

# अंतर्गत

Breathing Waste: Reuse, Recycle, Recreate



**INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN**

(UNDER DELHI VIDE ACT 9 OF 2012, GOVT. OF NCT OF DELHI)  
(ISO 9001 : 2015 CERTIFIED UNIVERSITY)

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# What

are we?

"Antargat" is a movement that incorporates efforts from within, your heart, mind and soul. It is believed that every mind has an edge of creativity embedded in it. This movement aims at providing a platform to enhance it. This society would help us to explore our talents and create products from 'UNIVERSITY WASTE' that maybe of used in some form or order to the present needs of the university. Every year the University discards loads of Waste.

The process of non-consumable items is a tedious and long process and requires lots of paper work and manpower to perform the condemnation process. More over the condemned material uses lots of storage space used as dump yard for the same. This society aims as doing away with all this material in a more productive and useful way. This initiative incorporates the sustainability concept laid under millennium goals and 'Swachh Bharat Abhiyan' initiative of the government of India.

# Waste

## do we do?

Our Aim is to make Indira Gandhi Delhi Technical University for Women, a ZERO WASTE University in India. Many workshops, Awareness programs and on-ground Projects are proposed within the University for upcoming years. The initiative may incorporate collaboration with other societies with this aim as a joint venture.

A group of like-minded and budding architects looked at condemnation waste and came up with the idea that it's still breathing and some of it can still be revived. A society started on experimental basis in 2017 took official form in 2018. The main aim of the society was to:

**Reduce** condemnation waste in the University by promoting repair and remodeling of furniture etc.

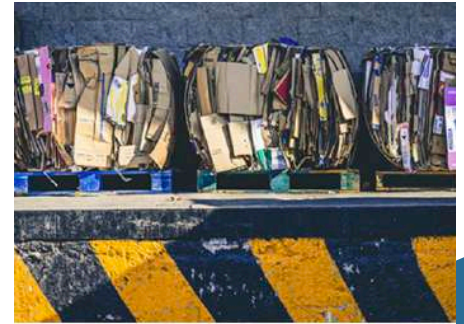
**Reuse** of usable waste from University like furniture, civil waste items, event waste, canteen waste etc.

**Recreate:** Initiating projects where waste items can be transformed to usable products and spaces.





# Can The Environment Afford Us?

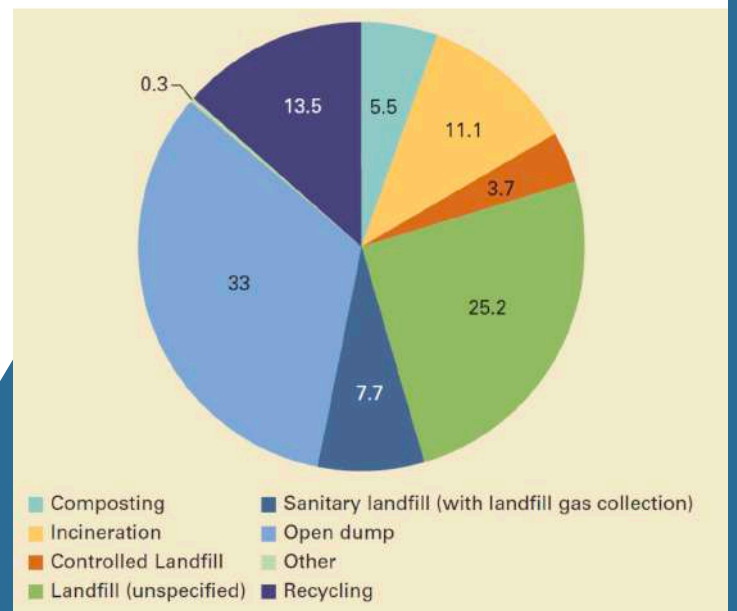


World Bank: Global waste generation could increase 70% by 2050

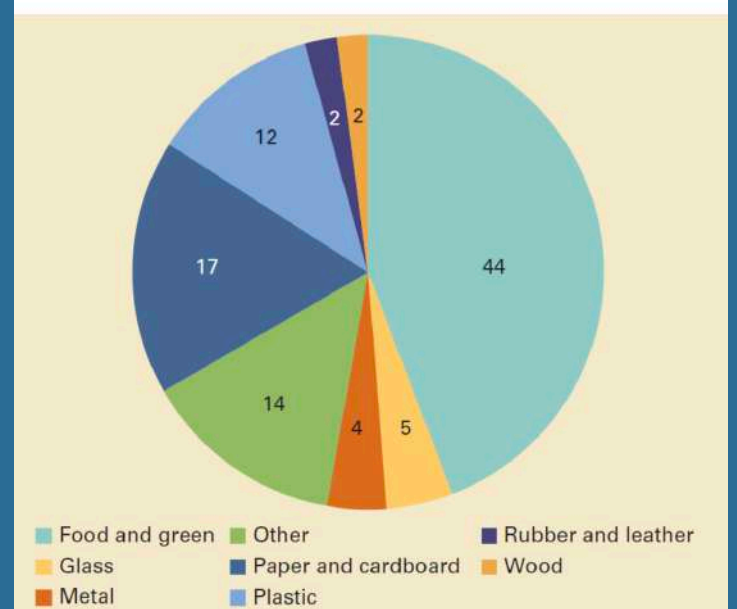
Currently, about 2.01 billion metric tons of municipal solid waste (MSW) are produced annually worldwide.

We generate more waste than we can handle, recycle, incinerate, or dispose. We are responsible for converting our beautiful planet into a wasteful dump.

Global treatment and disposal of waste (percent)

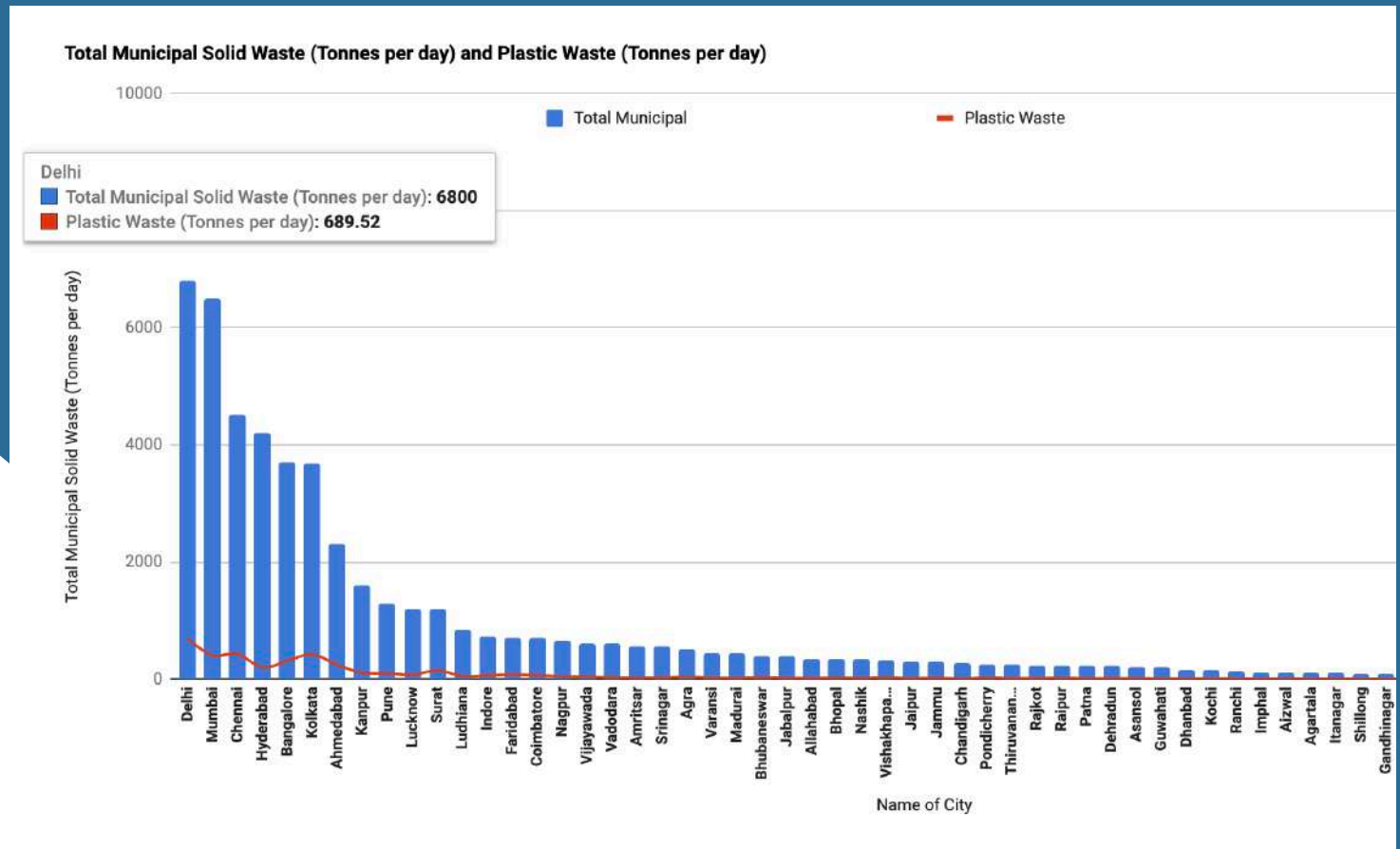


Global waste composition (percent)



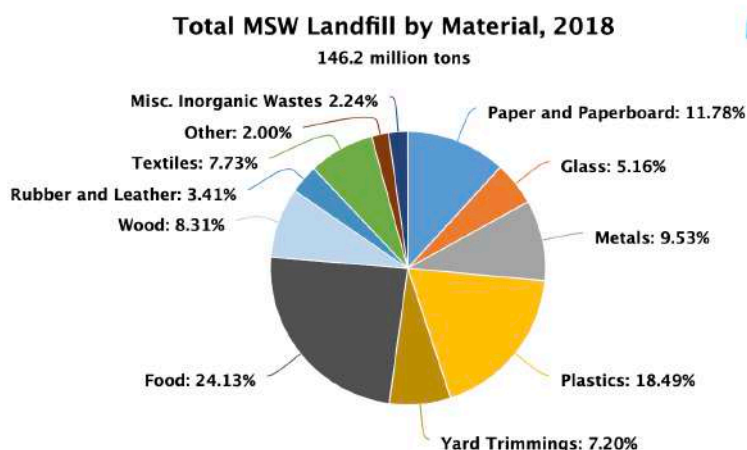
# Where Do We Stand Today?

The Indian Prime Minister got the prestigious Global Goalkeeper Award for the Swachh Bharat Abhiyan from the Bill & Melinda Gates Foundation.



Delhi generates 6,800 tonnes of solid waste per day.

Do you know that the average American produces almost eight times more municipal solid waste than the average Indian?



Do you know that the average European produces far more e-waste than the average Indian?

And do you know that the average Indian also uses fewer plastic materials than the average Westerner?

# Vision : IGDTUW as a Zero Waste Campus by 2025

The concept of sustainability can only be successful if we start at the beginning of waste generation. It is important to understand the physical and chemical qualities of waste material and utilize it to its maximum potential. 'Antargat' believes 'Treat waste as the raw material'

## FURNITURE WASTE

- Repair, Recreate, Refurbish
- Furniture, dustbins, plant holders, roofing shed structures

## GREEN

- Collect in compost pits, dry use
- manure for plantation, animal feed

## CIVIL WASTE

- Reuse, Recreate
- benches, plant holders, metal sculptures, murals.

## PAPER WASTE

- recycled, shredded
- handmade paper, envelopes, gift bags, handicraft paper Mache products

## GLASS/ PLASTIC WASTE

- segregate glass, plastic, wrappers etc.
- murals, litter bins, partition walls etc.

## FLEX/ POLYTHENE WASTE

- Reuse, Recreate
- Baskets, fans, bags roofing material

# Antargat as a Work Culture

'Antargat' is a movement that needs nurturing with time to become part of our everyday lives. The efforts of the team is to create 'Antargat' as a culture that people follow everyday subconsciously like breathing and eating. This movement intends to change the perspective of looking at the environment as a separate entity. We need to identify that the environment is part of us and our existence depends on co-existence. So it is imperative that we need to care for it as much as we do for ourselves.

knowledge sharing

awareness programs

competitions

capacity building

hands-on learning workshops

skill development

education

guest lectures

idea clubs

imageability

newsletters

exhibitions

revenue generation

sponsorships

Entrepreneurship

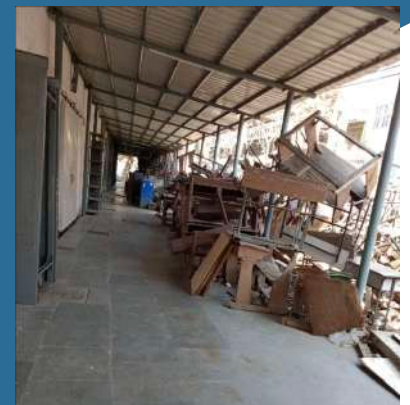
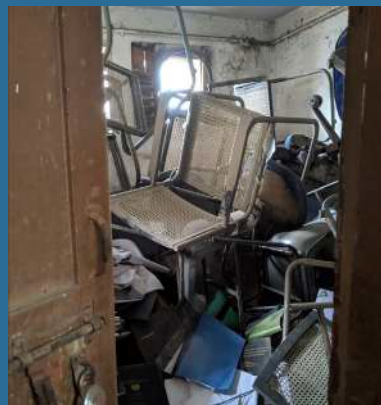


# Remodeling and Transformation of Condemned Furniture

85% cost benefit  
15% investment

The Department started its M.Plan program in 2019 and required a set of 20 computer chairs and some discussion tables for students. Team Antargat found 32 usable frames of computer chairs lying piled for condemnation. Some frames were fine, some has a part or pulley missing, all had tattered cushions. The market cost of chairs would be Rs. 1 lac aprox. Six old tables in dilapidated state were discarded and found. Purchase cost of all items would have costed the university around Rs. 2 Lac including taxes, transportation and labour cost.

Team Antargat purchased laminates, cushion foams and cloth to cover the computer chairs and sofas for Rs. 30,000, no transportation was required as products were created and consumed in the university (computer chairs and discussion tables in DAP and Sofa in ASH department).



Furniture Waste



Laminated tables with  
chiseled frame



Remodeled computer  
chairs

The labour cost was ZERO as the university carpenter and students of Team Antargat worked for three months to finish the products.

This project showcased 85% cost benefit to the university, helped in decluttering space and students learnt optimization of usable waste enhancing their creative, design abilities and hands on skills.



# Recreating Shopping Bags out of Old Flex Banners

100% cost benefit  
Zero investment



Flex sheets Waste

Team Antargat took the initiative of collecting flex banners as waste from many academic and cultural events held in the university in the past year. Out of these 35% of the banners were revived for use. The team in collaboration with 'Unnat Bharat Abhiyan' society approached some skilled labourers in village Baurari who knew how to stitch. These men and women were given the flex banners to be cut and stitched into shopping bags.

Banners and flex printed sheets used in exhibitions and displays were dumped at the already overflowing and dying landfills, polluting land and water bodies. Flex banners are PVC (Polyvinyl chloride) banners which not only cause environmental hazard but health hazard too. Flex is non-biodegradable, and when burnt, emits toxic fumes which have serious effects on public health. This issue was recognized and a unique solution was evolved.



Some Bags as designed by Team Antargat and stitched by skilled Baurari villagers.



Founder students modelling for publicity of products (Nilfa Saha and Ridhi Arora)

The bags are large, sturdy and waterproof, making them very useful to carry large and heavy miscellaneous items.

The small initiatives by team 'Antartgat', if projected at a larger scale can help in reducing waste, generate employment and create avenues for creative spree amongst youngsters.



# Reusing Broken Pavers and Tiles 100% cost benefit to Create Seating Spaces Zero investment

Team Antargat in collaboration with first year workshop in Department of Architecture and Planning created seating spaces for students within the department using 'Adobe Construction Technique'. This used mud and cowdung with hay to create bricks and plastered seating benches within the university premise.



Team Antargat with students of First Year B. Arch, Architectural Workshop (Ridhi Arora)



The seats were finished with embedded broken tiles. The old pavement pavers and civil waste jaalis were used to compile a plantation corner.

Tarpaulin used at construction sites for floor protection was cleaned and reused to create hanging cushions over the seating. The cushions were filled with chips wrappers, thrown away polythene bags etc. The back wall was painted by students to create a vibrant seating space for them.



Old and discarded twin table benches were repainted and set up for seating in courtyard and corridors of the department. This was another initiative to create awareness that its not necessary that ambience and creative spaces can be designed with expensive purchase.

Adobe construction seats with Tarpaulin cushions of plastic waste, plantation corner from pavers and civil waste jaalis and tiles.



# Student Exhibition, Innervive Technical Fest 2019

These bags were exhibited and sold during the Technical fest Innervive and the amount collected was given to the labourers in the village. The Exhibition efforts of the team were applauded by the Honorable Chief Guest Dr. M.P.Poonia, Vice Chairman AICTE and our Honorable VC maam. A product was also gifted to the chief guest as a token of our gratitude. The bags were designed by team Antargat and modelled for better publicity during the fest.





# Green Waste Compost Manure

Green waste from the University central lawn was collected and composted for reuse as manure by team Enactus. During the celebrations of Independence Day in 2019, the compost was utilised for plantation of trees and plants by Administrative officials, Faculties and Students organised by three societies conjointly; Enactus, Greensphere and Antargat.

The teams are working further to utilise green organic waste from the kitchens of both hostels to create natural compost manure for the university.





# Awareness Initiatives

Department of Architecture and Planning under the MoU signed with Delhi Municipal Corporations (South, North and East) is taking the initiative for promoting public awareness for a clean and green Delhi to support the efforts of Delhi Municipal Corporation and achieve best Ranking in Swachh Survekshan, conducted by MoHUA.

Team Antargat has been initiating awareness programs regarding sanitation and hygienic living conditions through workshops, dialogue with village folks during tours and in collaboration with UBA cell in the adopted villages by IGDTUW.



A poster painting competition was organised in the Department of Architecture and Planning on this 16.01.2020 with the theme 'CLEAN DELHI, GREEN DELHI' and three top paintings were awarded with cash prizes. The posters have been submitted to Delhi Municipal Corporation for recreation and public display.



# Hands On Learning

Students during some projects learnt Technical skills like COBB Construction, ADOBE Construction, Soil testing techniques etc. Mud mixing, brick design and plastering technique in the vernacular construction system. The overlaying and construction technique is part of their first year course curriculum.

Hands-on learning skills like carpentry work, wood handling and specifications, stitching techniques, public speaking and group discussions helped in interpersonal learning and grooming from an overall development perspective.







### Bhoomika Mehta (Batch 2015)

An Architect at Design Atelier Urbis, I work with a team of architects on various sustainable projects like residential, commercial, institutional etc. As students, we were sensitized about the various issues related to global warming and what can we do our bit to reduce it, which embarked the movement of starting a sustainable life. We were imbibed with this ideology of practising sustainable architecture led us to lay the foundation of the 'Antargat Society' by remodeling civil waste of the university for creating something exciting for students and faculties of the university. And this practise during college life has also become a part of my professional and personal life. I try to imbibe the learnings into practise as an architect and try to inculcate more sustainable methodologies and at home try to reuse recycle things.

### Jyoti Rani Meena (Batch 2015)

I am Jyoti Meena currently pursuing Masters in Urban Planning from IGDTUW. I have completed my Bachelors in Architecture from IGDTUW in 2020 and I have a certain interest in sustainability and green architecture. Antargat aims to make IGDTUW campus sustainable in terms of discarded reusable waste and expanding further beyond campus. Along with Preeti Chauhan Ma'am, Bhoomika and I started Antargat in the year 2017 with the sole purpose of conserving the environment and to move towards sustainable living. Uptill now, we have taken up many projects and saved a huge amount of expenditure cost of university and wish to keep doing good work with the support of the university and take up Antargat on national level one day.



### Nilfa Saha Karmakar (Batch 2016)

I, Nilfa Saha Karmakar, have a very ambitious personality. Reading various business and architecture magazines feeds my curiosity and I am very passionate to work towards bringing positive changes in the society. Being a dancer, model and a videographer myself, I've worked with several prestigious companies as a freelancer and run a production studio by the name of Niyat since 2019. Being a part of this society is about changing the way we look at things. Designs of antargat emphasise maximum utilisation of space and materials, taking into account their characteristics in order to maximize aesthetic appeal and decrease waste production at the same time. We were constantly working on making our designs implement the newest and most innovative products to minimise the impact on the environment while decreasing operating costs. We hope to create more such innovation in the coming days too.

### Ridhi Arora (Batch 2016)

A final year student of Bachelor's in Architecture at Indira Gandhi Delhi Technical University. She is an art enthusiast who loves designing and creating. She is also a video creator who makes videos about art, craft and architecture. The journey of founding Antargat has been such an amazing learning experience. I feel that the work of Antargat society, when implemented on a larger scale can be a great business model. I strongly believe in the Japanese concept of 'ikigai' – the way to live a fulfilling life - It is a perfect blend of passion (what one loves to do), profession (what one can be paid for), mission (what the world needs) and vocation (one's calling). The model of Antargat society highly resonates with the principle of ikigai for all those art enthusiasts like me, and I hope this legacy shall be carried forward by the newer batches to come.



## core team antargat

### Co-Coordinator



**Ar. Jahnabi Kalita**  
Assistant Prof., DAP

### Faculty Advisor



**Ar. Preeti Chauhan**  
Associate Prof., DAP  
Additional Registrar, GA

### Patron



**Dr. (Mrs.) Amita Dev**  
Vice Chancellor, IGDTUW

### Editorial Team



**Muskan Sharma**  
Batch 2018



**Kashish**  
Batch 2018



**Nandini Mishra**  
Batch 2018



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