



# **CREATING GLOBAL SUSTAINABILITY CHAMPIONS**

21-27 March 2022



#### Disclaimer

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## Introduction

In memory of the late Dadasaheb Rege, Principal of Balmohan Vidyamandir (BMVM), Mumbai, India, March 19 is celebrated as the International Day of Balmohan. Ekonnect Knowledge Foundation organized a week-long virtual event called 'Global Sustainability Champions' from 21st March to 27th March, 2022. Being an alumnus of Balmohan school, Dr. Prasad Modak conceived and mentored the program. The program focused on introducing the concept of sustainability to school students belonging to class 8 to 11. Blending 'theory or principles' with 'action or engagement' was the idea of the program design.

130 students from 6 countries and 30 cities in India expressed their interest. Students were taught topics like Sustainability, Sustainable Neighbourhoods and how to develop Sustainable Neighbourhood Action plans using the method of Eco-mapping and consulting stakeholders. Students were engaged in 6 hours of online sessions followed by 3 days of offline assignment. Top three teams received awards in the form of books.

Google drive was used for sharing presentations, resources, reading material, recordings of the sessions and assignments with the participants. Aha slides (https://ahaslides.com/) was used to make the sessions interactive where participants answered some questions live, at the beginning and end of each session.





# Activity on Sustainable Neighbourhood Action Plan

The participants had to prepare a Sustainability Action Plan for their neighbourhood using the method of Eco-mapping and consulting stakeholders. The students were allowed to work in groups according to their preference. The students had to identify their team members, post images of challenges and solutions identified in their neighborhood. They had to state the challenges identified, solutions proposed, budget estimated, time required, and stakeholders involved. Further, the students were required to discuss the action plan with three members of the community (teachers/parents/senior citizens/government authorities), share their feedback and mention the changes suggested by them. The students had to identify their role in the implementation of the Sustainable Neighborhood Action Plan and upload an image of the Eco-Map created for their neighborhood. On-line submissions were taken through Google Doc.

## Procedure for creating a Sustainable Neighbourhood Action Plan

Step 1: Map your neighbourhood area.

- Open google maps.
- Search the location you need to create an action plan.
- Right click on the map and click on 'Measure distance'.
- Mark the boundaries of your neighbourhood you wish to create an action plan for.

Step 2: Identify good practices and challenges faced by people in your neighbourhood.

- Take a walk in your locality.
- Take photographs.
- Talk to people in your neighbourhood to understand their challenges.
- List the challenges. (eg: absence of footpath, electric feeders need safety and repair, frequent power cuts, tree/plant overgrowth, illegal construction, lack of waste segregation, potholes, open drainage, flooding during monsoons, no zebra crossing/traffic signals)
- Identify best practices (eg: Outdoor gymnasium for physical activities, street lights in playground, colour coded waste bins)

Step 3: Find solutions that can be implemented.

- Set up community level composting units.
- Organize donation drives for collection of clothes, electronics, games, and donate them to a local NGO.
- Conduct tree plantation drives.
- Set up bird feeders.
- Setup electric charging stations.
- Promote borewell recharge.

Step 4: Identify stakeholders who can help you to implement your solutions.

- Students
- Adults



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- Local NGO/Residential welfare association.
- Building/society management
- Commercial banks
- Government and ward officials
- Media

Step 5: Make your neighbourhood sustainability action plan.

#### Example

Challenge	Solution	Budget needed	Time of implementation	Involvement of stakeholder
<ol> <li>Absence         <ul> <li>of garbage</li> <li>collection</li> <li>trucks. Waste</li> <li>dumped on</li> <li>roads.</li> </ul> </li> </ol>	<ul> <li>Contact ward officials for waste collection</li> <li>Set up community composters for treating organic</li> </ul>	Rs. 40,000/- per community composter	1 month	Government ward officials Building Management
2. Need to improve biodiversity in the park	<ul> <li>Conduct tree plantation drive</li> <li>Set up bird feeders</li> </ul>	Rs. 10,000/- Rs. 270/-per feeder	2 weeks	Students
3. Shortage of water in summers	<ul> <li>Rainwater harvesting</li> <li>Borewell recharge</li> </ul>	Rs. 30,000/- Rs. 10,000/-	1 month	Building Management

Step 6: Your role in implementation.

Example





# Activity Submissions on Sustainable Neighbourhood Action Plan

## Team 1

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We have selected Mithakhali Gam, Ahmedabad, India, 380006 as our location. We have conducted extensive research on this area in order to learn more about its sustainability status and create our action plan.

The primary reason behind choosing this specific location is because we are well-aware of its surroundings and also because it is strategically located at the heart of the city. Mithakhali is at the center of Ahmedabad and roughly falls between the old and its urbanized part. This allowed us to analyze a neighborhood that is unique and that presents both- modern development and includes parts of Ahmedabad's history.

## Challenges and Solutions identified in the Neighborhood:

We analyzed the location and identified several strengths and challenges which could be worked on as a community. Moreover, we conversed with and interviewed residents, shopkeepers, street vendors, students of the nearby school, and strangers to understand their unique perspectives on the sustainability level of Mithakhali Gam. After conducting our primary research, we conducted secondary research by using the internet. We gathered information about the issues identified and brainstormed on innovative solutions that could be implemented for the betterment of the society.

The following are the strengths and challenges that we have identified. The challenges have been followed by a detailed explanation and solution that we think is apt.



#### STRENGTHS IDENTIFIED IN THE NEIGHBORHOOD

#### **1.** Efficacy of the Authorities



#### 2. Rich Biodiversity





#### 3. Plastic bags aren't usually used in stores

The limited usage of plastic bags has been widely accepted in the community and it proves how they are striving to improve and are becoming more environmentally conscious.



#### 4. Advanced Waste Segregation System

#### **5.** Open-minded Public

The public in the location is willing to make small changes in their lifestyle for the betterment of the environment. A flexible public is always more motivated and passionate about working towards a change which will help in making collective efforts. They are ready to participate in carpooling, plantations, donation drives and other activities for the society and the environment.

#### 6. Plenty of Amenities within Walkable Distance







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#### 7. High social interactions due to a nearby park and increased cycling

There has been an increase in person-to-person interactions rather than only online interactions through social media. This has been possible because of the availability of parks and cycles.



#### 8. Awareness of Mental health, showing it's Progressive Culture

#### CHALLENGES IDENTIFIED IN THE NEIGHBORHOOD

#### 1. Waste Management Issues



**Challenge**: Regardless of having dustbins at appropriate places and distances throughout Mithakhali, there are evident waste management and cleanliness problems. Plastic waste like bottles, bags, food packaging is seen on footpaths and near shops in the neighborhood.

**Solution**: The two most effective solutions for the waste management issues of Mithakhali Gam are to organize campaigns and conduct donation drives. With the organized campaigns, we can make posters that spread awareness about this issue, have community meetings to educate the residents and stakeholders about the issue, create short films to share with them via social media and have cleanliness drives. These small changes will remind them



to be environmentally conscious and make informed choices about waste management. Through these campaigns, we will encourage the use of Reduce, Reuse, and Recycle in daily life, which will guide society to start making informed decisions. Under donation drives, we will collect clothes, toys, books, and more from the community and donate them to NGOs so that waste can be avoided, and the three R's can be practiced.

#### 2. Disorganization

## LIMITATION: DISORGANISATION AND HAPHAZARD PLANNING

broken divider causing confusion and chaos loose wires are a common sight, posing a threat to Mithakhali's residents



**Challenge**: Disorganization and haphazard planning are crucial issues in Mithakhali Gam. It can be seen in the images that there are hanging wires which pose a threat of electrocution and are dangerous for birds in the nearby environment. Moreover, there are broken dividers and a lack of parking facilities which cause chaos in the commuting community.

**Solution**: Community meetings will have to be conducted wherein we discuss infrastructure development and seek other peoples' opinions on these problems. After the community meetings, re-organization will be done where each area of Mithakhali Gam will be checked and required fixings will be made. This will make the location more organized, and the cleared spaces will be used to develop public parking.

#### 3. Old Buildings



LIMITATION: BEING NEAR THE OLD CITY, MITHAKHALI HAS SOME STRUCTURES THAT ARE ANCIENT AND "KACHA". THIS CAN BE THREATENING AT THE TIME OF AN UNFORSEEN EVENT SUCH AS A NATURAL DISASTER. **Challenge**: There are still old buildings in the area that can be affected by natural disasters like earthquakes and floods. Furthermore, there is a lack of underground parking facilities there and a constant issue of termites.

**Solution**: Contact Ahmedabad Municipal Corporation and conduct earthquake tests. Once the tests are done, further steps can be decided in how the building can be rebuilt or fixed.



#### 4. Lack of facilities for Differently Abled People



**Challenge**: There are hardly any ramps or facilities for differently abled people which makes it harder for them to commute. This is a societal problem that needs to be taken into consideration immediately.

**Solution**: To bring light to the issue, posters and messages should be sent which outline the concerns of not having ramps and facilities for differently abled. Furthermore, community meetings can be held with school students to encourage them to come up with solutions and raise funds for this project. Students of Mahatma Gandhi International School can take initiative and bring a change to the issue.

#### 5. Narrow Commuting Lanes and Lack of Public Parking



regular rounds taken by AMC officials which alludes to their accountability Mithakhali's narrow lanes do not support huge vehicles and unfortunately, are frequently congested with traffic **Challenge**: Narrow Lanes have made it harder for two or three vehicles to travel at the same time and a lack of parking places have also led to traffic jams, which in turn promotes noise and air pollution.

**Solution**: One of the best solutions is to promote cycling or walking for commuting to nearby places. This will reduce air pollution, noise pollution, increase socialization, and encourage a better lifestyle. For the work that requires the commute of larger vehicles like trucks and buses, proper border or edge lines should be made on the road, so there are clear paths for the travellers and chaos is avoided. Furthermore, the sides of the road can be cleared to increase the space.



#### 6. Low Walkability Index



**Challenge**: There is a low walkability Index as a result of waste and left-over items on the footpaths. This reduces the parking space as well as commuting space and affects the overall traveling experience of everyone.

**Solution**: First and foremost, the footpaths should be cleared and made accessible through regular cleanliness drives. Then, we can contact AMC to improve the infrastructure of the area and promote cycling for both social and environmental benefits.

7. Unvaccinated Stray Dogs



LIMITATION: STRAY DOGS HAVE NOT BEEN VACCINATED TO ENSURE SAFETY OF PEDESTRIANS

plenty of unvaccinated street dogs cause a nuisance as they get aggressive sometimes **Challenge**: There are numerous stray dogs in the area and most of them are unvaccinated which poses a threat towards pedestrians. There have been cases where they have been violent and have bit individuals passing by.

**Solution**: Firstly, unsterilized stray dogs must be sterilized and vaccinated. Then they should be put in proper shelters by communicating with the community and contacting NGOs that work for animal care, especially dogs.





**Challenge**: Damaged streets and roads are a threat for the community during monsoon and harder for people to walk on footpaths.

**Solution**: To contact AMC and get the necessary repairs done.

#### 9. Absence of Freshwater ecosystems in proximity

**Solution**: Build a pond in the garden, this will increase the aquatic biodiversity of the area along with terrestrial diversity.

#### 10. Food wastage from street vendors due to high temperature and absence of proper ventilated shops

**Solution**: Long-term solutions are important to take into consideration to maintain sustainability. This would include providing better carts for the vegetables and building a proper structure for street vendors' businesses. Another way to utilize the waste produced is by putting it into compost bins and use the manure produced for plantation drives.

#### 11. Water management caused by a nearby car washing center

**Solution**: Educate them about the issue and ask them to limit the use of water as well as monitor their waste to improve. Moreover, we will encourage them to reuse the wastewater for other processes in car washing. This will limit water wastage and over time create a lasting impact on the environment.



## ACTION PLAN:

Challenges Identified	Solutions Proposed	Budget Estimated	Time Estimated	Stakeholder Involved
1. Waste management	Campaigns to spread awareness	Rs. 18,000 per segregation bin	6 months for the campaigns	- Students: To create the posters and films
issues	(posters, workshops, short- films)		2 months for donation drives	- The community: To implement changes
	Promote the 3 R's			<ul> <li>The media: to assist in spreading awareness</li> </ul>
	Donation drives			- NGOs: To donate items collected from the donation drive
2. Low mobility and walkability index which causes threat to pedestrian safety	Contact AMC Make footpaths accessible through Cleanliness Drive	Rs. 2000 AMC charges Rs. 5,593 per Cycle stand	3 months for cleanliness drives 1 week to promote cycling	<ul> <li>Ahmedabad</li> <li>Municipal Corporation: government body</li> <li>The Community: To conduct the cleanliness</li> </ul>
	Promote Cycling			drives and promote cycling
3. Aggressive stray dogs	Stray dogs must be sterilized and vaccinated	Rs. 12,000 per dog shelter	2 weeks for vaccination	<ul> <li>NGOs: To vaccinate the dogs and find shelters for them</li> </ul>
	Provide shelters		1 month for	
	Contact NGOs		setting up shelters	<ul> <li>Students: To bring awareness about the dogs to the public</li> </ul>
4. Absence of freshwater ecosystems in proximity	Build a pond in the public garden	Rs. 35,500 to build a pond	4 months to build the pond	- The Community: For permission
				- AMC: To conduct the necessary procedures



5. Disorganization	Re-organisation and developing infrastructure Developing public parking Introduce reserved parking and traffic police	Rs. 2, 000 AMC charges for parking space Rs. 7,000 for structuring the area	5 months for infrastructure development 2 months for public parking	<ul> <li>The community:</li> <li>For permission</li> <li>of infrastructure</li> <li>development</li> <li>All individuals in the</li> <li>area: To maintain the</li> <li>public parking service</li> <li>AMC: To set up an</li> </ul>
				efficient traffic police system along with the concept of reserved parking
6. Water management issues caused	Educate the community about water management	Use the resources we already have,	2 weeks	<ul> <li>Adults and teenagers:</li> <li>To educate them about</li> <li>the issue</li> </ul>
by a nearby car washing center	Promote water reuse for other purposes in the car washing process.	to spread awareness.		- Bank: To borrow money to build technologies that can save water
7. Old Buildings	Contact Ahmedabad Municipal Corporation to conduct earthquake tests	Rs. 405 per earthquake test	1 week to contact AMC and fix a date to conduct the test	<ul> <li>AMC: to carry on the test and ensure safety of the residents</li> </ul>
				<ul> <li>Community: residents should be willing to let the tests happen</li> </ul>
8. Lack of facilities for	Create posters and messages	Rs. 6,414 for ramps	2 weeks to create effective	<ul> <li>Students: To create posters and messages</li> </ul>
abled people	Design ramps and facilities for differently abled people		4 months for the designing ramp and making prototypes	- AMC and architects: To build an inclusive community that is adaptable to the differently abled and all genders
	Community meetings can be held. Students can be encouraged to take initiative.		1 week for community meetings	<ul> <li>All individuals in the area: To communicate and bring a collective change effectively</li> </ul>



9. Food wastage from street vendors due to high temperature and absence of proper ventilated shops	Provide better carts and build sustainable structures Put the waste organic matter in the compost bins and use the manure for plantations drives.	Rs. 2,00,000 Food composter Rs. 20,000 per sustainable cart	2 months to decide and carts and design efficient structures 1 week to raise awareness about the composting bins	<ul> <li>Students: organize fundraisers to finance vending carts that keep produce away from direct sunlight and composting bins</li> <li>Street Vendors: To change their business carts</li> </ul>
				- The Community: To make use of the public compost bins and actively participate in plantation drives

## PROBLEMS AND FEEDBACK OF COMMUNITY MEMBERS

To create a sustainable neighborhood plan, we knew that it was essential to be aware of the challenges faced by the community of Mithakhali. For this, we communicated with people who have regular interactions with this neighborhood. After learning their take on Mithakhali Gam, we also knew that our design plan should be shared with those who it will impact the most.

Following are excerpts and our takeaways after conversing with Mithakhali's interactors.

#### **INTERACTOR 1: STUDENT**



They say, "Being a student enrolled at Mahatma Gandhi International School, located in Mithakhali, I am here almost daily. Studying in a lush area like this, I find myself appreciating nature increasingly. However, I wish better parking strategies were implemented as it takes way too long to find a good spot. Daily traffic is also a big nuisance"

In response to our proposed

solution of having a traffic police to effectively manage congestion, they said, "Oh! That would definitely help. I would also suggest you to maybe introduce the concept of reserved parking here. This can work near the school area as most of us come from backgrounds that can afford a parking fee. This will also push people to responsibly use their car and turn to alternative means of transport such as bus, auto or maybe carpool."



#### **INTERACTOR 2: EXPERT**



To get an eco-centric opinion on our action plan, we talked to our Environmental Sciences and Societies teacher. She asked us to note the low levels of water bodies in this area and come up with a possible solution.

We came up with the idea to construct a small pond in the public park. This will introduce aquatic biodiversity in Mithakhali and bolster its biodiversity index. Our teacher approved of our suggestion and urged us to introduce bird feeders throughout.

Furthermore, she appreciated the detailed analysis and examination of the area which was shown through the annotated pictures. However, she believed that a section could be added where we could list down marketing and fundraising strategies, we will use to develop the neighborhood. She also suggested that the pros and cons of the solutions provided can be listed down so that better clarity can be gained. In totality, she appreciated the action plan and said it was quite realistic.

#### **INTERACTOR 3: STREET VENDOR**



issue right now that is fuelled by the rising temperature."

Mithakhali's most prominent business people are its vendors. Upon asking how their daily business goes, they said "We are thoroughly satisfied with our routine here. We have regular customers to look forward to and are able to sell most of our produce. However, it is unfortunate as about 20% of our produce goes to waste. Gujarat's heat makes it worse, and we have bad carts that do not keep fruits and vegetables away from direct sunlight. This is our major

They seemed sceptical about hearing our action plan but were soon interested. We told them about our idea to get them sustainable metal carts with roofs. This will help keep their produce away from direct sunlight and avoid spoilage. In response to our proposed action plan, they said "We would be grateful for such assistance. However, such promises have been made in the past and have gone unfulfilled. We would appreciate you working at the grassroot level and creating a reform from within."



## Our role in implementation of Sustainable Neighborhood Action Plan:

It is unfortunate when the aware and the educated sit back and witness the injustice treatment inflicted on our planet. We believe ourselves to be changemakers which is why we aim to do the following to contribute to the society and play our role in making Mithakhali a sustainable neighbourhood:

#### 1) Spread awareness:

We will create posters and movies and post them on social media to achieve our purpose. Along with this, we can educate our schoolmates about such issues and form clubs to work collectively. According to us, theater is an excellent medium to bring understanding which is why we perform Nukkad Natak on today's pressing issues.

#### 2) Host donation drives:

We will host donation drives to promote the three R's - Reduce, Reuse and Recycle. This will also in turn support SDG 12 which, along with many things, aims to reduce global carbon footprint. Such donation drives will also develop community spirit and tactfully highlight today's hyper-consumption.

#### 3) Push accountability amongst the officials

We will conduct meetings with the Mithakhali community to talk and encourage them to contact the AMC, whenever required. This will increase responsiveness of government officials and direct their attention to issues such as water management, poor infrastructure and other general hazards.

#### 4) Cleanliness drives as fundraisers

Such activities will hit two birds with the same stone as the residents will find themselves living in a cleaner Mithakhali and fund sustainable practices as discussed next.

#### 5) Set up cycle stands

This neighborhood is special for its forestry lanes. However, these narrow lanes are regular witnesses of traffic jams which is why, with the acquired money from the fundraiser we can set up cycle stands. This will reduce traffic congestion and also promote PBS (Public Bicycle Sharing). Increase in cycling will support SDG 9: "Industry, Innovation and Infrastructure" and SDG 11: "Sustainable cities and communities."

#### 6) Buy sustainable vendor carts

Sustainable vendor carts have presented us with a great solution to prevent horticulture produce spoilage due to Ahmedabad heat. We can finance this from the funds acquired by our activities and give street vendors a way to optimize their produce and profit.

#### 7) NGOs can be involved to care for street dogs

Mithakhali's street dogs show signs of aggression and scare a few of its residents. This can be combated by putting them in foster care provided by NGOs. This will improve their quality of life and may give the young ones a new home. Apart from this, vaccination drives should be carried out to ensure that all street dogs are healthy and pose no/little threat to themselves and pedestrians.

#### 8) Organize a concert to raise funds for sustainable menstrual products

As a part of our extracurriculars, our class plans to host a concert to fund sustainable menstrual practices in a rural village of Gujarat. We can advertise this concert to a huge extent to achieve our purpose and also educate young menstruators of Zainabad.



We are self-motivated and passionate environmentalists who will strive to make a change in society. Through the above-mentioned roles, we wish to develop a sustainable neighbourhood for ourselves and others.

## EcoMap created for our neighborhood:

The following is an ecomap that we created for the area, along with a legend for an ease of understanding:



Environment is a crucial component of our lives and we as educated individuals wish to bring a change in society.



## Team 2

Number of team member(s): 1 Names of team member(s): Ms. Eesha Thakoor School: MET Rishikul Vidyalaya, Bandra, Mumbai Class: 10 City of residence: Mumbai Google map location of action plan: Shivaji Park, Mumbai



## Challenges and Solutions identified in the Neighborhood:

Challenges Identified	Picture of Challenge
1. Over excavation of sand at Dadar Beach causing erosion	
2. Excavation of Seabed during construction of the Band- ra-Worli Sea link has also caused colossal quantities of water being displaced, thus affecting Dadar Beach	
<ul><li>3. Due to the increase in traffic, road widening is imperative but the trees adjoining the road becomes a hindrance. Barriers for trees therefore cause a lot of accidents.</li><li>Also, the roads have no zebra crossing nearby, which can be dangerous for pedestrians.</li></ul>	
4. Construction equipment/s blocking sidewalks making them inaccessible to pedestrians	



Good Practices Observed	Picture of Good Practice	Good Practices Observed	Picture of Good Practice
1. Old Trees Maintained- Roads are built around old trees.		4. Proper seating arrangements available in parks.	
2. Waste 'clean-up' drives on beaches are present and posters informing people are placed around the beach to encourage people not to litter.	And the later is the same is t	5. Waste Segregation bins to separate dry and wet waste	
3. Accessible Open areas and playgrounds available for children and adults (Nana-Nani parks) for walks.		6. Sapling Plantation behind Bus stops and between dividers.	

## Action Plan:

Challenges identified	Solutions proposed	Budget estimated	Time esti- mated	Stakeholders involved
Over excavation of sand	Informing local authorities about the issue to act	Rs. 0	2-3 months until action is taken	Local and government authorities take note and prevent excavation.



Soil / Sand Erosion Near beaches	Can be fixed with planting appropriate vegetation. Anti-Soil Erosion Bunds can be placed. Breakwaters can be places to reduce the force of waves to prevent erosion.	Cost of placing 2000 plants= Approximately Rs. 20,000 Cost of placing anti- erosion bunds= Rs.125,000 Cost of 100m of breakwater may cost about Rs. 2,000,000	Time for placing vegetation: 2-3 months Time req. To build Bunds: 1 year Time to place breakwater: 2-3 years	Government authorities to build Bunds and breakwaters Environmental activists to take notice and make the issue public via media to speed up the action process and inform the public. Volunteers to help plant vegetation
Tree Barriers cause accidents	Shape of the barrier can be changed to V shape to prevent accidents. Radium strips and reflectors can be placed to light up and help traffic	Cost to rebuild Barrier around the tree: Approx. Rs. 40,000 Cost of Radium Tapes: Rs. 1000- 2000 for 4 tapes Cost of Reflectors: Rs. 2000 for 20 reflectors	Time to rebuild barriers: 3 months including formalities Time to stick radium tapes around barriers: 1-2 days Time to place reflectors: 1-2 days	Government authorities and municipal corporations to build barriers and install tape and reflectors. Local citizens may protest to make this issue public and voice their concerns so that the local authorities / government would act
Road not safe for crossing	Zebra crossings can be painted. If the traffic is too fast and crossing is too dangerous, walkovers can be built.	Cost to paint zebra crossing: Rs. 5000 Cost to build walkovers: Rs. 90,000/Metric ton		Government authorities and municipal corporations would help source equipment and labour. Contractors to build walkover if necessary
Construction equipment blocking sidewalks	Authorities can be informed to act and relocate equipment	Rs. 0	9-10 days until equipment may fully be relocated	Municipal corporations to act and relocate. Volunteers can also help.



## Problems and Feedback of Community Members:

Action plan was discussed with a Senior citizen, Beach cleanup volunteer and a citizen in the neighborhood.

- The Senior Citizen stated how the beach used to be wider and the water used to be farther away before the construction of the sea-link. She said that this plan would be very helpful if implemented, both for the environment and the city as the beach would once more become a local hotspot. She also remarked that the rubbish segregation is useful, although the public does not have enough knowledge about why it should be separated. Therefore, awareness should be raised so that people would responsibly segregate waste in their respective bins and not litter.
- The Beach Clean-up volunteer mentioned that the erosion causes bigger issues as it deposits all the waste around the shoreline, and it is very frustrating, therefore breakwaters may help reduce waste deposition on the beach. He also observed that since the construction of the sea link, the water levels have risen, increasing erosion, and says that the construction was very careless. He agreed with the Action plan and was happy to volunteer.
- The citizen was content with the action plan and while responding that a foot over bridge would be safer and more useful. He mentioned how there was a horrific accident a few years ago where a car crashed into two pedestrians, killing 2 and severely injuring a child. He also said that the barriers for trees were also accident-prone areas, and that too have caused very serious accidents, which killed 4 people on the spot. He said that high time action should be taken to prevent more injuries as even today, rash drivers pose threats to pedestrians on sidewalks and to themselves.

## Our role in implementation of Sustainable Neighborhood Action Plan:

Major Roles I would play in the implementation:

- 1. For the issue of over ex cavation, I would help raise awareness by distributing and sticking posters in the neighborhood. I would go talk to the local authorities about the issue and the consequences it is causing. I can also try to raise awareness by making this issue public by posting about it on social media and/or local news channels, so that the wider public can notice this issue and help.
- For the issue of sand erosion, I can approach municipal corporations with my action plan and budget and try to convince them to take measures. I can also make this issue social to try and attract attention toward the problem. I can also start donation drives online, for example use Go Fund Me to try and collect a portion of the cost required to prevent erosion
- 3. To rebuild the barriers and construction of a walkover bridge, I can gather up residents from different buildings to talk to the local authorities propose the action plan, along with the concerns of the residents.
- 4. To clear the construction equipment from the sidewalks, while also ensuring such issues do not arise again in the future, I can try talking to local authorities or the contractors themselves. I can simultaneously post on social media to try to garner the attention of the public and speed up the action process.



## EcoMap created for our neighborhood:





## Team 3

Number of team members: 2 Names of team members: Ms. Vanshika Verma & Ms. Vedika Agarwal School: Vivekanand School, Noida Class: 11 & 9 City of Residence: Noida Google map location of action plan: Sunshine Helios, Sector 78, Noida, Uttar Pradesh 201305

## Challenges and Solutions identified in the Neighborhood:

#### Molding in society:





**Electrical loads (generators):** 







#### Basketball court:



#### Greenery:





#### Aerobin (wet waste composting):

STP:





Parks and centers:



Use of paper bags in pharmacies:





## Action Plan:

Challenges identified	Solutions proposed	Budget esti- mated	Time estimated	Stakeholders involved
Frequent power cuts because of overload on the supply lines	Switch to renewable energy sources like solar panels. Talk to higher authorities, like the PVVNL, that supplies power in the society, for better supply lines and electrical loads with higher voltage.	Rs. 40,000- 44,000	6-8 months	PVVNL AOA society association
Water Seepage throughout the society	Apply waterproof coats on the external walls to prevent moisture and rainwater from damping the walls	Rs. 3,50,000- 4,20,000	7-9 months	Maintenance team: CRM
Water leakage in shop areas	Talking to the societal authorities and having plumbers come in and having check- ups, on a monthly basis to secure water supply lines. A lot of the time, leakages can happen due to damaged roof material, therefore in such cases, construction workers can come in and secure the roof. For monthly check- ups, money would be paid through fundraising.	Rs. 52,000- 60,000 per annum	<ul><li>3-5 months in a year for check-up</li><li>3 months for fixing pipes</li></ul>	Plumbers and Maintenance Associations like AOA



The builder has insufficient funds, due to which infrastructure of the society is not being maintained or progressed, like the basketball court is not big enough.	Talking to the authorities, forming a committee, to work towards the needs of the people. Funds shall be raised through donations, bake sales, fundraising, where the committee members would be doing these constantly as per the required funds needed.	For basketball court, Rs. 3,500- 6,000 To form committee: Rs. 2,500	For basketball court, 2 months To form committee: 3 months	AOA CRM
Mold throughout the society on the buildings	Apply whitewash throughout society.	Rs. 48,000- 55,000	6-9 months	Builder CRM
Children are unaware of a lot of conservation techniques.	Conduct more social activities like skits, dance and music performances, or competitions to promote or spread awareness regarding current environmental issues and the ways to conserve the resources, to the children. This can be done the neighborhood's field or clubhouse	Rs. 25,000- 30,000	Conducting programmes thrice in 4 months	Local NGOs Residents AOA



Improper segregation of dry waste.	Waste must be segregated at homes if possible, or by the garbage collectors and then be sent off to the then correct recycling centres. For this awareness about the problem would have to be spread, and extra income would be given to the garbage collectors by the maintenance team itself.	Rs. 25,000- 30,000	Regular check-ups In every 2-3 months at the center Weekly checking at residential level	Residents Recycling center CRM Garbage collectors
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#### A few of the good practices:

- 1) Using the STP water recycle method, 50% of the water is used for cleaning of the society and watering of the plants, and the rest is used for sewage wastewater in households.
- 2) Aerobin practice where the wet waste is treated and made into compost.
- 3) There is a lot of greenery in the society. This is one of the most positive feedback we have received from the residents.
- 4) Socializing centres for senior citizens and yoga recreation centres and parks for kids have been wellmaintained and are a good practice to build a healthy and nurturing community.
- 5) Use of paper bags instead of polythene ones.

#### **Challenges and Feedback from Community Members:**

Senior citizens in our locality were concerned with the decrease in social activities since the past few months and suggested bringing forward a platform where all the senior citizens could stay in touch on a regular basis.

Vendors in the locality were facing water leakage issues on their end but were satisfied with most parts like the greenery in the area.

Parents felt the action plan was detailed and informative, fulfilling most of their concerns.



#### Our role in implementation of Sustainable Neighborhood Action Plan:

Our main role in all problems would be to talk to the authorities with backing from the surveys and questionnaires we conduct throughout the society for each problem. We would therefore, also be the link between the residents and the authorities and convince the maintenance team for funding.

We would also be leading the donation drives, bake sales, fundraisers. We would be taking volunteers from the society of any age for the same and be implementing the plan further.



## EcoMap created for our Neighborhood:



## Team 4

Number of team member(s): 2 Names of team member(s): Mr. Nishad Modi & Ms. Suhani Guleria School: Mahatma Gandhi International School Class: 11 City of residence: Ahmedabad Google map location of action plan: Ambli Village

The site of investigation we selected was Ambli Village, Ahmedabad. During this investigation, we were able to identify urgent problems and devise tangible solutions. We also got the opportunity to interact with architecture students that were associated with the Intersection Foundation working towards ecological and sanitation development in the area. It was an enriching experience.

Challenges and Solutions identified in the Neighborhood:



Illustrations created of the areas:



Figure 1: Lifestyle Diversity



Figure 2: Utensils used for Water Usage

## Action Plan:

Challenges identified	Solutions proposed	Budget estimated	Time estimated	Stakeholders involved
1. Lack of water a. Only one supply (Small pipe)	<ul> <li>Installation of water supplies.</li> <li>Rerouting water systems to the ghetto.</li> <li>Rainwater harvesting.</li> <li>Wastewater recycling.</li> </ul>	Rs. 40,000/-	3 months	• Government officials.
<ol> <li>Lack of toilets</li> <li>a. Open defecation.</li> <li>b. Locals travel 2-3 km for toilets.</li> </ol>	<ul> <li>Circular toilet sanitation model.</li> </ul>	Rs. 50,000/-	1 Month	<ul> <li>Local NGO.</li> <li>Architectur e Students.</li> </ul>
<ol> <li>Lack of sanitation         <ol> <li>Gutter is joined with bathrooms of homes in the ghetto.</li> </ol> </li> </ol>	<ul> <li>Filtration system</li> <li>Nukkad Natak on its importance.</li> </ul>	Rs. 30,000/-	1 Month	• Local NGO

## Challenges and Feedback from Community Members:

The area of focus is a small ghetto in the neighbourhood of Ambli Village, Ahmedabad. The ghetto that we decided to investigate resides outside the urbanized portion of the village and is reported to face both environmental and lifestyle problems from locals. Anecdotes from the residents of the ghetto are the main drive to this action plan and the two of us feel urgent intervention is required.



The action plan mentioned above addresses three fundamental challenges: lack of water, lack of toilets, lack of sanitation. These are the challenges that we feel are the most important in context with the ghetto and require the most attention.

Essentially, our approach to these problems primarily follow a techno-centric worldview. We feel that with the advancement of green technology in recent years, solutions that are efficient and self-perpetuating would create long term impacts. These would range from harvesting systems, filtration systems, sanitation models and recycling mechanisms; some of which we wish to implement in our own plan.

To further evaluate the strengths and limitations of our action plan, we gauged the responses of three people that we felt would be the most appropriate in assessing our planning: a ghetto resident, a government official, and a resident of the urbanised area of the village. We did this to understand factors such as measurability, attainability, relevancy and time estimated of our intended plan. These were their responses:

#### **Ghetto Resident:**

- Told us they have to travel 2-3 km to defecate. Children face a lot of issues at night.
- Told us only one source of water: a small pipe.
- Told us the bathroom is connected to the gutter. No proper sanitation.
- They are worried about long-term plans for the place.
- Told us government officials won't listen to demands, so they are sceptical about the action plan.

#### **Government Official**

- Liked the idea.
- They were worried about funding. Suggested collaboration with NGOs.

#### **Resident of Urbanized Area**

- Told us their observations about the contrast between rural and urban areas. Stark inequality present.
- Suggested action to be taken. Liked the action plan.
- Would help in the effort.
- Was worried about the approval of the government.
- Might take too long.

The feedback was thereafter implemented in the action plan to maximise the attainability. It helped in understanding the need of the community and to tackle possible limiting factors to consider. It was overall a positive response from the people.

#### Our role in implementation of Sustainable Neighbourhood Action Plan:

After we received the feedback, we set to develop the entire stages of the action plan. This was done through mind maps, sketching, and seeking professional guidance. We went through each problem and made sure each had at least one tangible solution. These solutions were effectively planned, and factors such as budget, time estimation, and stakeholder for each were noted down. The following is an outline of each solution to its respective problem:

#### Lack of water:



By asking ourselves the question "where can the water come from," we identified that the water used by the residents came from a large tank that supplied only to the urbanised portion of the village, which had unfortunately omitted the ghetto. To further understand more about the water being supplied, we had a conversation with the manager of the tank and came to know that the water is only supplied three hours a day, which, we felt, was not enough water given to sustain the routines of these residents. More importantly, the ghetto had only one pipe that supplied water to all its residents (30 people), which was an issue.

To tackle these issues, we addressed our concerns with the Intersection Foundation, a local body that works on issues such as sanitation and environmental problems. With this organisation, we discussed the looming problem of water shortages and discussed possible solutions to mitigate them. Some of the solutions that arose were the installation of more water supplies, rerouting the water to parts that don't have much water, rainwater harvesting, and the recycling of water wasted from air conditioners. The last one was the most interesting since the urbanised areas all had air conditioners that wasted tons of water.

In response to this, the individuals at the foundation suggested we have a look at all the air conditioners in the village and note down the amount of water being wasted. We found that a lot of it was wasted and, in the future, we would address our concerns to the entire community in hopes that they begin to recycle the water and conserve it.

#### Lack of toilets & Sanitation:

We found out that the Intersection foundation had also been working on a circular sanitation model toilet, called Waterloop, that addressed the open defecation and sanitation problem in the village. This was particularly interesting to us since there were major problems identified in the ghetto community and thus, we decided to volunteer in this initiative and engage in the project ourselves. The initiative was led by a group of architects all over India and we were able to suggest possible amendments to their existing solution. We made some changes to the design layout, mechanism, and were even lucky enough to help begin building the layout of the toilet.

By understanding the use of wasted air conditioner water and receiving hands-on experience on a model for circular sanitation, we were able to give a direction of thought. On a small scale, we have impactedand we wish to continue.

EcoMap created for our neighbourhood:











**Discussion with the Intersection Foundation** 




Number of team members: 3 Names of team members: Ms. Poorna Datta, Mr. Pranav Kapoor & Mr. Dhruv Chhabra School: The Mother's International School, Sri Aurobindo Marg, New Delhi 110016 Poorna Class: 8 City of Residence: New Delhi Google map location of action plan: Cr Park I block

#### Dhruv

Pranav

## Challenges and Solutions identified in the Neighborhood:



Overflowing/ leaking and blocked drains from which sewage flows onto the road

Proper maintenance and cleaning of drains



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## Action Plan:

Challenges identified	Solutions proposed	Budget estimated	Time estimated	Stakeholders in- volved
Broken ramps of newly con- structed buildings	Waiting for court and the RWA to decide whether it is legal to build ramps	Builders will either have to rebuild a ramp or a footpath	2 weeks	Building manage- ment, court and the house owners
Overflowing/ leaking and blocked drains from which sewage flows onto the road	Fix leaking drains and remove blockages	Rs. 50,000	4 weeks	RWA and committee members, govern- ment, and ward officials
Wastage of clean water due to overflowing of overhead tanks, use of pipes or sprin- klers to wash cars and balco- nies and water plants	<ol> <li>Reusing water from kitchens and other areas</li> <li>Wiping the cars and balco- nies instead of washing</li> <li>Installation of a water alarm for overhead tanks</li> </ol>	1 2 3. Rs. 3000 per alarm system	<ol> <li>Continuous process</li> <li>0</li> <li>1 day</li> </ol>	Collective society members
Back lanes that are built for emergency exits are used by people for hanging their clothes, parking their cars, throwing garbage, especially rubble	Removal of rub- ble and imple- menting a rule so that people take care of their back lanes	Rs. 1000 per truck	1 week	RWA and committee members with the residents



Spitting on walls by the people who eat paan or paan masala	Create a vigi- lant society and spread aware- ness through social media		Continuous process	Residents, RWA, the guards, and media
Theft of iron covers of drain thus drains are left open	Installation of CCTV surveil- lance cameras and fining of the wrong doers	Rs. 50,000	2 months	RWA and its members
A lot of construction at the same time leads to high air, water, and noise pollution	Stricter laws for construction		Continuous process	Judiciary and RWA
Energy consumption is very high, because of heavy use of air conditioners which pro- duce high amount of green- house gasses	Use of lesser air conditioners, 1. Planting more trees, 2. Paint roofs and walls with white re- flective paint 3.Use alternative cooling methods like coolers and reflectors	<ol> <li>Trees can be collected at 0 costs from government nurseries</li> <li>Rs. 10,000 per house</li> <li>Cooler: Rs.</li> <li>5000 per cooler Reflectors: Rs.</li> <li>50,000 per house</li> </ol>	5-6 months	Residents, RWA and the government
Every house has 2-3 cars and carpool is rarely done which leads to more pollution and less parking area	Spread aware- ness for carpool- ing and buy only electric cars	Carpool Rs. 0 else electric car: 10+ lakh per car	Continuous process	Residents

## Challenges and Feedback from the Community Members:

Like minded residents - very enthusiastic but are skeptical about the cost and RWA's action

Secretory of RWA - cost and cooperation of the residents is a matter of concern otherwise optimistic about the plan

Lawyer - not sure about the time needed for the required laws to be made and implemented

#### Our role in the implementation of the Sustainable Neighborhood Action Plan:

I would like to be on the advertising and promotion side of this action plan. I would like to raise awareness through social media, posters, speaking at committee meetings, etc. I would like to give briefings, progress updates and oversee donations. I shall oversee hosting tree plantation drives in local parks etc. and the collective donations from these would be put towards the secondary aspects of these action plans such as feeding stray animals, cleaning up rubble, and raising awareness in the form of more plantation drives. I would also be liked to be involved in convincing stakeholders and shareholders for funding and advancement of this action plan.



Ecomap created for our nneighbourhood :







Number of team members: 1 Names of team members: Ms. Pooja Srivastava School: Colchester County high school for girls Class: 9 City of Residence: Rayleigh, U.K. Google map location of action plan: Rayleigh



# Challenges and Solutions identified in the Neighborhood:







# Action Plan:

Challenges identified	Solutions proposed	Budget estimated	Time estimated	Stakeholders involved
<ul> <li>Plastic and rubbish on street</li> <li>Food waste bin collection happens every 2 weeks</li> </ul>	<ul> <li>Introduce more recycling/ waste bins available for use</li> <li>Raise awareness of the facilities available</li> </ul>	£70 per bin	2 weeks	<ul> <li>Rochford council.</li> <li>Society management</li> <li>Media</li> </ul>
Ditches in roads are unsafe because people could get injured	Fill the ditches with environmentally friendly materials that are low in carbon e.g., Warm mix asphalt	£500	1 month	<ul><li> Rochford council</li><li> Road workers</li></ul>
Temporary traffic lights mean more traffic and more greenhouse gases emitted	<ul> <li>Plant more trees on the roadsides and near houses</li> <li>Use local facilities instead of going far</li> <li>Do road works in the night so it doesn't cause disruptions</li> </ul>	£11-19 per tree £0 to raise awareness	1 month	<ul> <li>Adults</li> <li>Students</li> <li>People living in the local area</li> <li>Media</li> <li>Road workers</li> </ul>



Most people use diesel cars (which emits more nitrogen dioxide and can affect human health) because they travel long distances	<ul> <li>Encourage people to invest in an electric or hybrid car</li> <li>Try and do things more locally</li> <li>Introduce low emission zones</li> </ul>	£19,000- £25,000 for an electric car	1-2 weeks	<ul> <li>Adults</li> <li>People living in the local community</li> <li>Media</li> </ul>
Lots of house in my neighbourhood are old so their main source of energy is gas.	Look into other renewable sources of energy like wind power or hydropower	£6,000-£10,000 for every household to switch to renewable energy	5-6 months	<ul><li>Rochford council</li><li>Government</li><li>Media</li></ul>
Encourage people to grow and buy food that is grown in local farms or the weekly farmers market	Grow fruits and vegetables at local farms and at home. Swap home grown items with neighbours	£100	3-6 months	<ul> <li>People living in the local community</li> <li>Rochford Council</li> <li>Young people</li> </ul>
Using too much water	Try taking shorter showers or switch of taps when you are not using them	£O	1 day	<ul> <li>Local people</li> <li>Adults</li> <li>Students</li> <li>Media</li> </ul>

## Challenges and Feedback from Community Members:

- Take shorter showers
- Use less temporary traffic lights
- Try walking or cycling instead of driving a car for shorter distances
- Use less gas energy and more renewable energy
- Introduce more recycling bins
- Plant more trees and wildflowers to attract bees
- Encouraging people to buy food from local farms and the weekly farmer market
- Grow fruits and vegetables at home and swap with neighbours
- Compost our food and garden waste
- Upcycling (taking one item and finding more than one use for it)



## Our role in implementation of Sustainable Neighborhood Action Plan:

My role in the implementation of my sustainability action plan is to raise awareness. As of right now, I don't have a lot of power to make huge changes like switching to renewable energy, but other people do. Talking to people and persuading them to make small changes in their daily lives, for example taking 10 minutes showers and switching the taps and lights off when you are not using them, can make a dramatic difference when it comes to being sustainable and saving the Earth's valuable resources. If I raise awareness of the challenges in my neighbourhood, more and more people will be mindful of the consequences and choose to take action.



#### EcoMap created for our Neighbourhood:



Number of team members: 1 Names of team members: Mr. Gyaan M.Teli School: Don Bosco HS School, Baghchung, Jorhat Class: 9 City of Residence: Jorhat Google map location of action plan: Lakshmi Nagar, Jorhat, Assam 785006



# Challenges and Solutions identified in the neighbourhood:

Challenges	Solution
	ECO-FRIENDLY



# Action Plan:

Challenges identified	Solutions proposed	Budget estimated	Time estimated	Stakeholders involved
Unmentored <i>visarjan</i> of idols	Use of ecofriendly idols made of decomposable materials.	More or less the same as any other idol used in <i>pujas</i>	The recommendation is to be used during religious fests	The local people & Lakshmi Nagar Mandir Committee, LNMC (Local temple committee)
Throwing of plastic waste in nearby stream	Putting up 'don't throw garbage' signboards and clean-ups.	Rs. 2000 to make a minimum of 4 signboards near bridges at diff. parts	1 month. The clean-up can be organized on World Environment Day	Students, Adults, media
Dumping of construction and demolition materials in empty land plots	Proper disposal of materials lying astray.	Rs. 3000 – Rs. 5000. For excavators and trucks to move the materials.	1 month	Adults, Society management committee
Fused streetlights	Adding new street lights and regular maintenance	Rs. 7000 to Rs. 10000 for new lights, electrician, and other materials	15 days	Society Management, adults
Waterlogged drains during monsoons	Proper drainage and sewage systems	Rs. 5000-Rs.7000	1 month	Students, adults, society management
Puddles on roads	Construction of newer roads	Rs. 10000	2 months	Government and ward officials, society management
Empty plots lying idle	Creation of a community Garden	Rs.5000 for plants and maintenance	1 month	Students, Adults

#### Challenges and Feedback from Community Members:

Mr. Mohan Lal Teli (Father)- "It is a very good and much needed initiative and should involve more people of ages between 10-20"

Mr. B. Dutta (local resident)- "All residents will surely come forward to help once such actions are started. Also I would suggest the creation of a playground for children in one empty plot"

Mr. A. KKumar (resident of society management and development committee)- " Such initiative is highly appreciated and the committee will extend their full support. You can also conduct donation drives to get money to conduct the activities."



# Our role in implementation of Sustainable Neighborhood Action Plan:

My neighborhood conducts such activities on very rare occasions. This initiative will bring a transformation in the society. I will be very glad in leading the program. Being the person to have started this movement, I will also present it to the Lakshmi Nagar Unnayan Samiti (society development committee). Apart from bringing changes in my neighbours, people nearby might get inspired and they themselves may start new movements in their respective neighbourhoods.



Image of EcoMap created for our neighbourhood:



Number of team members: 1 Names of team members: Ms. Mitiksha Gossain School: Shiv Nadar School Gurgaon Class: 11 City of Residence: Gurgaon

Google map location of action plan: Bestech Park View Spa Next

# Challenges and Solutions identified in the neighbourhood:





ekonnect

Challenges identified	Solutions proposed	Budget estimated	Time estimated	Stakeholders involved
No colour coded dustbins in the society	Purchase of colour coded dustbins	Rs. 12,990 (10 dustbins with wet and dry waste segregation)	1-2 weeks from ordering to setting up the bins.	RWA
Need for rainwater harvesting plant	Identifying where all water collects when it is raining, and accordingly constructing a rainwater harvesting plant there.	Rs. 1,00,000 (in 5 building roofs)	1-2 months	RWA
Dirty streets	Organise cleaning drives during the weekends	No cost	Approximately 7-8 weekends (Saturday or Sunday)	Residents and students
Incomplete construction work	RWA informs the local government to complete the construction work.	No cost for society		Local government and RWA
No solar panels	Estimating the amount of electricity used in common areas like lift lobbies and parks. Then accordingly installing solar panels on the roof of each building and on streetlamps.	Rs. 1,07,520 (in 7 buildings)	1-2 months	RWA and residents (adults)
No electric charging station	Getting an inventory of how many people would require charging stations and then accordingly purchasing and installing them in the garage.	Rs. 3-4 lakhs (2 electric charging stations)	Around 2-3 days for installation	RWA and residents (adults)
Less green cover in society	Organising plantation drives.	Rs. 3000 (100 saplings)	2-3 weekends	Students and adults (residents)
Frequent flooding outside society during monsoons	Informing the local government and then trying to repair the drainage system outside the society.	Approximately Rs. 15 lakhs	1-2 months	Local government and RWA



# Challenges and Feedback from Community Members:

- 1. Sona Singh (Resident) suggested talking about the flooding that took place outside the society in the monsoon and the incomplete construction work.
- 2. Tanisha Mathur (resident student) No changes suggested, but helped in identifying the stakeholders involved
- 3. Sanjay Mathur (resident) Helped in identifying the good practices in our society.

#### Our role in implementation of Sustainable Neighbourhood Action Plan:

My role in implementing the Sustainable Neighbourhood Action Plan:

- 1. Share my plan with the residents and RWA
- 2. Explain to them why this is important and should be implemented.
- 3. With the help of the RWA make a more detailed plan to execute the Sustainable Neighbourhood Action plan and figure out how to raise and collect funds for the projects.
- 4. As for the plantation and cleaning drives explaining to children and adults the importance of good green cover and garbage free streets. Also, to convince them to join the drive.

#### Image of EcoMap created for our neighbourhood:



Bestech Park View Spa Next



Number of team members: 1 Names of team members: Ms. Ishika Yadav School: Shiv Nadar school Class: 10 City of Residence: Gurgaon



Google map location of action plan: The citizen welfare society, Gurgaon, Haryana

# Challenges and Solutions identified in the neighbourhood:

Challenges	Solution
Broken footpaths	Maintenance of parks
Sewage system	Bird feeders
Can install solar panels to generate electricity at a cheaper price	Community efforts and communication
Carbon waste generation due to unused and donatable goods	Usage of cloth bags
	Dog shelter
	Plantation of trees
	Waste segregation (the organic waste is then used to make compost)

# Action Plan:

Challenges identified	Solutions proposed	Budget estimated	Time estimated	Stakeholders involved
Waste generation due to unused and donatable goods	Donation drive	Rs. 0	1-2 weeks	RWA Committee members and Society members
High electricity generation cost	Can install solar panels to generate electricity at a `cheaper price	Rs. 40,000	3 weeks	RWA and committee members



Broken footpaths right outside the society	Inform Municipal party	Rs. 0	1-2 months	RWA with the collective society members
Sewage system	Monthly maintenance	Included in the monthly salary of the social workers		RWA and committee members

#### Challenges and Feedback from Community Members:

It would be difficult to check the sewage line for blockage every month as the plumbers would have to check the sewage pipe of every house. What they can do instead is to cover up the few open gutters with concrete blocks.

#### Our role in the implementation of the Sustainable Neighbourhood Action Plan:

One of the major role that I would play in the implementation of the problems mentioned above

- 1. Bring the ideas to the committee members
- 2. For the donation drive, I shall contact NGOs and talk to them regarding their requirements and how the drives can be helpful.
- 3. Spread a word about the importance of the solutions to the faculty members in my school and the rest of the society members. This can be achieved by making posters, speaking at the committee meeting, and posting in the society WhatsApp group.

#### EcoMap created for our neighbourhood:





Number of team members: 2 Names of team members: Ms. Ishita Singh & Ms. Naisha Datta School: Shiv Nadar School, Gurugram Class: 9 Ishita Naisha City of Residence: Gurugram Google map location of action plan: Sector 49, Gurgaon. Haryana

# Challenges and Solutions identified in the neighbourhood:





## Action Plan:

Challenges identified	Solutions proposed	Budget estimated	Time estimated	Stakeholders involved
Lots of garbage such as wrappers, tissues are thrown about, especially near street vendors. No dustbins are placed as the path is quite narrow.	attaching a small portable dustbin to the vendor's cart itself which can later be emptied by the vendor when needed. two dustbins- one for wet waste and one for dry waste help raise awareness among vendors and buyers alike about proper waste segregation.	Rs. 300/- per dustbin	1-month	Volunteers (both adults and students) Public Crowdfunding
Due to construction in the area, the number of trees has been reduced.	Organise tree plantation drives in school Organise an inter-school or intra- school competition to promote the same. "Adopt a Tree" campaigns to encourage people to take care of at least one tree which they choose to grow	Rs. 10,000/-	6 months	Students volunteer
Lot of electricity is being wasted by using halogen bulbs.	Use solar-powered streetlights which will help conserve electricity	Rs. 40,000/-	3 months	Society Management Public Funding

#### Challenges and Feedback from Community Members:

#### Suggestions by Parents:

For the first challenge, we could look for an even more eco-friendly solution instead of using plastic dustbins. We can try to switch to dustbins made of bamboo or jute and avoid using plastic altogether. A lot of plastic is also used for serving food by street vendors, so a better option could be reusable plates or biodegradable plates which after being cleaned, can be used in composting.



#### Suggestions by Teachers:

Usually, solar-powered streetlights can be quite expensive when bought in bulk. Considering we have to install them in the whole neighbourhood, they suggested we first buy solar panels and with the help of our IT Department and later, the government officials, we can install the panels on the pre-existing streetlights instead of buying and installing completely new streetlights. For the budget, they suggested crowdfunding and raising money from the community itself.

#### Suggestion by a Landscaper:

Though many tree plantation drives are conducted, few of them bear fruit in the long run. This is because usually, the saplings don't survive long enough due to a lack of water and proper care. Thus, he suggested promoting the "adopt a tree" campaign, so that even if only a few saplings are planted, it is ensured that they grow into mature trees. He also suggested clearing the many garbage stumps around the area. Volunteers and students can be encouraged to collect garbage as a service to the community. A valuable input given to our idea was to get in touch with the horticulture department of the government or the municipal corporation for better implementation of our plans. It would be great if we could plant such trees and plants which are scientifically proven to naturally cleanse the air. Some flower-bearing or fruit-bearing trees would be great as well to ensure the beautification of the area. Another suggestion was to create community composting units, where biodegradable garbage including the leaves shed by the trees can be converted to compost.

#### Our role in the implementation of the Sustainable Neighbourhood Action Plan:

We could:

- 1. Raise awareness through different mediums such as posters, videos, articles etc.
- 2. Get to understand the situation
- 3. Take steps
- 4. Include as many people as possible

There are multiple ways in which we can implement our Sustainable Neighbourhood Action Plan and our role is important. The first step would be for us to make the people living in the society aware of the challenges that we are facing. We can do that through various mediums: for example- videos, articles, posters, and plays. Once the challenges are known to them, we can move to the next step, which is to understand the challenges better. We would research to comprehend the situations better. From the research, we will get to know about certain things like the budget needed for implementation, the number of resources needed etc. We will also focus on the stakeholders involved. Through all of this, we will arrive at finer solutions. Then would be the time to implement all of the solutions found for the challenges. We would have to talk to the stakeholders, buy the necessary resources and include as many people as we can to execute our Sustainable Neighbourhood Action Plan.

It will not be easy to do so much, but we will try our best.



## EcoMap created for our neighbourhood:



Green marks the area where trees can be planted

Red marks the area where the solar-powered street lights can be installed.

Yellow marks the area where usually street vendors are present and a lot of garbage is accumulated.



# Annexure

# Annex 1: The Final Agenda

Creating Global Sustainability Champions					
	21-27 March, 2022				
	Program Outline				
Indian Time	Торіс	Speaker			
	21 <sup>st</sup> March 2022, Monday				
5:35 pm	Interactive Session	Vishwa Trivedi			
5:45 pm	About BMVM and Dadasaheb Rege	Dr Prasad Modak			
5:50 pm	Let us Understand Sustainability	Dr Prasad Modak			
6:25 pm	Ownership to steer positive changes in our community	Manvel Alur			
6:45 pm	Business Initiatives in Fostering Urban Sustainability	Anagha Paranjape-Purohit			
7:05 pm	Interactive Session	Vishwa Trivedi			
7:20 pm	Instructions for Assignment I	Sakshi Gore			
7:28 pm	Feedback				
7:30 pm	Close				
	23 <sup>rd</sup> March 2022, Wednesday				
	Activity				
	Write 3-page profile on one of India's Sustainability H	leroes			
	On-line submissions through Google Doc	Γ			
5:30 pm	Interactive session	Vishwa Trivedi			
6:00 pm	What are sustainable neighborhoods? Examples	Dr Prasad Modak			
6:30 pm	How to create an action plan for Sustainable Neighborhood?	Sakshi Gore			
7:00 pm	About KidPower	Robert Wood			
7:15 pm	Instructions for Assignment II	Sakshi Gore			
7:30 pm	Close				
24 <sup>th</sup> , 25 <sup>th</sup> & 26 <sup>th</sup> March 2022, <i>Thursday, Friday &amp; Saturday</i>					
Activity					
Prepare a Sustainability Action Plan for your neighborhood using Eco-mapping and stakeholder consultation.					
Students may work in groups if they prefer.					
On-line submissions through Google Doc.					



27 <sup>th</sup> March 2022, <i>Sunday</i>		
5:30 pm	Interactive Session	Vishwa Trivedi
5:45 pm	Experience Sharing by Participants	
6:00 pm	Jury's comments	
6:15 pm	Announcing Top Three Sustainability Champions	Dr Prasad Modak
6:20 pm	Zero Waste Living	Sahar Mansoor
6:45 pm	CEE's Initiatives on Engaging with School Children on Sustainability	Kartikeya Sarabhai
7:15 pm	Closing Remarks	

# Annex 2: Questions asked by students during the sessions

- 1) Sustainability is a necessity, but people like to choose easy way. How can we convince people to choose right over easy?
- 2) As young students, how can we make sure people take us seriously when we are creating awareness?
- 3) We know that cars have created a lot of pollution, so can we convince people to use public transport to reduce air pollution?
- 4) Can sugarcane pulp be a good alternative to paper and plastic?
- 5) What is a short-term and long-term policy we must adapt to combat climate change?
- 6) Certainly, sustainability can be very helpful to environment and indirectly the society. But sustainability is also more expensive than the conventional methods. For example, renewable energy is more expensive than non-renewable energy; not only is it comparatively expensive to us individuals, but it may also be more expensive to some third world countries to adopt, which, obviously is not feasible. So, what can we do to make sustainability more affordable to everyone?
- 7) While trying to convince people to take ownership for the environment, some people are taking the meaning of "ownership" as "my place, so I'd do as I please". Convincing everyone is not possible, so how can we carry on even though some people are opposed to practices of sustainability?
- 8) In my neighborhood, we have a small stream running through. There is a highway nearby and the stream runs under it. Now there is a construction of an over bridge and due to it the stream was blocked resulting in a small trickle of water on our side and frequent floods on the other. Letters were written to the municipality multiple times but to no vain. Is there any other way we can tackle it?
- 9) Another issue is recycling. Many people today put their waste in recycle bins. But most of the times, there are reports that the waste is not recycled, but just dumped or downcycled. So, in such cases, what can us individuals do to make sure that my waste is not polluting, but it is being recycled?
- 10) Do you believe that a techno-centric approach is more useful than an eco-centric or an anthropocentric approach?
- 11) Today businesses are encouraged to be sustainable or ethical. But obviously that is not very affordable to small time businesses or startups. And sadly, there are not many government policies/loans



available for ethical development of a business, and hence, this may discourage entrepreneurs from sustainable development. So how can we urge the government to take action like introduce policies?

# Annex 3: Challenges and Solutions

#### The participants mentioned a few challenges such as:

- 1) Lack of time to complete the assignments due to school exams.
- 2) Challenge in getting information while researching for the assignments.
- 3) Challenge in getting stakeholder responses while preparing the Sustainability Action Plan for their neighborhood.
- 4) Difficulty in attending the sessions due to the time differences in different countries.

#### The following solutions could be implemented to overcome the challenges mentioned by the participants:

- 1) Longer time could be given to the participants for research and completing the assignments.
- 2) Instead of preparing one single model which can be attended by anyone globally, separate models for 'Global Sustainability Champions' could be prepared catering to a specific region eg: South Asia, or a particular city eg: Mumbai, or a particular country eg: India. This would ease the problem of different time zones in different countries.
- 3) Financing of these models could be done with the help of the Municipality of that area or the model could be undertaken as a part of a CSR project of a company.

#### Some suggestions given by the participants also could be implemented as a part of the program:

- 1) Including quizzes in the interactive sessions.
- 2) Increasing the duration of the program to learn better and giving more time to do better research before submitting the assignments.
- 3) A 'bait' could be used to attract more students.
- 4) An advanced programme for students who would like to dive deeper and take actions.
- 5) Implement a system to make the programme a continuous process to take action and form a group or a club for participants who are interesting in continuing the journey.
- 6) Introduction of this programme at an early stage in school to encourage students towards sustainability.
- 7) Expand outreach of the programme to more schools.
- 8) Inculcate the concept of 'Hand Print' in students, which is a positive action towards sustainability.



# Annex 4: Prizes for Winners

# 1st Prize was won by Mahi Shah, Isha Lokre, and Bindu Pullarkot from Mahatma Gandhi International School, Ahmedabad.

Books given to Mahi Shah:

- 1) The Race to Save the Lord God Bird by Phillip Hoose
- 2) The Climate Solution: India's Climate-Change Crisis and What We Can Do About It by Mridula Ramesh
- 3) How to Change Everything: The Young Human's Guide to Protecting the Planet and Each Other by Naomi Kelin
- 4) Bare Necessities- how to live a zero-waste lifestyle by Sahar Mansoor

Books given to Isha Lokre:

- 1) The World Without Fish: How Kids Can Help Save the Oceans by Mark Kurlansky
- 2) Wangari Maathai- The Woman who planted millions of trees by Franck Prevot
- 3) How to Change Everything: The Young Human's Guide to Protecting the Planet and Each Other by Naomi Kelin
- 4) Bare Necessities- how to live a zero-waste lifestyle by Sahar Mansoor

Books given to Bindu Pullarkot:

- 1) A Hot Mess: How the Climate Crisis is Changing Our World by Jeff Fleischer
- 2) Watershed: How We Destroyed India's Water and How We Can Save It by Mridula Ramesh
- 3) How to Change Everything: The Young Human's Guide to Protecting the Planet and Each Other by Naomi Kelin
- 4) Bare Necessities- how to live a zero-waste lifestyle by Sahar Mansoor





# 2nd Prize was won by Suhani Guleria & Nishad Modi from Mahatma Gandhi International School, Ahmedabad.

Books given to Suhani Guleria:

- 1) A Hot Mess: How the Climate Crisis is Changing Our World by Jeff Fleischer
- 2) This Changes Everything: Capitalism vs. the Climate by Naomi Klein
- 3) Bare Necessities- how to live a zero-waste lifestyle by Sahar Mansoor

Books given to Nishad Modi:

- 1) Wangari Maathai- The Woman who planted millions of trees by Franck Prevot
- 2) The World Without Fish: How Kids Can Help Save the Oceans by Mark Kurlansky
- 3) Bare Necessities- how to live a zero-waste lifestyle by Sahar Mansoor



#### 3rd Prize was won by Eesha Thakoor from MET Rishikul Vidyalay, Mumbai.

Books given to Eesha Thakoor:

- 1) The Story of More: How We Got to Climate Change and Where to Go from Here Adapted for Young Adults by Hope Jahren
- 2) The Sixth Extinction: An Unnatural History Paperback by Elizabeth Kolbert
- 3) The Tree Lady: The True Story of How One Tree-Loving Woman Changed a City Forever by H. Joseph Hopkins
- 4) Bare Necessities- how to live a zero-waste lifestyle by Sahar Mansoor





# Annex 5: Interactions with Participants

The sessions were made interactive using Aha slides where participants were asked to answer some questions live, at the beginning and end of each session. The students were asked to click a photo of a green product/solution in their home and upload it on Instagram. They were made aware about Air Quality Index and were asked to download the SAFAR-Air app. The participants asked relevant and intriguing questions to the speakers and an interesting discussion took place after each session. At the end of each session, the participants were asked to write some words that inspired them and give their rating using Aha slides. Towards the end, the participants shared challenges they faced during the program and provided their valuable feedback.

#### Session 1

















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**O** AhoSlides







Where does your food come from? Try to trace it back as far as you can and list it here.

AhaSlides







1 4

C AndSlides Indoor air quality could be much worse than outside air. Can you think of some of the main sources of indoor air pollution?











# Did the program inspire any action that you may continue? Give examples

res. It did. Through my action plan. I valued there are many things that I can nitiate, and do not have to wait till the povenment or any authorities take action. can do it myself and inspire many others p join me

C AhaSlides

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# Annex 6: Feedback

# Feedback from Participants

The ratings given by the participants were: First Session- 7.8/10, Second Session- 8.4/10 and Third Session- 8.9/10.

"Through the action plan activity, I realized there are many things that I can initiate, and do not have to wait till the government or any authorities take action. I can do it myself and inspire many others to join me."

"The action plan was a great way to plan for different things and it can be used very much regularly."

"I learned many things and I will try to think about how I can reuse my waste and try to spread awareness."

"I would definitely use the eco-map and start initiating actions in my locality."

"I will adopt some of the mentioned zero-waste practices and look into courses and programs to enrich my understanding."

"The program has inspired me to keep growing my own fruits and vegetables and to reuse/upcycle waste in my local area."

#### Feedback from Parents

"Congratulations Sir! My daughter and her friend participated and have given a very positive feedback to the programme. This programme has instilled a will in her to become an Environmental Engineering graduate and do her best for the environment. I thank you on her behalf for this enriching experience."

"Thank you so much for arranging such wonderful programme on Environmental Sustainability. Children experienced a very in-depth learning about this subject. I'm very happy to know the results of the Championship. Eesha Thakoor is my daughter, and we are eager to meet you in person in your office."

#### Feedback from Peer Participants

"Dr Modak, Wonderful to see the entire project unfold...and the enthusiasm of the students! Excellent idea- training young minds which will remain with them for life! They will be eco sensitive citizens."

"Excellent presentation and congratulations to Dr Modak for tapping the young talents."

"Excellent initiative Dr Modak! Certainly, young mind can bring change in society as an action towards our politics!"

"Congratulations to all participants. I was very impressed by the observations made and the amazing eco plans developed. Dr Modak and team, this is such an exciting project, really very interesting approach of bringing young champions into the sustainability challenge."

## For more information

Contact Dr. Prasad Modak at prasad.modak@emcentre.com

