an environmental weekly newspaper from South) which is a part of Delhi based Dwarka Express, besides 4 YouTube videos. Thanks to all readers for the wonderful support

Selvarajan V

Nature-based carbon removal

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Future Prospects

To maximize the potential of nature-based carbon removal, a multi-faceted approach is necessary:

1. Integrated Land-Use Planning

Balancing land for afforestation, agriculture, and biodiversity conservation through integrated land-use planning can help address land competition issues.

2. Strengthening Policy Frameworks

Governments and international bodies should enhance policies and incentives to support NbS, including carbon pricing mechanisms, subsidies, and payments for ecosystem services.

3. Community Engagement and Co-Benefits

Engaging local communities in planning and implementation ensures that projects meet local needs and maximize co-benefits, such as improved livelihoods and biodiversity conservation.

4. Research and Innovation

Ongoing research into improving the efficiency and monitoring of carbon sequestration processes is crucial. Innovations in remote sensing, data analytics, and ecological modeling can aid in this effort. Nature-based carbon removal strategies offer a viable and essential component of the global response to climate change. While there are significant challenges, with careful planning, policy support, and community engagement, these strategies can play a major role in reducing atmospheric CO₂ levels, enhancing biodiversity, and providing multiple other ecological and social benefits. The future of climate action will likely hinge on the successful integration of nature-based solutions with technological and policy innovations.

Care nature for future



Green Circle, Dwarka Delhi Chapter Activities

April to June 2024

08/04/2024 - Green Manifesto Round Table was held @Pacific Mall Dwarka. Around 50 activists from various NGOs attended the Round Table and gave their suggestions for the improvement of environment. A Green manifesto was prepared for all MP candidates from Dwarka.

20/04/2024 - A delegation of Green Circle met Mrs Kamaljeet Sehrawat, a BJP candidate and Mr Mahabhal Mishra AAP candidate and handed over our 'Green Manifesto' to both MP candidates.

27/04/2024 - Green Circle participated as an associate in 'Go Green Marathon 2024' organised by G D Goenka Public School, Dwarka.

05/06/2024 - Green Circle Dwarka Chapter organised Tree Plantation in Krishna Apartments Sector 9 Dwarka on the occasion of World Environment Day. A pledge was administered to protect the environment.

16/06/2024 - Delhi International School Edge Sector 18 Dwarka organised an event Planet Peddlers, Riding for Health and Harmony* in association with Bal Ram leela. A 6 km cycle rally and slogan writing were also organised. Green circle team participated as associates.

20/06/2024 - International Yoga Day in ABHINAV SCHOOL was organised by Durga Saptashi Foundation. As associates, Green Circle members also performed yoga exercises.

20/06/2024 - Green Circle Dwarka Chapter organised a Health Talk in collaboration with Max Super Speciality Hospital, Dwarka at Welcome Hotel Dwarka. Dr Charu Goel Sachdev, Director Internal Medicine spoke on Health Implications of Global Warming. 60 Dwarkaites attended the talk.





Green Circle, Nainital Chapter Activities

April to June 2024

21.06.24 Green Circle Nainital Chapter inaugurated. Chairman V.Selvarajan addressed the meeting and nominated the office bearers. Green Circle, Sattal Unit in Uttarakhand which was originally formed in 2021 has since been renamed as Nainital Chapter (Uttarakhand) in a meeting held at Bhowali Uttarakhand

22.06.24 Plogging at Sattal lake : Members engaged pedalling boats and fished out the plastic bottles thrown by tourists in the Sattal lake.

22.06.24 Birding at Sattal : The birding team comprising of Selvarajan and Karthik visited the Sattal birding areas and check-listed 83 species of birds



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