

The background features three distinct areas of wavy, concentric lines. The top area is blue, the middle-left area is orange, and the bottom-right area is green. The lines are thin and closely spaced, creating a topographic or fingerprint-like texture.

SI: IMPRINT

CONFLUENCE

Celebrating **10 years** of conscious
efforts and endeavors

SI : IMPRINT CONFLUENCE

10th Year edition

Editor: Rama Raghavan

Editorial Team:

Rama Raghavan
Shivali Waichal
Amol Umbarje

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Sustainability Initiatives

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CONFLUENCE

Contextualize • Catalyst Change • Collaborate

Celebrating **10** years of Sustainability Initiatives

Contents

Foreword	03
About Sustainability Initiatives	07
Contextualize	10
Sustainable Development Goals	12
Catalyse Change	24
Research and Publication	26
Capacity Building	46
Advocacy and Outreach	64
Community Contributions	108
Collaborate	116
Care. Connect. Contribute	125

Editorial

“The Confluence” as the name suggests, is the culmination of 10 fulfilling years of Sustainability Initiatives, the 10th anniversary issue of SI: Imprint. Shedding light on a very heartening journey of over a decade, it encapsulates in a nutshell, the spectrum of humble endeavours taken up by the team over these years. Processes are often far more important than the product itself. With this in mind, SI has always taken into cognizance the importance of sensitive and sensible directions in moving towards Sustainability, which means, a path that prioritises contextual needs for sustainable development rather than a one-size-fits-all approach.

The Sustainable Development Goals (SDG's) are currently among the greatest priorities globally. In this special edition of SI: Imprint, we have taken the thread of the SDGs to demonstrate the manner in which Sustainability Initiatives has **Contextualised** these goals to suit the Indian urban realm. We showcase, how through our initiatives, we meet and continue to align ourselves with the SDGs to enable the community to move towards achieving true sustainability. Further, we shed light on the initiatives that aim to **Catalyse Change**. The initiatives, in line with the SDGs are categorised under four verticals- Advocacy and Outreach; Capacity Building; Research and Publication and Community Contributions. We have offered a glimpse into the work that we do with institutions, communities, organisations, the government and individuals, at all scales to facilitate the journey towards building resilient urbanescapes.

“United we stand and divided we fall”. We believe that if we **Collaborate**, we can move unitedly in a robust way, towards transformation. In this book we have showcased our collaborations and also shown how we could collaborate with all of you, dear readers, in a way that we halt this seemingly irreversible change to our planet and attempt to make change happen. Let us Contextualise, Catalyse Change and Collaborate to create a Confluence of our collective endeavours, and attain a greener, cleaner, healthier, safer and a more inclusive world for all!

Warmly,
Rama Raghavan
Editor



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Sabarmati Riverfront, Ahmedabad

Foreword

By Dean D'Cruz

In the world of professional design one rarely sees the outreach to society the way Sustainability Initiatives has been pursuing in the last 10 years. In this fast changing world with new challenges there are also new approaches and everyday solutions that emerge and the key is to be sensitive to the issues and innovative in the solutions.

With the recent threats brought up by the pandemic, climate change and resource crunch we need participation from all sections of society and invent solutions that are resilient. Sadly policy changes are usually driven by complex laws but one realises that incentivisation is a far better way to effect quicker positive results.

The way in which Sustainability Initiatives has gone about achieving their goals has been methodical with research and publications clearly establishing the realities we face, with advocacy and outreach bringing about awareness, calling for collective participation to achieve solutions using communities and building technical capacities to tackle them.

Using a network of researchers, academicians and professionals the team has also respected the traditional knowledge system and come out with approaches that address the extreme urbanisation taking place in India.

Our cities are showing the great divide between rich and the poor and a need to make cities more equitable, providing safe movement, proper open spaces and clean living environments for all. In fact successful public transport is measured by how much of the rich population of the city uses it and not just the poor. Government initiatives like NITI Aayog and Smart City initiatives, though noble in intent, lack the real public participation they need and Sustainability Initiatives seem to bridge that gap by providing curated information and feedback through workshops and seminars.

With urban planning in India mainly restricted to Government agencies and Town Planning departments the ability to scale down to a level where small but problematic issues lie is difficult. Thus there is a great need for urban interventions at ward level where ground realities can be

mapped and with community participation solved in a democratic manner.

The approach here is for an organisation to simplify complex technical issues and present them in a manner that a lay person can understand and showcase visuals that are viable solutions, but the real success lies in ensuring that there is an enduring and expanding ability to address the many complex issues of cities. This can be done only through capacity building, where technical, social and environmental skills are imparted to those who wish to contribute to the betterment of their urban space.

The Sustainable Development Goals set down by the United Nations provides a broad framework of issues to be addressed. Local bodies can use these as guidelines to address specific issues which are usually a combination of these varied goals. A number of days have been reserved in the annual calendar to celebrate or bring awareness on urgent issues. Both Government and non governmental organisations use these to showcase work done on these areas, at times tokenism and at times serious efforts. Regardless we all need to ensure that these guiding principles or memorial days are applied to every situation and every day in our lives if we are to really make a difference, for it is only lifestyle changes like going vegetarian, reducing travel, consuming less etc that can bring about real and lasting change. Sustainability Initiatives has shown seriousness by organising various programs like E-recycling, EV promotion, tree plantation etc as ways of bringing about awareness through public participation and bringing children on board through competitions, exhibitions and other outreach initiatives.

To have a society that has justice and resilience built into it we must take care in supporting the underprivileged and plan for disaster mitigation in the future. With the sharp rising cost of land in urban areas slums are growing and with it problems of sanitation, pollution, social strife, crime etc are also rising at an unprecedented rate. We have seen the completely insensitive solutions of slum re-development schemes of 10 storey buildings virtually 10 feet apart causing serious health issues and the schemes benefiting only the developers. Therefore, one needs a platform that allows dialogue between all stakeholders for everyone to benefit from such redevelopment and organisations like this can act like a mediator. With the erratic climatic conditions that we are now facing and the never ending devastating pandemic, disaster response through proper infrastructural response need to be given

priority. Organisations such as this can be the voice of environmentally and health concerned citizens of the city to assist and monitor in these proposals.

All in all the 3 Cs of care, connect and contribution achieved through empathy to fellow beings, building community spirit and participating as active citizens is the only way we can assist governance in achieving their mandate and the growing activities of Sustainability Initiatives seems to be doing that well.

Dean D'Cruz

Architect | Creative Head

Mozaic
1 Design Valley, Alto-Porvorim,
Bardez - Goa



Dean D'Cruz – a graduate in architecture is actively involved in professional practice as well as in academics. He has conducted numerous workshops and seminars on architecture, planning and the environment across India as well as abroad. His works and articles have been published in leading magazines in India and abroad.

He is a Partner and Principal Architect in MOZAIC DESIGN COMBINE', a leading design firm based in Goa, involved in Urban Intervention, Architecture, Conservation, Product and Graphic Design.

Currently he is a Member of the State Level Committee to prepare the Regional Plan for Goa 2021, Director with Goa Foundation and Green Goa Works, organisations involved in environmental protection and environmental cleaning and Present Design Chair BRICK School of Architecture Pune.

He has supported the Royal Institute of Art, Stockholm, Oxford Brookes University UK, and PRATT Institute New York for their architectural and planning programs in Goa.

About Sustainability Initiatives

Sustainability Initiatives is a non-profit organization with its office in Pune. It was initiated 10 years ago by a group of like-minded professionals from varied domains of Urban and Environmental Planning, Architecture, Environmental Science, Geography, and Energy. With this shared passion for Sustainable development, and an urge to make a change towards better cities, these individuals came together to work towards the common goal of **'Urban Sustainability'**.

Sustainability Initiatives was thus conceived with the objective of creating a strong network of researchers, academicians, and professionals who could help develop meaningful research in the environment and energy sectors that could be applied towards climate resilient and healthy cities.

Celebrating a decade of efforts and endeavours

As we celebrate a decade of working towards the common goal of urban sustainability, we foresee ourselves marching on in a collaborative manner.

We hope to mobilize more energies into upholding the objective of Sustainability in all verticals. We wish to align our goals with the Sustainable Development Goals to holistically contribute towards all the facets of sustainability.

With an increasing threat to our natural resources and a pressing need for alternative ways of advancing, we shall strive to innovate and invent more significant contextual solutions for Sustainable Development in all realms.

Our Mission

Moving towards Sustainability

The concept of Sustainability as a way of life is of paramount importance today. With issues of environmental degradation, depleting resources, and irreversible climate change plaguing the earth, urgent steps must be taken towards the resilient and sensitive development of the built environment. Sustainability Initiatives aims at developing a knowledge resource pool that will guide the policy makers and actors of today to make informed decisions that would make the world a better place for the future generation.

Our Approach

Our journey towards achieving Sustainability must incorporate scientific knowledge that borrows from the regional context and traditional Indian knowledge systems. Only then will the way forward be universal yet contextual. Every project must create effective conversations with the past, present, and future. The journey towards Sustainable Development is a collective approach, where democratic participation of communities in tandem with the government is an absolute must. Lastly, no decision, policy, or action can be sustainable and holistic without collaboration.

The People who made it possible



Dr. Poorva Keskar
Trustee



Hrishikesh Kulkarni
Trustee



Anagha Paranjape Purohit
Trustee



Apoorva Kulkarni
Trustee



Vijay Sane
Trustee



Dwaipayan Chakravarty
Core Member



Ashish Kulkarni
Core Member



Amol Umbarje
Sr. Coordinator



Shivali Waichal
Program Coordinator

CONTEXTUALIZE

Placing Sustainability into its local context has been our constant endeavour. With the Sustainable Development Goals coming into the forefront it becomes only relevant to take these ahead in a contextual way forward and localise them to suit the condition of Indian cities. In the following section, we introduce the thread that SI has focussed on to inch towards the goal of creating sustainable urban environment in India.



**SUSTAINABLE
DEVELOPMENT
GOALS**

Sustainable Development Goals

A Roadmap to Protecting the Planet

'Sustainability' and 'Sustainable development' have been some of the most discussed topics in the last decade. In the light of climate change, it has become increasingly urgent to shift the current approaches to growth and development. A road to global sustainable development was envisioned. It was no doubt a path laden with extensive challenges. Despite this, it has now become an agenda with topmost priority at an international level, that seeks active participation and proactive involvement across all countries.

What are Sustainable Development Goals ?

In order to render a focused direction to this agenda, the United Nations, after an extensive collaborative consultation process with 193 member states announced a comprehensive plan in 2015. A plan that charted out a roadmap for embarking on a robust path to Sustainable Development- the target for achieving which, was laid out as 2030. The plan included 17 goals, 169 targets and 230 indicators for measuring progress. The 17 goals were designed to include social, economic and environmental dimensions and were conceived with the 5 pillars of People, Planet, Prosperity, Peace, Partnership. The goals aim to catalyse action in important areas such as poverty, education, gender equality, sustainable cities, climate action, affordable and clean energy, and so on.



Principles

The action plan was designed with certain core principles that reinforced the need for an inclusive way forward. 'Integration'- recognized the interconnectedness of systems and the need for policies to address issues at a systemic level. 'Universality'- all countries no matter the socio-economic status or the level of development must be able to use the action plan without impediments. 'Inclusion'- the UN was keen on enforcing the need to engage all sectors of society including small organizations, private bodies, governmental agencies, NGOs together in a collaborative way forward. 'Leave no one behind.' was the motto adopted to ensure that even the most vulnerable were an intrinsic part of the agenda.

Contextualizing SDGs The Indian Context : Niti Aayog

India, a country with rich and diverse natural resources has traditionally aligned in implicit ways, with sustainable living. Our vernacular talks about co-existence with the environment in every aspect of day to day living, protecting and preserving natural resources has been at the core of traditional built environment and regional cultural beliefs. Along the way, with globalization and neo-liberalization a disconnect came through, removing us from these inherent lifestyles. 'Sustainability' as an ideology resurfaced to drive home the point that there was a dire need to recalibrate our detrimental course of living.

India's sustainability movement in alignment with the United Nations has been spearheaded by Niti Aayog, a public policy think-tank of the government of India. The primary role of Niti Aayog is to oversee and monitor the adoption of the SDGs at all levels within the country.

The organization is working in tandem with various collaborators to achieve important milestones in this decade of action. The Sustainable Development Goals put down by the United Nations have come as an opportunity for India to review our present context, rewind to the roots to derive contextual knowledge, and respond sensitively to meet the targets in a holistic manner.

UN SDG 11 and Urban Sustainability in India

Mahatma Gandhi had said of India in the 1940s that “India lives in its Villages”. Since then, India has come a long way. And as much as we would like to continue to call ourselves as an ‘agricultural’ economy, the truth is that India is highly urban. Today, India has 11% of the total global urban population living in its cities. In absolute numbers, the urban population in India is more than in highly urbanised countries across the globe. If we are to make changes to the definition of ‘urban’ in our census, it would be clear that already, half of the country’s people are urban. Hence, India’s quest towards Sustainable Development cannot and should not ignore Urban Sustainability. While, it is the cities that consume energy, water and food and generate wastes, it is also the cities where Action for Sustainability can happen. It is cities where Sustainable innovation will occur and it is cities from where human resource necessary for Sustainability, will emerge. SDG No. 11 focuses on ‘Sustainable Cities & Communities’, which encompasses a range of actions that can help us achieve the Target 11.6 – Reduce the Environmental Impact of Cities. There are so many facets to understand and address the Environmental Impact of cities. Today, most Indian cities are plagued by air pollution, primarily due to vehicular pollution. Hence, planning for and implementing a Sustainable transport system is vital for the future mobility of our cities.

The Metros that are coming up in cities today, have set the pace for sustainable mobility for us and the next generation. However, just planning and executing a project doesn’t finish the work for Sustainability. The work actually begins for the government and community organizations. The task is now to see how maximum people will choose to keep their private vehicles at home and travel for their work in a Metro. The last mile connectivity, including development of footpaths for ease of walking, safe cycling tracks and finally non-polluting vehicles at the local neighbourhood level will ensure that people will ride the metro. The use of operational energy in our homes, offices and institutions, is another important aspect of city’s environmental impact. Just by a click of a button, we light up our indoors and make them cool. But, this adds to the environmental footprint. Thus, planning, designing and building structures that will use less energy for lighting and cooling, is a necessity for urban

sustainability. When we buy a home, we need to see if principles of environmental design are integrated into its. Thirdly, we come to the use of water. India faces a tremendous water stress and every year it is growing, as population continues to rise while water resources continue to decline. While water conservation needs to become a part of our daily habits, it is important for us to understand how the riverine system works. With more understanding of how closely connected our natural resources are to the use of our tap water, we will learn to respect our rivers. It is not for nothing that India’s rishis and maharishis have called the Rivers as Goddesses.

Polluting these rivers is the biggest crime that we can do in our cities today. Lastly, and most critical of all is the waste. Waste generation is actually a very mindless action today. We use something and as soon as its use for us is over, we throw it out as waste. In this action, we forget that this “waste” is actually an important resource. As urban citizens, we are the maximum waste generators. We need to be more mindful of the things we throw. As soon as we shift our thinking and consider it as a resource, we will not generate as much waste. Circular thinking is an important skill when it comes to managing our waste.

Urban Sustainability needs to focus on circulating the waste so that there is, in theory, no waste generated! Finally, when it comes to urban sustainability, one of the most needed reforms today is in the sector of Urban Planning & governance. Niti Aayog has published a very important report on how and why Urban Planning needs to be strengthened for the sake of sustainability in Indian cities. Without plans and environmental impact assessment procedures in place, cities today flounder within ad-hoc decisions on urban infrastructure projects. Also, without urban planning it is impossible to plan for Climate Change adaptation, if and when required in cities. Thus, we see that the Urban Realm is one of the most important boundaries within which Sustainable Development will have to take shape. When India gets its urban sustainability right, there is hope for the entire world!

- Anagha Paranjape-Purohit



© Shohil Patel

Kankaria Lake, Ahmedabad

11 SUSTAINABLE CITIES AND COMMUNITIES



Cities must be equalizers that bring people of all socioeconomic, cultural backgrounds together under one roof, embracing the needs of one and all. At SI, we focus on taking action towards achieving inclusion, resilience, safety and sustainability in neighbourhoods and communities through deep processes that address systemic issues. One of our projects - the **Earth Centre** spoke about empowering local neighbourhoods towards responsible waste management through a self-sustaining waste recycling centre prototype.

Our Planet's resources are diminishing at an alarming rate and this has become the highest concern on a global scale.

We, at SI, are focussing our endeavours by prescribing and implementing alternative energies in projects of all scales. We also focus on building capacities and spreading awareness about the pressing need to make the big **switch to renewable sources** of energy.

7 AFFORDABLE AND CLEAN ENERGY



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Fostering innovation and **inclusive infrastructure**, is the main focus under this goal. With our cities moving at an unprecedented speed of development, it becomes paramount to include the component of resilience within the cityscape. Embracing exploration and newer ideas, yet executing them with sensitivity to the environment, has been our priority at SI. One of our projects to that effect also entailed reviewing **smart city blueprints** to incorporate robust design solutions for sustainable infrastructure.

Sustainable Development Goals emphasize on the need to be extremely mindful of our consumption and production processes. In SI, we believe that any design be it in small scale like products or larger scale of the built environment, must include an in-depth understanding of the life cycle of the entity. Understanding this can help optimize resources at every stage of production and also aid in planning for responsible usage patterns at the clients' end. This will help in mitigating carbon footprint right at source until the end of the loop.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



6 CLEAN WATER AND SANITATION



A majority of our population - the Urban poor, have a dire lack of access to Clean Water and Sanitation. This is a serious problem because it directly affects livability and in turn the health and wellbeing of individuals and communities.

At SI, we initiate a dialogue with communities and take on on-ground problem solving approaches to tackle issues of clean water and sanitation in informal settlements.

Our biodiversity, ecosystems and all the life on land are connected in various intangible networks. When we deforest a thriving ecosystem and afforest mindlessly to meet numbers, we fail from restoring habitats and further accelerate deterioration. At SI, our attempt is to view our ecosystems as **interconnected** and therefore reinforce a symbiotic relationship between the built and the unbuilt in all our initiatives. We also aim to conserve ecosystems at local levels and undertake tree plantation drives to replenish the lost treasure of our flora and fauna in cities.

15 LIFE ON LAND



13 CLIMATE ACTION



The planet is bearing the brunt of years of abuse by mankind. Deforestation, excessive production, greater consumption and many other factors have resulted in a climate that has become imbalanced and unpredictable. In this light, at SI, we focus on building capacities to sensitize organizations, local governmental bodies and communities towards taking action to combat the effects of climate change. We also conduct workshops to empower individuals towards the correct usage or Green building rating systems.

SI believes that any built or unbuilt space must be conceived with the people's **health and wellbeing** at the core, rendering utmost priority to the aspects of physical, mental and social wellbeing. Projects in all our verticals focus on connecting the mind, body and soul to the natural environment, thereby bringing about a sense of wellbeing.

3 GOOD HEALTH AND WELL-BEING

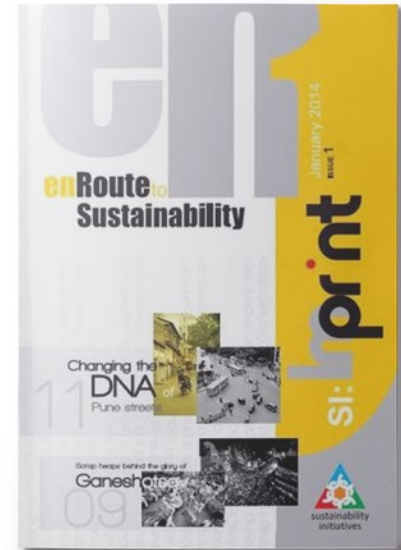


Past Issues : SI Imprint

Issue 1 2014

Sustainability Initiatives works on an open source platform which can be made available to any person or organization sharing the same passion of willingness to work with us on our areas of focus. Through this medium we encourage our members; professionals as well as students to bring to us an idea seed that can be further grown and nurtured with the support of SI and together we can work for the environmental benefit of the society at large.

The newsletter is to keep our members engaged with us in our activities and support us. We have tried to cover a variety of subjects and bring to our readers, analysis and approaches to sustainability. Enjoy reading our In Focus: article on Green office audit where we put in focus how offices can go green.





In the second issue, we bring to you inspirational stories and talks by Women from the field of Sustainability. Each of these women have a story to tell about their journey and the experiences of venturing into this field when there were few others. We also bring to you the second part of the three-part series on Urban Street Design Guidelines wherein we talk about the various stakeholders involved in designing streets and also share our findings from the stakeholder surveys & consultations held as part of this project.

In every issue, we try and look at addressing a very pertaining topic to our cities which remains ignored by citizens and authorities. This issue talks about e-waste and its awareness amongst citizens. Everyone generates it, but no one knows how to dispose it.

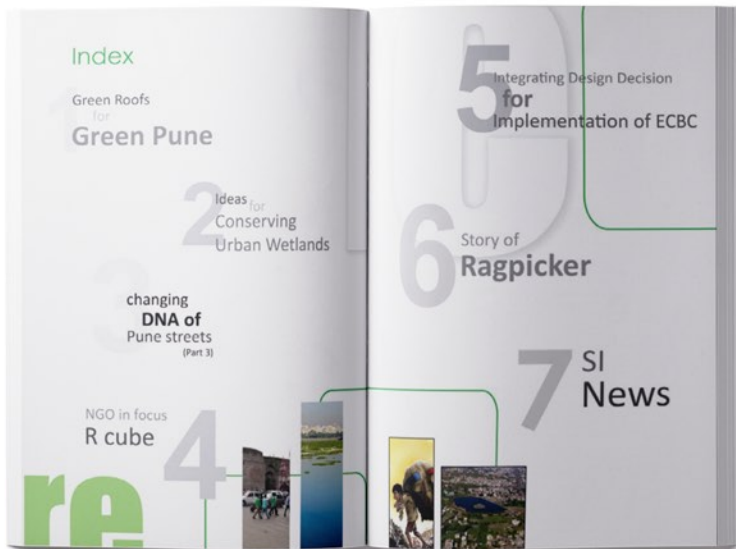
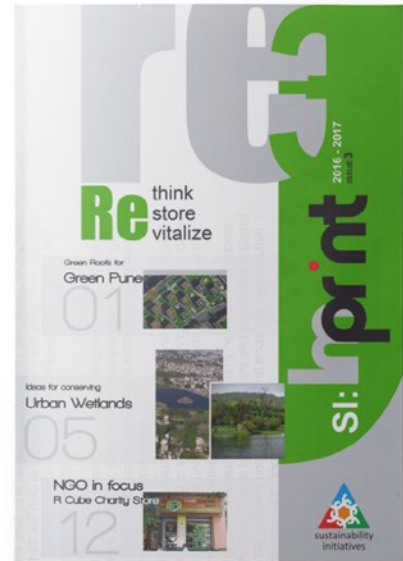


Issue 3

2017

This issue of imprint comes out after COP21, the UN Framework Convention on Climate Change in Paris, in December 2015 where Parties to the UN Framework Convention on Climate Change (UNFCCC) reached a landmark agreement. We have also covered the story of the ragpicker and the waste that gets collected. This waste converts into wealth only if this ragpicker does a good job of segregation. GHG emissions can be reduced by scientific treatment of urban waste.

The NGO in focus tells the journey of an individual from a conventional architect to a sensitive individual who believes that REUSING is the simplest form of conserving energy and in turn generating electricity. The issue covers efforts done by individuals, small organizations, NGOs as well as academia to reduce carbon emissions using varied approaches.





In this issue of SI Imprint we bring your attention towards a radical change that is taking place in our urban context, the use of 'Green materials' in our everyday life. Be it the green houses that are getting built, the use of interesting green materials in construction of infrastructure, the green cutlery that is gaining popularity, or the recycle-revolution in the fashion & textile industry. Its all very exciting. Further in this issue we showcase a story of an architect's sincere efforts to build a green home.

Through his story, Architect Gurjar bring up topics such as truth behind the 'so-called Green Materials', awareness and understanding about the actual sustainable methods of construction, and efforts to reduce the carbon footprint throughout the building process for debate.



CATALYSE CHANGE

Four verticals have been conceptualised to channel our initiatives viz. Research and Publication, Capacity Building, Advocacy and Outreach, Community Contributions. This section offers a glimpse of our endeavours under each of these verticals.



Research and Publication

There is a pressing need for credible and quality research that supports policy making and enables informed and sensitive development in India. At Sustainability Initiatives, we believe that research, particularly in the areas of urban planning and policy will go a long way in developing robust cities. The Research and Publication wing will also focus, in the coming years, on meticulous documentation of innovative practices that embed the sustainable development goals. This will encourage archival practices which can later be useful in measuring the success of the implementation of the goals.



01. URBAN PLANNING

- Draft Development Plan of Phaltan
- Street Design for Pashan-Bavdhan Link Road
- BRTS Research
- Green Roof Policy Document



02. RESOURCE MANAGEMENT

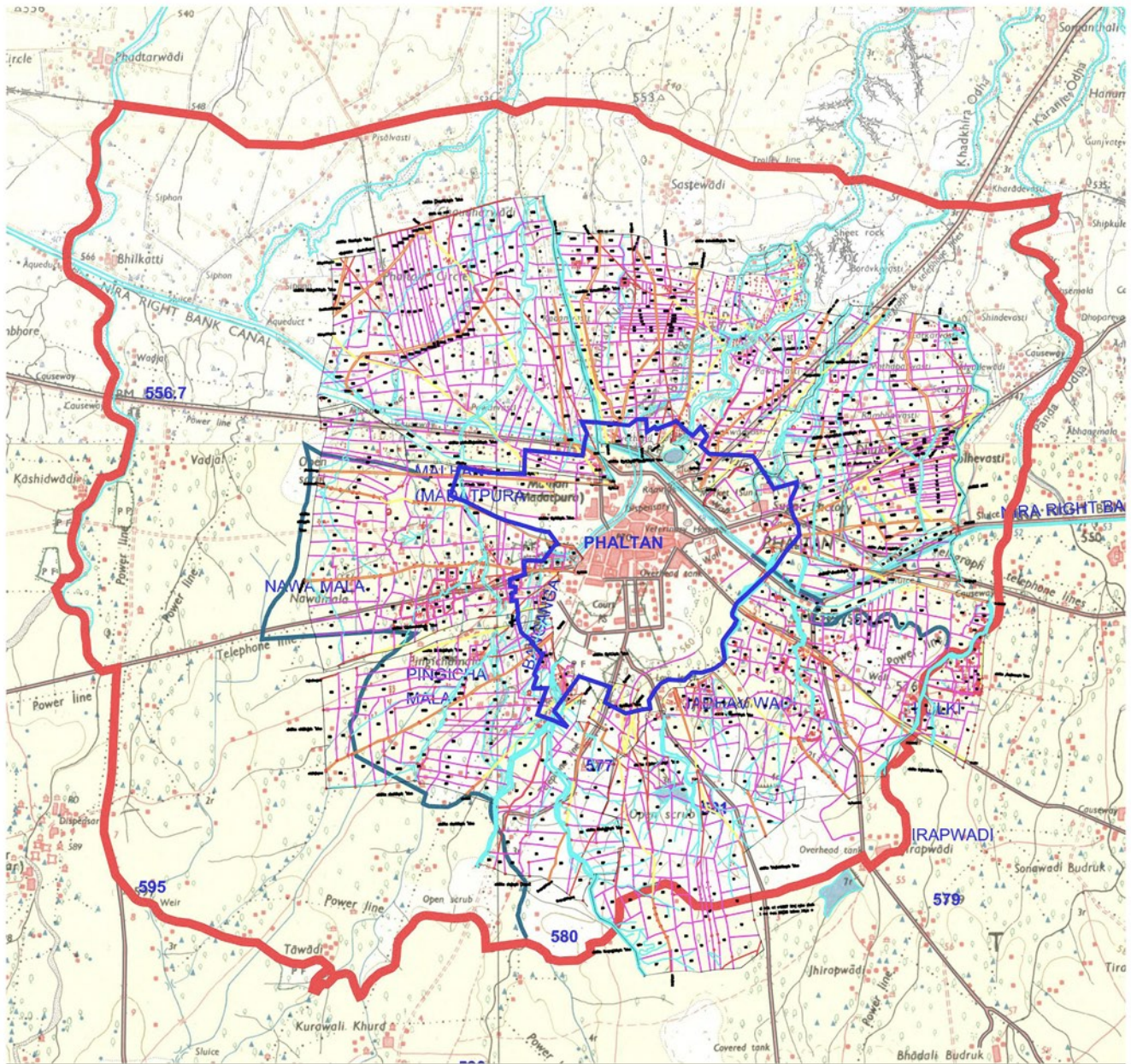
- Solid waste generation and disposal during Ganesh festival
- Pilot study on garden waste treatment
- Earth Center



03. PUBLICATIONS

- Green Buildings in Pune Map
- Green Footprints of Pune Book
- SI:Imprint
- Inclusive India- Re:Pune





Proposed Planning Boundary for Phaltan

Draft Development Plan of Phaltan : Satara

Sustainability Initiatives was involved in the existing land use Survey for the 3rd revision of the draft Development Plan of Phaltan in association with the Mrityunjay Ashram Trust, Phaltan. As a growing town with a population of 50,000, Phaltan was looking at developing a Plan to chart a direction for its otherwise haphazard and rapid urban growth. The existing land use (ELU) map was created after an extensive ground survey involving students from BNCA and a local school. Existing infrastructure, services, building typologies, age of construction etc. were also mapped along with land use. Based on the ELU, an analysis was drawn, that indicated a lack of basic civic amenities in the projected urban development of Phaltan, and therefore, an alternative for extension of urban jurisdiction was proposed.

Street Design

Pashan - Bavdhan Link Road

Sustainability Initiatives has prepared a vision plan for 2.1 km stretch, extending from Chandani Chowk to Ramnagar for Pune Municipal Corporation. This was a vision document of street design considering various aspects like residential and commercial land use, mobility, traffic movement, safety, community spaces, storm water management etc. under the consideration of Urban Street design guidelines for Pune city and Global Urban Street design guidelines.

BRTS Research

INHAF, SI and NCM, like-minded organizations dedicated to resilient urban design, came together to formulate a research study to highlight important lessons learnt from the implementation of the Bus Rapid Transit System (BRTS) in Pune and Ahmedabad



Green Roof

Green Roof Policy Document

From Grey to Green

With rapid urbanization, there is a necessity for Pune city to adapt to the extremes of climate change, increased energy consumption, loss of greenery/ biodiversity, amenity space and contribute towards healthy living. Energy consumption in buildings is dependent on envelope design or design of the building skin. The increased number of barren roofs and exposed concrete surfaces lead to more heat gain in buildings. This results in the formation of urban heat Islands, affecting the micro-climate of the place and leading to increased temperatures.

Sustainability Initiatives undertook research on 'Green roofs' to utilize the untapped potential of empty roof spaces and unleash their environmental and recreational benefits, contributing towards sustainable urban growth. Across the world, green roofs that include vegetated and insulated roofs, have been successfully implemented for their environmental, economic and social benefits which include – enhancing biodiversity, reducing peak storm water discharge, mitigating the urban heat island effect, improving the indoor thermal comfort, carbon sequestration and air pollution reduction and offering an alternative green space in the city.

Pune- the eighth largest metropolis in India and the second largest in the state of Maharashtra, is known for its rapid development and is undergoing constant changes in the city fabric. The cityscape has drastically changed over the past few decades in all aspects of urban design such as density, area, infrastructure, population, traffic, pollution, green areas, river-ways, micro-climate and many more.

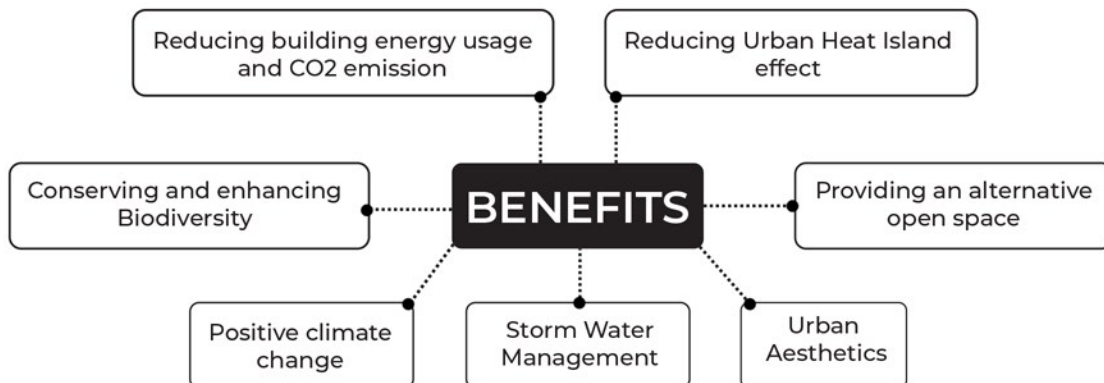
The policies that control and guide the development in Pune, also need to evolve progressively as a step towards sustainable development. At this point when the city is poised to start implementation of its new DP, undertaking environmentally beneficial policies such as "Green Roofs" shall enhance the environmental quality and image of the city.

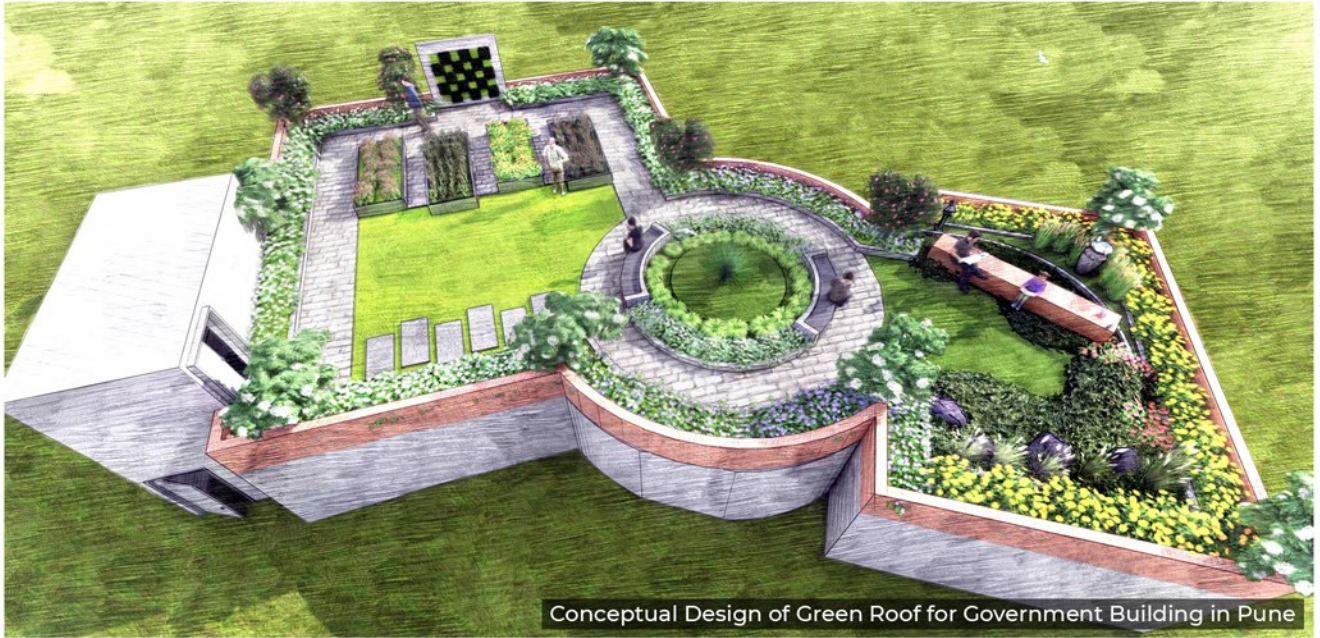
What are Green Roofs?

A green roof or living roof is a roof of a building that is partially or completely covered with vegetation (grasses, shrubs or eventrees) growing in a medium (soil / substrate) planted over a waterproofing membrane. The entire assembly has a thickness of 4 inches to 8 inches and is light weight. The term green roof may also be used to indicate roofs that use some form of green technology, such as a cool roof, a roof with solar thermal collectors or photovoltaic panels.

Pune city is experiencing rapid urbanization to meet the needs of the burgeoning population. Managing urban growth sustainably is both challenging and provides opportunities to innovate and explore. Development is taking over the open green spaces of the city. Though there are difficult ways to stop / control it there are some easy ways to increase the green areas by developing Green Roofs. Energy consumption in buildings is dependent on envelope design. More bare roofs and exposed concrete surfaces lead to more heat gain in buildings.

The heat reflected by the surfaces leads to a phenomenon of "Urban heat Island" affecting the micro climate of the place resulting in increased temperatures. Across the world 'green' roofs which includes vegetated and insulated roofs have been successfully implemented for its environmental, economic and social benefits. In Pune there are very few buildings which have adopted these alternatives.





Conceptual Design of Green Roof for Government Building in Pune



Green Roof



Improper Waste Disposal During Ganesh Festival

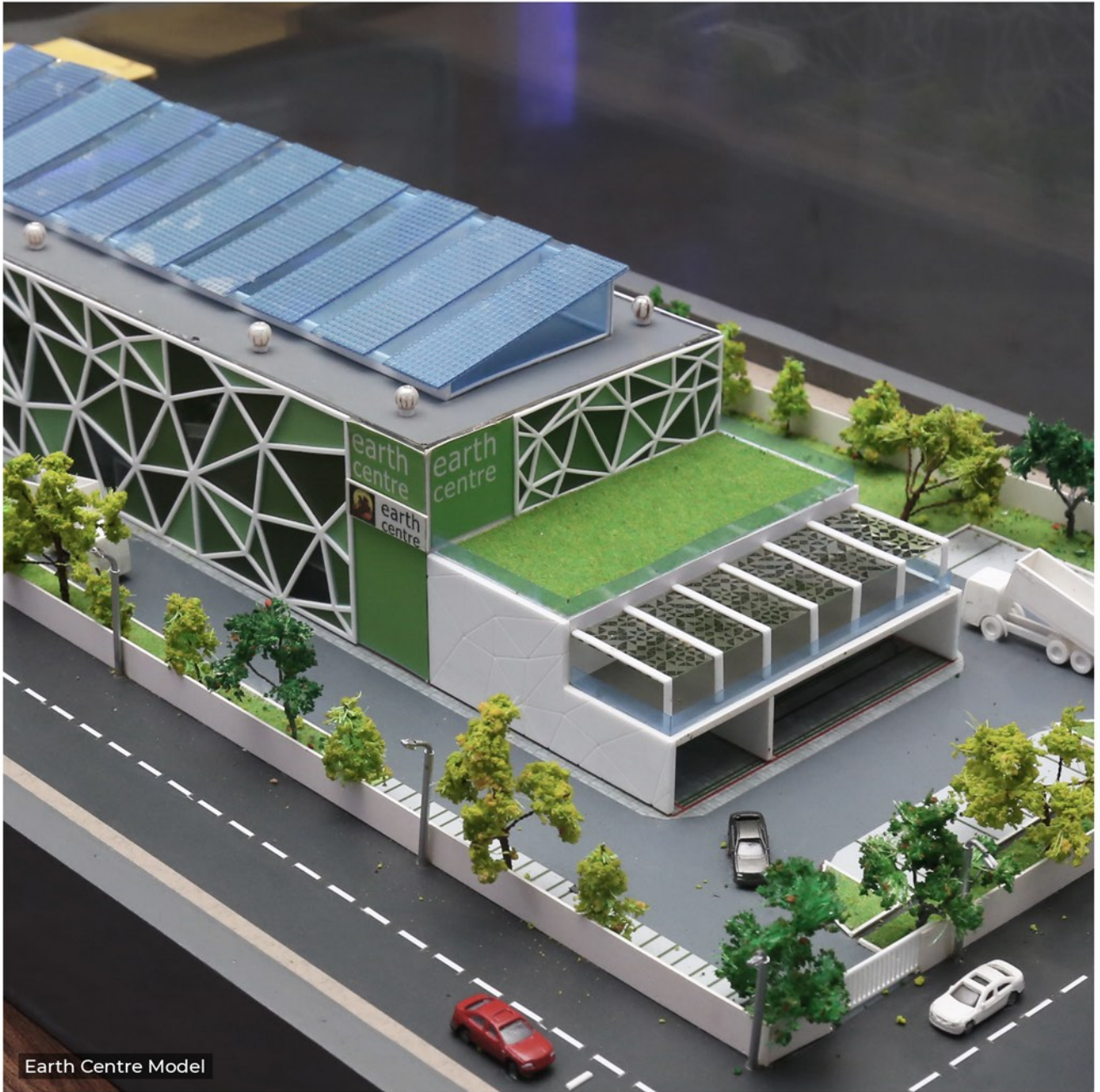
Solid waste generation and disposal

During Ganesh Festival

Every year in our cities, the aftermath of the Ganesh festival, after a fortnight of celebration points to grave environmental concerns. It is imperative that we begin taking stock of the consequences of the celebration. Sustainability Initiatives conducted a research study to estimate the magnitude of waste generated along with an identification of material usage. The study indicated that a variety of materials like Plaster of Paris, thermocol, coir, wood, etc. were extensively used by more than 3000 Sarvajanic mandals and individual households. We attempted to sensitively address the issue by bringing about an awareness of the toxicity and non-biodegradable nature of most of these materials whilst also discussing alternatives and recommendations for the masses

Pilot study on garden waste treatment

SI team conducted a research on garden waste management including treatment methods for garden waste in housing colonies and carried out a pilot experiment at Shrirang housing colony in Pune. Garden waste from 26 plots of 3000 sq ft was collected and stored in a vermiculture pit. The vermicomposting process was constantly monitored to assess the quality of the treated waste. The results showed that it took about 3 months to treat 3 brass of Garden waste in to fine quality manure. It also showed that the volume of waste was reduced by half after the composting process. The compost was later distributed in the nearby plots



Earth Centre Model

Earth Centre

Connecting People to Waste

Sustainability Initiatives, VK:a architecture and VK:e environmental team have conceptualised 'Earth Centric Unit' referred to as the "Earth centre" with a vision to offer valuable environmental and social services by way of a de-centralized solid waste management facility. The Centre has been designed to serve maximum segregation, diversion, treatment and recovery to reduce the landfill area requirement and minimize environmental and social impacts. It serves as a neighbourhood decentralized solid waste treatment and diversion unit with an inherent character to be citizen- friendly. The idea is to engage citizens in solid waste management through responsible behaviour, in contrast to viewing this public infrastructure as dirty and "someone else's job".

The Earth Centre Prototype Design can cater to 9 MT of Organic Waste, 1 MT of Plastic Waste, 100 kg of Sanitary Waste along with e-waste and recyclable waste tie-ups for diversion. In addition, the Earth Centre shall offer a state-of-the-art- Citizens Dry Trash drop facility, Citizen Information & Help Centre, Waste Food, Shoes and a Clothes Donation Facility along with interactive spaces like a restaurant, art gallery, cafeteria with wi-fi, gathering spaces for small events, upcycled product store, nursery etc. which will connect people to waste.

The prototype, its allied research and techno-commercial feasibility have been completed and SI is now determined to roll out a demonstration project to raise awareness and evaluate the benefits of this facility.

Earth Center is not merely a Solid Waste Treatment Facility, but it is an opportunity to trigger behavioral change through participatory approach. It is a concept in Circular Economy which connects People to Waste, People to Technology & People to People. The proposal is developed as a replicable & scalable prototype.

Project Vision

- Decentralized Solid Waste Management at Ward Level
- Address the NIMBY Syndrome
- Reduce Social & Environmental Costs of Waste Management
- Make Waste Management Trendy Acceptable & Financially viable
- Promote Awareness, Up-cycling & Recycling Opportunities

Technology and Functional Space

Organic Waste Treatment ~ 9 MT
Plastic Waste Treatment ~ 1 MT
Sanitary Waste Incineration ~ 100kg/day
Inorganic Waste Diversion for Recycling
E-waste Diversion for Recycling



Interactive Space

Citizen Waste Drop off Facility
Citizen Information & Help Centre
Waste for Donation Centre
Workshop & Seminar Space



Recreation + Gardens

Buffer Plantation all around
Open Space for Recreation
Yoga Centre



Environmental Services

Parking
Toilets
Employee Welfare



Renewable Energy

Solar Energy Installation
Demo Space for
Alternative Technologies



Food and Shopping

Upcycling Product Store
Cafeteria with Wi-fi
Saplings & Manure Shop









'Green Buildings in Pune' Map

Sustainability Initiatives initiated the design of a handy map that locates, lists and provides information on the Gold and Platinum IGBC Rated Green Buildings in Pune. This map was unveiled at the Inaugural function of the Green Conclave by CII in Pune on 30th November 2017 at Hotel Westin, Koregaon Park. The Map locates all the Green Buildings on Pune's geography and provides information on the identified buildings. This was a user-friendly medium of translating valuable information about the green building initiative in Pune to the larger masses.

The publication that incorporated the handy map, recognized the numerous efforts of various Green building teams who have made remarkable contributions towards Sustainability through iconic building design. The map publishing event was in the presence of dignitaries and officials of CII and IGBC including Mr. J. P. Shroff : Chairman, IGBC Pune Chapter; Mr. Shrikant Bapat, Green Conclave Chairman and Convenor; Mr. Nitin Chalke, Chairman, CII Pune Zonal Council, and N. Srinivas, Dy. Executive Director CII. SI team members, Ar. Poorva Keskar, Ar. Anagha Paranjape – Purohit, Mrs. Apoorva Kulkarni, Ar. Namrata Dhamankar and Mr. Amol Umbarje were present, along with SI Interns Ms. Namrata Shinde, Ms. Nikita Deshpande, Mr. Hiroshi Yoshinaka and Mr. Kouhei Yamada.

'Green Footprints of Pune' Book

Sustainability Initiatives released the book 'Green Footprints of Pune' on 2nd February 2017 at the Inaugural ceremony of the Pune Heritage Festival and Urban Heritage Symposium in YASHADA Pune. The book recognizes the numerous efforts of many individuals and organizations who have made a remarkable contribution towards "Urban

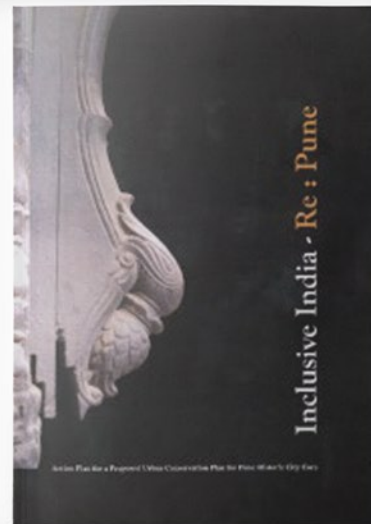
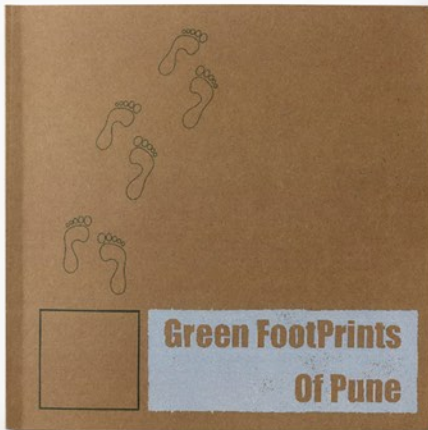
Sustainability” through their work across Pune. From Green Buildings to Garbage management, this book can inspire us towards taking up Greener Lifestyle. The book publishing was graced by the Chief Guest of Honor Dr. Nitin Kareer, Principal Secretary, Urban Development Department, Government of Maharashtra. Guest of Honor, Shri. Kunal Kumar , PMC Commissioner and Chief Guest Ms. Abha Narain Lambah. A soft copy of the book is also available on the PMC official website.

SI : Imprint

SI launches its newsletter SI: Imprint. The newsletter intends to catalyze the engagement of SI members and associates towards the Trust activities and encourage their contribution and support. This newsletter was conceived with the motto of imparting awareness about Sustainability across various disciplines and disseminating knowledge that brought an interconnected understanding of Sustainability amongst all verticals. The publication covers a variety of topics and brings to its readers the analysis and approaches to sustainability in different sectors. This publication aims to reach out to a wider audience base and stakeholders working in the field of environmental design, planning, urban development and social awareness, thereby encouraging more people to contribute towards sustainability.

Inclusive India : Re:Pune

Sustainability Initiatives, along with the Royal University of Art, Stockholm, Dr Bhanuben Nanavati College of Architecture, Pune, and Intach Pune chapter published a book that features an action plan for the conservation of the historic core of Pune city. The publication is based on extensive research on the heritage buildings and sites in Pune and the need to retain their existence. The research was jointly conducted by the students of Dr BN College of Architecture, Pune and Royal University of Arts, Stockholm.





Capacity Building

Capacity Building through Training and Awareness programmes and dissemination of essential knowledge and skills is a cornerstone towards achieving sustainable development. The Capacity Building Wing of 'Sustainability Initiatives' provides training and guidance to professionals, academicians, decision-makers, and students for effective policy formulation, implementation and implementation, and mainstreaming of best practices. The primary aim of the Sustainable Development Goals 2030 is to 'Leave no one behind'. At Sustainability Initiatives, we resonate deeply with this sentiment. Our capacity-building programmes in the coming decade will focus on empowering individuals, institutions and communities towards achieving the collective implementation of the targets of the SDGs.



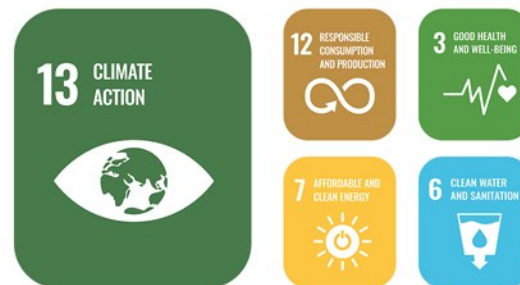
01. CONFERENCES & SEMINARS



02. TRAININGS & WORKSHOPS



03. EXPOSURE VISITS





Nashik, 2014



Jalgaon, 2015



Mumbai, 2018



Pune, 2017

Conferences

Enhancing and building skills and capacities adds greater value and empowers the individual and the collective to embark on the road to sustainability, as opposed to purely enabling solutions. We conceptualise and enable various events with collaborations, to empower the community towards key aspects in Sustainability.

GRIHA Regional Conferences

Sustainability Initiatives has successfully organised GRIHA Regional Conferences. The 5th edition was hosted at the Nashik Engineering Cluster on 7th and 8th November 2014. The Conference was organized in association with ADa RSH (Association for Development and Research on Sustainable Habitats), a secretariat jointly set up by the Ministry of New and Renewable Energy (MNRE) and The Energy and Resource Institute (TERI). For the 7th edition SI in association with Gandhi Research Foundation, Jalgaon organised a conference on the topic Smart cities and Smart Building- Traditional Wisdom and Technology for Sustainability. This 2 day conference on 4-5 December 2015 was a successful event with participants more than 150 from in and out of Jalgaon. It took place at Jain hills at Jalgaon

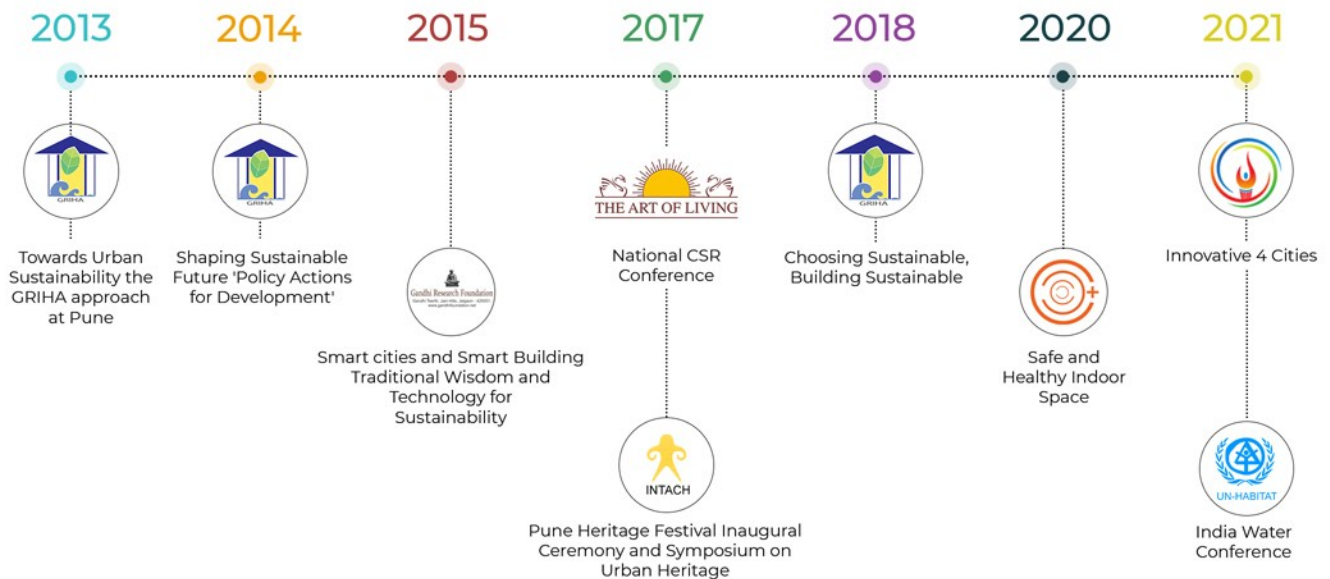
Global Conferences

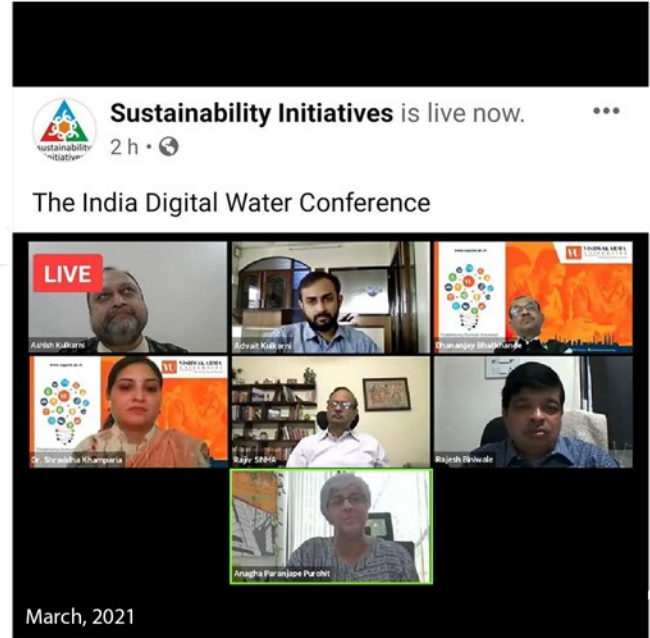
SI was empanelled as a regional curator for the South Asia Region along with BNCA and MIT for a global conference co-hosted by the UN-Habitat and the Global Covenant of Mayors for Climate and Energy (GcoM). The Innovate4Cities Conference was an international platform envisioned with a focus on the nexus of cities, climate change science, and innovation. It brought together over 1000 city leaders, scientists, researchers, innovators, academics, youth and entrepreneurs to initiate a discourse on advancing pragmatic, action oriented research and science that would aid cities in reducing their carbon footprints and building resilience to climate change.

Other Conferences

Art of Living Foundation and Social Responsibility, in association with Sustainability Initiatives, organized A National CSR Conference for NGOs and Corporates on 15th August 2017 at Pandit Bhimsen Joshi Kalamandir, Aundh in Pune.

Apart from physical conferences, we also host Digital Conferences to enable larger outreach. On the Occasion of the 9th Foundation Day of SI, Sustainability Initiatives, along with the support of Shycocan Corporation, Pune Municipal Corporation, Maha NGO Federation, AESA, ISHRAE, RFRF Asian NGO and ASSIST, organized a Digital Conference on Safe and Healthy Indoor Spaces.





Workshops

11 13 3 15 12

Hands-on workshops help support theory and supplement it with live experience. We conduct various workshops to imbibe interactive learning. We work actively in collaboration with NGOs to build capacities. One such workshop was in partnership with the Art of Living Foundation and the MIT School of Government and Social Responsibility. This was a two-day State Level Workshop on NGO Capacity Building on the 2nd and 3rd December 2017 at the Swami Vivekanand Auditorium, MIT, Kothrud, Pune. Many of our workshops also are directed towards building capacities of organizations and individuals towards Green building approaches and understanding rating systems like IGBC, GRIHA and ECBC and build awareness with respect to Environmental issues and Environmental Impact Assessment. Sustainability Initiatives organized a training programme for the officers of PCMC to give them insight into green building design, processes adopted to design, operate and evaluate.



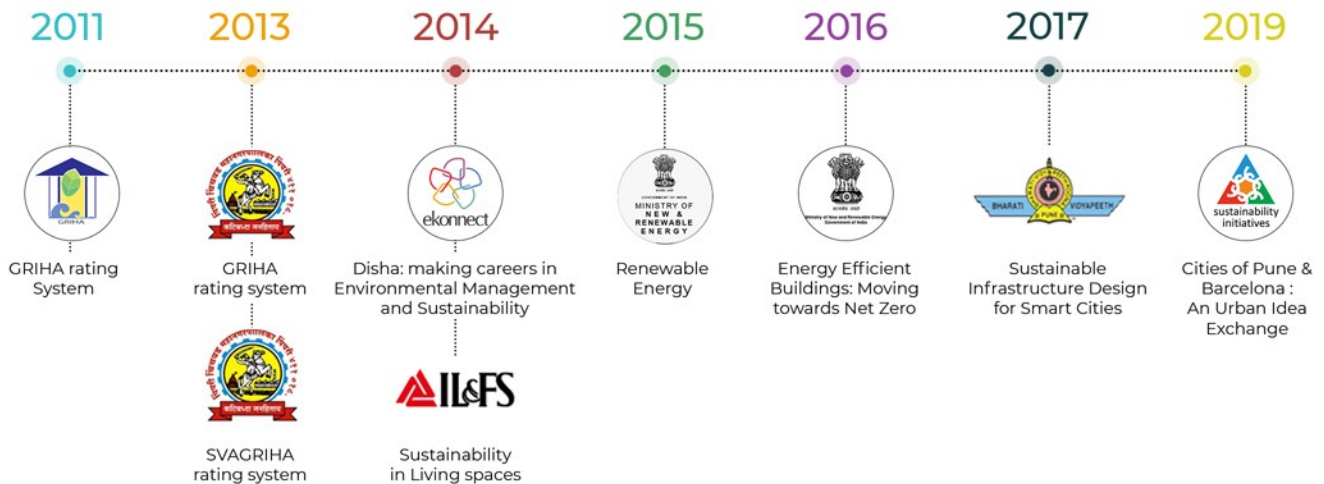




Seminars

11 13 3 15 12

23rd February 2019, Sustainability Initiatives had arranged 'Cities of Pune & Barcelona: An Urban Ideas Exchange Seminar' at Patrakar Bhavan, Pune. Renowned urban planner Sulakshna Mahajan and Karuna Gokhale's book by Rajhans Prakashan 'तुम्ही बी घडा ना' was launched in the same event. This book was translated from an original Catalanian book by Ex-Deputy Mayor of Barcelona Mr Antoni Vives. SI also conducts sensitizing seminars on alternative forms of energy. SI received a mandate from MNRE to conduct an awareness programme on Renewable Energy. This one-day seminar was conducted in Aurangabad, on 31st October at Hotel Atithi. This seminar rendered valuable insight into various available renewable energy technologies, varied systems for designing energy-efficient buildings and policy, and financial incentives available for their execution.





Spain, 2018



Pune, 2016



Pune, 2018



We offer hands-on training programmes for organizations and institutions in various key areas. We invite experts- in house or through collaborations to provide insights and train participants in diverse domains like Environmental Impact Assessment, Green Rating Systems, Waste Management, Climatic Design, use of Energy Simulation Softwares etc. Training on Environmental Impact Assessment. Sustainability Initiatives conducted a 3-day workshop on Environmental Impact Assessment (EIA) for the environmental science students of Fergusson College. Students enjoyed working on this exercise and the presentation that followed. The participants were also given field training on conducting an ecological survey in the Botanical garden of Fergusson College.

Global Training

Sustainability Initiatives successfully conducted our first International Training on 'Urban Renewal and The Future of Cities' in December 2018. This training was conducted for Officers / Town Planners of the Department of Town Planning and Valuation of Government of Maharashtra. This two week training was designed, developed and implemented by senior experts at London School of Economics (Custom Programmes), who partnered with Sustainability Initiatives, Pune as a local partner. The training's primary objective was to bring quality content and a rich teaching and public policy experience to the officers of Government of Maharashtra. The Training was hosted in Barcelona, Spain.

Another international training was the Ex - Country Training on Green and Energy Efficient Construction Technologies for the Ministry of Works and Human Settlement, Royal Govt. of Bhutan. Some of the key topics covered in the Training Sessions were the Introduction and relevance of Green Rating Systems, Site planning, Water and Waste Management, Green Building Materials, Passive Design and Planning, Thermal comfort & IAQ, and Energy Conservation.

Software Simulation Training

SI is also a facilitator to young minds and enables training along with collaborators on the use and applications of Energy Simulation softwares. We have organized these training sessions to students of various institutions viz. Symbiosis Institute of International Business (SIIB), PVP college of Architecture The training sessions include understanding the stage-wise use of these softwares in the design of buildings and the estimation of the overall energy performance of the building.

Fire and Life Trainings

We also conduct training in Fire and Life safety to empower individuals and offices towards combating the risks of fire hazards. One such training was in collaboration with the Fire and Security Association of India for the VK group staff on Fire and Safety through a series of demonstrations and lectures. Employees of VK:a architecture, VK:e environmental, VK:i interiors , VK:u urban, Sustainability Initiatives actively participated in the activity.





Pune, 2019



Barcelona, 2018



Pune, 2017



Visit to Suzlon 'One Earth'



Visit to Suzlon 'One Earth'



Visit to Amar Business Park



Visit to Ovalnest



SI facilitates and conducts visits and exposure tours to 'Green Buildings'. These visits help students and institutions gain insight to the practical applications of Green Architecture through live walkthroughs of Green Buildings. These visits aid in bringing an in-depth understanding of green systems, building technologies and holistic approaches towards achieving sustainable lifestyles in buildings. One such site visit was organised for the students of SVS College of Architecture, Coimbatore, who are pursuing their Master in Architecture. The visit was arranged on 10th January 2020 to the Suzlon One Earth Campus, Pune. The students were given a tour of the building by the consulting expert and the building manager of the project. The visit helped in understanding principles of sustainable architecture conceptualized by the architect.

Environmental services, like an Organic Waste converter, Renewable Energy Systems, Rainwater Harvesting techniques and Energy and water monitoring systems were integrated into this Green Building project. The site visit was beneficial for the students to understand ways and means of weaving sustainability at the core of the built environment.

Other Exposure visits include

SKF Corporate office at Chichwad for students of Symbiosis Institute of International Business (SIIB)

Royal Orange County Residential Complex in Rahatane and Amar Business Park in Baner for students of Symbiosis Institute of International Business (SIIB)

Visit to the Oval Nest Residential Housing Society at Warje for students of Vishwakarma Institute of Information Technology, Pune



Advocacy and Outreach

Advocacy is one of the pillars of Sustainability Initiatives. The efforts under the Advocacy and Outreach wing aim to address gaps within the current and future policies of the government. One of the prime objectives of Sustainability Initiatives is to guide governmental and semi-governmental departments in policymaking through expert-driven research and analysis. Advocacy is one of the key pillars of Sustainability Initiatives.

The Sustainable development goals emphasize the importance of bringing a change at a systemic level. With this vertical, we aspire to effect change through policies that embed sustainable design principles at the core of urban and rural development.



01. POLICY ADVOCACY

- Urban Street Design
- Creating vision for Pune Metropolitan region
- Pune City EV Cell
- Voicing Opinions and Providing Directions



02. OUTREACH ACTIVITIES

- Tree Plantations
- E-waste Drives
- Earth Hour
- Celebrating Days
- Spreading awareness about Sustainability City Development
- Working with children





URBAN STREET DESIGN GUIDELINES PUNE





Urban street design

Vk:a architecture submitted Urban Street Design Guidelines (USDG) to the Pune Municipal Corporation. Sustainability Initiatives was the Public Outreach Partner for this project and contributed through outreach and awareness initiatives. Over 8000 opinions surveys were collected by SI to understand the citizens' perspectives about streets and their design. This helped in validating and strengthening the proposed design recommendations. SI also conducted stakeholder consultations in association with VK:a and organised awareness activities in schools and colleges.

Creating a vision for Pune Metropolitan region

With increased urbanization, the need for integrated regional planning has become ever more important. Sustainability Initiatives in association with Janwani a social initiative of Mahratta Chamber of Commerce has initiated a project to succinctly put together the vision for the Pune Metropolitan Region through informed stakeholder consultations. The Pune Metropolitan region is the region including the area within the city limits and the fringe areas where development is increasing at a growing rate.

The project aims to utilize an envisioning process that relies on market realities and diverse stakeholder inputs overlaid with environmental-spatial constraints, and create a base for effective planning in Pune Metropolitan Region. As geographical regions share the same physical spatial context and the same strengths and weaknesses with respect to location, thus it makes sense to plan regions integrally so as to ensure equitable, healthy and resource efficient planning.

Pune City EV Cell

Stakeholder consultation

Pune City had participated in the Global Mayors' Challenge by Bloomberg Philanthropies' in 2021 with its proposal to create an Electric Vehicle (EV) readiness plan and City EV fund. The proposal was drafted in support of the adoption of electric vehicles in Pune. During this phase of the challenge, Bloomberg Philanthropies had requested Pune Municipal Corporation (PMC) to develop a prototype of its proposal. The prototype being developed by the PMC entails a governance structure for planning, coordination, and decision-making. Some of the primary aspects of the prototype include- promoting and enabling EV adoption, including coordination with central and state policies, local fiscal and non fiscal incentives, infrastructure siting and commissioning, electricity tariff design, and consumer awareness. The governance structure will be referred to as the Pune City EV Cell. To support the design of the City EV Cell, Sustainability Initiatives supported Pune team in carrying out following activities:

Citizen survey: Around 1000 citizens were surveyed across the city which included EV owners, students, auto and cab drivers, working professionals. The survey acted as a crucial indicator of the awareness about Electric Vehicles among the citizens of Pune.

Industry round-table workshop: A round table workshop with urban local bodies and EV industry was conducted on 22nd October 2021 to facilitate the adoption of EVs in Pune City.

Around 80-100 participants from the EV industry and government departments attended this workshop. The chief guests for the ceremony were Hon. Mayor Mr. Muralidhar Mohol and Mr. Vijay Kulkarni (Road Department). Hon. Mayor of Pune presented the existing EV ecosystem scenario in the city and also talked about future plans for making the city EV ready. The workshop helped facilitate an open platform for discussions, and served as a platform for seeking industry feedback on Pune's electric mobility initiatives.





EV Industry Convening Workshop



Pune City EV Cell Meeting



Citizen's Survey



Citizen's Survey

Voicing Opinions and Providing Directions

We actively voice our opinions by way of filing suggestions and objections towards formation of development plans of cities and regions.

Presentation of Incentives Framework

GRIHA rated buildings in PCMC

Sustainability Initiatives guided the Pimpri Chinchwad Municipal Corporation (PCMC) to develop a framework for the incentives to be offered to the developers and homeowners of GRIHA rated buildings in the PCMC jurisdiction. Experts from SI have contributed through organizing stakeholder consultations and sharing expert advice for the incentives scheme and developed a incentive framework that is in best interest of all stakeholders. Along with technical guidance, SI also supported PCMC by organizing capacity building programs for internal and external capacity building. SI also assists in creating promotional material for the widespread reach and implementation of the GRIHA rating system .

More details of the incentives offered are available on the Pimpri Chinchwad Municipal Corporation website (www.pcmcindia.gov.in)

SVAGRIHA rated buildings in PCMC

SVAGRIHA rated buildings in PCMC After incentivizing the GRIHA rated buildings under their jurisdiction, Pimpri Chinchwad Municipal Corporation (PCMC) has also adopted the new SVAGRIHA rating system which is applicable for small projects under 2500 sq.m . SVAGRIHA rating system is a design cum rating tool which helps in design and evaluation of individual residences, small offices, schools, motels, commercial buildings etc. Experts from SI have facilitated consultations with all the stakeholders and helped the PCMC in developing the incentives framework for SVAGRIHA rated buildings. Promotion of the rating system and other capacity building activities are also being carried out by SI in collaboration with PCMC and the GRIHA secretariat.

GRIHA and SVAGRIHA rated buildings in NMC

Green building are being looked upon as a means for optimum use of resources and a very effective way for environment conservation. SI has also initiated work for creating a incentives framework for GRIHA and SVAGRIHA rated buildings under the Nashik Municipal Corporation jurisdiction. SI has facilitated stakeholder consultations with CREDAI and IIA bodies from the city to understand their expectations of incentives to promote the wide-spread building of environment friendly construction. SI further coordinated with the NMC to develop a incentives framework which is in the best interest of all stakeholders. SI is providing its expert advice to develop the best possible incentives framework which will help in wide-spread adoption of green building in Nashik and help in optimum use of resources through the medium of GRIHA rating.

White Paper on possible Incentivization Energy Efficiency measures in Buildings For the Planning Commission Working Committee on Energy

Ar Anagha Paranjape-Purohit and Ar Namrata Dhamankar of Sustainability Initiatives worked closely with the Prayas team to develop a white paper on possible avenues and requirement of providing incentives for building energy efficiency measures in commercial buildings. The SI team worked with Late Girish Sant and Daljit Singh of Prayas on this. Numerous roundtable discussions were conducted with developers, architects and energy managers to understand where and how incentives will be effective, if at all, in ensuring energy efficiency in buildings.

Filing of Suggestions and Objections

Draft Development Plan 2007-2027 of the Pune Municipal Corporation (PMC)

The Pune Municipal Corporation (PMC) published the Draft Development Plan 2007-2027 on its website on 27th March 2013 and it was open to public responses through suggestions and objections. Sustainability Initiatives, with urban planning at its core, submitted a detailed document for suggestions and objections on this Development Plan. The suggestions covered areas of policy for land use, metro influence zone, cluster development, middle class housing development, recreational open space and density and modifications in the new Development Control Rules. Urban planners from SI also conducted awareness sessions for citizens in various parts of the city to explain them the process of urban planning and how this Development Plan will affect their neighborhoods. Citizens were also encouraged to voice their opinions about the development plan.

Housing schemes for economically weaker sections and Low Income Groups (EWS / LIG)

In January 2012, a Government Resolution (GR) was issued by the Urban Development Department to modify Development Control (DC) rules for all Municipal Corporations with regards to housing schemes for Economically weaker Sections and Low Income Groups (EWS / LIG). Urban planners from SI and its associate members studied the document and submitted suggestions and objections to this resolution for reservations in housing projects for economically weaker sections.

Revised City Development Plan for Pune

A 'Revised City Development Plan for 2041' for Pune, under JNNURM was prepared and published by Pune Municipal Corporation in Feb 2013. The PMC invited the stakeholders of the city to suggest their inputs for the improvement of this development plan. SI studied this document and suggested that some points from the document should be reconsidered and revised.



Tree Plantation Drive



Tree Plantation Drive

Tree Plantations

Green regeneration on sparse open spaces in the city, has been an initiative of utmost priority at SI. We have successfully executed tree plantation drives in different parts of the city giving the city its lungs back. We conduct plantation drives every year in collaboration with various organizations. One of the drives by Sustainability Initiatives was planned in collaboration with Maha NGO Federation for a plantation drive led by the Forest Department at Taljai on Sunday 14th July 2019. Till date we have conducted 5 such plantation drives where in, we have planted **2961 trees** with the help of **899 volunteers** which include SI volunteers, employees of VK:a architecture, VK:e environmental, VK:i interiors , VK:u urban, Resilient Cosmeceuticals, Genesupport, GeneOmbio, Water P Moore, school children, FSAI Members, FSAI Student Chapter members, Maha NGO Federation members, senior citizens, a group of cognitively challenged students from the Navkshitij Foundation, and children of Mamta foundation, an organization for HIV +ve children.



E-Waste Collection Drive



E-Waste Collection Drive

E-Waste Drives

Sustainability Initiatives periodically carries out collection drive for e-waste from its staff at offices- VK:a architecture, VK:i interior, VK:e environmental and VK:u urban. The collection drive aims to create awareness about the ill-effects of e-waste and the right approaches to discard them safely.

E-waste contains mercury, nickel, cadmium, cobalt amongst other dangerous chemicals and heavy metals that pollute the environment and can prove to be a severe hazard, if disposed of, unscientifically. The environmental effects of improper disposal of e-waste are little known; these impacts, nonetheless, pose great threat and can be detrimental to the health of humans on a global level.

We also collaborate with organisations who work with waste collection, segregation and recycling. Sustainability Initiatives donated e-waste collected from its staff and the offices of VK group to 'E-Waste Global', an authorised e-waste collector and disposer and 'Poornam EcoVision Foundation' , an organization working extensively in the collection of e-waste, plastic waste, and toys collected from residential colonies and institutions in and around Pune. The used electronic goods are refurbished at their centre and sent to be reused. Remaining e-waste and plastic waste are then channelized to authorised recyclers / re-processors for safe disposal.

Till date we have successfully disposed **980 kg** of E-Waste in safe and scientific manner.

Earth Hour

Earth Hour, organized by WWF, is a global grassroots movement uniting people to take action on environmental issues and protect the planet. Engaging a massive mainstream community, Earth Hour was famously started as a lights out event in Sydney, Australia in 2007. Since then, it has grown to engage millions of supporters in more than 185 countries and territories, inspiring individuals and organizations worldwide to take action for the environment, and driving major legislative changes by harnessing the power of the crowd. The annual Earth Hour lights out event is held worldwide toward the end of March to encourage individuals, households, communities and businesses to turn off their non-essential lights for one hour as a symbol for their commitment to the planet.

Sustainability Initiatives has taken it one step further by observing Earth Hour every month. Sustainability Initiatives along with VK:a architecture, VK:e environmental, VK:i interiors and VK:u urban employees observe the 'Earth Hour' on the third Friday of every month wherein all fans, lights, ACs, printers and lifts are shut for one hour between 10.00 am and 11.00 am. In the month of February this is administered for half day.

Earth Hour Details			
Month / Year	Earth Hours	Saving Units/ KWH	Cost
Apr 17 - Mar 18	12	61	885
Apr 18 - Mar 19	12	62	899
Apr 19 - Mar 20	11	60	870
Nov 21 - Jun 22	12	183	2654
Total	45	333	5307

EARTH HOUR

#CONNECT2EARTH



What does the Earth Hour logo mean?

The standard Earth Hour '60' logo represents the 60 minutes of Earth Hour where we focus on the impact we are having on our planet and take positive action to address the environmental issues we face.

For Earth Hour 2011, the '60+' logo was introduced representing a commitment to add to Earth Hour a positive act for the planet that goes beyond the hour. Take up the 'plus' and get involved with the movement beyond the hour.

60+
EARTH HOUR

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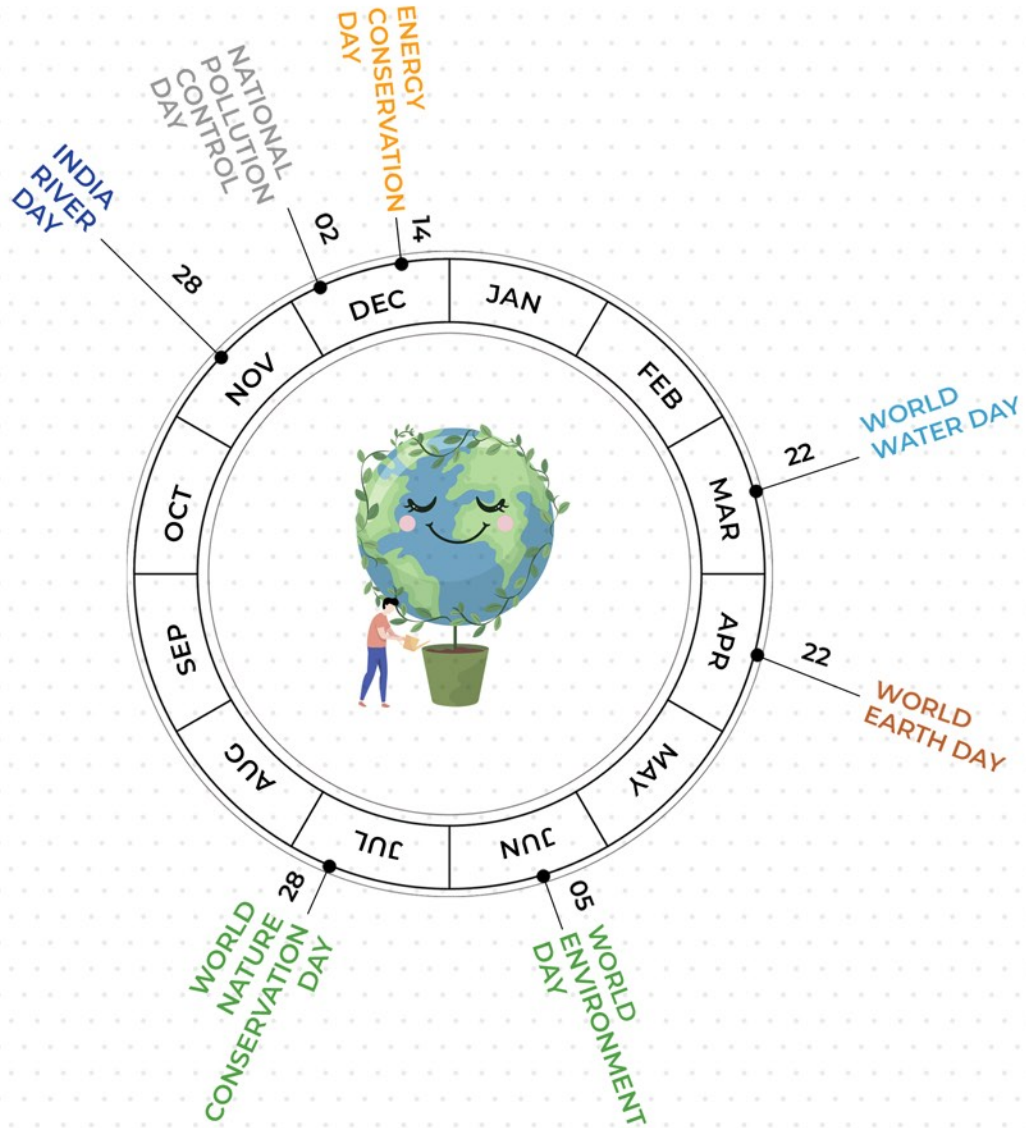
Shape Our Future
earthhour.org

60+
EARTH
HOUR

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Celebrating Days



World Environment Day

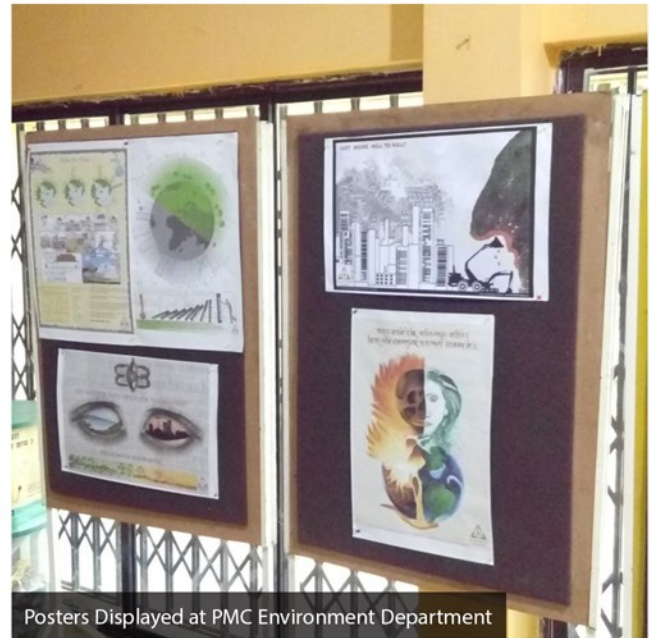
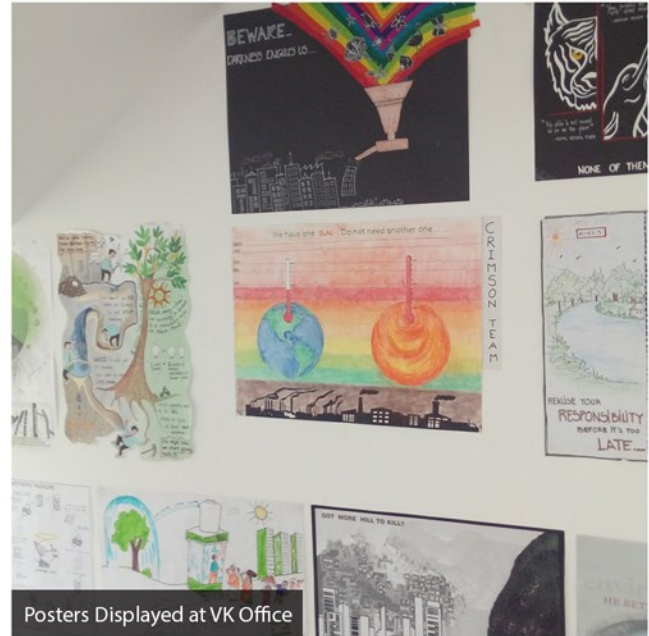
World Environment Day (WED) is celebrated annually on 5 June and is the United Nations' principal vehicle for encouraging awareness and action for the protection of the environment. Various activities are conducted across the globe to celebrate this day. Sustainability Initiatives celebrates this day with variety of activities by collaborating with various organisations to take this subject to all types of stakeholders.

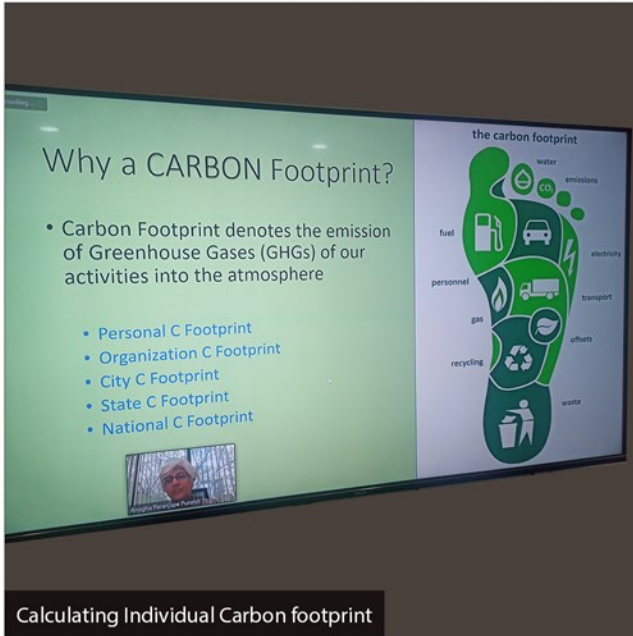
Expert Talks

We have conducted interactive sessions with experts on environmentally sensitive issues like 'Great Indian Bustard and its conservation' with Dr. Pramod Patil, a 'Vasundhara Sanman' award winner. A panel discussion was conducted on Air Pollution to understand the air pollution in Pune specifically and other cities in India and discuss various measures that are being taken and that should be taken to address the rising air pollution in Indian cities. The invited panelists were Dr. Gufran Beig, senior scientist at the Indian Institute of Tropical Meteorology (IITM), Pune; Dr. Sundeep Salvi, Director, Chest Research Foundation, Pune and Mr. Mangesh Dighe, Environment Officer, Pune Municipal Corporation. Poster making competitions on different themes were conducted at VK office which were then displayed at various government buildings, schools, colleges etc. to create awareness.

Poster Competition

We believe in learning by doing, so on such occasions, we encourage VK Group employees to make their lifestyles environment friendly. Some of such initiatives include carpooling and using public transport or non-motorised commute, reusing plastic bottles as planters etc. Poster making competitions on different themes were conducted at VK office which were then displayed at various government buildings, schools, colleges etc. to create awareness. Some of the topics are plastic free world, environment pollution, climate change etc. This activity made every participant think on how they can proactively contribute towards Sustainable development.





Calculating 'Individual Carbon Footprint'

A very eye opening activity was conducted where participants calculated their individual carbon footprints. Through the talk, Ar. Anagha Paranjape urged the audience to start becoming conscious of our lifestyles and question our every action from the point of view of reducing carbon emissions. The key takeaway of the session was that the power of small steps taken collectively could pave the way for a greater change in reducing carbon emissions globally.

Awareness Drives

Sustainability Initiatives created awareness on Indoor Air Quality by presenting air purifying indoor plants to senior officers of the Pune Municipal Corporation. To create awareness about importance of indoor air quality we decided to place indoor plants in the offices of Hon. Mayor, Hon. Commissioner, Hon. Additional Commissioner (Special), Hon. Additional Commissioner (General), Hon. Additional Commissioner (Estate) and Hon. City Engineer of the Pune Municipal Corporation.

Indoor Air Pollution is often ignored while everyone is busy debating how to tackle outdoor air pollution. But indoor environments, especially air-conditioned, sealed buildings can accumulate significant levels of Volatile Organic Compounds (VOCs) like Benzene, Formaldehyde, Ammonia, Trichloroethylene, Xylene etc. These compounds are emitted by wood particle boards used in furniture, upholstery, tapestry, printers, photocopiers, computers, floor cleaning liquids etc. Accumulation of these chemicals can cause headache, nausea, eye irritation etc. and prolonged exposure can have serious effects on vital organs of the body.

A study by NASA highlighted a number of indoor plants that absorb these VOCs and help keep indoor air free of these chemicals. This includes plants like Rhaps Palm, Chinese Evergreen (*Aglaonema* sp.), Spider Plant (*Chlorophytum* sp.), Money Plant, Snake Plant (*Sansevieria* sp.), Peace Lily (*Spathiphyllum* sp.), Weeping Fig (*Ficus benjamina*), Red-edged *Dracaena*, Cornstalk *Dracaena*, Flamingo Lily (*Anthurium* sp.) etc. NASA recommends that at least one large sized indoor plant should be placed for every 100 sq ft of indoor space. Several people across the world have started using indoor plants in their workplaces to keep indoor air pure.

Upcycling Competition

Upcycling is defined as “The act of taking something no longer in use and giving it a second life and new function. In doing so, the finished product often becomes more practical, valuable and beautiful than what it previously was.”

An upcycling competition was organised for VK Group where the participants were asked to create functional and durable products from the things they no longer need at office or home. Upcycling benefits the environment by reducing the pollutants of air, land and water in the processing of new goods – as well as preventing additional natural resources from being used. It also reduces the amount of excess waste which would otherwise end up in landfills.

Around 250 employees were grouped into 25 teams who made some amazing products through waste; Footrest and stools from emptied paper rolls, a hanger from antennae, soaps and scrub from coffee ground, pen stands from obsolete visiting cards, paper weights from rough papers, hair bands from masks, organisers from mango crates etc. to name a few. . These products were exhibited in the office studio for 2 days.



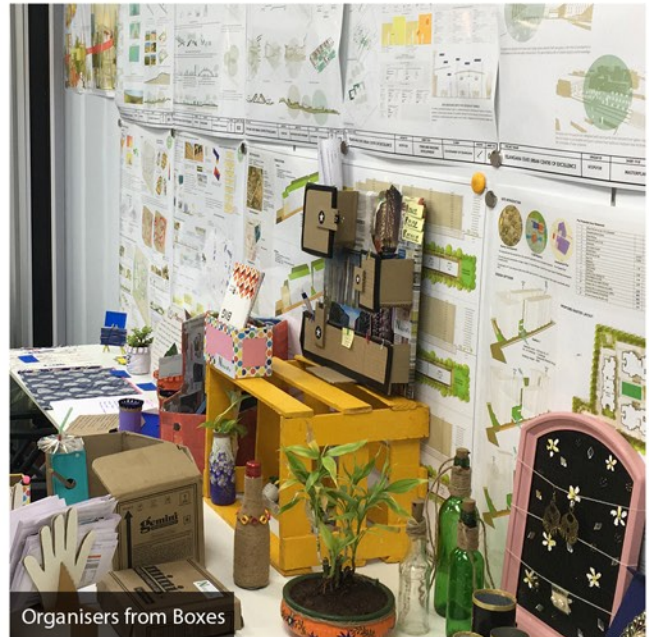
Quilts and Doormats from old clothes



Soaps from leftover Coffee Grounds



The Jury Round



Organisers from Boxes

World Water Day

Since 1993, March 22 has been marked as "World Water Day" every year to highlight the importance of freshwater resources. This day is meant to raise awareness about 2.2 billion people living without access to safe water.

Awareness Campaigns

This day is an opportunity to learn more about water related issues, be inspired to tell others and take action to make a difference. On the occasion of World Water Day, Sustainability Initiatives has installed water aerators on all taps of VK:a architecture, VK:e environmental LLP, VK:i interiors, VK:u urban and Resilient Cosmeceuticals Pvt. Ltd offices. Because of this, we will be saving 70% water that is consumed in these offices. Also, a campaign on 'Water Free Holi' was organised on occasion of holi to create awareness about water conservation under the circumstances of severe drought in Maharashtra.

Site Visits

Sustainability Initiatives in association with Pune Municipal Corporation, had organized site visits to natural water filtration plant and sewage treatment plants operated by the Pune Municipal Corporation. Around 85 students and faculty members from various colleges and employees of VK:e environmental, participated enthusiastically in this activity.

River Walk

A River walk was organised in association with 'Indian Green Building Council (IGBC) Pune Chapter which was focused at understanding the biodiversity around the river area, knowing the history of the river, getting informed about the ecosystem and get insight about right approaches towards restoring and maintaining a river. Around 50 people participated in this participative River walk. Certain important topics were addressed by the experts from Jeevitnadi such as the recent Riverfront Development Plan for the city and how it will transform the Mula Mutha River.



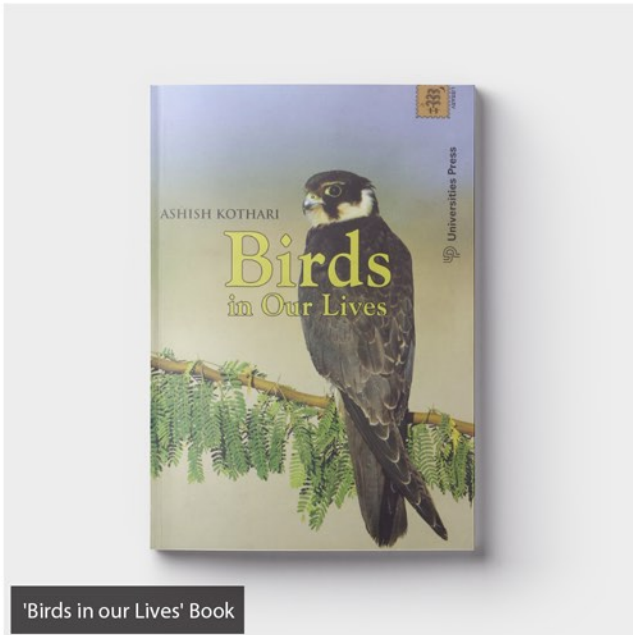
Visit to Water Filtration Plant



River Walk



Presentation on 'Birds in our Lives'



'Birds in our Lives' Book



Presentation on 'Birds in our Lives'

Nature Conservation Day

To create awareness about conservation of nature, Sustainability Initiatives organised a book reading session at a popular book cafe. The session was organised on occasion of World Nature Conservation Day in association with The Western Routes, Pagdandi Book Chai Cafe and Kalpavriksh. Ashish Kothari from Kalpavriksh read the book "BIRDS IN OUR LIVES" which is an account of the various birds in India and their conservation. He talked about ornithology through Indian history, birds and Indian economy, migrating birds and extinction of species and efforts for their conservation and read parts from the book related to these topics. Mr. Kothari also showed some pictures of rare birds from his book in a slide-show presentation. After the reading Mr. Kothari interacted with the audience and shared experiences about habitats and conservation of birds and other animals. The reading was attended by other authors and writers, avid readers and nature enthusiasts.

World Earth Day

Earth Day is an annual event on April 22 to demonstrate support for environmental protection.

Pledge for 'Plastic Free City'

Awareness campaign on harmful effects of plastic / polythene bags on environment was organised where we urged people to sign a pledge saying 'No to plastic'. Over 500 individuals took this pledge who were then gifted with reusable bags as a token of encouragement. Also a video was circulated amongst various stakeholders which effectively communicated the message of becoming plastic free city.

Bird Walk

Bird walk at Pashan Lake was organised on this occasion. Pashan lake is a man-made lake which hosts a variety of wetland birds such as storks, ibis, kingfishers, cormorants, ducks, herons and tree birds like barbets, wagtails, great tits and many more can be seen around the lake. Experts guided the participants to identify birds and also shared information about their habitats. Tree species were identified which particularly nest some species of birds. Participants were also made aware about the problems facing the lake and its surroundings – encroachment, human pressure, garbage, growth of weeds and invasive species and excessive eutrophication.

'Save Soil Movement'

Sustainability Initiatives collaborated with Isha Foundation for 'Save Soil Movement' to create awareness about the issue of soil degradation. Through our week long celebration we reached around 500 people from different sectors who took 'Conscious Planet Pledge' and became 'Earth Buddies' hence committing themselves to take eco-conscious decisions and be responsible towards their actions to save our planet.



Officers of Pimpri Chinchwad Municipal Corporation taking pledge



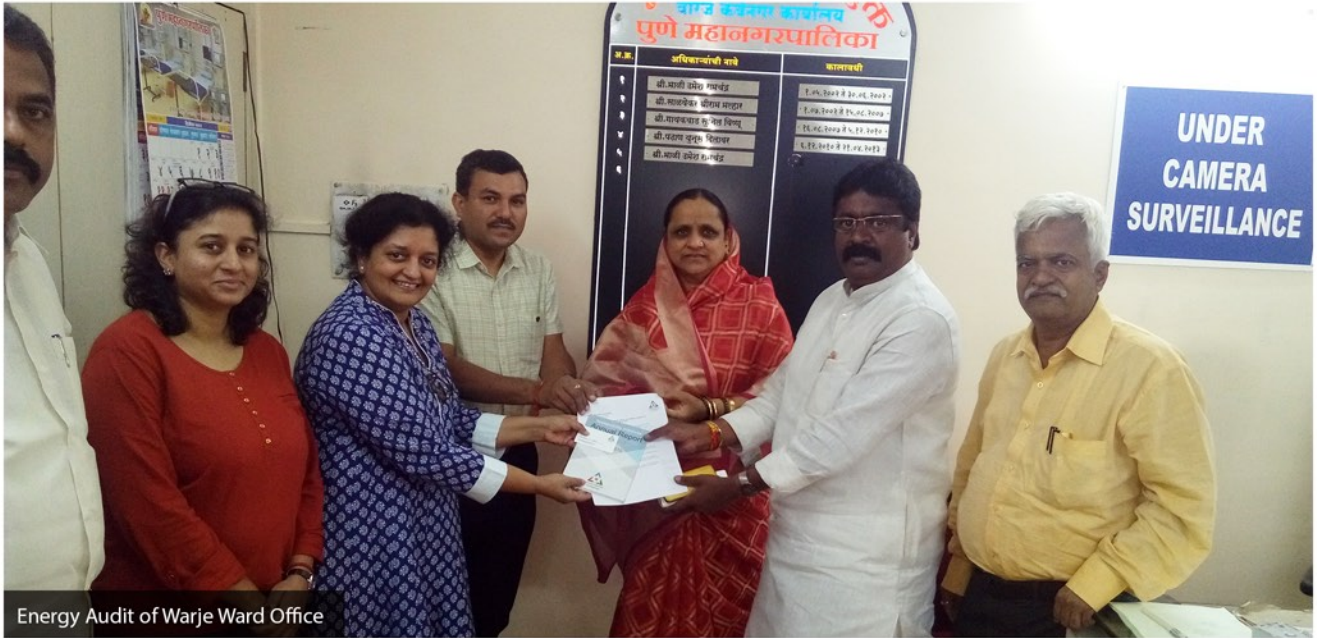
Pledge taking at Indian Institute of Architects Event



VK Group Employees becoming 'Earth Buddies'



Fire Department Officers becoming 'Earth Buddies'



National Energy Conservation Day

Energy is one of the major inputs required for the economic development of a developing country like ours. 'Every unit saved at consumer level is three units saved at generation level'. Hence it is of utmost importance to save energy to the most possible extent. Every year on the 14th of December, National Energy Conservation day is celebrated in India. This occasion has been celebrated since 1991, led by the Ministry of power. This day is celebrated to raise awareness regarding the conservation of energy as it is the best way to have a greener and brighter future.

Sustainability Initiatives along with VK:e environmental, celebrated this day by taking an initiative to conduct an Energy Audit at Warje – Karve nagar Ward office Pune Municipal Corporation. The audit was conducted under the guidance of certified Energy Auditor, with the help of volunteers. The motive of the initiative is to create more awareness and demonstrate the benefits of energy auditing and energy conservation.

National Pollution Control Day

The National Pollution Control Day is celebrated every year on 2nd of December in India in order to give the honor and memorialize the thousands of human beings who had lost their existence because of the Bhopal gas calamity. As a contribution to such awareness, Sustainability Initiatives has organized various activities in the VK:a office, Resilient, Genesupport, GeneOmbio. Employees were asked to get PUC Certificates for their respective vehicles. On 2nd December in order to consume less fuel and to create less pollution, employees were requested to come to office by public transport or walking or by sharing a car/bike. Active participants from the various teams were rewarded. An interactive session with Dr. Vishnu Shrimangle from SWaCH was organised which emphasised on pollution caused by improper waste handling and management leading to environmental degradation. An appeal was made to people to take Pledge to reduce pollution caused by our lifestyle on this occasion.

World Forestry Day

The United Nations General Assembly proclaimed March 21 as the International Day of Forests to celebrate and raise awareness of the importance of all types of forests.

Sustainability Initiatives celebrated this day by organising a session by Ms. Ketaki Ghate, who talked on "Devrai" - The Sacred Groves of Maharashtra. She spoke about the overall efforts of the tribal communities to conserve hundreds of old and rich forested patches, which were essential to our ecosystem. Ms. Ketaki also presented her work in this area and engaged the participants with several anecdotes about her teams' interaction with tribals and villagers working for the Sacred Groves. She also urged the participants to become stakeholders in conserving Forests, taking small steps at the community and neighbourhood levels. She suggested that these steps begin with a mindful acknowledgement of the flora around and the appreciation of the biodiversity it harbours.

India River Day

Jeevitnadi-Living River Foundation in association with Sustainability Initiatives, Pune organised a 'Conceptual Design Competition for Pune Riverfront'. It was one of the activities planned for 'Muthai 2016' a weeklong event which was organised to celebrate 'India River Day' which was on 28th November. The competition invited students of architecture and planning to give design solutions to these vibrant and ecologically sensitive banks of the river, to give conceptual design solutions to Re-establish this connect between the 'communities and river', 'bio-diversity and river', 'history, culture and heritage with the river.' Let's help river, revive its ecological functions and make our rivers – 'Jeevitnadi' a Living River! Mr. Rajendra Singh (Water Man of India) distributed prizes to the winner.



Expert Talk on 'Devrai'



Design Competition for Pune Riverfront



Waterman of India Mr. Rajendra Singh speaking at the prize distribution event



Display at Pune Smart City Exhibition



Explaining the 'Earth Centre' to officials from Pune Smart City Office



Green Society Contest Award Distribution



Display at A & I Exhibition

Spreading awareness

Contests and Awareness competitions

The Rotary Club of Gandhi Bhavan in association with Sustainability Initiatives had organised a Green Housing Societies competition. Housing societies that served as models in sustainable practices were shortlisted and received numerous accolades through the competition.

Exhibitions

Heritage Cities Exhibition

An exhibition was organised as part of the 'Indian Heritage Cities Network' fourth biennial conference. This exhibition was displayed at Balgandharva Art Gallery from 20th to 22nd November 2013. Sustainability Initiatives displayed the its research conducted on the heritage core of Pune city during the 'Inclusive India- Re: Pune' project in this exhibition.

Smart city: Exhibition

A stall was set up by Sustainability Initiatives at the Pune Smart City Development's Integrated Command and Control Center to bring forth awareness and sensitization towards relevant issues affecting the environment. Some of the issues addressed were waste management, heat island effect, a prototype of Earth center, Green Building rooftop policy and Green rated buildings in the city.

A & I Exhibition

Sustainability Initiatives exhibited its work at the A&i Digest Design exhibition in Pune on 7th January 2014. A&i Digest Design exhibition is an annual Design Exhibition that features Architects, Interior Designers, Landscape Planners, Conservation Architects, Design Institutes and International firms who share their projects and thoughts. SI projects were featured here with special focus on the Street Design Guidelines project to create awareness about the necessity of such guidelines.

Working with children

Road Safety Session for Children

Little Millenium Pre-school was helping SI to collect responses for the USDG opinion survey. As part of this project, and through interest of the school, SI also conducted a session on “Children and Road Safety” at the Baner branch of Little Millenium Pre-school on Thursday, 16th January, 2014. Pune Traffic Policemen were also present for this session.

Children below the age of 10 years do not have the same ability to judge distances, speed, and noise direction of traffic and vehicles as teens or adults. Hence it was very important to ensure that children are given a good understanding of basic street safety when they start walking around the local and city streets.

With this thought and enthusiasm of Ms Aboli Ruikar of Little Millennium encouraged us to collaborate and have a fun interactive session for children to help them learn about road safety. Ms Neelam Jadhav, of Pune Traffic Police also supported and sent her officers to be a part of the session.

Through this session, we taught children about traffic rules and road safety with guidance from Pune Traffic Policemen. The session included posters, Powerpoint presentation, videos and activities to make the pre school children understand the importance of being safe on the roads.

Important rules and regulations like use of Zebra crossing, walking on footpaths; elements which students see every day on their way to school; and necessity to follow traffic/pedestrian signals were explained to the children. The Traffic policemen also emphasized the importance of road safety to children.

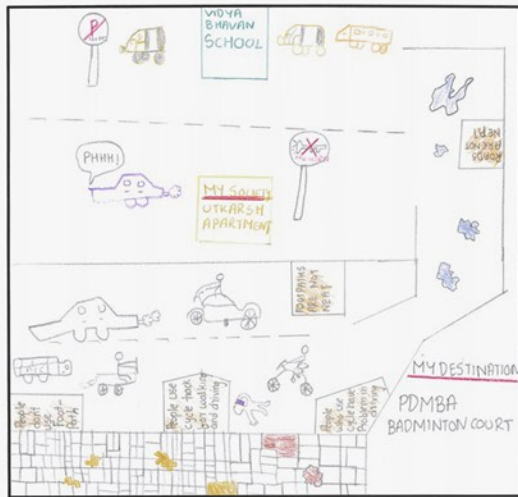
The objective of this activity was also to encourage kids to pass on the message of following traffic rules to their parents. The children enjoyed the activity very much and were also glad to meet the traffic Policemen.



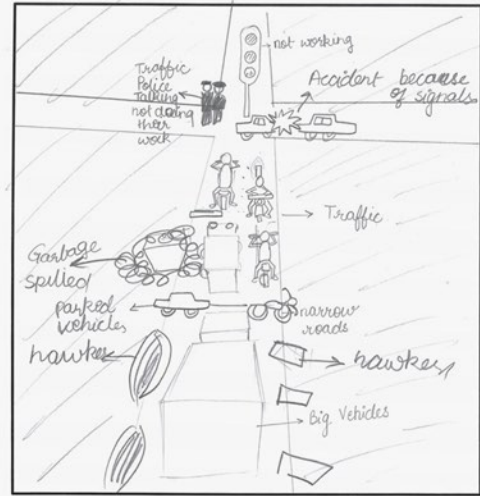
Interactive session on Road Safety



Interaction with Traffic Policeman



Road Drawings by children



Road Drawings by children



'Bird Feeder' making activity



Video on Environmental Conservation

Draw Your Roads activity in Delhi Public School

Delhi Public School very enthusiastically participated in collecting the responses on the citizen survey for the Urban Street Design Guidelines. Everyone from the students, teachers and the staff members this survey across the school and contributed to the very good response received to this activity.

Along with the survey, students were also involved through a drawing activity. In this activity, the students were asked to draw anything that they remember of the roads they use every day.

The insights of the children were very interesting. Along with signals, potholes and pollution, children also noticed the the inconvenience on roads due to frequent repair works, absence of footpaths, non-working signals among other things.

Cool Gurukul Summer Camp

SI organized a workshop in 'Cool Gurukul Summer Camp' at Little Millennium school (Baner Branch) for educating the children about the importance of a healthy Earth. The workshop aimed at spreading awareness about the environmental issues to the children and how they can contribute for better future start at a young age.

The workshop started with a short video emphasizing the need of protecting the different species that we share the planet with and that it is our duty to conserve and protect the various animal, bird and insect species to maintain an ecological balance. In the second part of the activity children were taught to make a bird feeder out of empty juice cartons and Ice cream candy sticks.

Through this interesting activity kids learnt about recycling and reusing waste materials and were also encouraged to help the birds by keeping food and water for them.

Workshop on making Eco friendly Ganesha

A workshop was conducted by Anagha Paranjape -Purohit, Trustee of Sustainability Initiatives for Mamta Foundation, a charitable trust working for the rehabilitation of HIV +ve children for making eco-friendly Ganesha using clay on 1 September 2016. Keeping with the spirit of all Hindu traditions and rituals which aim to make us more aware of nature, the eco friendly Ganesha idols were made to be given to some key influential people in Pune so that there is a commitment to celebrate Ganeshotsav in an eco friendly way this year. The children enjoyed the experience of making the idols and everyone was pleasantly surprised when children's creativity and talent was showcased in making beautiful idols

Visit of School Students to SWaCH

Sustainability Initiatives organized a visit of the students of 'Victorious Kidss Educares' school to the office of SWaCH, Pune on 5th August 2019. There they learnt about how the solid waste in the city is managed. The students participated enthusiastically and interacted with the SWaCH staff. It was a great learning experience for the students, many of whom would be future decision makers!



Visit to office of 'SWaCH'



Eco Friendly Ganesha making workshop



Visit to office of 'SWaCH'



Community Contributions

Grassroots level development is crucial in paving the way for resilient cities. While we work extensively in sustainable city-level development, we take active efforts towards community and neighbourhood level initiatives. Under this wing, we host social events and activities, in association with various local organizations to positively impact communities through participatory and democratic processes. The UN Goals have relegated utmost importance to including and empowering marginalized communities through an action plan.

This requires a recalibration of our blinker approaches to urban development, creating more polarity in our cities. This vertical will take ahead cues from the Sustainable Development Goals agenda pertaining to sustainable communities and cities, to make a deep impact towards equalizing and democratizing the urban realm.



01. DISASTER RESPONSE

- Covid Care Centre
- Kerala Floods



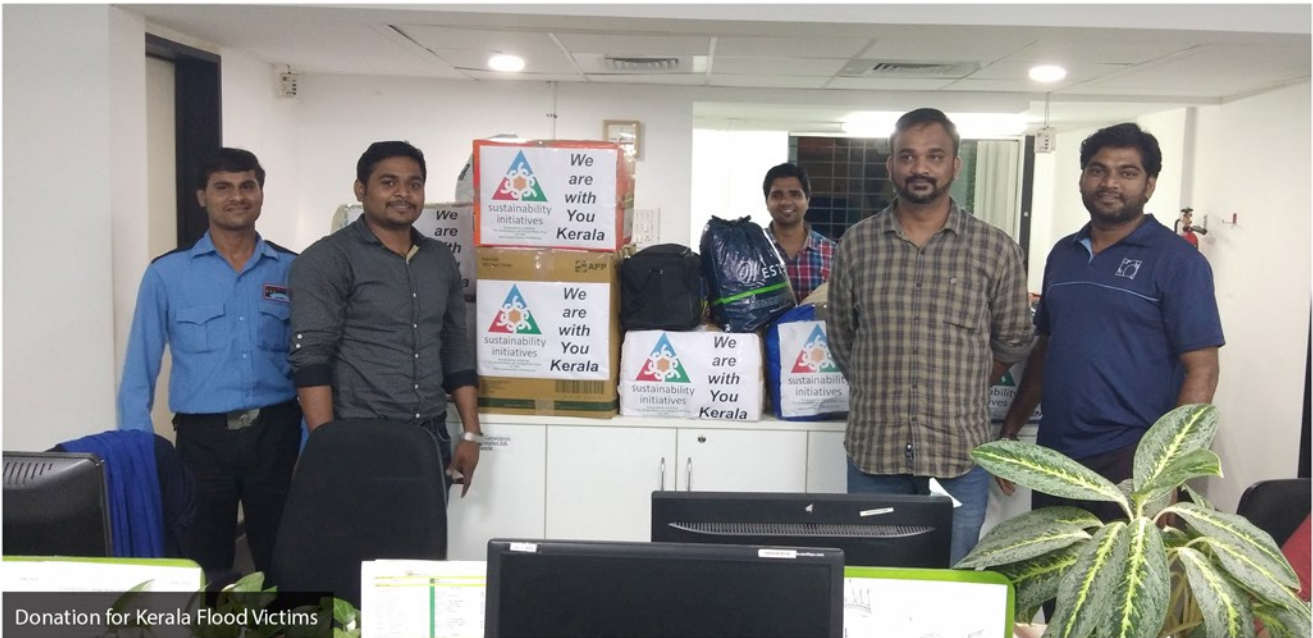
02. REACHING THE UNDER PRIVILEGED

- Library
- Food Kits
- Diwali Celebration
- Toilet Block Construction





Covid Care Centre



Donation for Kerala Flood Victims

Covid Care Centre

A 120 bedded Covid Care Facility Rapid Relief Center was set up by Anesthesia Associates in collaboration with Sustainability Initiatives at the Ganesh Kala Krida Centre, a famous Sports and Cultural auditorium in Pune, India.

This space, allotted by the Pune Municipal Corporation and the Mayor's Office was augmented with additional toilet facilities and oxygen supply lines. Two more organisations, Aloha Lifestyle Centre, Pune and Kapila Naari, Pune were also a part of this initiative and assisted in bringing experts, doctors and the required medical staff for the center. Jnana Prabodhini provided volunteers working 24/7, helping with the everyday functioning of the center. The Sakal Relief Fund played a major role in providing uninterrupted funding for the day to day working of the Rapid Relief Centre.

The facility was set up on 15 April 2021- 8 days within the peak of Covid cases. It has all the necessary medical equipment including oxygen beds with ventilators, a testing lab and in house X-Ray facilities. Good home-cooked meals and sanitation facilities along with free treatment and counseling support were provided to the patients through their quarantine period.

Kerala Floods

The 2018 Kerala Floods caused widespread destruction, took several lives and left many in a state of irreversible loss. As a social responsibility, Sustainability initiatives undertook a clothes donation drive towards the relief of flood victims through the organization- Goonj along with the support of VK:a architecture, VK:e environmental, VK:i interiors and VK:u urban. Sustainability initiatives also donated Rs. 1,06,000 /- funds towards the relief of the victims as a part of the Chief Minister Relief Fund, Maharashtra.



Mobile Library to kids in urban slums



Mobile Library in rural areas of Pune



Extending help to flood victims in Kolhapur and Sangli



Celebrating Diwali with HIV affected children

02.

Reaching the under privileged



Library

Sustainability Initiatives, Pune started a mobile library for underprivileged school students with the support of the Prarthna Foundation Solapur. A Study room and a Book Bank have also been set up for public in association with Solapur Social Foundation. This facility is open for people across all age groups and a wide variety of book of different genres are available in this book bank.

Food Kits

Given the pandemic and the plight of the poverty-stricken, Sustainability Initiatives and Maha NGO Federation Pune undertook the distribution of **50 Home Kits** to underprivileged families in **Solapur**.

Diwali Celebration

Maha NGO Federation in association with Sustainability Initiatives distributed Diwali sweets to the children of Mamata Foundation. Mamata is a project for the welfare of HIV +ve children and women. The aim of the activity was to distribute sweets and Diwali Faral (snacks and savoury) among 35 children, thereby bringing some joy with the festival of lights.

Toilet block construction

Sustainability Initiatives, Pune started a mobile library for underprivileged school students with the support of the Prarthna Foundation Solapur. A Study room and a Book Bank have also been set up for public in association with Solapur Social Foundation. This facility is open for people across all age groups and a wide variety of book of different genres are available in this book bank.

COLLABORATE

Sustainability Initiatives derives nourishment from meaningful collaborations. Our Support partners and our numerous governmental, private, community and individual associations have helped us propel ourselves unitedly forward to attain sustainable goals. This section throws light on our associations, guides the reader into how they could join hands with us and make a difference in every small way in taking the road to sustainability by caring, connecting and contributing.

Testimonials

Interns

Mr. Abhay Bachhuka College of Engineering, Pune

The environment oriented ideology and principles at Sustainability Initiatives makes one put their heart into their work along with their mind. The organization insists on widening the horizons of knowledge and understanding, thereby providing a positive work environment with perpetual guidance and motivation.

The wide network and connections of the organization present the opportunity to work with various city and national level organizations and their events. It was a delightful and enlightening experience working here, at Sustainability Initiatives.

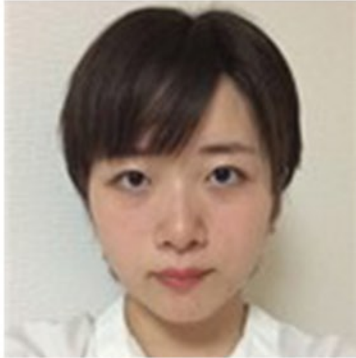


Nupur Kulkarni, Savannah College of Art and Design, USA

My experience work with Sustainability Initiatives has been great. I'm a trained architect so working with SI was a different role that I had to play. I had the opportunity to work under a competition project organized by the Pune Municipal Corporation. Here, I could use my architectural skills to design a solution for the existing problem. I learnt a lot about what goes into the design while. Along with the competition project, I was a part of an interesting project that SI is doing. SI is developing a book titled, "Green Footprints of Pune".

The book acknowledges works of individuals and organizations, who have worked towards the betterment of the environment, through sustainable means. This was a different project that I was a part of. I learnt a lot about the kind of work that is happening in Pune in terms of creating a better environment.





Mayu Harada
Yokohama City University, Japan

It was great experience to work in SI. I searched that the traffic issues caused by festivals in Pune through my internship term. I analyzed the traffic situation in Pune and the solution for making it better through the fieldwork. It was not easy for me, but I could suggest the issues from foreigner's view. I learned many things here; how to find the problem, planning skill and importance to be energetic. I am still a still student, but this experience absolutely will be a big help in my college life and my future.



Yoshida Tadahiro
Japan

I worked here for 2 months and I studied about garbage problem and traffic in Pune. As for garbage, maybe you think Japan is a clean country and there is no problem, but in fact we have these problem as well. We incinerate garbage and bury garbage in the sea. We emit dioxin from incineration and create sea pollution. But who notice? It`s invisible to citizens. We are good at concealing these problems. The work experience in SI arouse my interest about these social issues because in India we can find how such situations creates social problems easily. We, people in advanced countries, have to think more about environment. This experience made me notice that. Thank you.

Testimonials

Partners

Ar. Aprajita Kaushik,
Professor | DY Patil School of
Architecture, Lohegaon, Pune.

At DY Patil school of Architecture, Lohegaon we strive to give the best educational experience to the students. Site visits at premium institutes help Environmental architecture and Bachelors' students gain professional knowledge and overall rounded development. I am glad that Sustainability Initiatives through their advocacy program have helped us to get access to institutes like Suzlone, Yamuna Kirloskar Green Buildings, PMC STP plants etc and to organise site visits. Kudos to Mr. Amol Umbarje and team Sustainability Initiatives for their relentless social work. Such initiative has created opportunities for dialogue between industry and academic institutions.



Mr. Shekhar Mundada,
Founder, Maha NGO Federation

Environment and Sustainability is a very important aspect for upcoming development discourse. Sustainability Initiatives with their expertise in this field is doing a very good job of research, awareness generation and policy advocacy which will give an appropriate direction to future development and help in making our society carbon neutral.





Mr. Mangesh Dighe
Environment Office
Pune Municipal Corporation, Pune

SI has taken several initiatives for spreading the awareness about environmental issues and climate change which is very important for community education. PMC and SI together have been working on these issues for past 6-7 years. Their expertise in this field will certainly give a good direction to future development of cities.



Mr. Mandar Patil
Manager, RMI India

I wish to commend Sustainability Initiatives team for the way they assisted us during the Global Mayor's Challenge. They were courteous and friendly and always went out of their way to ensure timely completion of all the tasks. Such professionalism and work ethic is rare nowadays. Your team is an asset to your organization and is part of the reason I look forward to collaborating with you again in the future.

Awards and Achievements

SI recognised by Nelda Foundation

Sustainability Initiatives awarded and recognised by Nelda on the special occasions of 2nd Foundation Day of Nelda. Recognized on 24th June, 2018 at the Jawaharlal Nehru Memorial Hall, Camp, Pune SI got recognised by Mr. Mangesh Dighe, Environment Officer, PMC.

This certificate of Recognition is awarded to Sustainability initiatives an organization / group of volunteers, working for the betterment and preservation of our environment & society for contribution towards our society and our common home, the Earth.

Certificate of Commitment by World Book Of Records

Each day at Sustainability Initiatives, we are striving to contribute to the society in all the ways possible to us. Recently, we got awarded for our social work and we cannot be more proud. Sustainability Initiatives had set up a 120 bed facility in collaboration with Anesthesia Associates during the 2nd peak wave of Covid on 15th April, 2021.

Apoorva Kulkarni, our trustee member accepted the Certificate of Commitment on the behalf of Sustainability Initiatives by World Book Of Records for Ganesh Kala Krida Covid Center.

CERTIFICATE OF RECOGNITION



Annual Nelda Recognitions, 2018

This Certificate of Recognition is awarded to

Sustainable Initiatives Pune

an organisation/group of volunteers, working for the betterment and the preservation of our environment & society. This certificate is a small effort to recognise the contribution they have made towards our society and our common home, the Earth.

Recognised on the 24th of June, 2018, at the Jawaharalal Nehru Memorial Hall, Camp, Pune.

VEDARTH DESHPANDE
General Manager, Nelda Foundation



Recognition from 'Nelda Foundation' for SI's work towards betterment of society



Certificate of Commitment by World Book of Records for exemplary work during Covid Pandemic

Support Partners



Ministry of New and Renewable Energy (MNRE)



Swedish International Development Cooperation Agency



CREDAI Aurangabad



Suzlon One Earth



Art of Living



GRIHA



Architects, Engineers & Surveyors Association



Janwani



TERI



INTACH



MHADA



CREDAI Pune Metro



Mamata Foundation



VK Group



The Western Routes



Environment Department PMC



Nashik Municipal Corporation



Jain Irrigation



CREDAI Jalgaon



Chamber of Marathwada Industries & Agriculture



MEDA



CREDAI Aurangabad



Aurangabad Municipal Corporation



Nagpur Municipal Corporation



The Indian Institute of Architects



Pimpri Chinchwad Municipal Corporation



College of Architecture, Jalgaon



Fire and Security Association of India



Social Responsibility



Kohinoor Group



Bharat Vikas Group



Maha NGO Federation

Care. Connect. Contribute

Your support is what we seek for envisioning a better world. A place that is safe, happy, bountiful and equitable to all. Let us collaborate and connect to collectively contribute our efforts to care for our resources.



Care

We believe that our Planet can be protected and revived with the smallest interventions in our day to day lives. It is all about our lifestyle choices. We have designed a social media movement wherein we introduce small tips to achieving a zero waste, more sustainable and sensitive lifestyle, that we hope all our readers will implement at their individual level. Together if we join hands and pledge to lead lives that are more mindful of protecting our environment, we will be able to save resources for our future generations. Let us pledge to Care for our mother earth.



WHY BUY NEW STUFF WHEN YOU HAVE OLD CERAMIC JARS THAT YOU CAN REUSE?

Old pickle canisters can be a great option for storing food, can be used as aromatic candle holders, as stationary holders, for storing cosmetic brushes, for gifting cookies on special occasions etc.



CARRY YOUR OWN TIFFINS FOR TAKEAWAYS

Restaurants use black plastic containers for food packaging to make the food look more appealing. Black plastic has less recycling value due to the strong dyes used in it and more often than not end up in landfills. Also, most plastic containers are not made up of food-grade plastic, making them unsafe and prone to leaching.



RECYCLE OR REUSE

Old newspapers can be used to make planters, as cupboard liners, to make paper mache objects, for gift wrapping etc.



BUYING IN BULK

Grains, dry pulses, cereals, sweeteners can be bought in bulk and stored. Bags can be allocated for the same and reused routinely. That reduces the packaging wastage.



SHAMPOO BARS ARE THE NEW SHIKAKAI!

If powdered shikakai is a great hassle, shampoo bars are the new less - wastage alternative! There are vegan, cruelty - free, non animal-tested options which come in biodegradable packaging. Great for the planet and for your hair!



SOAP NUTS ARE A GREAT ALTERNATIVE FOR DETERGENTS!

They're natural laundry cleaners and can be reused upto 4 times. Good laundry alternatives for sensitive and allergy-prone skin. Boil soapnuts in water and used the cooled down, strained liquid for effective washing.



WHY SPLURGE ON CHEMICAL PRODUCTS WHEN ORGANIC SOLUTIONS ARE AVAILABLE AT YOUR HOME?

Combinations of baking soda, lemon juice, white vinegar, cornstarch, coconut coirs can be used in washing and cleaning household items. They are not only toxic-free, but also cheaper and harmless for the environment.



ANCIENTS USED NEEM TWIGS, NOW WE HAVE NEEM TOOTHBRUSHES!

Neem toothbrush handles are naturally anti-bacterial and bio-degradable. Plastic toothbrushes are the 2nd largest plastic waste generators after plastic bags as 150 million plastic toothbrushes end up in garbage every month.



GREEN BEAUTY EXISTS!

Ayurveda recommends skin-type compatible kitchen ingredients that are amazing for the skin and the planet! They're easily accessible, harmless and much cheaper on the pocket.



UPCYCLE OLD, FADED CLOTHES BY ORGANICALLY DYEING THEM!

Losing interest in old, faded clothes is quite common. Dyeing puts new life in them! Organic dyes derived from fruits, flowers, plants can be used to create funky tie-die patterns, or to simply give a new colour to old clothes, to be able to use them again.



HAND ME DOWNS BRING SO MUCH JOY AND SUSTAINABILITY!

Kids outgrow clothes, books and toys fast. Handing them down to other children will increase the usability of the items and will also teach children the value of things in life and will help make them eco-conscious at a young age.



SIX YARDS OF MAGIC!

Sarees that have gone through wear and tear can be repurposed into beautiful things! Ancients made cozy godhadis out of them, you can get even more creative! Turn them into kurtis, skirts, tote bags, wallets, cushion covers and curtains! It'll be unique and zero waste!



WHY BUY NEW UTENSILS WHEN OLD ONES HAVE FAR SUPERIOR QUALITY?

Traditional utensils are made out of copper and iron that survive generations. It's always a great idea to reuse them than giving them away for new ones. Infact, use and pass them on to the further generations we say!



WHY WASTE WHEN YOU CAN PICKLE?

Pickling increases shelf life of the food products. It's an energy-saving and economical way wherein no refrigeration is needed. Easiest ways to pickle are to place the food item in brine, vinegar, alcohol, or vegetable oil to kill off bacteria and other micro-organisms.



LESS MILK, MORE PLASTIC!

Milk is a daily requirement in each household. The accumulation of plastic packaging of milk can be avoided by buying milk directly from milkman or by purchasing it in reusable glass bottles that can be returned to the vendor.



COOL THE WATER IN A DESI WAY!

Earthen pots can equally cool drinking water the way refrigerators can. They require zero electrical energy. Water from earthenware is beneficial for health and it's temperature is optimum for drinking in summers.



LET'S MAKE HOMEMADE CURD AND GHEE "THE NEW TREND!"

Preparing curd and ghee at home has a smaller carbon-footprint than buying it from the store. It also eliminates the extra plastic packaging. It ensures that all the by-products get used and nothing gets discarded. It's fresh, minus preservatives and it's healthier.



REUSE CARDBOARD SHIPPING BOXES AND NEWSPAPER

Using your delivery parcels instead of store-bought gift boxes is one of the easiest eco-friendly gift wrapping swaps you can make.



SWAP PAPER FOR FABRIC GIFT WRAP

Won't it be fun if the wrapping material is a gift in itself! Choose to wrap in a scarf or shawl, pocket square, or handkerchief over traditional paper. Less waste, more gifts!



ADD NATURAL FESTIVE TOUCHES

Opt for natural decorations than using shiny plastic bows. Get creative and colourful with tree branches, flowers, cinnamon sticks, rosemary, fallen leaves, dandelions or whatever else you can sustainably source in your area.



USE BIODEGRADABLE PAPER TAPE OR TWINE

Single-use plastic scotch tape is super bad for the planet! Consider compostable paper tape, washi tape or twine. These biodegradable alternatives are made with wood fibers, pulp or bark and natural adhesives. They come in a multitude of patterns and colors too!



INDIANS ARE NOTORIOUS ABOUT CARPOOLING!

We are known to stretch vehicle-pooling too far but jokes aside, it's an eco-friendly, economical and socializing approach to commute. A typical car emits 4.6 metric tons of CO2 per year which becomes combined for 5-7 people in carpooling.



USE PUBLIC TRANSPORT AS MUCH AS POSSIBLE

With the onset of metros in every big city, it's upon us to make the greener choice. That will not only lead to far lesser air pollution, but will also reduce road congestion. It's also an excellent opportunity to catch up on reading and listening to podcasts.



BUY SECOND HAND BICYCLE FOR SMALL COMMUTES

Short trips like grocery shopping can be managed on a bicycle than using fuel-run vehicles. Increased bicycle use means lower green-house emissions, money saving and healthier lifestyle.



INVEST IN ELECTRIC POWERED VEHICLES

They have tons of benefits including no gas, thus no emissions. Quieter, thus less noise production. Cheaper to maintain, easy to charge, better on the pockets.



DITCH FLIGHTS AND CHOOSE TRAINS AND BUSES

Planes release more CO₂ per passenger than other modes of transport. They're thus worse for the environment than driving, or getting the train. That said, the number of passengers in a car will make a big difference – so if it's just you driving, the CO₂ / passenger will be far higher.

Connect. Contribute

We intend to create a ripple effect through our initiatives and pave the way for an environmentally responsible society. Research and Development within Sustainability requires significant funding and we need your support to be able to bring about a meaningful change! The support can be through your contributions in terms of time, your subject expertise, and access to your networks or monetary support. Let us embark on this journey of sustainable transformation, together!

Kindly write to us at
mail@sustainability-initiatives.org
if you would like to contribute and support our activities!

Connect with us

Tel: 020-6626 8888

mail@sustainability-initiatives.org



Correspondence Address

5th Floor, Next Gen Avenue, Su. No 103(p), CTS no 2850,
Bahiratwadi, Off, Senapati Bapat Rd, Near Icc Trade Tower,
Pune - 411016, Maharashtra, India

Dr. Poorva Keskar

Trustee



“ Developers are the most important stakeholders when it comes to integrating energy saving and environmental friendly measures in residential projects. And with the help of SI we can raise that awareness. ”

Dr. Poorva is an architect, environmental designer, educator and an author of numerous articles and research papers on the practice of Environmental Design and Management and is a Director (Partner) at VK:e environmental, Pune. With an extensive professional experience of 22 years, she has worked on diverse projects of varying scales and complexities. Dr. Poorva spear-headed the structuring of syllabus for Masters program in Environment Architecture at the University of Pune and also headed this Masters Program at BNCA, till 2012. She has been invited by reputed organizations to conduct seminars and workshops in the field of Climate Responsive Architecture, Green Building and Carbon Neutral Buildings. She was among the first few to get qualified as LEED AP and GRIHA Evaluator and Trainer in India. She is a member of the General Body of ADaRSH and also has been instrumental in creating the framework of incentives for GRIHA registered projects for Pimpri Chinchwad Municipal Corporation-GRIHA model. Dr. Poorva has served as an Environment and Energy expert on various Boards and Committees at local and National level. She is also the Principal-in-Charge at Brick School of Architecture, Pune. Dr. Poorva is an empaneled expert with Bureau of Energy Efficiency, Ministry of Power, has served as a member of GRIHA technical advisory committee and is the Co-Chair of IGBC Pune chapter.

“ We at SI, get involved in the areas of research, capacity building, public outreach and advocacy which are meant to add the knowledge of people involved in the construction industry, policy makers, students and public at large. ”

Hrishikesh Kulkarni is a Director (Partner) at VK:e environmental and VK:a architecture in Pune. He has specific focus on Building Physics & Micro-climate Simulations for built environment projects. Hrishikesh completed his Diploma in Architecture at the Academy of Architecture, Mumbai and MA Environment & Energy at the Architectural Association (AA), London. He specializes in Performative Architecture, Energy Efficient designs, Human comfort studies and Built Environment simulations. He is a Qualified Assessor of BREEAM, UK (Building Research Establishment Environmental Assessment). He has lectured at the London Metropolitan University and for the post-graduate programme at the BNCA, Pune and also presented at many seminars and conferences on the subject. Hrishi was instrumental in forming the International Environmental Policy for IKEA, in UK, the world's biggest furniture company. He was also involved in performative design simulations for master-plan projects in India. In 2007, Hrishi and David Rhodes formed OPEN Arch Ltd. in UK and worked on energy efficient housing and public buildings. Hrishi is an active member of professional bodies, such as Council of Architecture (CA), Indian Institute of Architects (IIA), Architects, Engineers & Surveyors Association (AESAs) and Indian Green Building Council (IGBC). With his involvement he advocates better policies at the government level for changes in rules and regulations.

Hrishikesh Kulkarni

Trustee



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We are keen to contribute to a better understanding of Urban Sustainability in India Cities. At SI we aim to provide on-ground solutions for urban environmental issues and concerns.

”

Anagha
Paranjpe-Purohit

Trustee

Anagha is an architect – environmental planner with more than 12 years of professional experience in the field of Architecture, Sustainable Design and Urban-Environmental Planning and is a Director (Partner) at VK:e environmental, Pune. A Graduate of Pune University and Arizona State University, Anagha has multinational experience in countries like USA, India and Sweden. Anagha is also an academician and teaches post graduate programs in Architecture, Energy and Environment. She also conducts training on diverse themes such as Green Buildings, Environmental Impact Assessments, Urban Air Quality Management Solid Waste Management, Green Productivity and Sustainable Architecture. She is a member of various Boards and Committees at national and local level in the areas of Green Buildings, Urban Planning and Energy Efficient Buildings. Anagha is an empaneled expert with Bureau of Energy Efficiency, is a GRIHA Trainer and IGBC Evaluator. Additionally, she is involved in the Development Plan for the city of Pune and framing of environmentally sensitive Development Control Rules for the city. Through Sustainability Initiatives, Anagha is active in creating white papers on Indian cities, policies and frameworks that are used for influencing and making urban policy in India. She serves on various National and State level committees on Sustainability issues, Environmental Planning and Green Buildings. She writes a blog (anaghaspeaks.blogspot.com) which focuses on urban issues faced in Indian cities.



Apoorva Kulkarni

Trustee

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I am associated with SI to make our communities aware of our real needs, transfer knowledge and techniques of recycle, reuse. Help to understand our waste generation, take responsibility and participate.

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Apoorva has over 12 years of multifaceted experience from working as a Marketing Executive for Wigan and Leigh College, UK to currently as the Head of Operations for VK:a architecture and its sister concerns VK:e environmental and VK:i interiors. Human Resources, MIS- Quality Control and Marketing have been her domain areas. She has worked in the UK for 6 years; which provided her substantial exposure to the British culture and way of business. She has worked very closely with the local government and its departments such as Environmental and Planning department during her stay in the UK. She has been instrumental in formulating the ISO 9001- 2008 system of VK:a and has been representing the organisation as the Management Representative for the past 3 years. Apoorva is currently focused on Marketing activities for the organisation in order to enhance the image of the Group as a strong one-stop consultancy consortium which have carved a special place in the field of built environment. Her interests in Sustainable Design and Environmental Planning can be seen through her enthusiastic involvement in VK:e environmental where she is also a Partner. She contributes to Sustainability Initiatives through managing public relations and initiating various awareness programmes and outreach events.

Vijay Sane

Trustee



“ We personally believe that the following environmental issues are of utmost importance and like to contribute towards solutions via SI platform – Deforestation, Water Scarcity, Global Warming, Air Pollution. ”

Ar. Vijay Sane is a Director (Partner) at VK:u urban. After graduating from the University of Pune in 2000 Vijay completed a Financial Markets and Property investment course at FINSIA, Sydney. He has been employed with Kolte Patil Developers Ltd (KPDL) since 2011, previously for twelve years worked with leading Real Estate companies like Surbana International Singapore, COX Group Sydney, 'SSA & GKK corp' in India, Australia & Singapore. As a fresh Architectural graduate Vijay worked on the institutional and commercial projects in California as an in-house architect / operational manager for 'GKK corp.' Recognizing the need of global exposure in urban scale projects back in 2003 he started working with legendary planner Mr Philip Cox on various master planning and township projects in Middle East and China. Later 2007 brought him back to India as managerial professional who aspired to be part of rapidly urbanising Indian growth storey. He worked with Singapore based Surbana International until 2011 as Project Director of development as well as consultancy arm.

“ SI is started by architects, planners, environmentalists and urbanists... because we have a greater responsibility in a more sustainable future. But ultimately SI is about people like you and me and what small difference we can make. ”

Dwaipayan is an Architect and Urban Designer based in Pune, Maharashtra. After completing his M.Arch (Urban Design) from School of Planning and Architecture, New Delhi in 2005, he had been working as a Senior Architect in some prominent firms of Pune, after a memorable stint with Council of Architecture's academic unit – NIASA. Later, after 5 years as the Senior Masterplanner at Associated Space Designers Pvt. Ltd., masterplanning large acreage special townships like Nanded City, Life Republic and Oxford Oasis Golf City, he moved on to VK:a Architecture as an Associate, where he looks after a large number of interesting Architectural and Urban Design projects, including Townships. He has taught Urban Design at some prominent schools of architecture in Pune, and remains in touch with teaching and academics. Dwaipayan both specialises and is deeply interested in urbanism, urban design & planning, real estate dynamics, relationship between city & society, architectural education, architectural journalism and technology, and writes frequently on these subjects in various online & print magazines and blogs

Dwaipayan Chakravarty

Core Member



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We at SI aim to facilitate research, knowledge dissemination and capacity building in the areas of Energy, Environment and Sustainable Development.

”

Amol Umbarje

Sr. Coordinator

Amol has graduated with a bachelor's degree in Sociology and MSW in Urban and Rural Community Development with experience in the field of Social Development. He has been working with Sustainability Initiatives as Programme coordinator since 2015 and helps in implementing projects and activities. Amol is responsible for coordinating and managing awareness, outreach events, training programmes and public seminars in promoting awareness in various groups about sustainable development and green buildings. He looks after media management and communication for the trust, networking activities, administrative work and promotional activities for the organization through social media, awareness, outreach and capacity building events. Amol has successfully organized many Conferences, seminars, events and awareness programmes for capacity building and awareness related to sustainable architecture, urban and environmental planning, etc. for Sustainability Initiatives. Amol is also expertise in Preparing Corporate Social Responsibility, Social Impact Assessment and Corporate Environment Responsibility report.



Shivali Waichal

Program Coordinator

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SI is working with a clear goal of achieving Urban Sustainability and aims to create a society which is environmentally conscious in their actions and lifestyle habits.

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Shivali is a Mechanical Engineer with a passion to work for society which has landed her in the Development sector. Alumna of renowned Jnana Prabodhini Prashala, a school for gifted students, she has been working as a researcher in this sector for the last 7 years. She has worked in a NGO named 'MITRA' as a researcher in the field of Decentralised Urbanisation where she contributed constructively in making Aurangabad Human Development Report and Vidarbha Model for Decentralised Urbanisation. With her analytical skills she had designed 'District Human Development Index' for Aurangabad district which was appreciated at State Level. 'MITRA development model' was selected for the UN Global Compact on Migration where she presented the MITRA Development Model in the conference held at Geneva in 2017. She has worked as Assistant Manager CSR in renowned NGO Vanarai working in the field of Environment and Integrated Rural Development. In Samhita Social Ventures, Mumbai she has worked in research department where the major work was proposal writing for National and International Grants and Impact Analysis of CSR projects. She has also worked for impact analysis of Paani Foundation Project with Jnana Prabodhini Institute of Psychology in research design.

Sustainability Initiatives

Sustainability initiatives is a trust working towards a clear goal of achieving '**Urban Sustainability**' with a three pronged approach of research, capacity building and policy advocacy. We are a group of professionals mainly architects, urban planners, environmental scientists, sociologists etc. who are keen to apply their knowledge for betterment of society.

