



A COMPREHENSIVE STUDY ON PLASTIC POLLUTION IN PERUNGUDI , CHENNAI.

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ABSTRACT:

Plastic contamination has arisen as a worldwide natural test, presenting serious dangers to biological systems, human wellbeing, and biodiversity. The universality of plastic items in contemporary society has prompted a disturbing expansion in plastic waste, bringing about broad pollution of seas, streams, and earthly conditions. The Current review explored the impacts and effects of Plastic waste on the climate by uniting the vast majority of the writing distributed up to this point connected with this subject. The survey was circled among occupants of in and around Perungudi region, Female members were relatively more than male . The review came about that plastic is turning into a natural issue and furthermore respondents gave new ideas and procedures to diminish plastic . General assessment is that human conduct assumes a significant part in this plastic contamination. Virtual Entertainment are viewed as a compelling method for speaking with overall population . This study plans to make familiarity with plastic contamination and to teach individuals on the significance of climate. Furthermore I recommend to make mindfulness among the forthcoming age about the wariness and effects of plastics.

Key words: Plastic, Pollution, Waste, Environment and Global concern.

INTRODUCTION:

Over a beyond couple of many years, human movement have brought about seriously unfavorable plastic contamination influencing our networks ,marine biological systems and the climate too. Plastic remaining parts one of the most horrendous types of contamination. Plastic garbage, alongside most rubbish can't disintegrate and in this way stay caught in the land and as well as sea for as long as 1000 years , bringing about creatures confusing it with food or harming themselves with the risky waste . This gradually kills creatures over a significant stretch of time, upsetting the species and any remaining species in the food web . Many individuals or even business gain Benefit from utilizing plastic in view of attributes is difficult to be subbed with different materials. As referenced previously, plastic is non-sustainable asset and need a significant stretch of time to separate, but individuals use plastics for generally everything encompasses them . So it will make accessibility of the regular assets for unrefined components of the plastics diminishes essentially and can be come about a shortage of assets. Different causes that happened in view of plastic contamination is the marine life being undermine of the enormous measure of plastic dumps in the sea . UNEP's collection of work shows that the issue of Plastic contamination doesn't exist in a vacuum. The ecological, social, financial and wellbeing dangers of plastics should be evaluated close by other natural stressors, similar to environmental change, biological system corruption and asset use.

The stack up of plastic items on ground or in water is called plastic contamination which meaningfully affects the existences of people Birds and creatures. Plastic contamination perilously affects natural life , untamed life living space and individuals . Plastic contamination influences land , air, streams and seas. Plastic contamination is the collection of plastic items and particles into the earth climate that differently influence untamed life territory and people plastics that go about as poisons or classified into miniature trash , in view of size plastics are in costly and strong making into entirely adoptable for various purposes subsequently levels human produce a ton of plastics anyway them collaborator to numerous regular plastic renders them colleague to numerous normal cycles of corruption and as result they are delayed to debase together these two elements permit enormous volume of plastic to enter the climate as miss the executives squander and for it to introduce in the biological system starting around 1950 to 2020 around 6.3 tones of plastics have been created overall 9 % and 12 % of which have been reused and burned separately human populace increment and steady interest for plastic and plastic items or answerable for persistent expansion in the development of plastic age of plastic waste and its finished ecological contamination we have explored in the .

Research has shown that the utilization of plastic jugs and holders is incredibly risky. Having a hot food or water in a plastic vessel can prompt disease. At the point when the plastic is hot because of unnecessary daylight or temperature, spillage of destructive compound dioxin in it makes weighty harm the body.

Numerous natural mixtures are added to make adaptability in plastic. Many sorts of polyethylene gasification are cancer-causing compounds. These poisonous substances found in plastic are utilized during plastic arrangement. In the prepared (strong) plastic utensils, in the event that the food

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contents are saved for quite a while or the skin of the body is in touch with the plastic for quite a while then the synthetic substances present in plastic can unleash destruction. Also, the plastic waste that is tossed into the trash for extensive stretch can leave numerous poisonous impacts for the climate.

REVIEW OF LITERATURE:

Richard C. Thompson, et.al, (2009)“Plastics, the environment and human health: current consensus and future trends” focus on the amount the impact of plastic in the environment and human health, and also plastic impact on wildlife. This study also discussed about the prediction usage, Disposal and waste management solutions and also analysis the current consensus and future trends.

Hannah Ritchie Max roser (2018), “Plastic pollution” mainly focused on plastic Pollution and it’s negative impact on oceans and wildlife health . Rapid growth in global plastic production didn’t happen until the 1950s. Even just in the last few eras , global plastic production has increased.. It also explained about the improvement of waste management systems all over the world also gave suggestions to release plastic pollution.

Chinaza Godswill Awuchi and Chibueze Gospel Awuchi (2019)“Impact of plastic pollution on the sustainability of seafood value chain and human health” stated the impacts of plastic pollution and its sustainability. This study mainly focused about Microplastics ingestion and also caution of plastic to sea animal species.

Mathew MacLeod et.al (2021) “The global threat from plastic pollution” stated about the consequences of plastic pollution, exoticism and societal Impacts and also suggested various strategies for waste management. This study explained the negative outcomes in consequences of plastic pollution. The researcher also emphasized the global threat on reversible plastic pollution.

Penguin Li et.al (2022) “Abundance, characteristics, and distribution of micro plastics in Xiangjiang River, China” focused on analytical methods, source , abundance , transport late , degradation of plastics in the globe and threats to natural surrounding, wildlife or even human health. And also , this paper reviews the major characteristics of plastic pollution in the environment to enhance present understanding of the issue.

RESEARCH GAP:

Many studies have explored the aspects of plastic pollution, it’s negative impacts, analytical methods, and their effects on the environment. This research is something different from these previous articles. The researcher given more explanations micro plastic pollution as well. Area specification is also an important to note. This study also made some suggestions as how to develop environmentally friendly alternatives, as well as efforts to improve waste management and increase recycling which is currently analyzed. These specifications made my article towards better methodological reporting and regional representation and relevance.

STATEMENT OF THE PROBLEM:

As of now, the world is confronting a worldwide practice emergency. Almost 50% of all plastic items are disposed of after a solitary use and required as long as 1000 years to crumble. The utilization effects of Plastics are extremely high now a days . Almost 79 % of our earth is presently contaminated with plastics. So this examination paper came to give a positive idea and mindfulness among public in utilization of plastic items and furthermore an inducer to start “No plastic” world.

OBJECTIVES:

The general goal of the undertaking is to lessen plastic and advance waste administration

- To identify the main barriers or difficulty in reducing plastics from the household, garbage etc..
- To promote sustainable alternatives to single use plastics.
- To identify most feasible waste administration choices, reusing, as a corresponding choice.

METHODOLOGY:

Data for the study is delivered from both primary and secondary sources, with the main data in the study coming primarily from questionnaire given to the residents at perungudi , Chennai . For more accurate study, secondary data is gathered from sources including articles, books, magazines, newspaper, and the net sources. This research paper has used primary data for collection of data and it has secondary data from research papers and newspapers. They use questionnaire for data collection and their preference was asked with some references and recommendations.

RESULT AND DISCUSSION :

Table 1
Socio- Economic Status

Statement	Options	NOR	%
Gender	Male	31	31
	Female	69	69
	Total	100	100

Age	Below 20 years	58	58
	21-29 years	17	17
	30-39 years	16	16
	Above 40	9	9
	Total	100	100
Educational Qualification	Uneducated	6	6
	School education	19	19
	UG	56	56
	PG	19	19
	Total	100	100
Occupation	Student	62	62
	Home maker	12	12
	Employee	19	19
	Others	7	7
	Total	100	100
Marital Status	Married	28	28
	Unmarried	72	72
	Total	100	100

Source: Primary Data

In Table 1 we ascertain that from 100 respondents 31% of male and 69% of female answered the questionnaire. Through this we conclude that more number of female had responded to the survey. Here we ascertain that the people who are under the age group of Below 20 had answered more than other age groups. And the respondents who are above 40 is answered less to this survey. From the above table we ascertain that the people who are doing UG course are responded more to this survey. Despite PG has responded 19%, uneducated (6%) and school education (19%). The majority of population who answered to this survey are Students (62%) and employees (19%). Here we observe that 28% of married people and 72% of unmarried people were responded to this survey.

Table 2
Public opinion on Plastic Pollution

Statement	Yes		Maybe		No		Total
	NOR	%	NOR	%	NOR	%	%
Do you use plastic products?	57	57	7	7	36	36	100
Do you always throw plastic waste in dustbin?	70	70	24	24	6	6	100
Do you think plastic bags are convenient than cloth bags? %	52	52	26	26	22	22	100
Can you accept the world without plastics?	81	81	-	-	19	19	100
Do you carry your own bags for shopping?	59	59	24	24	17	17	100
Is plastics is becoming an environmental issue?	96	96	-	-	4	4	100
Do you think government is taking necessary steps to reduce plastics?	59	59	31	31	10	10	100

Source: Primary Data

In the above table we ascertain that 57% of population is using plastics, and 7% of people answered they don't use plastics, and 36% of people answered that they use plastics partially but not all the times. So we conclude that high percentage of people is using plastic. Plastic is used across almost every sector. Plastic had inevitable part in and among the society. Mostly plastics are recycled when we throw it in dustbin. However, majority of people are not experts in sorting and still have doubts, next upon the recycling of plastic items consisting of different materials. But, from this table we can predict that people are using more number of plastic products but they are disposing plastics in a proper way (dustbin). 70% of people are disposing the plastic waste in proper way. We ascertain that people prefer plastic bags than cloth bags. 52% of people respond that they are convenient with cloth bags. 22% and 24% of people responded no and sometimes for using cloth bags. Almost equal amount of people is not preferable towards cloth bags because they think they are not convenient to carry. Here we conclude that the people are ready to accept the world without plastics, 81% population accepts the plastic free world. We can aim for a future without plastic waste and pollution. This result is a positive response to make this world plastic free. Here, 59% of people answered that they are carrying their own bags for shopping. So this shows that people are taking some steps to reduce plastics. 24% of people sometimes they are carrying own bags. Plastic releases toxic gas that is very harmful for our environment so it is important to carry our own bags for going to shopping. This also results in a positive sign for the end of plastic pollution. We arrive that people are being more aware that plastic pollution is becoming an environmental issue. Plastic pollution is a global problem. Every year 19-23 million tones of plastic waste goes and stored into water ecosystem it also pollutes rivers lakes and seas.

People were also taking necessary steps to reduce plastic pollution. In the above table we observe that people are agreeing that government is taking necessary steps to reduce the plastic pollution. Government had implemented plastic waste management rules, swatch Bharat Abhiyan etc.. for aiming

towards plastic free world . But people were not that much satisfied with government measures (31%) they are expecting the government to make alternative and smart techniques to reduce plastics.

Table – 3
Public Opinion on Plastic Usage

Statement	Options	NOR	%
How many times do you re-use the plastic carry bags in a month?	More than 20 times	15	15
	11-19 times	21	21
	Less than 10 times	51	51
	None	12	12
	Total	100	100
Where do you use more plastic products?	Home	31	31
	Office	2	2
	Outdoor	34	34
	All of the above	34	34
	Total	100	100
Why do you prefer plastic products?	They are cheap	17	17
	Light in weight	20	20
	Easily available	55	55
	Other reasons	8	8
	Total	100	100
Which plastic products you use more?	Plastic bags	19	19
	Plastic buckets	20	20
	Plastic bottles	11	11
	All of the above	49	49
	Others	1	1
	Total	100	100
After you have finished using plastic what do you do with it?	Dustbin	64	64
	Re-use	15	15
	Burn	4	4
	All of the above	17	17
	Total	100	100
How much plastic pollution is there in the area you live in?	Great amount	23	23

	Moderate amount	45	45
	Little	25	25
	None	7	7
	Total	100	100
Why would you not use reusable shopping bags?	Too expensive	30	30
	Not suitable	18	18
	No reason	28	28
	Rarely I use reusable shopping bags	24	24
	Total	100	100
“Major health issues are happening because of plastic pollution”?	Agree	85	85
	Neutral	13	13
	Disagree	2	2
	Total	100	100
According to you what is the most effective way to manage plastic pollution in the city?	Steps by government	53	53
	Compaigns by NGO’s	2	2
	Individual action and effort	40	40
	Others	5	5
	Total	100	100

Source: Primary Data

It is clear that people are reusing the plastic products by less than 10 times .21% of people by less than 20 times ,12% of people says that they don’t reuse plastics. But majority of population (52%) answered that they reuse plastics by less than 10 times. People answered that they use more plastic products in outdoor areas and also in home, office etc But from the above survey it is clear that outdoor places are more polluted with plastics than other places . And also home (31%) and All of the above (34%) so equalant amount of plastic pollution is occurring in all of these places . Here I observed that majority of population (55%) is preferring plastic products because of its easy availability. So easy availability (55%) plays a major role in plastic Pollution. Almost 17% and 21% of people using plastic because they are cheap and light in weight. So this options paves way for dominant of plastics in the world. By reducing the availability of plastic in the markets can also help towards plastic free environment .

We ascertain that 49% of people is using all types of plastic products which is available in the market. So plastic products usage among people is still is in high rate. Majority of people are using all types of plastic products. So instead of essential plastic materials, reducing the production of all other forms of plastic products will make people less use of plastic. 64% of people is putting the plastic waste on dustbin than reusing and burning it. It results in less number of plastic reusage among public. By properly disposing and recycling plastics by people indicates a positive note . Out of 100 respondents 23%were answered great amount of plastic pollution, moderate amount (45%), Little (25%) None(7%). So Here, we arrive that almost some equal amount of plastic pollution is there in their area they live in. Here in this table , we ascertain that the reason for non usage of cloth bags and other reusable shopping bags are too expensive (30%), Not suitable to carry (18%), No reason (28%). But 24% of people rarely use reusable shopping bags . From the above table, we arrive that majority of population (85%) agreeing that major health issues are happening because of plastic pollution. So from this we conclude that people are more aware of caution and impacts of the plastic pollution. Here we ascertain that 53% of people answered that government should take necessary action and 40% of people answered that individual action and effort only make the universe plastic free. So I conclude that government steps plus individual action together make plastic-less universe.

SUGGESTIONS:

Solving the global plastic waste crisis will require solutions and suggestions that prevent plastic pollution and built waste management infrastructure to allow for the recovery of plastic in the environment at scale:-

1. From the above study it is ascertained that people are ready to accept the world without plastics , so people in the society should together take initiative to use sustainable alternatives for plastics like bio-degradable materials, single use plastics, reusable containers, eco- friendly packaging options
2. Government also should implement and should develop advanced recycling technologies which will promote the economy to ac plastic less world.
3. Awareness must be given in educational institutions, office, community about the impact and the ways to reduce plastics.

LIMITATION OF THE STUDY:

The data which was collected for the research is only in and around perungudi area. So this study is limited with a particular people. This study is limited with only research regarding plastic pollution at land and there is a lack of a standardized approach for sampling plastic at sea. My study and this sample is only based on manual procedures . So this method limits this research to give almost accurate statistics about Plastic pollution.

CONCLUSION:

“Let’s Waste less Waste”

Plastic contamination is turning out to be to a greater degree a worldwide issue legislatures establishments and a few online entertainment associations or all endeavoring to rise mindfulness about the difficult issue the contamination brought about by the plastic us uncountable adverse consequences a large number of the environment or impacted bringing about the laws of biodiversity the world is solid or when it’s spotless . As a general rule we can’t take out plastic use from our everyday exercises . The public authority ought to limit plastic contamination and empower reusing through fitting approaches the plastic waste administration rules 2016 should be completely kept. It is trust that in your future we will serious areas of strength for have and self image cordial streets and houses which will free the Earth from all kind from plastic waste . Generally my idea to decrease plastic contamination and to make plastic liberated world through this examination paper is that the mindfulness in regards to plastic contamination or some other issues ought to actuated to school one more instructive establishments through this the forthcoming age will be more mindful and know about the wariness and effects of plastics.

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