Sustainable and Affordable Sanitation Solutions for Small Towns
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Lecture – 12
Plastic Waste Management

So, a Plastic Waste Management as I said that plastic can be segregated for the brand auditing we did that recyclable and non recyclable waste.

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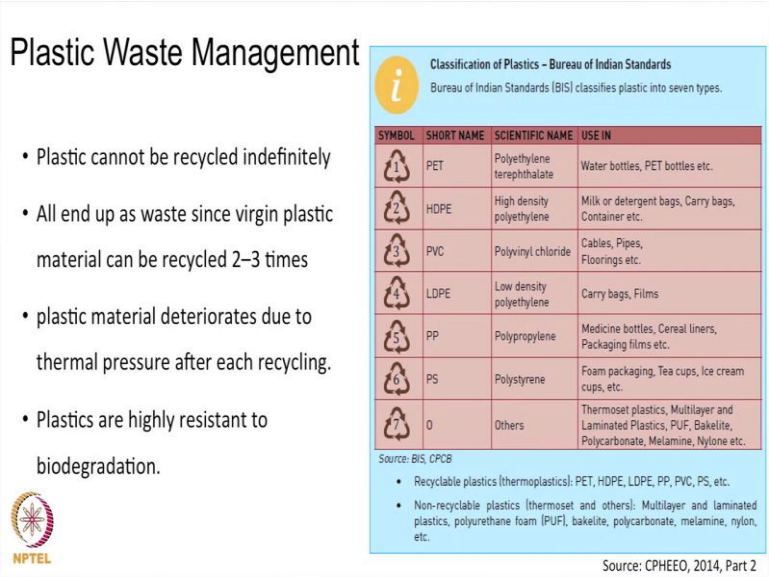

So, these are the different categories for of plastics which you can you know recycle and use, but one thing one needs to be reminded of is that plastic cannot be recycled indefinitely. So, once is there in the economy once there in the system it will remain its very difficult to you know do anything about it once if there in the system. These are the different options from plastic waste management.

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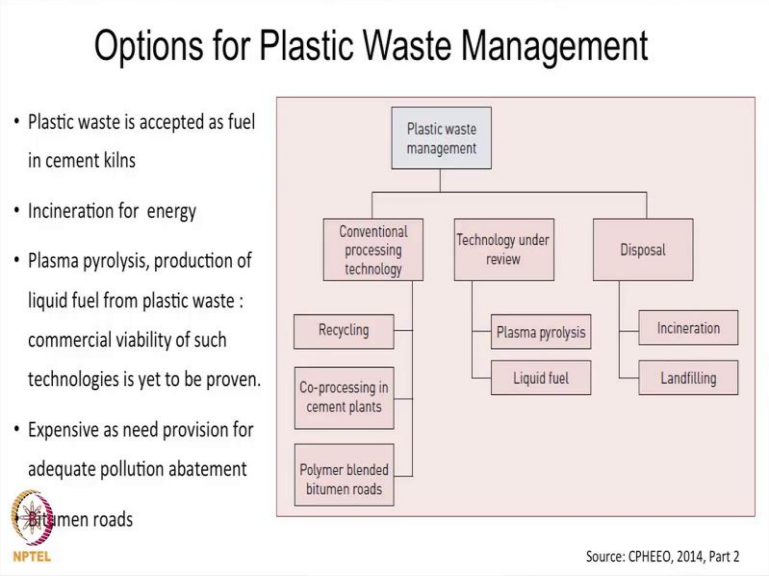

I have always; I have already spoken about this thing the planting with the bitumen and the other thing is that incineration if you want to dispose off. Plasma pyrolysis is happening, but I think there are only two or three plants all over india that to an industrial level, its not happening at the city level, this is very very expensive technology and the most of the urban local bodies they cannot afford to have neither they have the capacity and nor they have the skills or the money for that (Refer Slide Time: 01:23). Paper waste management you know how it done.

Right segregation initial sorting and this is the process of making handmade paper. A waste to energy I have already spoken about little bit the bio degradation part and the most preferred part in most preferred technology in Indian case is incineration or biomethanation ok. But they are if you see we have about 8 systems all across all across India in Andrapradesh-2 to Maharashtra-2.

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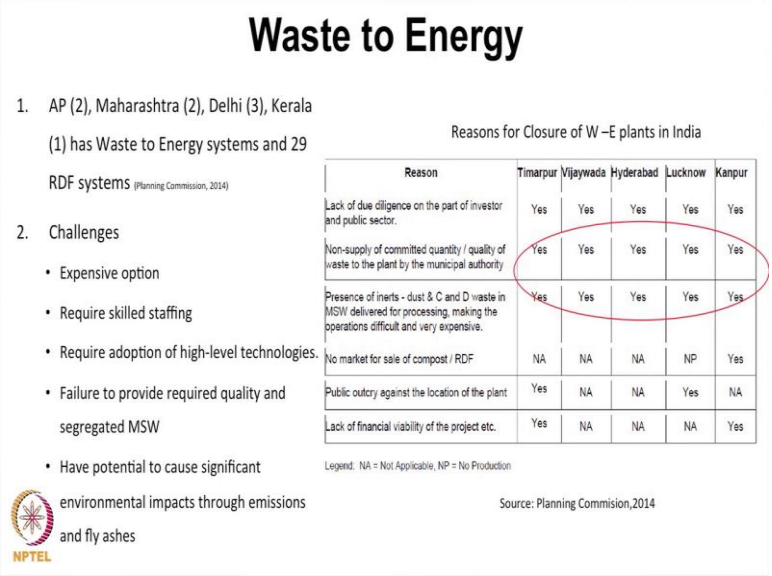

And these this is the different kind of waste to energy systems all across India These are the challenges as I said or waste to energy systems is the most biggest challenges to provide sorted waste which is very difficult in Indian cities, you cannot provide a sorted waste and the required waste.

And obviously, there are environmental impacts of these waste to energy, if you are not employing any air pollution method and obviously, these are very expensive again ok. So, sanitary land we discuss about the landfills actually most of the cities are not landfills those are dumping sites. So, there is a difference between landfills and the dumping site. So, these sanitary landfill means where the final and safe disposal of residual solid waste.

Student: Question maam.

Student: (Refer Slide Time: 00:52).

Its not the as I said before its not, but then ultimately there will be certain materials which you cannot process or reuse you have to ultimately dispose; so.

Student: If there are items in that particular (Refer Slide Time: 03:10) which we cannot.

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Student: So, what is the solution?

There is no solution you have to dispose off that is that is the only thing you can do. As I said that plastic you can even if you know converted into and use it as a mixture with bitumen ultimately plastic is there, floods will come, roads will go the plastic will remain ok.

So, there are certain things which you cannot do away with it you have to dispose it in some maybe more controlled manner if not like openly you are throwing them away its like more controlled approach to disposal and management. So, sanitary landfills I do not think, so we have any example in India of sanitary landfills, correct me if I am wrong.

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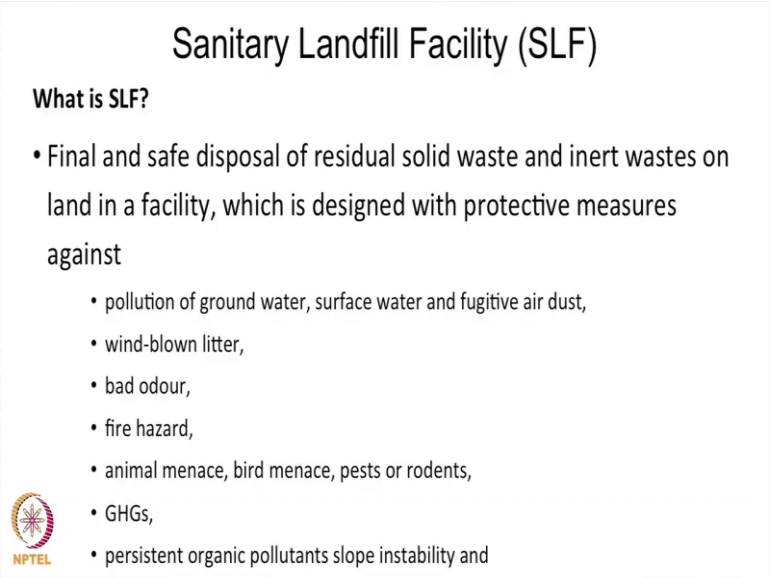

And these are the things sanitary landfills have to take care off. They have to take care of pollution of ground water, surface water, any air, dust, a bad odour, fire hazard, animal menace, GHGs and persistent organic pollutants slopes instability and erosions. Sanitary landfills are necessary for any non bio degradable and inert waste mixed waste not found suitable for waste processing.

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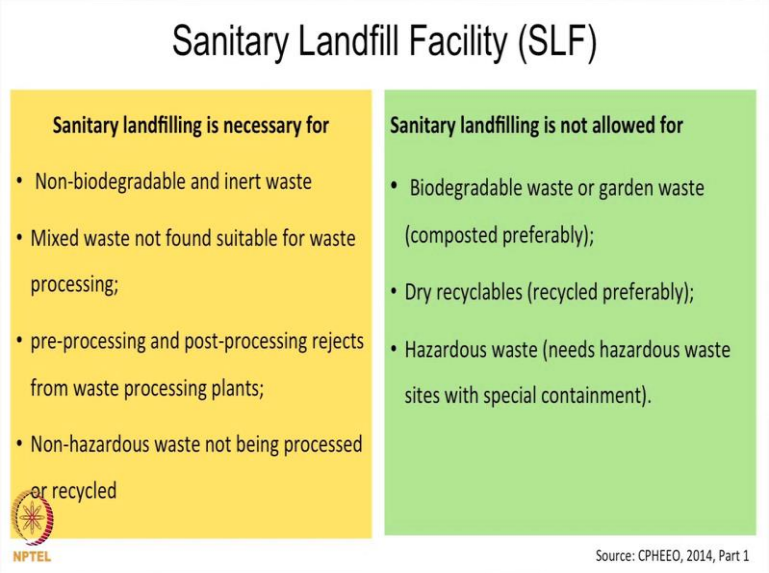

So, these are the things that should go ultimately to landfills and these are the things that are not allowed to go to sanitary landfills. Obviously, biodegradable waste should be preferably composted dry, recyclable and hazardous waste should be managed.

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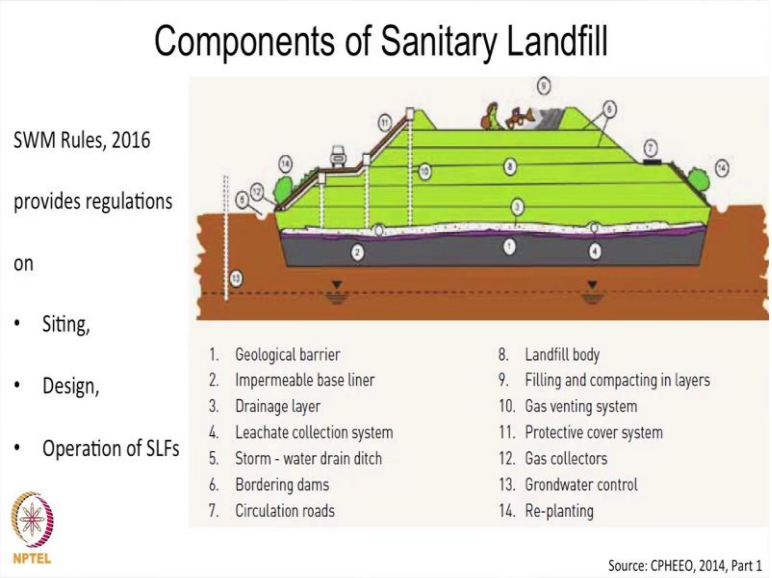

This is the typical diagram which is the recent CPHEEO manual also came out with and solid waste management rules. So, these this is the best sanitary landfill how it looks like it has a layer. So, that leachates would not go go it has a you know system here piping

system. So, that leachates will be drained out in a controlled manner. So, these are the different component of sanitary landfill.

Student: Yes.

So, before she has starts the next session. So, we spoken about integrated solid waste management planning which is multiple interventions at each step of the waste chain. So, segregation, collection, transportation, disposal it involves integration of multiple stakeholders. So, informal sector is not outside the realm of government or the value chain has to be incorporated within the formal chain. It aims to reduce total volume of the waste that is reaching to the landfill, it optimises resources and material recovery.

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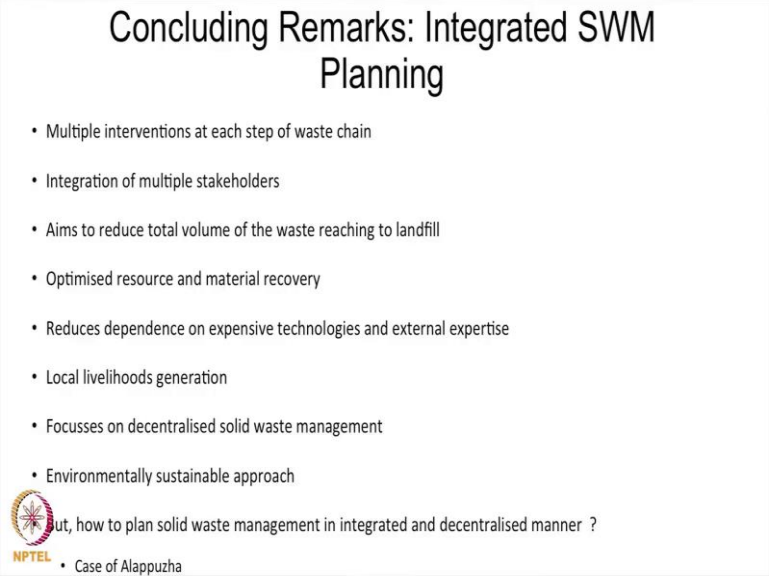

So, these are the few principle of integrated solid waste management, but is it possible, can we do that? So, Alleppey as I mentioned that Alleppey experimented with the decentralized waste water management. It experimented with no bin policy. So, Shridar is going to talk about this efficacy of such kind of a model for small towns like.