BENGALURU SUSTAINABILITY FORUM

Annual report 2019/2020

Content

Bengaluru Sustainability Forum is a space to reflect on sustainability questions in and around Bengaluru across disciplines. While we did not hold a retreat in the previous year, we continued to participate in dialogues, facilitate conversations around a sustainable future and partner with other institutions and organisations.

The small grants programme expanded to support now in total 19 projects. Post the retreat on Urban Climate change in 2019, BSF funded two more projects one in climate change and one in urban water. In December 2019 we opened our small grants programme for the first time to applicants across the city, and have hence extended our support to 8 new projects in the area of urban water, urban biodiversity and urban waste management.

In the year ahead we are looking at hosting 3 retreats combining different sustainable development goals (SDGs) with SDG 11, sustainable cities and communities. The first one is incidentally SDG 3, good health and well being, which of course also includes public health , the importance of which is underlined by recent events. We expanding our retreats beyond invitation only and would like to achieve about a quarter of attendees through applications, with a focus on gender balance and people in early career stages.

Besides this we are going to host a monthly reading across the different SDGs, increase our outreach in the space of climate change awareness and contribute to the upcoming Bengaluru Science Habba. Stay tuned on out social media channels and our website for further updates.

Lastly, we thank Dr. Suhel Quader for his time with BSF and welcome Prof. Tejal Kanitkar in his place. Tejal is a Professor at NIAS Bengaluru and is a renowned expert for energy, climate science and development. Striking the balance between development and curbing carbon emissions is set to be one of the major upcoming themes for the Global South in the future and will certainly be extremely relevant for future development.

Harini Nagendra is a Professor of Sustainability at Azim Premji University, where she anchors the Centre for Urban Ecological Sustainability. Her 2016 book "Nature in the City: Bengaluru in the Past, Present, and Future" examines the implications of environmental change for cities of the Global South.

Jahnavi Phalkey is a filmmaker and historian of science and technology by training. Jahnavi is also the Founding Director of Science Gallery Bengaluru. Jahnavi has authored Atomic State: Big Science in Twentieth Century India and is director of the documentary film Cyclotron.

P.S. Narayan is the Head of Sustainability at Wipro Ltd, and the Managing Trustee & Head of Wipro Foundation, the CSR arm of Wipro Ltd. A graduate in Electrical Engineering with a post - graduation in management, Narayan has more than twenty five years of cross - functional experience. He has led Wipro's Sustainability initiatives since its inception in 2008. He is also involved in sustainability advocacy through several business and civil society platforms. He is currently the Chairman of the CII Greenco forum for Bangalore. Narayan is also Visiting Faculty at Azim Premji University and Xavier University, Bhubaneswar where he teaches post - graduate classes in ecology and sustainable development.

Mahesh Sankaran is an ecologist whose research interests lie in understanding the impacts of global climatic changes on the structure, functioning and stability of ecosystems. He was the coordinating lead author on the IPBES Land Degradation & Restoration Assessment and the review-editor for the IPCC special report on land.

Nitin Pandit is the Director of the Ashoka Trust for Research in Ecology and Environment (ATREE) in Bangalore, India. Previously, he was the Director of Priority Initiatives at the World Resources Institute (WRI) in Washington, DC, USA, focusing on restoration and energy efficiency, after serving as the CEO of WRI India and led WRI's work in India.

Satyajit Mayor is an Indian biologist. He serves as the Director of the National Centre for Biological Sciences, Bangalore. Prof. Mayor is an M.Sc. in Chemistry from IIT Bombay, who later obtained his Ph.D. in Life Sciences from Rockefeller University, New York. He has worked in the Department of Pathology at Columbia University and has taught at the Woods Hole Microscopy Course.

S. Vishwanath is a Civil Engineer and an Urban Planner. He is a Trustee with the Biome Environmental Trust. He has 32 years of experience in the water, waste-water and sanitation sector helping design rainwater harvesting, aquifer recharge, wastewater recycling and ecosan systems. He is an Adjunct Professor and teaches a course on Water at the Azim Premji University, Bengaluru, India. He writes a weekly column called Waterwise for the last 11 years and more in a national newspaper-The Hindu.

Tejal Kanitkar is an Associate Professor in the School of Natural Sciences and Engineering at the National Institute of Advanced Studies, Bengaluru. She has worked in the area of Energy and Climate Change for the last 15 years. She has a B.Tech in Mechanical Engineering from Mumbai University, A Master's in Mechanical Engineering from the University of Massachusetts, Amherst, and a Ph.D. from the Department of Energy Science and Engineering, IIT-Bombay. Her work covers the broad areas of energy and emissions modelling, climate policy, and energy policy.

Uma Ramakrishnan is an associate professor at NCBS interested in molecular ecology and conservation genetics. Her work involves using genetic and genomic data to make inferences about populations of endangered species, and suggest measures to avoid extinction. She also investigates the ecological and evolutionary contexts of emerging infectious disease. She is passionate about science communication and science capacity building.

Veena Srinivasan is a Fellow at the Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore, where she leads the Water, Land and Society Programme. Veena's research interests include inter-sectoral water allocation, impacts of multiple stressors on water resources, ground and surface water linkages, and sustainable water management policy and practice.

Steering Committee - Previous members

Suhel Quader: Formal background and training in the field of animal behaviour and evolutionary ecology. Over the years, he has studied various aspects of animal behaviour. Apart from these interests in the natural world, Suhel spends a fair bit of his time thinking about how ecologists ask and answer research questions, including about the quantitative and data analytic techniques we use and should be using.
Suhel's main interest is in engaging with the larger public in better understanding the natural world and how it is changing. Examples for this are Bird Count India and SeasonWatch.

Photo credit: The Nature of Cities

BSF @The nature of cities global summit

Paris, 4th - 6th June 2019

What is the nature of the city of our dreams? The nature of cities - global summit sought collaborative and transdisciplinary answers to this question over the course of 3 days. It was a get together and exchange of scientists, urban planners, artists, policy makers, ecologists, architects and many more. Ths summit consisted of well curated panel discussions, interspersed with readings, speeches, music and seed sessions where specific topics were discussed in smaller groups.
BSF attended seed sessions on approaches to retain existing trees and plant more trees on private land, pondering on how to connect people with nature in the cities (#NatureForAll), thinking on the reasons we don't have more affordable green housing amongst others. Key points for a liveable and enjoyable urban future that emerged from the discussions were social justice, courage and equity, sustainable lifestyle choices, responsibility on the governance and citizen level, resilience, collaboration, interaction and bioregional awareness. It was clear that cities of the future cannot afford elites, neither can they afford ignorance and exclusion of nature.
Attendees came from across the globe, representing countries of the Global North and Global South. It was highly inspiring to hear and discuss the various perspectives this diversity brought along.

The output and recordings from the panel discussions can be found here.

UnGallery talks: 'Creating a Culture of Sustainability'

Bangalore, VR mall, 22nd February 2020

Artflute in association with Whitefield Art Collective 2020 hosted a special edition of their 'UnGallery Talks'. BSF was invited to be part of this curated conversation. The panel for this event consisted of Avijit Michael, Founding Member of Jhatkaa.org, Susheel Nair, Co-Founder, Artand, Tara Krishnaswamy and Srinivas Alavilli, Founding Members of Citizens for Bengaluru and Akbar A, placeArts Youth Collective. Questions emerging from the panel discussion were: Can Art be a way to attract media attention and deescalate from street protests? Can art ask tougher questions in a simpler design? Is participatory art a way to unite for the same cause? What can we achieve with design intervention? And lastly how can we use the power of the afore mentioned to achieve a more resilient and just city, leaving no one behind.

A collection of thought provoking exhibits around sustainability were showcased at VR mall in parallel.


Photo credit: UnGallery Talks

Traveling exhibition 'Germany's Energiewende'

Nov 2019, National Center for Biological Sciences

Or 'Energy transition' in English is a traveling exhibition on the German's approach to transition from fossil fuels to renewable energy while increasing energy efficiency at the consumer's end. The exhibition was hosted by the Bengaluru Sustainability Forum, Science Gallery Bengaluru and the National Center for Biological Sciences (NCBS) and commissioned by the Indo-German Energy Forum (IGEF) and the German Consulate General Bengaluru.

Prof. Tejal Kanitkar (NIAS), Amir Bazaz (IIHS), Martin Rohlmann (German general consulate), and Palak Aggarwal (Batti Ghar Foundation)opened the exhibition with a panel discussion on India's energy future, led by Anandi Iyer, Fraunhofer India.

The exhibition saw about 800 visitors across age groups, from within the campus community and outside. Elios Sprung (Indo-German-Energy forum) gave tours for school classes and university visitors, answering questions around energy generation and production. The NCBS in-house team gave an overview on energy usage on campus. The numbers came as a surprise to many in the audience and have hence lead to significant reduction of energy usage.

The exhibition concluded with a quiz on renewable energies, held by Berty Ashley. Some of of the quizzers went home with a solar powered powerbank as reward. The campus improv group tailored a session to renewable energy inspiring the audience to put on their thinking caps. The German Consul General, Mrs. Margit Hellwig-Boette and the Director of NCBS, Prof. Satyajit Mayor gave concluding remarks. Saptak Ghosh (C-STEP) introduced a collaboration with BESCOM where the rooftop solar potential across Bengaluru is evaluated and made accessible for every citizen.

This exhibition was hosted on NCBS campus by Bengaluru Sustainability Forum, Science Gallery Bengaluru, InSTEM and NCBS.

More information on the exhibition can be found here:
www.energiewende-global.com

igef Indo-German Energy Forum
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
ncbs National Centre for Biological Sciences Tata Institute of Fundamental Research
Consulate General of the Federal Republic of Germany Bengaluru
Energie wende Switch to the Future
inStem Institute for Stem Cell Science and Regenerative Medicine
SCIENCE GALLERY

BSF @ Submerge

Bengaluru Sustainability Forum partnered with Science Gallery Bengaluru in their very first exhibition season - SUBMERGE - which opened at the Bangalore International Centre on 15th December 2019 and was running till the 30th of January 2020.

'What's in your water' : a water testing set-up in collaboration with the Foundation For Environment Monitoring (FFEM). A smartphone and an easy to use test-kit empowers people to test a variety of water parameters. More than 500 visitors got water samples from their homes tested on site. Science Gallery Bengaluru mediators also took the testing kits to WeWork, a co-working space in Shivaji Nagar and discussed the importance of water testing.

'Grow Cans' : An exhibit by BSF Grantee artist Suresh Kumar, which introduced exhibition visitors to an easy way of growing local greens in their balconies or terraces, which use less water, are better suited to Bengaluru's environment and offer multiple health benefits. The grow cans were doubly inspiring because they came with a way to compost kitchen waste which helps to reduce the burden on the city's waste management systems.

In addition to the above BSF organized 7 events on the weekend of 24th and 25th of January, generating conversations around Bengaluru's water systems, citizen participation in science, and sustainable alternatives.

'Sarjapura Curries Lunch': Participants got to enjoy traditional cuisine cooked with the greens grown in the Grow Cans exhibit, over a conversation with the women from Sarjapura who prepared the meal. The women are collaborating with Suresh Kumar in reviving these almost forgotten plants. They shared information about the greens, their benefits, recipes for cooking them as well as their thoughts and motivation behind the project.

'Pitch Session' : In December 2019 BSF had announced its first ever open call for the Small Grants Programme around the areas of urban water, urban biodiversity, urban climate change or the linkages between them. We shortlisted 12 of the proposals to come and convince the jury why they should be awarded the grant. Prof. Chandrashekhara from GKVK was the external jury member with Mr. Dinni Lingaraj from Wipro and Prof. Mahesh Sankaran from NCBS representing BSF. Applicants also got a chance to see other applicants pitches, which gave rise to some spontaneous ideas for collaboration over and above the collaboration BSF was trying to encourage through its grant programme.

'Kasu Kasa/Rubbish' : A role-playing game by BSF grantee Fields of View where the participants take on the responsibilities of Dry Waste Collection Centre Managers and negotiate the push and pulls of economy versus the environment. The game saw players from diverse backgrounds like law, development sector and corporate sector bring their experiences to the problems of waste management in the city. The post-game discussion on impact and use of technology, data, behaviour modification etc. on managing the waste problem brought home the need and importance of segregation.

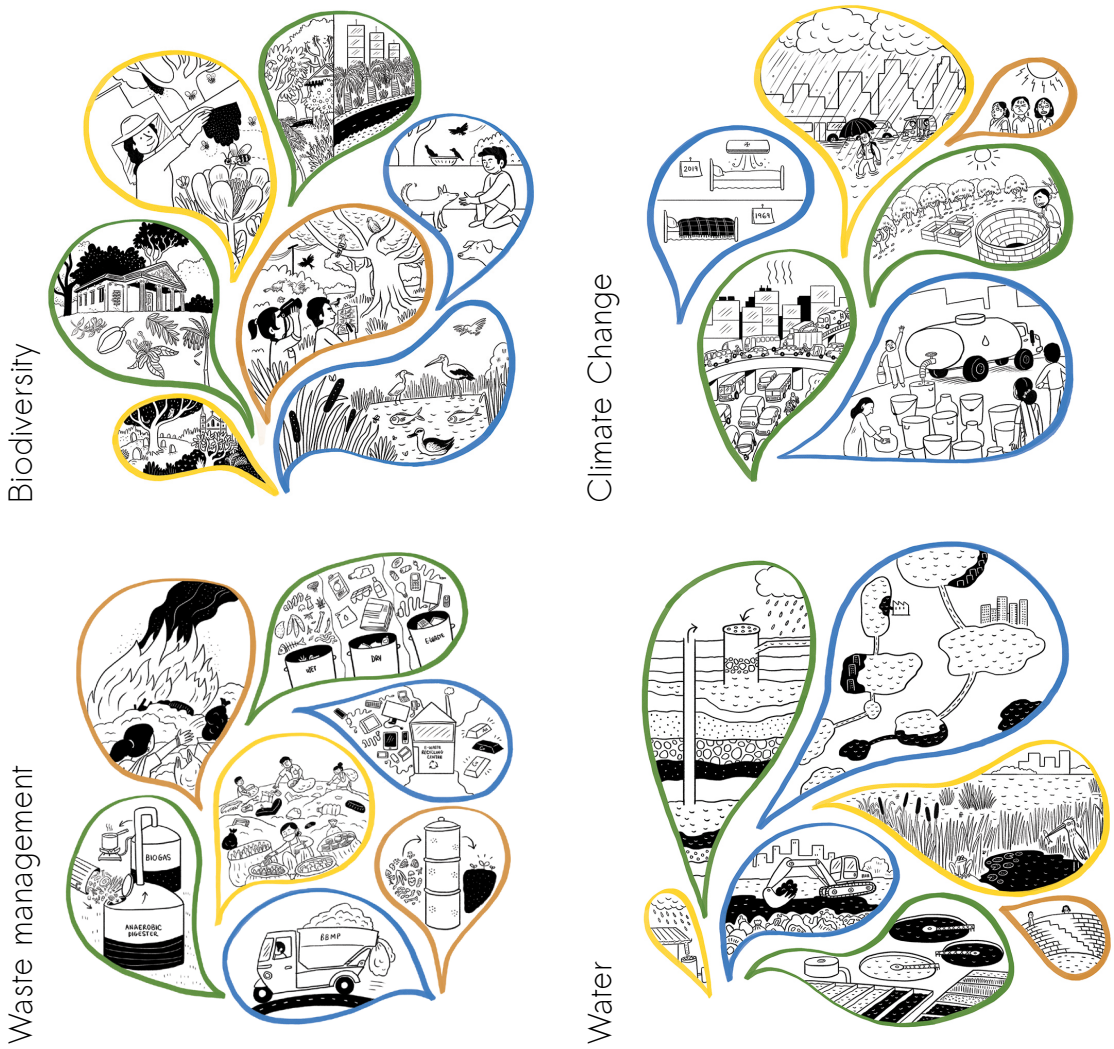
'Ulsoor Lake Water Walk' : Water walk with BSF grantees Suma Rao and Shubha Ramachandran from BIOME Environmental trust. This was an off-site event where participants were taken around Ulsoor Lake and introduced to the wetland system of Bengaluru and the role it plays in the city. The participants visited the sewage treatment plant at the lake and discussed what a holistic model of lake and water management could look like.

'Exploring Citizen Science' : Presentations and discussion with citizen science practitioners. Dr. R. Prabhakar from India Biodiversity Portal moderated the session with Prof. Veena Srinivasan from ATREE, Samuel Rajkumar from FFEM, Dr. Jai Asundi from C-STEP, Anisha Jayadevan from Cafe Oikos and Gautam Prakash from REAP-BENEFIT who came together and shared their experiences of working on citizen science projects in Bengaluru. They enumerated the problems and challenges they face, their hopes and possibilities for the future and introduced the audience to key questions like who owns contributed data in a citizen science project.

'The Invisible Water Warriors' : Mr. Avinash Krishnamurthy from BIOME Environmental Trust and Dr. Obalesh, founder of Thamate and convener of the Safi Karmachari Kaval Samiti curated an interactive session with well diggers, plumbers and manual scavengers. Those are workers from the water sector who take on the burden of making our water systems work even as they stay on the fringes of our consciousness, not to be acknowledged until the system breaks down. The audience got to hear their stories in their own words. The news of the hospitalization and death of a manual scavenger received by Dr. Obalesh in the middle of the interaction, underscored the need to bring these stories into the mainstream.

'What's In Your Water?' : This was a continuation of the weekly water testing in collaboration with FFEM. Samuel Rajkumar and team from FFEM walked about 60 visitors through the process of using a smartphone, their app and chemical reagents to test water. Such a set up potentially empowers citizens to take control of the quality of their water, be it to monitor local water resources or see if their drinking water is indeed potable.

We thank Science Gallery Bengaluru, BIOME Environmental trust and Foundation for environmental monitoring (FFEM) for their support during this event.



In 2019 BSF established a small grants programme which funds collaborative initiatives within the realm of sustainability in Bengaluru. Currently BSF funds 19 projects (10 in Urban waters, 7 in Urban Biodiversity, 1 in Climate Change and 1 in Waste management).

The small grants programme started in June 2019 with the aim of fostering local collaborative initiatives towards a more resilient Bengaluru. Many facets of knowledge and community spirit have emerged since then. Almost forgotten greens, gourds and legumes have been reintroduced, Jakkur lake grew a community garden, Citizen Science activities have evolved around water and biodiversity around the lake. A mud mural can be admired in Cubbon Park Metro station, a guide on common avenue trees in Kannada is about to be printed and data on human elephant relations in the outskirts of Bengaluru is coming together.

In December 2019 we had the first open call, the major two criteria for application being a collaboration and the project rooted in Bengaluru. We received fantastic applications across disciplines, ranging from theatre to innovative small business ideas to educators to science communicators. We selected three within the space of urban water and four related to Urban biodiversity.

Photo credit: Nishant Srinivasaiah

Elephant on the zebra crossing

Project start June 2019

'Elephant on the Zebra Crossing' works on understanding elephant behavior, movement patterns and family composition in periurban areas of Bengaluru by analyzing data collected over the last 15 years. Based on the findings they develop a prediction model that helps urban planners and policy makers to minimize human-elephant conflict in the future.

The first part of the project, for which environmental and biological factors influencing foraging and ranging patterns of Asian elephants, especially the males, in peri-urban areas of Bengaluru were assessed has been completed. The results from this exercise have provided the baseline values that reflect decision-making in the individual elephants. This is now being used to model elephant distribution and fine-scale movement in the current land-use and land-cover scenario. The process of visualising information on the changing movement patterns and distribution of elephants, collected through questionnaire surveys by interviewing field-level Forest Department staff, covering an area of nearly 10,000 sqkm is ongoing. This project will wrap up by August end.

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Photo credit: Suresh Kumar

Sarjapura Curries

Project start June 2019

Sarjapura Curries is a community and inclusion based art/video project that aims to include edible weeds in the menu and document recipes of the same. It extends to conserving knowledge on those weeds and reviving their popularity in vegetable markets and popularising them for urban/terrace gardening.

Sarjapura Curries has transformed a barren community space into a thriving garden of almost lost edible greens and vegetables like the clove bean. They have hosted seed and sapling sharing events with local and urban gardeners and were part of 'Submerge' at BIC. Besides this Sarjapura curries prompted other places like schools and colleges to start growing their supplies.. Women in the village got inspired to set up beds to grow greens in their spaces.They furthermore developed a new setup at an adopted farm land to revive amaranthus and local heirloom varieties of snake gourds and bottle gourds. Sarjapur Curries will wrap up by June end with online documentation of the project findings, information, recipes and stories that were collected through the year. The information will be uploaded on a YouTube channel and it's newly created website. It furthermore has an active What's app group for ease of sharing information on what is growing and for help in identifying unkown produce of terrace gardens.

Samuha suresh
Sarjapura Curries

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Photo credit: S. Karthikeyan

More information on:
www.ecoedu.in

Pocket guide on common avenue trees in Kannada

Project start June 2019

Ecoedu and naturalist Kartikeyan S. designed a pocket field guide for common avenue trees found in Bengaluru and other Indian cities in Kannada.

Information like the names of flowering trees, the flowering patterns, their age or how big they will grow is not easily available to the non english speaking part of the community. This project aims to change this. The guide will include information on flowering patterns, leafs and origin of the species and more. We are thankful for this high quality and educational source of information and hope it will make knowledge on our immediate surroundings more accessible.

The pocket guide is ready to go to print and should be available on www.ecoedu.in post COVID 19 pandemic implemented restrictions.

The following 4 individual projects on biodiversity will meet every quarter and exchange material and knowledge that develops over the course of the projects to increase the outreach and impact.

Photo credit: Roshni Ravi/Jane Sahi

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Suttha Muttha

Project start May 2020

The Suttha Muttha project will take experiences and stories of local ecology and biodiversity to back to school.

'Unfortunately the children of today - who will be the grown-ups of tomorrow - are likely to have very different memories of their childhood and the outdoors. Children increasingly grow up disconnected from and fearful and suspicious of the natural world that they are part off.'
By making meaning of serendipitous encounters with myriad creatures that visit their schools the project hopes to facilitate deeper connections for students with their immediate natural world. Jane Sahi, Founder Fig Tree learning center and Roshni Ravi, Nature conservation foundation are going to design and create locally relevant and accessible teaching-learning material, curate stories, songs and sayings in consultation with parents, teachers and students. They will develop and offer immersive nature education and nature learning workshops for students and teachers. Material emerging from this will be made available freely under the creative commons understanding.

Please reach out to Jane, Roshni or Vena if you are interested in this and if you would like to use any of the ideas and material in a school you know.

Photo credit: Cafe Oikos

Know your urban wildlife

Project start May 2020

This project is a collaboration between Cafe Oikos and FERAL to make urban wildlife more accessible to urban citizens.
Cafe Oikos will expand its series of talks by a series of nature walks in Bengaluru, showing how much is there to discover in your immediate neighbourhood and how to keep track of it using nature journaling. They will also make short video clips on citizen science initiatives in India. This is set to inspire people to go out, observe nature, and contribute to science helping Bengaluru to build a comprehensive report on its urban biodiversity
In light of the COVID 19 pandemic, the film concept slightly changed and along with nature walks and talks has been pushed to later. They are now working on coming up with a booklet on urban wildlife as a resource.

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The Why and How of Bengaluru's Biodiversity

Project start May 2020

Citizen Matters and Mongabay India will research, develop and publish stories and short videos on "The why and how of Bengaluru's biodiversity".
This includes 2 guidebooks [guidelines for reporting on urban environment targeting journalists & best practices for scientists to engage with civil society and journalists targeting scientists.]; 10 longform articles and 5 video stories exploring Bangalore's biodiversity. They will also conduct a training workshop for journalists on covering the environment and sustainability and for scientists on how to communicate their findings better to the public.

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Photo credit: Vena Kapoor/Priya Venkatesh

Flash cards on common spiders and insects

Project start May 2020

This project will produce a set of about 60 easy to use flashcards on common spiders and insects that one will come across in and around Bengaluru city.
The flashcards will have fun educational content on the natural history, interesting behaviour, useful identifying tips and the kinds of habitats the species are found in. The flashcards will be in a roller binder so that it is easy to carry around as a unit but also removable as separate cards so that they can be placed anywhere and used as teaching aids and as educational games. They can also be used in schools by educators to promote learning, provoke conversations and can be used as aids for nature educators when taking groups for nature walks. The design and content will be open source so that others may use the information and create/ modify it to their context or requirement for educational purposes. 50 sets each in English, Kannada and Hindi will be produced to start with.

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Photo credit: Quicksand/Bharat Mirle

Climate change stories from Bengaluru

Project start: December 2019

This project wants to build empathy and understanding around climate change issues among the general public living in Bengaluru through stories of people affected by climate change in and around Bengaluru.

It hopes to enable people to relate to it in a more human and deeper way by wrapping the overwhelming scientific evidence around climate change in stories of real people.
They are currently scoping out stories and welcome people who would like to share their story. A video story of farmers around Byramangala lake (on the outskirts of Bangalore) who are sourcing grass growing in a highly polluted lake for their cattle is the first story to be ready soon. Some of the other leads currently being pursued are around the conservation efforts done by the Rail Wheel Factory in Yelahanka and a story of human-elephant conflict in the outskirts of the city.

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Photo credit: Daniel Phillips

STRAINs

Project start June 2019

STRAINs project, a project of ATREE and BIOME environmental trust, tests the effect of small scale, low-tech decontamination strategic in-stream system prototypes for waste water treatment in storm-water drainsbuilt at Saul kere lake in Sarjapur.

32 Canna lily plants have been planted,16 plants in each constructed wetland consisting of Gravel and Terracotta as a filter media. The water pre and post the constructed wetland is sampled and tested bimonthly. 7 samples are collected and analyzed for organic (Faecal coliform, Biochemical oxygen demand (BOD), and Chemical oxygen demand (COD)) and inorganic (pH, Conductivity, Total nitrogen, Total phosphorus, Ammonical nitrogen, Nitrate nitrogen, Orthophosphates, Total suspended solids (TSS)) parameters. 80% of BOD removal, 96% of COD removal and 97% of TSS removal has been seen due to the combination of Canna lily and the respective filter materials. Residents will be taught how to monitor the system.

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Photo credit: Art in Transit

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Namma Ooru, Namma Neeru

Project start April 2019

The project conceived and executed by Art in Transit and BIOME Environmental Trust fosters engagement with Bengaluru's water heritage through events, murals, performances and workshops, using metro transit stations as platforms/labs with local heritage and contemporary water practices as themes.

The Mud Mural on the Well Diggers has been completed at Cubbon Park and content for an information signage that would make a large print around the Mural is being collected. Research has also been initiated for the second half of the project at Chickpete station and a mini meet at the station to brainstorm the historic and community context for the project is to be scheduled.

Photo credit: Suma Rao

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Understanding Wetland Instrumentality and Dead Zone at Jakkur Lake

Project start April 2019

This project aimed to identify dead zones (low oxygen zones) at Jakkur lake and rejuvenate one of them using Vortex or other suitable systems.
It furthermore observes the role of dissolved oxygen (DO) in the lake by monitoring the water quality in the dead zone for a period of 10 months. The project also wanted to understand the instrumentality of the wetland by analysing different samples like Alligator weed, Water Hyacinth, Sediment, Fish for heavy metals/N/P and others parameters.
As part of the project they identified 3 Dead Zones in Jakkur Lake and also found that the Kalyani at Jakkur lake has low DO levels. They worked at the Kalyani to see if the dead zone could be revived. As most lakes do not have power supply, they got a mobile Solar Aerator for this purpose.

Photo credit: Nature's Gurukul

Nature's Gurukul

Project start April 2019

This project was to be an expert guided citizen science project, located at Jakkur lake, with permission and support of BBMP.
1. An activity centre with a laboratory for activities like water testing and in house material like binoculars and field and audio guides for interested citizen to lend and use 2. A library containing reading material around lakes for every citizen, from toddler to adult which could ignite interest and curiosity in the visitors and include them in cataloging and exploring flora and fauna. 3. An information centre dedicated to the history of Jakkur lake and outdoor space that would be available for community meals, public presentations and workshops.

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Nature's Gurukul has had various activities that revolved around bettering the lake environment, becoming an amazing 9 months of learning for the community and the school children with the concept of 3 events every month- Environmental day, Volunteering activity and Volunteering workshop. The renovation of the BBMP buildings by the lake to be used for Natures Gurukul is under completion.

Photo credit: Ananas Permaculture

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Jakkur Community Gardens

Project start April 2019

The Jakkur Community Gardens project aimed to contribute to livelihoods as well as biodiversity around Jakkur lake through growing vegetables and a forest garden.

A vegetable garden was laid out and local stakeholders like fishermen, residents and local users of the lake trained to maintain it in return for the produce.The forest garden will eventually take care of itself and increase the living space for all the birds and critters around.
The trees, shrubs and vegetables have all done well in the forest garden, earth garden and water garden including the guild near the fisherman's house. There is now a gathering area and two benches for talks and relaxation. Most of the monthly volunteer days always attract between 15 and 30 volunteers. The water garden will next be planted with dense fruit trees and other saplings; the earth garden will also be more densely planted with edibles and the forest garden soil will be improved; thus the "design for neglect" will have been completed.

Photo credit: Seema Sukhani

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Jakkur Citizen Science project

Project start April 2019

Jakkur Citizen Science project wanted to engage with college students to evaluate water quality, flora and fauna around Jakkur lake and build a long-term relationship and sense of responsibility between the students and the lake, encouraging a regular engagement with the lake and elaborate on the value of close monitoring and data collection.

In the last 8 months over 10 students were called from several graduate colleges from Bangalore and trained in various water quality assessment procedures to take this project forward. While managing long term participation of students as citizen scientists to help monitor the variation in water quality in different seasons of the year was not successful, a few became a part of this project and helped in mapping the lake as well. Citizens have been engaged in successfully monitoring the water quality in the lake since August without fail. Mapping the drivers of change in the catchment of the water body and their relationship with water quality has just been started. Bird surveys have been conducted by Jalaposhana.

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Project Hanigalu - Participatory Planning for Water Security

Project start: December 2019

Project Hanigalu seeks to develop and pilot a tool using which urban residents can plan for water security.

The objectives are to (i) test a participatory planning tool to facilitate dialogue among citizens, and between citizens and the government on coping with climate change; (ii) enable participation of citizens as co-sharers of the responsibility of knowing about and managing a commons; and (iii) identify requirements and challenges of designing and implementing such a tool.
The first phase of the project that involved secondary research, including some data collection, is finished. The next phase of the project is heavily focused on fieldwork — engaging with volunteers from colleges, identifying stakeholders for our interaction, and plugging data gaps. Given the restrictions in place, this phase of work is on hold for the time being. Further actions or modifications to the project will be done based on changing circumstances in the coming months.

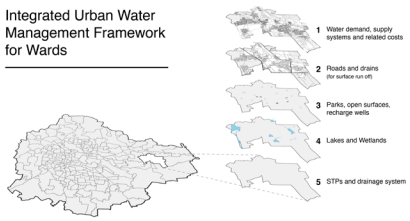

Image: Sensing Local

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Integrated Urban Water management at the ward level

Project start May 2020

The goal of the project is to design a framework for Integrated Urban Water Management (IUWM) at the ward level in Bengaluru using two wards as test beds that can be used to create ward level action plans.
The project responds to the on-going crisis of water in the city from the perspective of supply, access, management, and contamination, leveraging the new found opportunity of the recently constituted ward committees with the objectives of:
1. To evaluate and propose management and technological solutions for specific ward issues
2. From a planning viewpoint: determine what is actionable at the ward level, its potential impact and what requires to be solved at other scales of governance.
3. Extrapolate how private actors and public actors can work in tandem towards improving access, availability, quality, and its overall sustainability
This project is executed in collaboration with IIT Kharagpur.

Photo credit: Praveen

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Developing Citizen-Relevant Water Quality Criteria for Urban Lakes in Bengaluru

Project start in May 2020

This project will focus on the development of biomonitoring tools and assessment schemes to enhance citizen ownership of lake management through more effective monitoring of these water bodies for community use and urban biodiversity.
The outcome would be easy to use monitoring tools for citizens to reliably track the water quality and ecological health of the lakes over time and also to develop a flexible and evolving definition of what constitutes a clean and sustainable urban lake. This would also give a platform for different stakeholders to state their needs from the lakes and allow for an inclusive approach to lake management.

Contact: friendsoflake@gmail.com

Lake Health Index

Project start in May 2020

The Lake Health Index is a project to bring Lake Health into prominence with importance towards indicative parameters which affects the lake health in terms of water and it's ecology and biodiversity using citizen science initiatives.
It involves developing a robust dynamic index to represent the lake's environment and biodiversity which sustains the overall ecology in the form of an app or list, which can be assessed by layman and can be an indication for experts and researchers to take necessary action.

Small grants programme - Urban Waste management

Credit: Sensing Local

Contact: sobia@sensinglocal.in

Zero-Waste Wards

Project start April 2020

Sensing local aims to capacitate ward committees with technical knowledge and expertise in Solid Waste Management, in order to support and aid local area planning, budgeting and implementation of solutions.
The two main components of the project will include the development of the following: Planning toolkit - Development of a Planning Framework for Zero Waste Wards, that is scalable and replicable across all 198 wards. (Will be piloted in 2 wards)
Technology selection tool - Development of a decision-making tool for the selection of technologies or a combination of them, in order to achieve maximum processing at the scale of a ward. (Will be piloted in 15 wards).

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