7.1.3

Facility in the institution for the management of the following degradable and non degradable waste

- a) Solid Waste Management
- b) Liquid Waste Management
- c) E-Waste Management

7.1.3 Efforts towards Waste management on campus

Our institution follows the basic steps regarding the waste management on the campus over a period of time solid liquid and e-waste management is done properly through respective channels and majority part of the process for solid liquid management is done with the help of NSS cells. The institution works to create awareness among the students and society too. About the significance of healthy environment the following details are han about solid liquid and e-waste management efforts taken on the campus

A) Solid waste management

The institution makes sure that all the academic building and rest of the campus is cleaned and has proper disposal of solid waste dustbins are arranged and different parts off the campus throughout to collect it and dispose of later.

B) Liquid waste management

Majority of the liquid waste is generated by the laboratories, toilets, canteen and other random sources the institution has made provisions for the proper water sanitation program and preventing majors to ensure our environment friendly campus. The waste liquid water is dispensed to the septic tank after due treatment.

C) E-waste

The institution has taken basic steps towards the management required for the disposal of e waste of contents preventing measures like all the departments are are ordered to collect e waste they use throughout the academic year like memory chips, motherboard, compact discs, cartridges etc generated by electronic equipments such as Computers, Radio,TV, Phones, Printers this along with other waste is collected when it will be 200 kg ,It will be given to the NGO. The e-waste generated from hardware which cannot be reused or recycled is being disposed off centrally through government authorized vendors,





"Jeevandeep Shaikshanik Sanstha Poi's" ARTS, COMMERECE & SCIENCE COLLEGE, GOVELI

(Affiliated to University of Mumbai) Goveli, Tal-Kalyan, Dist-Thane 421301

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1	Policy	3-6
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Clean and green campus policy

Introduction:-

The green campus concept offers, to the institution for an opportunity to take lead in the redefining its environmental culture through installing, environmental ethics among the students, staff and public. The institute also promote clean and green campus through adopting practicing and promoting the environmental practices for generation of eco consciousness.

The increasing in the population only Earth create environmental challenges which are continuous to grow time to time and unprecedented effort is required to elevate the adverse effect that human activity on the ecosystem, effects. Which turn alter that's how we interact with the earth and with the nature inclusion of all approaches to solve problem will be necessary to effect a meaningful change.

Nature club

The nature club was established on 2004 by the principal mister nivritti Bundi and coordinator. The main aim of the club is "save Nature save environment from the environmental degradation".

This group addresses to the global needs of environmental issues through innovation and education.

Vision: nature club which creates awareness among the young students, staff and public about various environmental problems and conservation of nature and the natural resources in the surrounding area of the campus and to educate how do you live eco friendly.

Mission:-

- 1. To bring awareness among the students about hazara spoiling to the environment.
- 2. To help the students understand with each other individual responsibilities and to take an initiative to save the environment.
- 3. To help the students to make small steps in saving the environment.

Objective of nature club:-

- 1. To encourage the students to keep environment clean.
- 2. Educate the students to create awareness among public.
- 3. To make the students understand the importance of environment and its problems.

Functions of nature club:-

- 1. To sensitize the students to minimise the use of polluting product
- 2. To motivate the students to adapt environment friendly practices which includes paper bags ,save electricity ,no plastic etc.
- 3. To take the necessary steps to protect the environment.



Outcomes of nature club:-

- 1. Awareness which is created about hazardous that are spoiling the environment.
- 2. Students and teachers realise their individual responsibility to save and protect the environment.

Environmental policy of college:-

JSSP college, GOVELI, Kalyan which is the located near by the rural area near to Kalyan city Maharashtra state protect its own environment with its green campus initiative and maintain pollution free, green and clean campus for the environmental development, it's a basic work with the education policy which are implemented in the campus, the institution is committed to managing its campus in accordance with responsibility towards the promoting sustainable environment, this responsibility can be demonstrated from following area.

- ★ Green environment and clean campus
- ★ Solid waste management
- ★ E waste management
- ★ Liquid waste management
- ★ Maintenance song water bodies
- ★ Water conservation and management
- ★ Landscaping with trees and plants
- ★ Energy use and conservation
- ★ Restricted use of automobiles
- ★ Ban on use of plastic in campus
- ★ Green audit
- **1. Green environment and clean campus:** Students are given instruction to maintain the campus clean and green chevron quotes related to the importance of clean and green environment are displayed on the campus.
- **2. Solid waste management:-** The college pays dedicated focus to see that the minimum weste is generated in the campus. solid Waste is segregated as biodegradable and non degradable. All the departments and classrooms are provided with dustbin for dry westages disposal segregation of waste into dry and wet waste from the separately allotted dustbins is done in the strategic location to maintaining the campus clean and eco friendly.
- **3. E waste management:** With the proliferation of electronic which comes the challenges for their proper disposal , the college is grappling with efficiently and cost-effectively handle the issue of electronic waste / e waste on the campus.

People to discard such products due to normal wear and tear but technologically advancement have exerted. E-waste growth as a students, faculty, administrator frequently. Upgrade to better gadget this



surge has forced college administrator to carefully examine and addressed and environmentally responsible disposal of this product on-campus wide scale.

The college adopts most scientific and eco friendly e waste disposable mechanism like AMC is mental to the periodically review the effective functioning of CPU and monitor and expert recommendation which are followed to dispose in the same market. All electronic waste like CPU, hard disk, laboratory equipment scrap which are sent periodically to the market for sale.

The institution has contract for approve electronic waste management and disposal facility in order to dispose electronic rest in the scientific manner.

Obsolete workable computer printer and other equipments discarded by the department sold as a scrap ,the cartage of printer are refilled outside the college campus, UPS batteries are recharged and repaired by supplier.

4. Liquid waste management:- Water is the most important element for preservation of the life. Its finite commodity, if not managed properly will result in shortage in the near future water conservation can go a long way to help elevate these impending shortages. Students are made aware that conserving water is equivalent to conserving in future.

Drinking water from the tap refilling bottle as often as students need is one of the best practice followed by our nature club, disposable bottles are not allowed

- **5. Maintenance of water bodies:-** Institution aims to provide best services to the students in all possible ways, education facility, infrastructure and basic necessities like water .The institutions with the help of ground water there are two borewells.
- a) 2HP,350 feets depth,24 hrs water consumption
- b) 1.5 HP,200 feet depth, 24 hrs water consumption

The institution has good storage of groundwater drinking water and water for cleaning purpose.

For drinking purpose the institution has 4 RO purifier which purifiers and separate for drinking water. Apart from the groundwater the college has rainwater harvesting pits which function efficiently during the rainy season. It's mandatory to clean and disinfect water holding tanks at least monthly once or more often. If required this is to remove the algi (the plants growth which produces testes odours).

Stilt and bacteria which may be harmful the cleaning method is as follows

- **★** Empty tanks.
- ★ Scrub or pressure wash to the interior wall to remove the dirt.
- * Rinse out the tank.
- ★ Mix the solution of household bleach with water.
- ★ Leave the tank for 2 hours for draying and after that reveal with portable water. Proper filters are replaced periodically to provide the students and staff with pure drinking water.



- **7.Water conservation and maintenance:**-The institution is located in the Goveli area. This area is known for acute water shortage in summer , so college realises the value of even drop of water and save the rainwater strategy for future use, hence college has installed rainwater harvesting mechanism, in that water is accumulated and deposited for reuse, the rainwater is collected and directed to deep pits of bore well for recharging and later it's use even the groundwater is directed towards the plants and trees, in spite of having maximum number of students the institution does not face any water crisis even in the summer time. The college has to borewells recharge system to renew or recharge borewells with rainwater.
- **8. Landscaping with trees and plants:-** in the campus our nature club organising plantation by the students, staff in rainy season mostly the plantation of common trees which are available and cultivate fast ,and planted ,our nature club organises seminar on importance of the trees plantation to the society and the students.
- **9. Energy use and conservation:-** in our college installed solar energy panels from the Sun group company from the solar energy the near about 45 minutes are consume per day. As per the availability of sunrise from the solar panel 12 KWH per day energy/ electricity is generated. We have total 10 solar panels. If excess generation of energy is produced then the units are transferred to the MSEDCL.
- **10. Restrictive use of automobiles:** In our college we are not allowed automobile to 2 wheeler and 4 wheeler in the campus parking is installed or placed near by the college campus we have also facility of cycle stand because some students used bicycle to come or travel purpose.
- **11.** Ban on use of plastic:- In our college plastic is ban in the campus for that purpose we placed some boards like no plastic or plastic zone in the premises.

12. Green Audit:- Our college is doing Green audit.

Principal

Jeevandeep Shaikshnik Sanstha's Arts, Commerce & Science Comment

Govell, Fal: Kalyan, Dist. Thane - 421 301.

SINOHNIK SANSTHA POL'S

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IENCE COLLEGE, GOVELI Tal. Kalyan, Otst. Thane - 421103

Accreditation with NAAC

(Permanently Affiliated to University of Mumbal Website: www.jsspcollegegoveli.in Email: goveli_jssp@rediffmail:com

B. Kore ncipal

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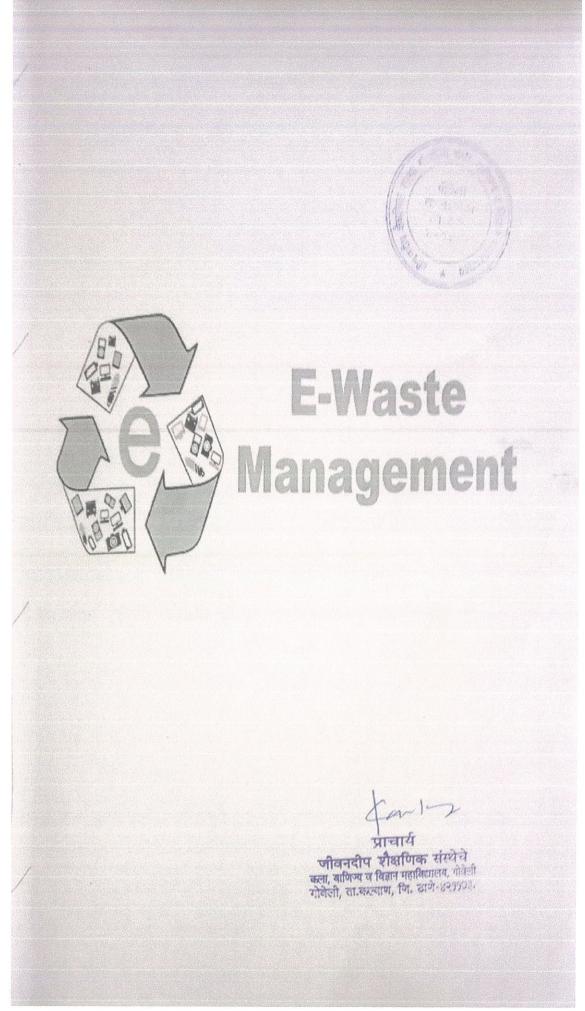
ई-वेस्ट मॅनेजमेंन्ट स्पर्धा

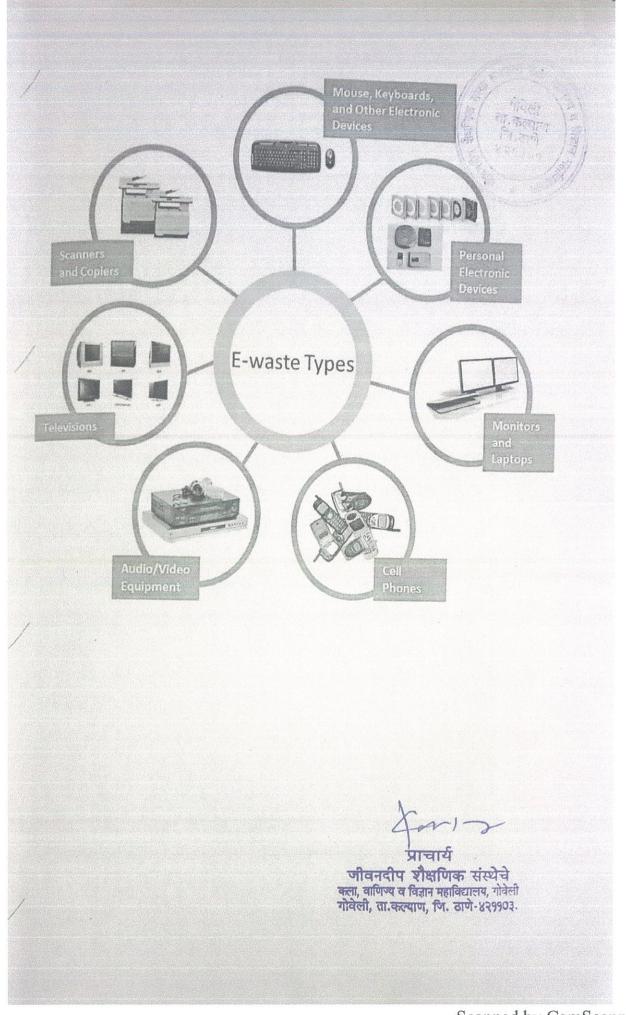
आपल्या महाविद्यालयात ई-वेस्ट मॅनेजमेंन्ट स्पर्धा आयोजित करण्यात आली आहे. ज्यामध्ये तुम्हाला ईलेक्ट्रानिक वेस्ट (ई कचरा- उद्दा-बंद रिमोट कंट्रोल, मोबाईल, सर्कीट व इतर) जमा करावयाचा आहे. या स्पर्धेत भाग घेण्याकरीता तुम्हाला प्रत्येक विभाग /क्लासचा ग्रुप तयार करावयाचा आहे व त्या ग्रुपची संपूर्ण माहिती प्रा. वैभव तरे,आय.टी.विभाग, पहिला मजला, जुनी ईमारत, जीवनदीप महाविद्यालय, गोवेली (मोबाईल- ९८२३१७३७६९) यांच्याकडे जमा करावयाची आहे. तरी जास्तीत जास्त विद्यार्थ्यांनी या स्पर्धेत सहभागी व्हावे.

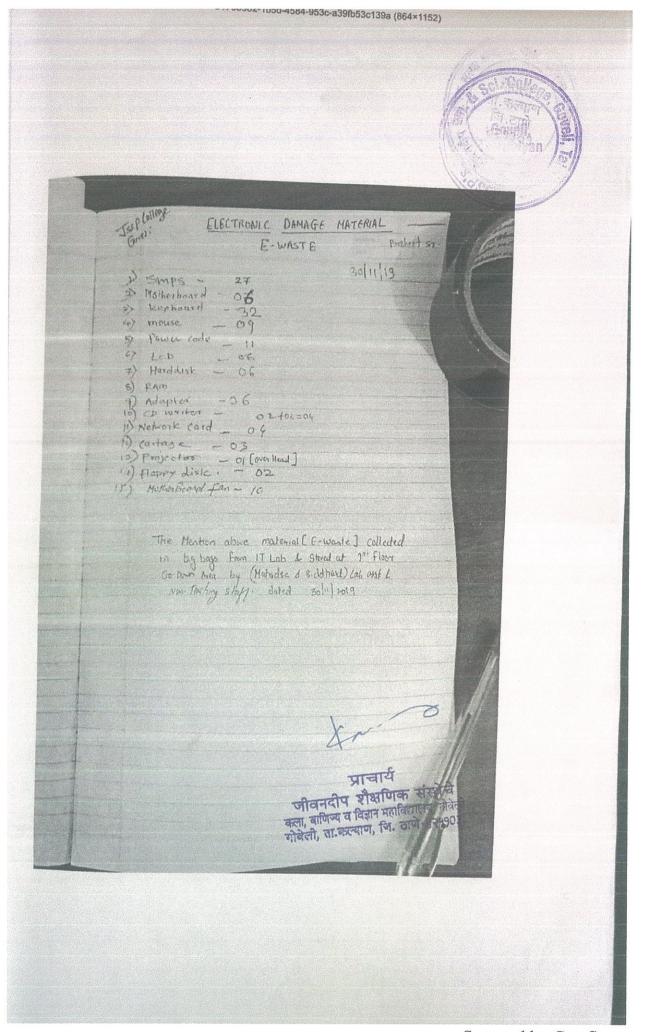
सूचना :-

- 🤁 स्पर्धेमध्ये प्रथम, द्वितीय, तृतीय व उत्तेजनार्थ बक्षीसे महाविद्यालयाकडून देण्यात येतील.
- २. क्रमांक हे साहित्याच्या गुणवत्ता व प्रमाणानुसार काढले जातील.
- ३. प्रत्येक दिवसाचे ई-वेस्ट साहित्य हे मोठया पिशवीमध्ये जमा करण्यात येईल. त्या पिशवीवर ग्रुपचे नाव टाकण्यात येईल.
- ८. जानेवरी, २०२० पर्यंत आपण या स्पर्धेत सहभागी होऊन ई-वेस्ट कचरा जमा करू शकतो.

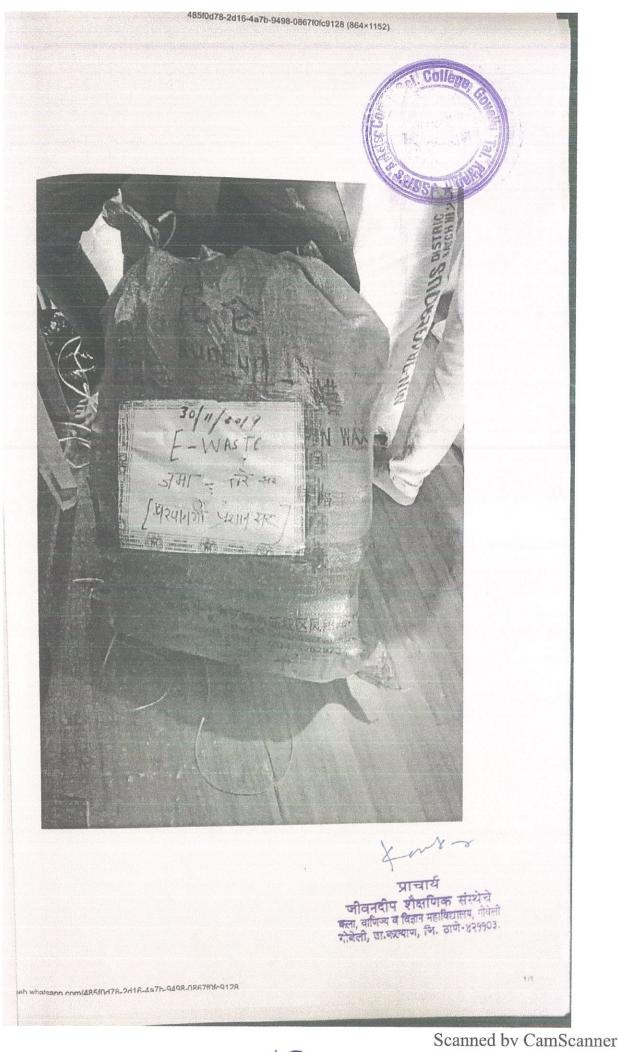
जीवनदीप शैक्षणिक संस्थेचे कला, वाणिज्य च विज्ञान महाविद्यालय, गोवेली गोवेली, ता.करपाण, जि. ठाणे-४२१९०३.

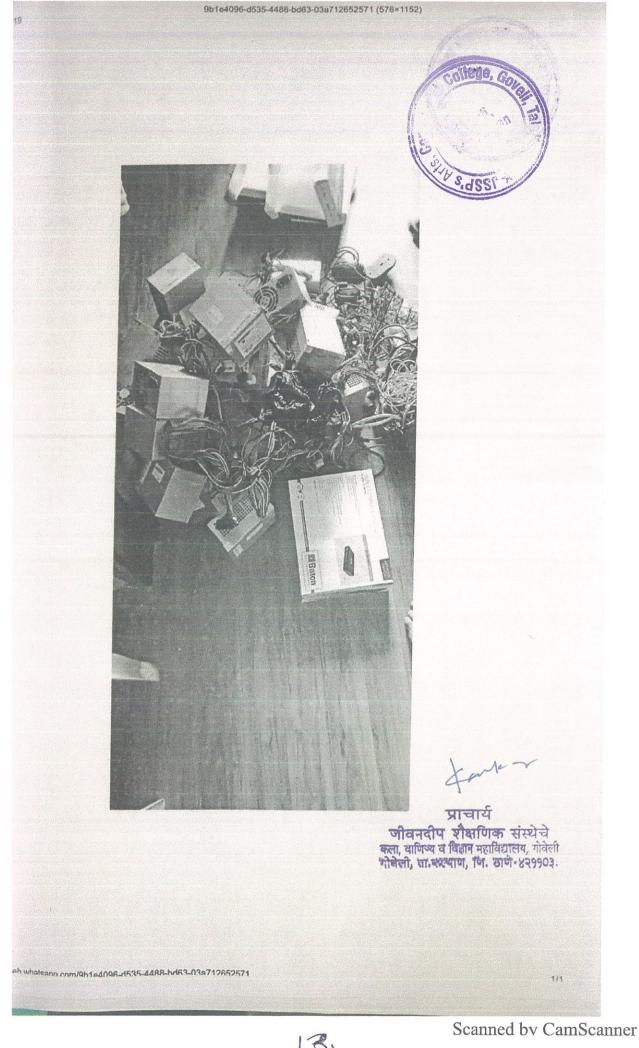












E- Waste Management



Jssp College of Arts, Sci & Comm, Goveli, Kalyan have took initiative for The E – waste management project from 21th june 2019. having goal to complete the target of collection of 200 kg e-waste.

E- waste Management project started with hands of Guest ,Principal and College Director at College on special event of college "Vardhapan Divas".

On the same day E – waste as keyboards, waste mobiles, electric circuits etc . have collected from stubents , staffs. total material collected with 3 kg e-waste.

Now, the core team of students working for the target of collecting 200 kg e- waste.daily the are working at their ground level.

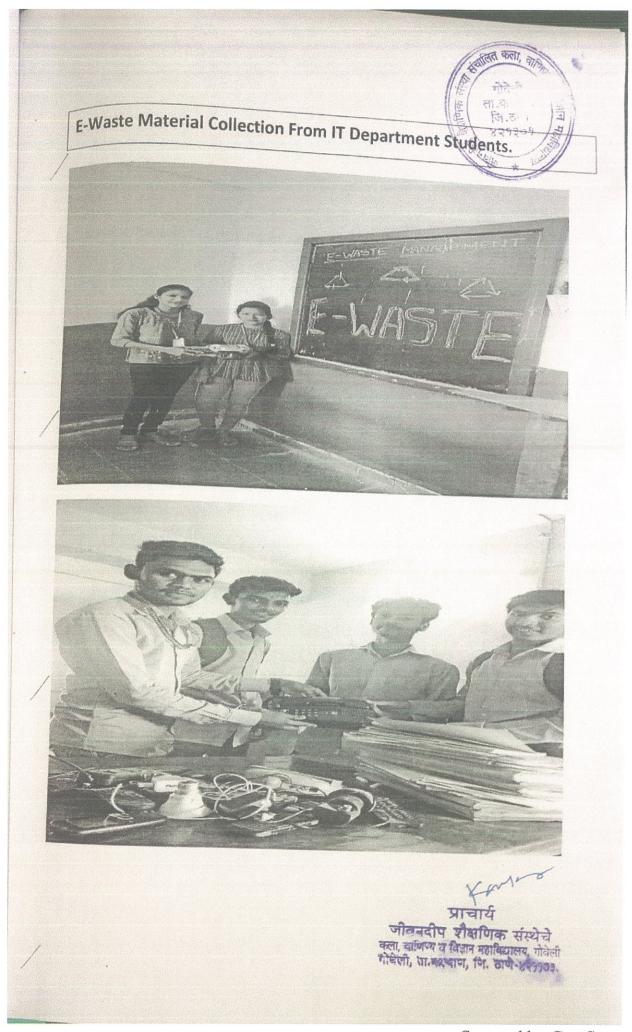
Students spread the message of proper e-waste management with the help of social networking sites, whatsapp etc.

Core Team created Whatsapp group as E-Waste Management to contact for e- waste.

Today, dated 27th nov 2019. Our team have collected 15 kg. e- waste material.

प्राचार्य

जीवनदीप शैक्षणिक संस्थेचे कला, बाणिज्य व विज्ञान महाविद्यालय, गोवेली गोबेली, पा-करपाण, जि. ठाणे-४२९९०३.



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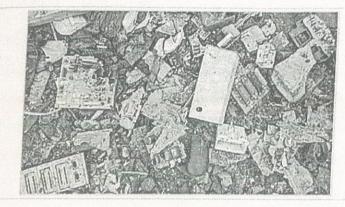
E-WASTE

Electronics waste, commonly known as e-scrap or e-waste, is the trash we generate from surplus, broken, and obsolete electronic devices. Electronics contains various toxic and hazardous chemicals and materials that are released into the environment if we do not dispose of them properly. E-waste or electronics recycling is the process of recovering material from old devices to use in new products.

Electronic waste in India

Electronic waste is emerging as a serious public health and environmental issue in India.

India is the "fifth largest electronic waste producer in the world"; approximately 2 million tons of e-waste are generated annually and an undisclosed amount of e-waste is imported from other countries around the world.



Discarded electronic waste.

Annually, computer devices account for nearly 70% of e-waste, 12% comes from the telecom sector, 8% from medical equipment and 7% from electric equipment. The government, public sector companies, and private sector companies generate nearly 75% of electronic waste, with the contribution of individual household being only 16%.

E-waste is a popular, informal name for electronic products nearing the end of their "useful life." Computers, televisions, VCRs, stereos, copiers, and fax machines are

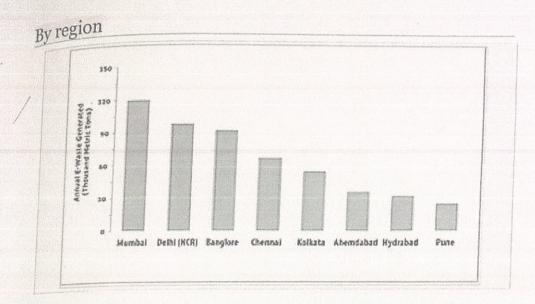
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common electronic products. Many of these products can be reused trefurbished on recycled. There is an upgradation done to this E-waste garbage list which includes gadgets like smartphone, tablets, laptops, video game consoles, camera and many more. India had 1.012 billion active mobile connections in January 2018. Every year the number is growing exponentially.[4]

क्त कला, वाह

According to ASSOCHAM, an industrial body in India the, Compound Annual Growth Rate (CAGR) of electronic waste is 30%. With changing consumer behavior and rapid economic growth, ASSOCHAM estimates that India will generate 5.2 million tonnes of e-waste by 2020.[5][6]



Major e-waste generating cities in India[8]

In India, the amount of e-waste generated differs by state. The three states that produce the most e-waste are as follows: Maharashtra, Tamil
Nadu and Andhra Pradesh. Other states that produce significant e-waste are Uttar Pradesh, West Bengal, Delhi, Karnataka, Gujarat, Madhya
Pradesh and Punjab.

Additionally, e-waste is disproportionately generated in urban areas—65 Indian cities generate more than 60% of India's total e-waste. Mumbai is the top e-waste producer followed by Delhi, Bengaluru, Chennai, and Kolkata.[1]

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Health and safety

Health hazards

women and children are particularly vulnerable to the health effects of toxic a waste * exposure.

E-waste contains many hazardous substances which have been found to be extremely dangerous to human health and the environment; e-waste is often disposed of under less than ideal safety conditions. Since most e-waste is illegally processed by workers operating outside of formally-organized systems, these informal workers commonly practice unregulated and often dangerous recycling techniques that can have serious health consequences.[9] Unfortunately the recycling labor force has a low literacy rate and very little awareness of the hazards of e-waste which means that many of these workers are unknowingly engaging in activities that are harmful to their health.[1] In Delhi alone, an estimated 25,000 workers including children are involved in crude e-waste dismantling units—annually these units dismantle 10,000-20,000 tons of e-waste with bare hands.[10] They lack proper personal protective equipment and are exposed to toxins though the e-waste. The materials that are not recycled by waste pickers are often left in landfills or burned. Both methods can lead to toxic chemicals leaking into the air, water and soil. Workers in these facilities often do not have adequate safety gear and exposure to e-waste can lead to many health issues. Exposure can happen directly or indirectly through skin contact, inhalation of fine particles and ingestion of contaminated dust. Potential health outcomes from e-waste exposure include changes in thyroid functions, poor neonatal outcomes, including spontaneous abortions, stillbirths and premature births.[11] Side effects also included changes in behaviors and decreased lung function. There is also evidence of significant DNA damage.

Environmental impacts

The processes used to recycle and dispose of e-waste in India have led to a number of detrimental environmental impacts. As a result improper recycling and disposal techniques, air, water and soil throughout much of India is now contaminated with toxic e-waste byproducts.

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Air pollution is a widespread problem in India—nine out of the ten most polluted cities on earth are in India.[13] An important contributor to India's air pollution problem is widespread, improper recycling and disposal of e-waste.

For example, dismantling and shredding of e-waste releases dust and particulates into the surrounding air. Low value e-waste products like plastics are often burned—this releases fine particles into the air that can travel hundreds-to-thousands of miles.[14] Desoldering is a technique used to extract higher-value materials like gold and silver which can release chemicals and damaging fumes when done improperly.

In addition to contributing to air pollution, these toxic e-waste particulates can contaminate water and soil. When it rains, particulates in the air are deposited back into the water and soil. Toxic e-waste air particulates easily spread throughout the environment by contaminating water and soil which can have damaging effects on the ecosystem.

Water



A child walks in a trash-laden river in the Indian Himalayas.

India's sacred Yamuna river and Ganges river are considered to be among the most polluted rivers in the world. It is estimated that nearly 80% of India's surface water is polluted.[15] Sewage, pesticide runoff and industrial waste, including e-waste, all contribute to India's water pollution problem.[15]

प्राचार्य

जीवनदीप शैक्षणिक संस्थेचें करा, वाणिष्य व विज्ञान महाविद्यालय, गोवेली गोवेली, ता.श्रूपण, जि. ठाणे-४२१९०३ E-waste contaminates water in two major ways:

Kalyan

College

1. Landfills: Dumping e-waste into landfills that are not designed to contain e-waste can lead to contamination of surface and groundwater because the toxic chemicals can leach from landfills into the water supply. 2. Improper recycling: Improper recycling produces toxic byproducts that may be disposed of using existing drainage such as city sewers and street

drains. Once these products have been introduced into the local water supply, they can cause further pollution by entering surface water such as streams, ponds, and rivers.

Researchers at Jamia Millia Islamia University collected samples of soil and groundwater from five locations with high e-waste activity and found dangerous levels of contamination near unregulated e-waste sites.[26] According to this study the average concentration of all heavy metals (except zinc) in water near e-waste sites in New Dehli was significantly higher than reference samples.

In addition to being measurable, the effects of industrial waste pollution in India are easily observable. Approximately 500 liters of industrial waste, which includes e-waste, are dumped into the Ganges and Yamuna river daily which has led to the formation of toxic foam[17] which covers large regions of the rivers.[18]

Soil

According to research by Jamia Millia Islamia University, the average concentration of heavy metals in topsoil near e-waste sites in India is significantly higher than in standard agriculture soil samples. Another study tested soil samples from 28 e-waste recycling sites in India and found that the soil contained high levels of toxic Polychlorinated biphenyls (PCBs), Polychlorinated dibenzodioxins (PCDDs) and Polychlorinated dibenzofurans (PCDFs).[19]

Further soil sample analysis conducted by the SRM Institute of Science and Technology found the average concentration PCBs in Indian soil to be two times higher than the average amount globally. In India, PCB compounds are most prevalent in urban areas with the highest rate of soil-contamination found in Chennai (a city that imports e-waste), followed by Bengaluru, Dehli and Mumbai.

कला, वाणिज्य व विज्ञान महाविद्यालय, गोवेली

गोबेली, ता.करयाण, जि. ठाणे-४२१९०३.

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21

pisposal techniques





workers dismanteling e-waste in Dehli.

The current e-waste disposal techniques in India have operated mostly in an informal manner due to the lack of enforcement laws and regulations. This has created a new area of economic gain for the country, especially among the urban and rural poor. Though it helps many make a living, those that are disposing of e-waste are usually not aware of the risks and health hazards that result from certain disposal techniques. There are two sectors that handle e-waste disposal and they can be divided into Informal or Formal Sectors.[21]

Formal sector[edit]

The formal sector includes two facilities authorized to deconstruct electronics for the entire country of India and are at capacity with five tons being disposed each day. These facilities primarily receive electronic waste from the producers of "service centers or take-back schemes" or companies that follow the environmental policies on disposing electronic waste. These facilities, though reaching capacity daily, are not the mainstream method of disposal. The formal sector only follows procedure of dismantling and segregating parts. They do not physically dispose of the electronic waste. The informal sector has made it difficult to compete.[21]

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informal sector[edit]

The informal sector handles electronic waste by recycling or final disposal. Much of electronics that reach India are out of date to more developed countries. Then within India, these electronics are passed around until no longer of use. There is a whole economic market for electronic waste because the parts can be dismantled and the scrap metals can be recycled. There are recycling techniques that are not following any type of environmental or health standards. Some of the methods used are acid baths, burning cables, and disposing in nature which can be detrimental to the health of those participating in these disposal techniques

E-Waste Management and Handling Rules, 2011[edit]

An addition to the Environmental Protection Act of 1986, the E-Waste (Management and Handling) Rules of 2011 came into effect in May 2012. The rules stated that all manufacturers and importers of electronic goods were required to come up with a plan to manage their electronic waste. Producers or importers had to establish e-waste collection centers or employ take back systems. These rules also mandated that sellers of electronic goods must provide consumers with information on how to properly dispose of the electronics in order to prevent people from dumping their electronics with domestic waste. Further, companies that produce electronics which have the potential to become e-waste must make the consumer aware of the hazardous materials in their product. These rules established and placed specific responsibilities for each party involved in the production, disposal, and management of electronic waste. Specific responsibilities were given to the producer, collection centers, consumer or bulk consumer, dismantlers, and recyclers. These rules also mandated that commercial consumers and government departments must keep records of their electronic waste and make them available to state and federal Pollution Control Boards.[22]

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E-Waste Management Rules, 2016[edit] E-Waste (Management) Rules, 2016 In October 2016, the E-Waste E-Waste (Management) Rules, 2016 replaced the E-Waste (Management and Handling) (Management)

(M Rules, 2016.

Ru stringent regular as clarifies the gener definition of e-waste. In these rules, e-waste is defined as "electrical and definition of e-waste, whole or in part discarded as welldefinition of definition of de electronic equipment as well as rejects from manufacturing, refurbishment and repair bulk consument and electronic equipment in turn has been defined to mean processes which are dependent on electric current or electro-magnetic field in equipment of an equipment of a second functional."[23] A major concept presented in theses rules is the order to ord products must implement EPR in order to ensure that their electronic waste is delivered to authorized recyclers or dismantlers. These rules establish and place specific responsibilities for each party involved in the production, disposal, and management of electronic waste. Specific responsibilities were given to the manufacturer, producer, collection centers, dealers, refurbisher, consumer or bulk consumer, recycler, and the state government. These rules also stated target goals for certain industries to drastically reduce their collection of electronic waste

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