

Plastic Waste Management
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Lecture - 16
Plastic Bans Including China Sword Policy Implication on Global Plastic Waste Management

So, welcome back good morning, good afternoon, good evening wherever you are based on your time zone. So, we will get started with the week 4 material. So, far we have finished 3 weeks of the material of this particular course. Now we will get into week 4, if you remember from the very beginning every week has a certain topic. So, for this week the topic is on looking at the bans.

So, the plastic bans and including will spend some time on China, policy that China sword policy which is called is essentially they also called green fencing some places you will hear green fencing, some places they call it China sword policy. Essentially it is that Chinese government has restricted the import of certain types of waste which was coming earlier to China for processing and recycling and all that. They have put more restriction on it, they want cleaner material, they do not want dirty material coming from other countries to China.

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So, that ban has implication on other countries too; like, not only in China it is a implication on US, Canada, Australia, New Zealand many European countries which were earlier sending their waste after sorting to China for processing and recycling. The reason they were going to China, the reason the waste comes to developing countries is where most of the most of the production is happening in developing country today.

We are not the developed countries are mostly becoming a service based industry they do not produce products like, a low type of products they whatever product they make is very high end product. To sophisticated analytical instruments, they will make arms and, they will make all those that flight like a fighter jets and all that, but in terms of regular product that we use in our houses; you go to any mall today, you will find mostly a lot of products from China coming in and that is the reason why the waste was going to China at the first place, but a China has rest had put certain restrictions.

So, we will talk about how this Chinese restriction on import of plastic waste is going to actually have a huge impact on plastic waste management and global scale, because earlier China was kind of a sink, but now it is no more there. So, how the waste needs to be managed and that also means that part of that waste may end up in country like in India.

So, because China is not taking it, they will try to send it to India. Now India does not have similar policy yet. So, that pay will get a lot of contaminated plastics coming to India. So, we are struggling with plastics in the country and at the same time we may see a increase of plastic coming from other countries in India, that will be a lot of that is a lot of concern for us in terms of management of plastic.

Because we are is still is struggling to manage our own plastic waste. So, we will talk about all that we will talk about some of the details, the bans that has happened. So, this is what we will cover in this week, this is the topic of this week; looking at the ban, looking at the impact of Chinas policy in terms of the big picture impact on global plastic waste management.

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So, when we talk about ban, if you remember it is there is not a blanket ban on plastic as such. The ban is mostly we are focusing on ban on lightweight plastic bags. So, we are the focus is mostly on lightweight plastic bags where the less than 40 microns. Now we are talking about 50 microns. So, the bigger like the size is ok, but although they also have risk, but something which was single use filled plastic, thin plastic that creates a lot of nuisance in the environment.

So, that was we are trying to phase it out from our use. So, the way it has worked in a global scale there has been two strategies that has been implemented. One strategy is when we try to phase out the lightweight plastic bag; one strategy was to charge certain money. So, you go they will charge you some money for those plastic bag.

So, when they charge money, there is a tendency that you do not want to spend money on that plastic bag. So, you; you will think that next time when I go to the mall when you go to the grocery store, I will carry my own bag. So, if you are carrying your own bag, then the plastic waste is reduced in because you are not using newer plastic bag. So, that is when you start charging and the charge could be from like a sometimes it could be in even in like paisa or incense or it can be few rupees and some as you know some stores do charge money like, when you go to big bazaar they will charge you money for giving you that bag, although that bag is not single use.

You can use it multiple times because that is a thicker plastic, and that is not less than forty microns that is, but still they do charge and then. So, you can bring your own back to a big bazaar, you do not have to use their bag. So, that is those kind of other; other more others this store similar to big bazaar as well like in Indian context.

So, there is a charge. So, that is which kind of I would say gives an incentive to the consumer to use less plastic, less plastic because you have to pay extra money for it well. We think like why you should pay for that and the other is other approach that has been used is, is of banning in. Then we will not let its old in that particular segment and that type of plastic. And if anybody does that with there has to be enforcement in place.

So, the charge strategy is all of the same it; it has helped in plastic bags reduction as a plastic bag ban with the additional benefit of creating a new revenue source. So, when you ban you are actually not creating any revenue source, but when you charge you are also creating a revenue source and then gradually your plastic usage will come down because people will not like to pay and if the people like to pay you can look at your system, and then you can also start charging more. So, say for first year you charge 1 rupee per bag and, the for the next after 6 months you increase it to 1 and an half or 2 or 3 or similarly 5 and then you will see that gradually there will be a reduction in plastic usage.

So, that is and at the same time we have to really provide the alternatives because unless there is a cheaper similar alternatives available it is very difficult to phase out plastic because it is such a convenient material which I have been telling you for try again and again in different module over last 3 weeks. So, it is a plastic bag charge method also protects the consumer choice which the ban does not, because when it many times when you ban something we humans have a tendency of always being I would say that we always like to revolt we it is a inherent nature that we if you try to force something there is with the equal force there is an equal opposite force as.

So, similarly when you try to force something down on the population there is also a revolt there is kind of they want it they do not want that. So, they want it kind of a there will be always a resentment in the society to some extent the some people who will understand the reason probably not, but in general there will be a resentment. But when

you start charging money the resentment is relatively less because they will say if you want you can take it, but you have to pay this much.

So, and then gradually that also helps. So, that is a kind of those 2 approaches has been used some approach. And it depends on how good your system is some of the authoritarian countries we will talk about to me I think I will towards in the middle of this module we will look at a video which talks about Rwanda I have it a part of it talks about Rwanda which is one of the cleanest sit country in Africa and which is an authoritarian government. So, they force the enforcement is very strong and they have banned, they have banned plastic for quite some time and it is working there.

But same thing working in an Indian scenario may not really because a we are a democracy with lots of like a inherent issues that we have in terms of implementation of different policies and laws and regulations. So, things what works in one country we will work in India does not it may not. So, it depends on how I within India also what works in one state may not work in another state depends on the demographics and the way the people live in there. And their cultural and the other history the behavioral and other history associated from the past. So, if you look at from a historical point of view, Bangladesh is the first country in the world to implement a ban on plastic bag and that was in long back in 2002, after they found that this plastic bags were choking their storm water drainage system and which cause lot of flooding in the cities.

So, 2002, when Bangladesh thought about banning plastic bags. So, that was when it they were started working on it. From an Indian context Sikkim was the first state in India to which is a plastic bag free status. So, again they had they managed to get it, but there was lot a lot of I would say public consultation people in general wants to keep this state very clean it is a tourist destinations as well. So, it depends so, that Sikkim right now is plastic bag free status. So, it is a first in India and other; other when we look at the other states we always try to follow a Sikkim's example in Indian context.

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In last year during the world environment day, our prime minister announced that India will abolish all single use plastic by 2022. So, which is just now 3 years away like slightly less than 3 years away. So, if you take January 1 2022 which is the start of 2022. So, we will be about 2 and 2 years and 11 months around away from that.

So, where we have to if that is our the country has decided to do it. So, the country is trying to walk towards that goal, and as you can will; will have this slides with you. So, you can read that, but what person essentially it talks about is that plastic is becoming a major issue. So, we have to look at the plastic waste management and come up with alternatives to that stop plastic pollution and make a planet a better place to live.

So, and it talks about the environmental issues affects the poor more then it affects the richer people. So, we make sure that material possibility does not compromise our environment. So, those can those things were highlighted by our prime minister during a speech made on the world environment day from Began Bhavan in Delhi.

And we; we got some international community took it very positively that India being one of the biggest country in the world or population wise and we have it if India comes up if we can really achieve it, it will be a big help to the environment. And of course, it requires the political motivation and, but real challenge comes in and getting its implemented the practicality aspect which we will be talking about in this lecture. So,

when we try to remove this single use plastic because as you know single use plastic is being used very, very extensively.

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WASTE

The problem with banning plastic

What is needed is to actually alter behaviour, if not preferences

While the move is a decisive step in expressing commitment to the environmental cause, outright bans have a poor track record in altering behaviour of stakeholders, which is key to developing sustainable policies. Ultimately, interventions targeting economic or social change must be normatively followed by a majority of the population as the morally right decision to make as a citizen, not a strategy followed grudgingly in fear of retribution from the criminal justice system. According to economist Kaushik Basu, a law becomes very difficult to enforce if it cues behaviour in an opposite direction to what is normatively followed.

The first problem with an outright ban is, of course, enforcement. When the current media attention dies down, will the authorities have the necessary resources or will to monitor the production of plastics in hole-in-the-wall plastic manufacturing facilities that dot our highways? Furthermore, as with other bans such as prohibition of alcohol, there are distributional effects as it is generally the poor producers and consumers who get the short end of the stick as richer users usually find both illegal and legal ways to beat the ban. In this case, this behaviour is already evident since big multinational companies such as Amazon and H&M are lobbying for exemptions and will probably get them, leaving the small trader to bear the brunt of significant repackaging costs and potential loss of produce. [Source: www.downtoearth.org.in/blog/waste/the-problem-with-banning-plastic-61198]

DownToEarth

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So, when we are trying to remove it we need to have proper alternative.

So, and then there has to be a behavior change and there is its and what is needed is actually the behavior it is if not preferences. So, it is; we have to outright ban in many places does not really work out many places, it because more citizens thinks that they have a moral right to make the decision. So, it is; so, that is becomes a problem a; a law becomes very difficult to enforce if it cues behavior in an opposite direction or what is normally followed. So, that is stated by Mr. Kaushik Basu for in the down to earth magazine.

So, it is the as I was saying the first problem with the pioneer's enforcement. So, when the current is usually what happens is you will have a lot of media attention and other stuff the laws will come in and things will you will see lot of activities happening on ground for a month or so. And once the media attention dies down, again you will the more things will come back and that is happening of those of you who are in states or cities which has plastic ban.

You yourself may have may witnessed and if you have not do some do some survey and you will see that once that the media hype and all the hype associated with goes away

when the ball goes glare and the photo and have been taken care of. Gradually you see things kind of coming back into the system.

Because there are places where plastic has been banned for a long; long time, but it is still if you go to there you will see plastics there. Recently Airport Authority of India announce that certain airports are a plastic free. I myself and visited certain airports I did find a lot of plastics is still being there. So, it is not that plastic free.

So, they were trying to reduce the usage of plastic, but when you go for ban and especially without a alternative program to how the things will be taken care off the ban does not really work very effectively on the ground unless you have a dictatorship or something where there is a lot of fear and huge penalty and that is, because it is still see if you compare this to municipal solid waste situation as well.

The rules suggest that we need to have a collection fee, but it is still hardly any you will be very few you will be in the country is able to collect the waste disposal free from the houses. So, that is why there is an always an issue associated with this kind of regulation.

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What is needed is to actually alter behaviour, if not preferences. Overtime, individuals need to make the socially optimal decision as intrinsic motivation, not as a strategy in response to an economic instrument such as a ban or a fine. In this context, behavioural interventions such as pro-environment informational nudges, combined with pricing mechanisms have the potential to alter behaviour. Nudges, according to Richard Thaler and Cass Sunstein, are behavioural cues that are libertarian and paternalistic. That is, they suggest the socially right decision without using the coercion of hard economic incentives. Of course, on their own, nudges that are not supported by a system of prices or fines, have been seen to be of limited efficacy. This is to be expected as these work just by power of suggestion and carry no monetary rewards or penalties for non-compliance. A well-known example of a "green" nudge takes the form of communication that informs households when their energy use is high and thus, environmentally unsustainable relative to others in the community. This messaging is seen to bring down household energy consumption. Green nudges either manipulate choice architecture or frame information in order to cue individuals towards making sustainable choices. These could take the form of simple defaults like making environmentally sustainable alternatives to plastic more visibly available to consumers, stern reminders of the environmental damage that their decision contributes to, or the usage of descriptive and injunctive social norms that evaluates people's behaviour and suggests what may be the right choice. Of course, unlike economic instruments, these would require both, coordination and cohesiveness within the community, which may make them succeed in certain contexts and fail in others.

DownToEarth

Source: <https://www.downtoearth.org.in/blog/waste/the-problem-with-banning-plastic-61198>

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So, we need to come up with alternatives that is what that is and then change the behavior those are very very important.

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And that is; that is how we will be able to take care of this plastic less in the plastic usage. So, again as I said airport authority just on 7th of January of 2019 Airport Authority of India ban single use plastic from may 16 of its airport have been declared single use plastic free. But around 14th or 15th of January when I was visiting through some of the one of those airport it was still had plastic.

So, I do not have to name that airport, but it is; so, it is there. So, it is a; so, announcement is different thing and real implementation on the ground is very different. We have already announced that certain states are open defecation free, but many states as the results are showing that they are actually not open defecation free. So, it is a; so, those things are has to be looked at from a implementations point of view.

So, for example, Srinagar airport among 20 declare plastic free by airport authority of India. So, we have been hopefully it is getting implemented this is again came on January 15th. So, but you have to provide alternatives, because plastic as you will see in some of the later slide.

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It is so much convenient to use. So, it becomes very difficult to really get rid of for certain applications certain usage, we do not we do not have alternatives right now. So, that focus should be on developing proper alternatives. So, that we can you can get rid of plastic and use some other material. Just simple example, our toothpaste or a toothbrush in the morning. So, if you are in the morning the toothbrush most of the toothbrush are plastics today.

So, what is the alternative, if we do not use that plastic toothbrush what else we can use, if it I do not know if there are there are they have been recently we I saw on one particular website they were trying to sell these organic toothbrush which is essentially what in our village we used to call it dathwan dathoon or dathwan, which is you take one particular tree you take this that is thin branches of the tree and you cut it down and use it as for your brushing in the morning and you can also use as a tongue cleaner part of it. And the neem tree is very popular for those application.

But, say entire country, entire India or entire China, entire world decides to that will not use plastic toothbrush I will use that organic dathwan thing. I do not know how many trees we need to how many branches we need to cut.

So, though there are those are the practical issues. So, we have to really think about that too. So, this particular website I think it was on one of the in UK or US somewhere and they were trying to sell the whole a 1 month package. So, 30 organic toothbrush. So,

basically 30 dathwan very nicely nice shape, they put even a sharpener at the front. So, they make it a little bit look sophisticated package really nicely, but it is the same material which is getting which gets sold at our railway station in Kharagpur in the morning if you go there. And there in Kharagpur station probably he will charge you 5 rupees I do not know, I have not bought it maybe probably less much less than that. But this they were charging for 30 pack, the charge was 15 dollars or 15 Euros.

So, think about that if it is a dollar it is around 70 rupees right now. So, 35; so, for 30 of them you are paying for 2 days you are paying 1 dollar. So, for 15 dollars for a months packet. So, it is a 35 rupees for one of that organic dathwan. And you are good plastic your toothbrush will probably come which will last for 3 months. So, there is a economic aside to it as well.

So, it is better to be green its always, but there has against kept on I keep on saying again and again that we have to provide cheaper greener alternative. Then only these bans and the usage of plastic will go down over in the years and over the decades. So, Mumbai is one of the prominent city in India which banned plastic I think in to 2 2018, almost maybe a year ago.

So, Maharashtra government, they banned it imposed a ban on manufacturer used, sale and distribution is storage of all plastic material across the state. And Mumbai is of course, gets the news because that is the biggest city in Maharashtra and also one of the biggest city in India. So, plastic items that are banned and once; so, you can all kinds of plastic bags with or without handle garbage bags are also banned.

All one time use plastic disposable items made of a plastics and thermo coal, cutlery plates and bowls, plastic seats or wrap and restore products, plastic pouches. Nonwoven polypropylene bags a cross between paper and clothe bag disposable plastic containers used for takeaway pet bottles containing soft drinks, mineral water etcetera and with carrying capacity of less than 500 ml.

So, that is a huge list of material that has been banned for from in, in Maharashtra. So, now, this was banned in June of 2018. So, I would those of; those of you the students who are from Mumbai or from Maharashtra I would really be interested to know that you tell me that whether all these bans are still working. And if the bans are still working you use please use the discussion forum and put those comments in there and if the bans are

still working what are the alternatives people are using. So, we can learn from that and we can use it in other parts of our country.

So, there may be there may be certain innovations may have happened where people are using different material and there are innovations are coming some of those bags which are coming into the market to replace this plastic bags. They have cloth at the outside, but they also have a thin plastic in the inside. So, that those bags are not really plastic free. In fact, they have very thin layer of plastic. So, when these bags will be disposed into the environment, we will have those plastics again coming to the environment as well.

So, they look to be clean, they look to be better and, they can be used multiple times for sure. So, there is a slight improvement definitely, but that is not we are not replacing plastic all together and in fact, the plastic the thin layer of plastic there could be more dangerous than the other plastic bags that we had earlier.

Similarly, when you go for this paper cups for coffee or tea and other stuff you look at the cup very carefully there is a very thin layer of plastic inside because otherwise paper cannot hold liquid, paper cannot hold say water or coffee or a tea. So, it requires a layer there which keeps our cloth the paper not exposed to the liquid otherwise people will start getting soggy and then things will crumble down.

You just take a glass of water and put it in a paper bag and you see what happens. So, that is the reason why there is a still a plastic is there. So, whenever we are replacing this plastic, what are the new products are they really plastic free or it is just a green washing that is happening. They may be a slightly benefit, but there might also be that we are creating a different kind of problem a different kind of problem down the line. So, that; those things needs to be looked from a systems perspective when we are looking at these bans.

(Refer Slide Time: 22:48)

ITEMS EXEMPTED

- Plastic cover/ plastic material used at the manufacturing stage** (Icon: Factory)
- Plastic used for medicines, solid waste management and agricultural products** (Icon: Pills and plants)
- Compostable plastic material used for nurseries, horticulture and agriculture** (Icon: Seedling)
- Milk bags and plastic bottles used in packaged water industry. Milk bags and bottles will have to be recycled by collecting them back. Or else, customers have to pay a nominal recycling fee to shopkeeper** (Icon: Milk bottle)

THE PENALTY

₹5,000	for first offence
₹10,000	for second offence
₹25,000	for third offence, with a three-month jail term

Logos: Ministry of Environment, Government of India; Swachh Bharat Mission; Swayam; India Water, India Waste.

Some exempted was the plastic cover; plastic material used at manufacturing plastic used for medicines solid waste management agricultural products. So, those are exempted; compostable plastic material used for nurseries horticultural and agricultural; again most of these compostable plastic bags do not really degrade that is the problem what we have seen from even when we were working in a some compost plant in Canada. We had some of these compo stable compostable bags which was coming into the garbage stream municipal solid waste stream, because people are using this compostable bag as a garbage bag. And the those bags were being sold as a compostable bag.

So, people we will put their food waste or organic waste in there and then the whole bag will come to the compost plant, what we saw is even after 2 3 rounds of going through the composting process we still had the plastic pieces there. So, it does not really degrade; theoretically it can it will degrade because, but it requires a very heavy duty composting system which is not typically found.

So, if you are trying to use a plastic bags even some of those chips bag which claims themselves to be a 100 percent organic and you can compost it and you want to use it in your home composter it is not going to work. If you want to use it in a city municipal composter it will work, but then you have to recycle that back through the system maybe a few times then probably you will see its finally, getting degraded. So, it is again they

claimed it to be compostable, but most of it is not really compostable in true sense theoretically yes, but practically there are issues associated with that.

Milk bags and plastic bottles; they are used in packaged to water industries. So, milk bags have been for example, Amul bag and all that bags have been, because again how to package them. When bottles will have to be recycled by collecting them are back and consumer have to pay a nominal fee to the shopkeeper, the penalty if you for the first offense if you do not the 5000 rupees then 10000 and then 25000 for third offense within a three month of jail terms. So, it is pretty strong; strong very strong rules there.

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But let us look at what is the impact of this ban on what is people are talking about this ban in Maharashtra, because that is what how, but what is the reaction in public especially in the market in the markets in terms of this particular ban and what needs to be done to me really make this ban work. So, let us look at that video in.

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It is been 2 weeks since the no plastics rule came into effect in Maharashtra. Some store owners have also had to shell out a fine, because of the use of plastic bags. But either enough viable alternatives to this only present product are they alternatives as viable. Let us find out in one of the largest markets here in the heart of Mumbai that the other market.

Customer [FL] parcel [FL] plastic [FL].

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[FL].

[FL] [FL].

[FL] stock [FL].

[FL] 20 30 percent plastic parcel [FL] business [FL].

[FL] total [FL] alternative [FL] customer [FL] double [FL].

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Shopkeepers are trying to use the 3 month window to use up all the existing plastic inventory. Some others are still searching for a viable cost effective alternative to plastic.

Paper [FL].

[FL] [FL].

[FL] [FM].

Per plastic bag [FL] 10 rupees [FL] 50 piece [FL] 100 rupees [FL] 50 piece [FL] [FL]. It is a wastage [FL] mutton [FL] mutton [FL] loss [FL].

[FL] packing [FL] packing [FL] packing [FL] quantity [FL] size [FL] we are going to have a big problem.

Plastic manufacturers are clearly unhappy with the ban.

40 50 percent [FL] loss [FL] business.

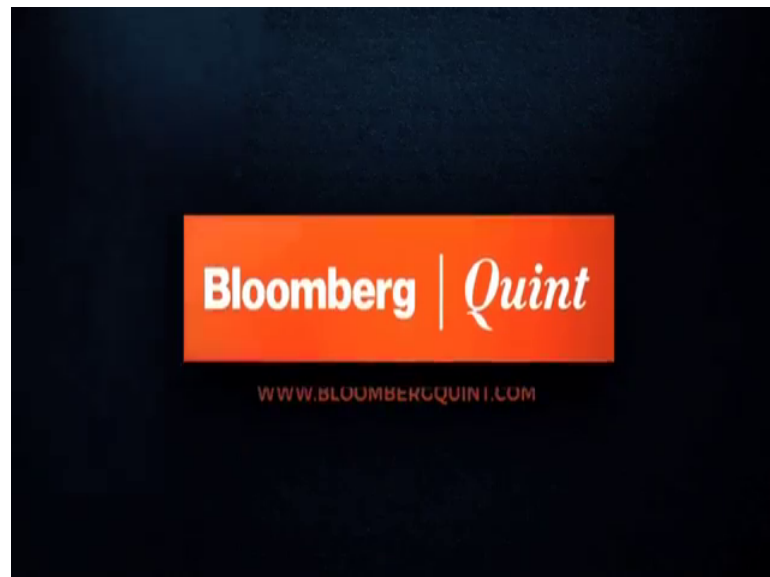
[FL] [FL].

[FL] item [FL] plastic [FL] pack [FL].

plastic [FL] paper [FL] consumption [FL] paper [FL] consumption [FL] automatic [FL] jungle [FL].

The good intent behind the move may have lost some of its forward partly because they arnt enough alternatives and also because there is still lethargy in the system to move towards the cleaner and greener society. This is Poorva Chatnas for Bloomberg Quint.

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So, as you saw it is in the video they were looking at the different aspect related to the plastic usage and ban which is being enforced in Maharashtra state. So, putting like a paper bag the lady was talking about how to put fish in there, the gentleman he was talking about that that its plastic bag that cloth bag is very phrasal it; it is not a strong enough to hold for example, certain kgs of meat.

So, when if it falls down it is a problem for the customer, it is a problem for the shop owner and at the same time with those paper bags putting all those grains and other stuff in paper bags for now. But what will happen during those Mumbai rains or during the rainy season how it will whether it will be can do that they can use it or they have to use something else. So, there are there are practical issues associated with that; that is the reason, see nobody really nobody no one has we do not really want to use plastic just

because of the sake of it, we are using plastic because it is so, convenient to use it for all these different stuff you saw.

There when the beginning of the video you saw in the background all those different type of utensils bathroom items, your buckets, mugs all those different stuffs are made from plastic. And they are and since it is so convenient, but those are mostly those are those are your HGPE LDPE and those kind of plastic.

So, what we are trying to ban is that single use plastic which is actually the bag part mostly the bags and then some of the cutlery sets and other stuff which is a single use not the multiple use ones. So, there are. So, the ban makes sense to certain extent especially for this single use plastic the ban does make sense.

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But at the same time the ban also because if you do not ban, you will have as you can see in this particular picture right on the on your; on your screen you will have these kind of scenarios or variety of plastics will end up and you if you look very carefully many of these are single use plastics or single use plastic materials, which end up in the atmosphere and in our environment. Recently there was every, every now and then we hear that more and more plastic in the ocean more and more plastic in the surface water just couple of weeks back we saw that there was a in a beach in western dies area where there most of this is like a beach around 5 miles area of that beach 5 little bit away from

the beach when they go went into the water they saw almost in the area of 5 miles or 5 square miles lots and lots of plastics.

And which was not discovered earlier. So, we are seeing lots of plastic in our water in existing places, we already know about the great pacific garbage patch, we also know about certain other garbage patches which we will talk about. And why it is happening we would go around in the city in the country in our country in India, you will find many of the water bodies have this kind of scenario what you see in my background.

So, we need to really need to clean it up. So, ban getting rid of the single use plastic will be will be of a health, but what I am suggesting is we need to look at in a little bit broader perspective that just banning may not banning may work for a few times few years or maybe a few months and then people does not find alternative people we will come back to the same plastic.

So, we have to come up with an alternative and the alternative may be given some subsidy actually to start with. So, let us look at some of these where we talk about these alternatives and some of the global issues. So, we will talk about this we look at this particular again a small video and then we will close this module. So, let us have a look at this a small video and we will discuss for a minute and then we will close this.

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On March 15th the Maharashtra state passed a proposal banning the use sale and the manufacture of all disposable plastic items

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The state generates close to 500,000 tons of plastic waste every year.

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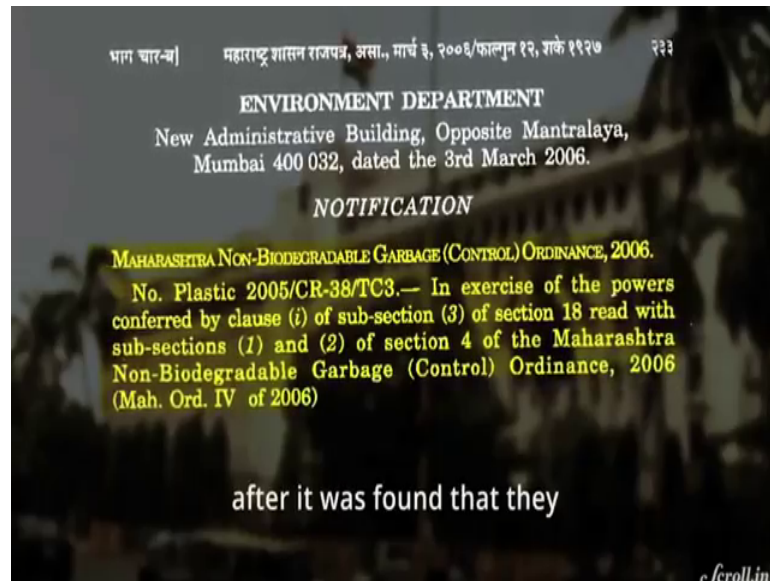


Such bans are not new in 2006, for instance

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The Maharashtra government banned plastic bags thinner than 50 microns after it was found that they had clogged the city storm water drains and compounded the 2005 flood crisis. But the implementation of the rule was shoddy with many people not even aware of its existence.

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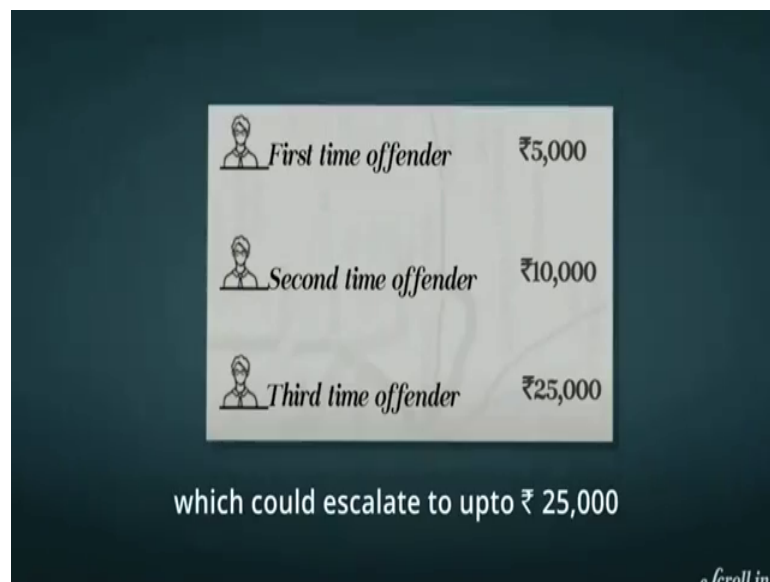
So, will this ban be any different? Activists say that this time an important clause has been added which could be the game changer.




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In the earlier case the manufacturer and supplier attracted penalty for breaking the law what is different? Now is that the consumer is also liable to pay if caught using plastic.

(Refer Slide Time: 33:08)



 <i>First time offender</i>	₹5,000
 <i>Second time offender</i>	₹10,000
 <i>Third time offender</i>	₹25,000

which could escalate to upto ₹ 25,000

First time offenders will be fined 5,000 rupees which could escalate to up to 25,000 rupees if caught a third time.

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Consumers will be charged an additional 1 rupee for a mineral water bottle and 50 paise for a milk packet which can be reimbursed if returned.

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Packaging used in medicine is garbage disposal and nurseries, has been exempted from the ban. There are some caveats however.

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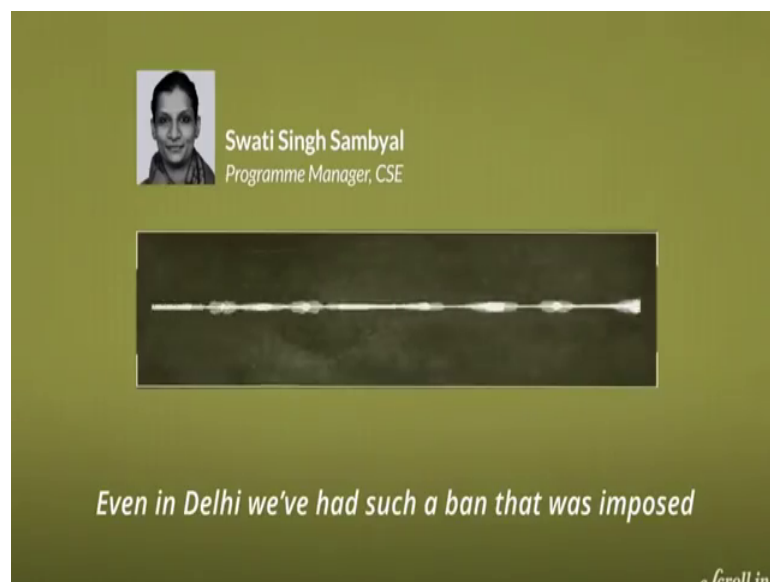
The ban does not include packaged plastic used in retail products which according to the 2016 notification on plastic waste management rules, had put the onus of collecting back the plastic waste generated by its products on retail brands.

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The country generates 15,000 tons of plastic waste every day of which 6,000 tons remains uncollected. Experts also feel that it will not be enough to put in place a ban without providing for alternatives to plastic.

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Even in Delhi we will such a ban that was imposed, but so far has not been successful. We have banned carry bags of humans bags, but then there are no alternatives which have been made available in the market and nor are these also meters cheap if we talk about dude bag or they talk about cloth bags. Then, they do not become as a huge cost.

So, what about some areas I mean, they won't go in for the costly dude bag or cloth bag you know. So, then the cheaper resort is probably a plastic bag. So, I feel that these bans would only be successful if we bring in some; some pollinators or. For some month these alternatives should be available at subsidized rate. So, that it becomes a habit.

Behavioural change is another challenge. In Mumbai, for example, the BMC is attempts to segregate waste at source has not proven successful. Then there is the question of implementation. Even though the bill empowers a range of government officials to enforce the ban it will be difficult to police the city with 18 million residents leave alone a state. Karnataka, where a similar ban has been in place for the past 2 years has only seen a marginal dip in the total plastic waste output. But, blanket bans on plastic bags do work as is the case in countries like Rwanda the cleanest country in Africa.

But the reason there could be the stringent enforcement under an authoritarian government.

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Plastic manufacturers in Maharashtra believe that the ban will give a raw deal to the 4 lakh workers employed by the industry. So, while it will take a lot more than just a ban to fix the problem it is a step in the right direction.

So, as you saw that again whatever we have been discussing kind of reiterated in that particular video that we have to provide a cheaper alternative and maybe subsidised

alternative for a while. And at the same time there are there have been bans have been tried earlier, but it has not worked, but there has been certain this time since the consumer is also going to be fine.

So, there was a little bit different than what we have seen previously, but again it is the implementation part which will be always under how; how we are going to implement this particular policy. And for and the cheaper alternative and at the same time you saw one new aspect which here we have not talked about in this video yet is on what is the impact of this ban on the people working in the plastic industry.

So, what will happen to those people their jobs? So, it is see we have to look at what I say we have to look at the things from a systems perspective. So, there are social aspect, there is economic aspect, there is environmental aspect. So, we have to look at the whole scenario while thinking about coming up with a solution to this plastic waste management problem.

Rather than taking just one step which is may sounds like a good step, but it has a lot of ramifications in the other areas. So, those areas needs to be considered as well. So, with this let us that is the put for thought for you to after this video. So, think about that and then we will continue our discussion in the next video again if you have your own experiences regarding this plastic waste ban from whichever state you come from India.

Please put it on the discussion forum it will be nice to learn from each other and do take the weekly quizzes on time we are also you have the weekly reading material which includes this set of slides as well as several other material every week will have a folder for the reading materials as well. So, go over those any questions on the discussion forum and I look forward to seeing you again in the next video.

Thank you.