Education for Sustainable Development
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Lecture - 56
Sustainable Consumption and Production

Hello viewer. Welcome back to this class on ESD. So, now today, we will start a new area, new topic that is Responsible Consumption and Production. So, it is related to it is actually related to this Sustainable Development Goal 12, ok. So, as you can see, we will discuss about how all of us we can adopt a life sustainable lifestyle and you know sustainable consumption and sustainable production pattern in our day to day practices.

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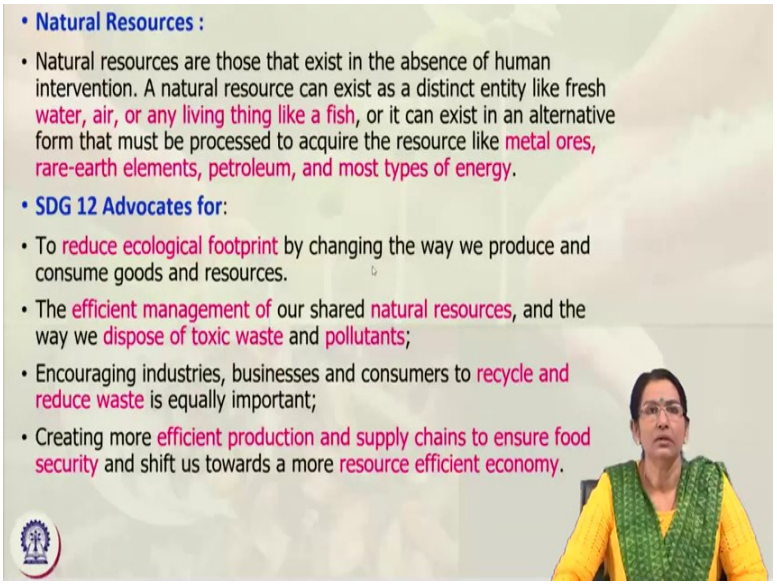

Now, let us proceed to. So, the slides now the natural resources, by natural resources as all of us we know by we mean it towards the energy towards the living stock, towards the air, towards the natural resources, like air, water, and then metal even the resources or mineral resources like metal ores, rare earth elements, petroleum products, different types of energy resources, water, air, all the living things like forestry, like you know marine life, all these are the resources, all these are the natural resources.

So, now SDG 12 advocate for how to not only sustainably use these resources and you know consume or develop the sustainable consumption habits and develop the habit of sustainable production also, but how to you know conserve the resources for the future

generation. Not only we will sustainably use it at the present time, but we will have to restore it, preserve it, conserve it for the future generation as well.

So, that is the SDG 12 advocates for the reducing the ecological footprints. So, it is a natural process that whenever we are consuming the resources, consuming the food products, consuming the other kinds of the goods and material things etcetera. So, then automatically as a result of this consumption, some kind source of energy some source of carbon footprints also come up is coming up.

So, how to reduce this ecological footprint? That means, whatever we consume how its impact can be neutralized, how its negative impact can be removed. So, the that is why the process we should produce it, we should consume it, it must have the minimum ecological footprint or you can say zero ecological footprint. So, that is the first thing is to reduce ecological footprint by the change by changing the way of our production and consumption habits.

Second is that efficient management of all these resources, whatever natural resources are there in our disposal in this planet earth how to sustainably use it, manage it efficiently, so that we can remove, we can dispose all these waste material, toxic things and pollutants in a very efficient way. So, here the waste management is also another you know important or potential area of this SDG.

So, encouraging similarly the industries and other organization business organizations to recycle this waste produce, waste being produced by this factories and the industry organizations. So, that is the processing, recycling, reducing the waste, and waste management through the whole process of waste management. So, creating the again more efficient production, supply chain.

So, especially in agricultural sector in food sector, in health sector also, so how can we efficiently produce it and distribute it with the proper supply chain process to ensure that the food security is restored, food security is maintained, and all the stakeholders, all the citizens they are having the access equal access to these resources basic resources of life. So, that we can say we can make our economy more resource efficient and robust. So, that we can move towards the most resource efficient economy and the robust economy.

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Then, now this is these are the some of the facts of today's world, like how we are consuming different types of resources, in terms, not just in terms of energy, air, water etcetera, but also food products etcetera. So, this is the data we can see. You can go through the how many percentage of people this across the world, they are consuming the different types of resources.

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And this is again similarly the consumption and use of the natural resources like in terms of electricity from the coal, coals from the you know from the marine life and food production from the marine life, then the fuel from the fuel that is the fuel in terms of gas, petroleum products etcetera on day to day basis.

Similarly, food consumption and it is also with regard to our the forest resources, other forest resources and how this resource depletion take place, the resource depletion; that means, how the resources are getting deteriorated, getting; that means, reduces from this in this process of in this process of consumptions or over consumption we can say.

So, the resource this is called the resource depletion how the resource depletion takes place like by how whether; if you are not sustainably using the forest products we are not sustainably using the you know animals, marine life, fruits and vegetables and energy also. So, that creates the that creates the situation for the resource depletion.

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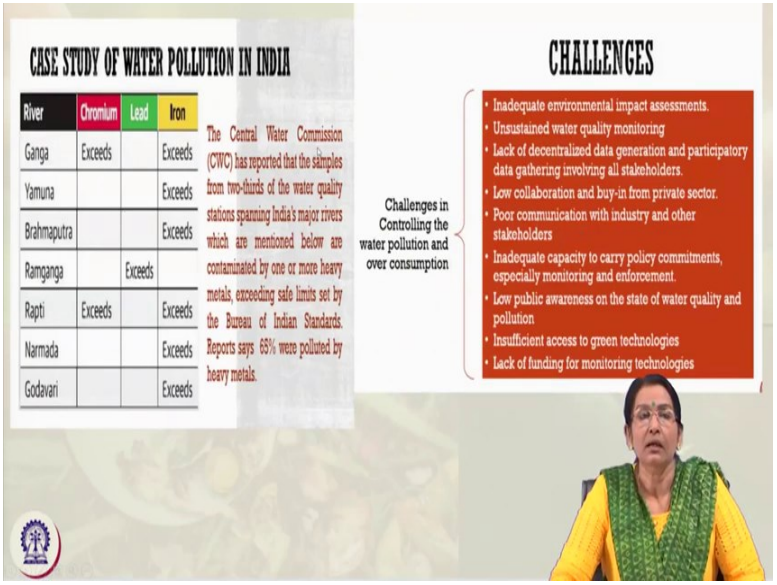

Now, this is again this is the case study of water pollution in India. These are the some of the rivers as you can see there is the rivers that how it the how these are being used by the different stakeholders and the what the Central Water Commission says reported that as per the sample from two-third of the water quality, major stake quality in the India and then India's major rivers are you know deteriorating, contaminating, contemplated.

You must be very much aware of you know Ganga so the Ganga so the Ganga Southern rivers; that means, cleansing of river Ganga, how it is taking place it is a kind of investment by the Government of India. So, these kind of things happens here with regard to the natural resource like water, especially the water.

So, that is a these are some of the challenges, emerging challenges that we are facing nowadays. Like for example, inadequate environmental impact assessment. Whatever we are consuming, whatever we are producing, definitely it is affecting the environment.

But, how efficiently, how we are measuring it, how we could able to act assess it, so then only we can be able to face the challenge face the challenge, mitigate the challenges, we are try to find out the solutions for it; that means, depletions and solutions for is this kind of problem. So, thing is that how do we assess the impact of this environmental impact of this consumptions and production in the environment.

So, that is the inadequate environmental impact assessment. We do not have the sufficient tool for assessing this impact. Unsustained water quality monitoring level. Water, drinking water is the most important source of a source that we are that is the we need in our present context across the country. So, how that is how what is the water quality, what is the water quality, how this unsustained water quality are being monitored are being going to be processed.

So, we do not have efficient now; gradually we are increasingly using the technology for is that, but we do not have sufficient mechanism to monitor and evaluate it. Similarly, lack of decentralization data generation and participatory data gathering, we do not have sufficient data, collective data, and being gathered from all the stakeholders and to you know to interpret it in an to get the predictions and assumptions for the water usage.

Then, low collaborations and buy in from the private sector. Low collaboration we do not have sufficient collaboration with the private sectors in the water distribution and etcetera. Then, poor communication with the industry and other stakeholders also with regard to the in natural resources.

Similarly, inadequate capacity to carry the policy commitments, whatever laws, rules, regulations and policies are there, we are not being able to committed to or stick to this or follow this or implement these policies and monitor and evaluate it. So, we need more kind of enforcement, legal enforcement.

So, low public awareness, low public awareness with regard to sustainability, with regard to conservation of resources, with regard to eco-friendly behavior, protection of our

environment, water quality, pollution. So, no consciousness, no conscious awareness among the public is there. So, we have to that is the biggest challenge we can say.

Insufficient access to green technology. Insufficient access to green technology, now in the present day context green technology has got immense importance because you know to minimize this carbon footprints to minimize the pollution and how can we use this technology like internet of things a artificial intelligence or other kind, even the even some robot robotics or mechanisms like that. So, that to how to use sustainably this green technology to reduce this pollutions and to and you know to enhance the quality of life.

So, lack of funding and monitoring technology. Yes funding is also definite financial resources, is most important, and also we must have the skills and competency to monitor, to regulate, to execute this kind of technology and to innovate green technology and must be aware of its proper usage and its results the results to be interpreted.

So, these are the some of these challenges in present day context, how to control the pollution, how to you know consume the things sustainably, how to restore, how to preserve, and how to conserve the all the resources in our planet earth and the country.

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So, now so these are some of the again, similarly the data is that industrial waste overview, how this what is the percentage of industrial waste that takes place in not only because of the industrial sectors, but also the industrial industrialize. But, also some

sometimes at the natural calamities, disasters, then overpopulation then you know population over population and pollution due to crowd overcrowd and the vehicles, the air quality, deterioration all kinds of things.

So, again say, so solutions for the natural resource depletion, again the same thing is that like make the electricity more useful, more efficient, now where you know more energy efficient bulbs are coming, energy efficient energy to be used, then more renewable energy, then more sustainable fishing growth like the marine life when we are fishing is also definitely the food stuff the. So, how to sustainably use that fishing and promote the sustainable growth of the fishing or marine life.

So, avoid the single use of plastics, drive less, as minimum as possible if you can manage with the two wheelers or like the cycle and walking etcetera, so how to minimize it. Now, we are also slowly moving towards the electric battery cars, hydrogen cars etcetera.

So, use again sustainable practices for the agricultural, so sustainable practices for the agriculture. And again most important thing is that reduce the food wastage, how the food security in order to ensure, in order to enhance the food security we have to reduce the food wastage.

So, food wastage is the biggest setback, means biggest drawback in our consumption habits. So, how to reduce that food wastage or how the food products should be distributed properly should be utilized properly and it should not be wasted should not be wasted.

So, reduce the food reduce the food waste; that means, food products and to distribute it to give the to give everyone even in even the food is being left out and how we can distribute among the animals, among the animals and then other living organisms. So, promote the sustainable forest management. Yes, of course, forest management is the most important thing.

Then the waste water before discharging. Yes, in the cities life in the urban cities you know waste water in terms of the drainage problem and the water logging problems all these are because of this you know waste water that is being that are being discharged to

different rivers and the water bodies in the city. So, how these are this waste water should be managed properly before discharging it to the environment.

So, that is waste water management, waste management, reducing the food wastage, sustainable agriculture and you know sustainable driving as much as possible, minimum use of you know petroleum vehicles. So, these are the some of the practices that we can adopt, we can practice, we can adopt in our regular day to day behavior.

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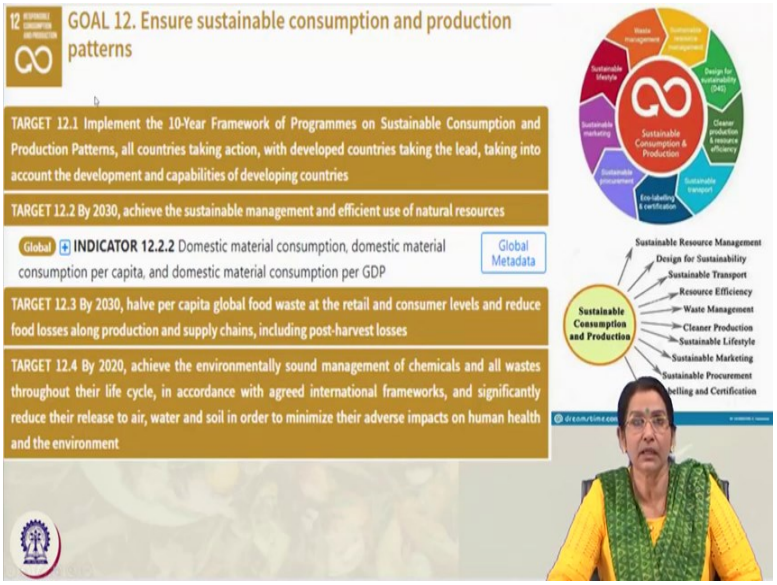

And these are the goal as the goal 12 objectives like ensure sustainable consumption and production patterns. And under goal 12 also there are so many targets are also there like 12.1 that is the 10 year, implementation of 10 year framework program then indicator like indicator is like target, 12.2 is again achieve sustainable management efficient use of the natural resources.

Similarly, the indicator shares are like domestic material consumption, domestic material consumption per capita and domestic material consumption for GDP, per GDP. So, these are some of the you know objectives goals and objectives of SDG 12. 12.3 also again you know advocates for the per capita global food wastage and how to reduce it, how to reduce this food losses ok, along the process of production and supply chains etcetera.

So, and then target 12.4 environment that is the achieve the environmentally sound management of the chemicals and all waste products, its life cycle being you know

through coming out through air, through water, that means significantly reducing the quality of air, water and soil, in and to how to minimize this adverse impact of health and the environment.

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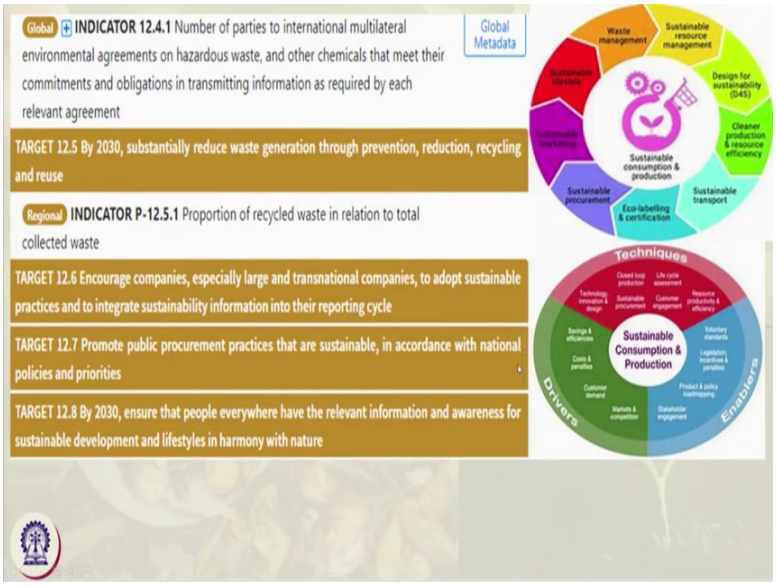

So, there say this similarly the indicators can be here the number of parties to internal to international multilateral environment agreements and the hazardous waste and chemicals and obligations in transmitting this information as required for the relevant agreement.

And 12.5 the target again reducing the waste generation through prevention, reduction and recycling and reuse. Indicator is like proportion of the recycled waste in relation to total collected waste; recycled waste in proportion to collected waste. So, and again now in the big cities also now the waste is waste materials, so waste materials are being collected individually from the household, individual household then being collected, then being processed through the through technology through mechanisms.

So, waste management has also become you can say you can say is a is sustainable practice which has already been started in the big cities, but with regard to the rural areas, rural regular areas, remote areas we have to also we need to practice it with our individual and collective awareness in the sense that we ourself can should dispose it off in a in a sustainable way in the and in a biodegradable way. So, that the minimum pollution or pollution will be created in the atmosphere.

So, this again 12.3 also people everywhere relevant they must have the relevant information and awareness for sustainable development by the lifestyle in the harmony with nature.

So, ultimately it advocates that we must lead a life and our lifestyle should go hand in hand with the in harmony with the nature, in harmony with the planet earth. So, that it should be sustainable lifestyle; that means, yes of course, our planet earth is giving us so much of you know food, not only food all kinds of resources for maintaining our living.

So, but we should not that, but we should be obliged, we should be grateful that we are getting this resources from planet earth, mother earth for our you know for our survival. But, we should not waste it. So, it is the kind of you know it is the kind of value we have to create that as because we owe the we owe the gratitude from the planet earth because we are living because of planet earth and its resources.

So, we hence we should be the caretaker of this planet earth, we should be the caretaker of is all the resources natural resources. Not for us, but for the future generation as well. So, for the whole for the global world. So, that kind of value system, that kind of awareness, that kind of conscience should be developed among us.

So, these are the some of the you know images that we can see the sustainable consumption production. Again, it is related to everything, it is related to sustainable resource management and then design for the sustainability, then sustainable transport, sustainable production, supply chain and distribution, sustainably you can say eco labeling sustainable procurement.

Now, the benchmarks are there you know, the benchmarks are there, certifications from the agencies certified agencies are there, like these are the with regard to the quality, with regard to the quality.

Similarly, sustainable procurement, sustainable you know manufacturing, sustainable lifestyle, waste management, all these things are. So, sustainable consumption it require it that means, it relates to 3 drivers you know drivers ecological driver, then the social driver, social enabler social drivers and the technical drivers like technology innovation all these kinds of.

So, is related to one is that our behavior, another is that production, when it is being created productions produced, it should be produced in a proper way, sustainable way and the techniques that are used through technology and other mechanisms.

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So, these are again this target 12 a, b, c is continuing a advocates for support developing countries. So, we should other countries should then or UNESCO agencies should support the developing countries to strengthen their scientific and technological capacity to move towards the sustainable patterns of consumption.

Similarly, develop the implement the tools to monitor this sustainable development, its impact on the sustainable tourism and create the more jobs and the promote the local culture etcetera and products.

And c is rationalize the inefficient rationalize the inefficient fossil fuel subsidies that encourage the wasteful consumption by removing the market distortions, and all the natural circumstances, also including restructuring the taxation and the phasing out these harmful subsidies. And all kinds of thing related to strengthen the our economy and economy and which accounts the accounts for the specific needs and conditions of the developing countries.

And other countries should help them out in not only in terms of resources, but in terms of technology to minimize this kind of, minimize this possible adverse impact on their

development in the on the environment and develop and to achieve the development in a very sustainable way.

So, these are you can say, so sustainable consumption and production it relates to everything. Starting from the you know production to supply chain, to distribution, to you know lifestyle, to management, to management to decision making to transport to tourism everywhere. So, everywhere we can say we have to make this sustainability as a kinds of kind of you know labeling like the quality labeling.

That, everything, whatever we do either in tangible way, intangible way, production consumption or whatever we are doing and anything that exists anything that we consumes, anything that we produce. So, everything should be a sustainability is a tag we can say sustainability is a brand, sustainability is a tag, it is a label. So, that should be there in our mental framework.

That whatever we are doing always we should be like the cost effectiveness is a tag for any kind of business transaction. Similarly, sustainability should be a tax, should be a should be a slogan, should be a brand name for all our activities behavior and consumptions.

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So, now here again with regard to this. So, we how can how this global challenges can be faced can be mitigated. So, to integrate environmental sustainability with the economic

growth. So, economic growth by decoupling the environmental degradation. Decoupling is a sense that by getting it separated, by getting rid of environmental degradation.

So, when we are advocating for environmental sustainability with economic growth, we have to reduce the environmental wastage, environmental degradation because of this economic growth or etcetera. Whatever we are producing, we are creating, we are consuming, etcetera, it should be environmentally sustainable in the sense that we have to remove out, we have to reduce, we have to get rid of this and degradation or the negative impacts from the environment.

So, resource decoupling and the impact decoupling are needed for the promoting the sustainable consumption and productions. So, whatever sustainable whatever goods and things we are producing not only during the process of production, but during the process of consumption also, we have to minimize, we have to reduce, we have to decouple this negative impacts from this from these processes.

So, that, so it positive transition can be made towards more greener economy, more greener jobs, more global economy and safe economy. So, then, so here another thing is that how to respect the biophysical boundaries of the planet, reduce the current global consumption rates, how to take care of you know; that means, instead of deforestation we should be we should adopt habit of afforestation, proforestation.

So, that to fit in with the biophysical capacity to produce the ecosystem, we should be more healthy and beneficial. So, here again how to take care of the biodiversity, how to take care of the natural resources like water, air, quality of air, then minerals or natural resources.

So, how to respect first thing, that how to respect for the biophysical resources, boundaries of the planets, our natural resources and consume. Of course, we have to consume it, but consume in a very sustainable way, so that our ecosystem will be more protected, conserved and safe for the future generation.

So, that means, we have to even if we are even if with our consumption so resource depletion takes place, but how to recover it, how to manage it, how to enhance it so other ways. So, how can. So, all of us we should make effort how to create. Even if we are using the resources, but instead of resource depletion how can resource creation be

possible through some other means and technology and innovative ways. This should be our attitude and the behavioral effort.

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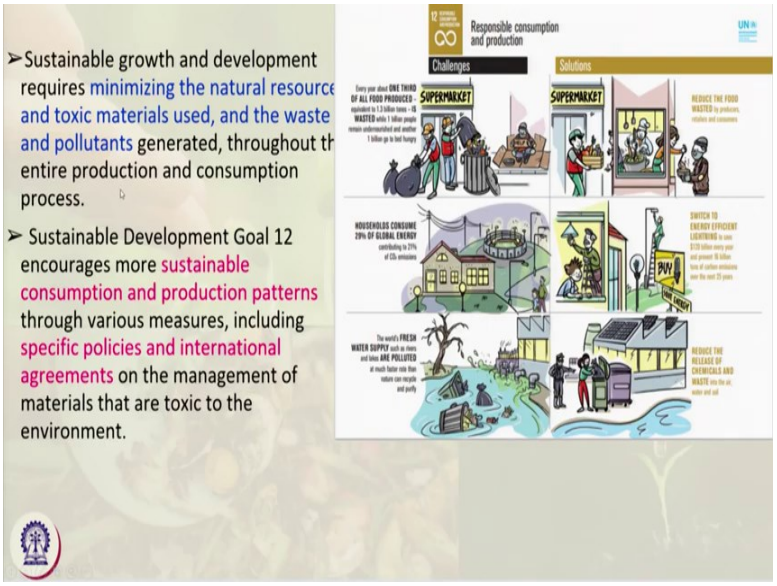

So, next is sustainable growth and development, like how to minimize the natural resources and toxic materials and the waste and the pollutants. And so that is where the nowadays the biggest challenge is the resource; that means, waste management reducing the resource depletion and waste management.

So, that is every industrial organizations, every cities, every municipal corporations, every government agencies also the waste management, even our from our day to day practice, day to day activity, small then different types of you know waste materials how these are to be processed.

So, that not only it will be you know processed in every ecofriendly way and in organic way, how the it can be minimized, it can be minimized. And the again waste out of the waste cycling recycling. So, that is also how to dispose it off, that is also another challenge.

So, sustainable consumption and production patterns including all kinds of the measures to be taken then specific policies, international agreements. Not just with related to climate change, but all climate change is again it is another, it is out it is the end result of all this kind of pollutions and the biodegradations and all kinds of depletions.

So, how to; so we have to stick to this all the international policies, agreements and the practices to reduce the toxic toxics outcomes in the environment and how to toxic materials, how to reduce this and waste management.

So, here these are some of the you know pictures that you can see how sustainably we can consume the resources and how we must adopt a sustainable lifestyle in the with the goal or the with the target of minimum with minimum resource consumption and with minimum resource consumption and maximizing the profit and you know again minimizing the wastage, minimizing the resource depletion in the environment.

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So, that that is why that is societies they need to find just and equitable ways to meet the individual needs. So, with the ecological limits of the planet. Like for example, you know in our society socioeconomic status is there, but yes, but all of us, all of us we should adopt a habit of you know habit of you know even though we are very rich, even though we are affluent, even though we can afford.

But even then, why should we waste, why should we waste our food products, why should we waste in shopping behavior, why should we waste in purchasing unnecessary things like in especially in terms of you know not only in terms of technological gadgets, but also clothes etcetera

Rather, we should distribute it. What is the what is the you know what is the what is the purpose of you know purchasing, so that means, I mean you can say that unsustainable shopping behavior, unsustainable purchasing behavior, just because we are affluent, just because we possess money. No, we should not we should adopt a basic policy and philosophy of our life that.

Even though we are rich, even though we are affluent, but how can we distribute it in a sustainable way among others. Instead of purchasing buying for our own consumption, why not to sustainability sustainably consume it or efficiently consume it or purchase as much as it is required and rest other things we must distribute in the among the community, among the people, among the pro.

So, that is why the sufficient responses to meet the science based emissions, reduction targets, natural resource constraints, these are also some of the sustainable practices with regard to food, water, sanitation, energy consumption should also be enhanced.

And as all of us we know pollution is the largest environmental cause of disease and premature death and all kinds of disease etcetera. So, that is a we must you know we must adopt that kind of sustainable lifestyle, sustainable habit, sustainable bent of mind, sustainable you know outlook.

So, outlook, not just to reduce the food products and not just reduce the carbon footprints, but also sustainably consume them at, consume the resources and try to equalize, try to distribute among others who are not getting the opportunity. Especially, the food especially the food and the clothings, especially food and clothings.

So, that we must distribute as much as possible among others. If you have the if you can afford to purchase it, buy it, then we must take care of other the section of the society who are actually deprived, who are not getting this opportunity. That is one thing.

And second thing is that energy also we should sustainably use it. And the third thing is that how the this how can we minimize the minimize the waste products, wastage of our individual in case of our individual household and how can we manage effectively manage the dispose off this our household wastages in a very biodegradable way. So, through different mechanisms.

And again how can we not just we not just think of our own consumption etcetera, but also we should take care of others in terms of distributing this basic amenities and the food products and to ensure the food security. And you know even water consumption also not only, we sustainably use it, but we can also help out the community people to have access to this basic amenities and resources and also protect the thing.

So, it is not just about consuming sustainability, but also taking care of others by distributing the resources among others, equal accessibility to resources and ensuring that everybody should get this advantage of this thing, but in a cost effective way and in a sustainable way.

So, that we should not think of ourself, but the community people, the others who are actually deprived like the people from the Rajasthan people, from the remote areas where they are do not have the access to safe drinking water or. So, they are the they are the victim of you know, they are deep with the victims, and they are deprived of these resources. We must also think for them.

So, and how to and the again how to minimize this pollution, not only the air pollution, but also the solid waste management is also an important factor. So, now, here I am stopping here. We will continue this in the next class.

Thank you very much.