

Episode Four: How Much Do we Need

This deals with S&T Development, Growth of Population & Natural Resources Consumption Patterns. It touches on urbanization, the problems of rural and urban poverty. Global inequalities in resource consumption. It juxtaposes examples of mindless consumerism by affluent families (and nations) against the more sensible sustainable practices.

Characters

Earth	:	Female voice
Teacher	:	Female voice. Adult.
Ravi	:	Student. Male voice
Papa	:	Ravi's father
Rani	:	Young girl. Ravi's classmate
Kamala	:	Lady. Adult Female voice.
Hari	:	Young boy.
		Zip-repair man: Adult male voice
Ramu	:	Hari's father. Adult male voice
Mr Sharma	:	BDO Adult male voice

Earth: Hello everybody. I am Mother Earth. Planet number three from the sun. Bathed in water. Blessed with air. Clothed in green. Rich in minerals. I am the only planet that has been shown to sustain life...no other planet explored so far has shown any trace of life.

I am SPECIAL.

I am the source of everything that living beings use. I provide the air you breathe, the water you drink or use for irrigation. I provide you with

nourishment. I am the source of the clothes you wear, your gadgets and even the jewellery you flaunt is my gift to you.

Over the years I have given these gifts willingly, gladly even. But in the past few decades the demands have become increasingly more and more and now, it is almost beyond my capacity to meet these demands. It is my youngest child yes, I mean Human beings...that is causing me this distress.

However, this species is an intelligent one. Hope for the planet hinges on those who have woken up to the fact that consuming more that is in my power to replenish will endanger everyone.

MUSIC

Teacher: OK children, before the vacation starts I have an assignment for you. I want you to keep track of how much you are throwing away in the two weeks that you will be on holiday.

Ravi: What do you mean by throwing away? What sorts of things?

Teacher: Well, I actually mean everything that you dispose off...say, use and throw pens, disposable plates and cutlery when you go on picnics, your old mobile phone if you get a new smartphone as a gift. You get the idea...keep track. OK?

Ravi: But why do you want us to do that?

Teacher: It is an experiment. I recently read what Jim Leape, Director General of WWF International had said. He said that we are living as if we have an extra planet at our disposal. We are using 50 per cent more resources that the Earth can sustainably produce and unless we change course, that number will grow fast--and by 2030, even two planets will not be enough."

Ravi: Oh! This is terrible! We will surely keep track of all what we are using and throwing away.

General sounds of class getting over. School bell. Desks banging. Children saying good bye.

MUSIC

Ravi's Home

Papa: So, Ravi, Vacations at last. (*Sounds of a pouch being torn. Chewing with gusto.Yummm...yummm sounds. When he talks it is clear his mouth is full.*)
I hope teacher has given you some homework that will keep you busy. Otherwise you will drive us mad.

Ravi: Oho...Papa. How many sachets of mouth freshners do you eat in a day? See the waste paper basket is overflowing with the empty discarded packets.

Ma: Never mind. Look the zip on my handbag is broken. I will have to buy a new bag before we go to our ancestral place during Ravi's vacation. Ravi(*sharp tone*) Raviiii, what are you doing with the waste paper basket?

Ravi: I have to keep track of all what we throw away...see sixteen pouches of mouth fresheners, three cardboard cartons from yesterday's online deliveries, big pieces of bubble wrap, two empty glass containers, and three plastic ball point pens.

Papa: Stop playing with the thrown away things. Come, let us go to the mall. Let us take the small car. It is easier to drive in city traffic.

Ma: Ravi, don't switch off the AC. That way the room will remain cool when we return.

Ravi: (*Grumbling*) But teacher said we should switch off electrical appliances when we are not using them.

Sounds of a car driving through the roads

Ma: Switch on the car AC. It is so hot.

(Sounds of a switch being switched on.)



Ma: (*Sigh of contentment*) Ah!

Papa: Oh! At last we have reached. Thirty minutes for a distance we could have walked in five. The traffic is killing. So many cars. Even ten years back we did not have so many cars on the road! I don't understand why people drive their big cars in cities. See, when we go on long drives on the highway we take the SUV...but now, we are using the small car.

Ravi: Our teacher says big cars guzzle fuel. And these cars are high maintenance. Parts that break down are replaced; not repaired. So more and more parts have to be made and a lot of metal has to be mined. A lot of plastic has to be made. She says this puts pressure on our limited natural resources.

Ma (*in sarcastic tones*): And what else is she saying?

Ravi (*encouraged by misunderstanding his mother's tone*). She says this is a policy of making sure that things rapidly become obsolete and so require replacing. Manufacturers frequently change in design, stop making spare parts, and use non-durable materials so that the product breaks down quickly...she calls it Planned obsolescence. And that this makes people buy more goods.

Papa: Shut up Ravi, I can afford it. And now that I am here, I think I will buy a nice wallet to match my jacket. And maybe a leather organizer for my watch collection.

Ma: See, how crowded it is! Have you noticed how many people there are everywhere!

Ravi (*in a small voice*): I read that in 2011 there were 623 million males and 586 million ladies in India...that number has grown. This is 2017.

Ma: (*In irritated tones*) So are you saying all those men and women have come to the mall today? Here, come to this counter...(Suddenly she spots a known face) Oh Hello Divyaji how nice to see you and your daughters here. So you bought three purses to match your new outfits. Raviii, go and talk to Rani....that way you two will not trouble us, right Mrs Sharma? Go sit at the Food court. Eat and drink something...we will collect you when we finish.

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MUSIC

Ravi and Rani are at the Food Court

Ravi: What do you want to eat?

Rani: Let us have cold drinks and something to munch. I am not hungry but we have to order something.

Sounds of cash register drawer being opened. Sounds of microwave heating food and plates etc being placed on the table.

Ravi: Have you started keeping track of all the throw away stuff. I already have a long list. I never realized how much we throw away every day.

Rani (sadly): I will have new things to add to my list once Didi and Mummy unpack all what they have bought today. The boot of the car is quite full. You know, Mummy buys a washing power that is packed in a plastic pouch and then, that is inside a big, hard cardboard box. Mummy throws away the cardboard box at the counter itself! What a waste. So many trees cut down to make paper!

Ravi: Look, thermocol cups and thermocol plates...paper napkins and plastic cutlery. All this will become waste!

Ravi: Yes...these will not degrade...you know I was in Kolkata recently and from the airport we went to Salt Lake....enroute I saw what looked like hills with kites or cheel flying over it.

Rani (surprised) Hills...in Kolkata?

Ravi (sadly) Yeah, when I asked driver uncle said it was a landfill area or a rubbish dump and it has been in operation since the 1980s, he said. They just buried all the

rubbish that the city produced and now there is no place to bury...it is like a hill.

Rani: Oh so it is like Ghazipur in Delhi...I suppose all metro cities have landfills...otherwise how will they get rid of all the rubbish...there are so many people in cities. We can't become zero waste can we?

Ravi: They say that the more affluent countries have introduced the use-and throw-concept and so lots of stuff is being discarded. There is waste generation in enormous volume.

Rani: Surely not all affluent counties have this life style. They would be educated and aware. Many affluent counties, particularly in Europe have a eco-friendly and green way of life. Like our traditional Indian way!

Ravi: I have read that Sweden is zero waste but even if we cannot become zero waste we can at least waste less and manage the waste better. Why should we continue to use thermocol plates and plastic cutlery? Can we not use saal leaf plates and bowls? Even if discarded it will degrade in the soil without hurting Mother Earth.

Earth

You and I have eavesdropped on Ravi and Rani's families long enough to understand a trend. This is a dangerous trend. I call it the consumerist frame of mind. People who think like this just consume more and more of everything. They do not realize that resources extracted from me are used to make all goods, gadgets and machines. My resources are large, but not Infinite. Some of my resources are not immediately replenish- able...once exhausted it will remain exhausted. For example, oil reserves are non-renewable resources. Coal, crude oil, and natural gas are all called fossil fuels because they were formed from the buried remains of plants and animals that lived millions of years ago. Can you expect to get newly formed supplies of this resource once you finish all known ones?

Even a century ago, human beings repaired what was broken or found an ingenious way of side-stepping the problem. Then, the rich countries began to throw away such items and replaced the new ones without a second thought. This led to demand for more and more goods. So more goods began to be manufactured. This led to increased demand for raw materials which means increased drain of my resources.

There is a land called India that was once a place that took great care of my resources. There were people called Kabariwallas who purchased old and broken things and then, these were recycled. They were my Green ambassadors who helped recycle my resources. Local shops sold stuff in small paper bags made out of old notebook pages. They did not use plastic. Empty containers were used to store other items. Old sarees were used to make soft blankets and washable nappies for babies. Traditionally, in India very little of anything was wasted or ended in landfills.

Ravi and Rani's parents live in India too but they have embraced a new way of life that emulates the wasteful lifestyle of some affluent nations.

Yet not all hope is lost. The young generation seems to be aware of my woes. Let me see what is happening in another part of India.

MUSIC

Village

Sounds of birds chirping. Cows mooing. Bicycle bell. Sound of someone calling Zip repair...in a long drawn out way as if from very far.

Kamala...Hari's Mother: O Hariya...run and stop the zip repair guy. Your pant needs a new zip. Once it is repaired it will be as good as new.

Hari: (*In a hopeful voice.*) I saw a nice pair of jeans at Moti chacha's shop...you could buy that for me.

Kamala: I can but I won't. Your pants are almost new and still have a lot of wear in them...so run and stop the repair guy now. Give me my umbrella I have to take food for your father in the field.

Hari: You should get a new umbrella. This one has a spoke poking out.

Kamala: Never mind...run and call the man or he will go away.

(Sounds of Hari guiding the man to his house and the cycle coming to a stop.)

Zip repair man: Oh this is a nice pant. Once I change the zip it will be first class. And I repair umbrellas too. I can change one spoke and your umbrella will be as good as new. There....all done. Five rupees for the zip and ten rupees for the spoke.

Kamala: Yes, here you are. Thank you. And Hari...I am going to the field. Take care of your sister. If you need to change her nappies you will find a pile of soft cotton ones I made from a torn sari yesterday. Sit by her side and do your homework. I will check it when I come back.

Meanwhile in the field Hari's father Ramu is talking with the Block Development Officer Mr Sharma. Sound of crows in the distance. One motorcycle goes by. Sound of water flowing as it is pumped into the field.

Ramu: Mr Sharma, yesterday the Panchayat Pradhan spoke to us about Resource depletion. I did not quite understand. I have been so worried about the dropping level of water in my well that I did not listen properly.

Mr Sharma: Actually that is exactly what the Panchayat Pradhan was talking about. You may have seen that many of your neighbors have installed pumps that run long hours. In the name of irrigation, they are consuming water, a resource faster, than it can be replenished.

Ramu: No wonder groundwater levels are going down. They are taking out more water than is seasonally replenished. How long can we afford to do so before we run out of groundwater?

Mr Sharma: Very valid question. You know, don't you, that India is the largest groundwater user in the world. We use about 90 per cent of ground water for food production.

Ramu: Yes, I have been noticing that every year the water level is going down in my well. The river nearby is drying up too. They are quarrying the river bed now! But there are so many mouths to feed...we need more water...more land...we have to use up more resources.

Mr Sharma: Yes, exponential increase in population is a problem alright. According to one estimate there are more than 7 billion living humans on Earth. Yet just 200 years ago we numbered less than 1 billion. By 2045 global population is projected to reach nine billion. Life expectancy has also increased. There are more mouths to feed.

Ramu: But that is only natural. Families grow. Populations grow. We grow more crops.

Mr Sharma: (*Laughs*). I wish it were that easily explained. There is a bit of science behind the study of population growth. Thomas Robert Malthus was the first economist to propose a systematic theory of population.

Ramu: And what did he say?

Mr Sharma: To put it very simplistically, according to Malthus, population increases faster than the supply of food available for its needs. If population grows faster than food production, the growth is checked in the end by famine, disease, and war. We call this the Malthusian Crisis.

Ramu: Oh, so people will die and the equilibrium will be regained.

Mr Sharma: That is not the only reason. There are many other factors. For example, many learned people predicted that in the 1970s and 1980s hundreds of millions of people would die of starvation.

Ramu: (*Cutting into what Mr Sharma is saying*): Nothing like that happened.

Mr Sharma: They had failed to foresee the tremendous influence of technology and appropriate interventions in agriculture.

Ramu (Happily): Yes, yes...we had better seeds. Fertilizers and pesticides increased crop yields. Developments in transport and food processing facilities helped us to produce more from the same limited resources.

Mr Sharma: Not only that, Medical advances meant death rates fell. Many people survived illnesses that would have earlier killed them. People began to live longer. But now, technology interventions are peaking. But we still need more food, we need more clothes. We need shelter for everyone. ..population is exploding.

Ramu: See, there is Kamala coming with my lunch. Last month Kamala and I had gone to the city. We were really sad to see how on either side of the highway the land was dry and without any vegetation cover. In many areas I saw flyash being dumped too. And the huge landfills as we approached the city were really bad. The piles of rubbish! It broke my heart. If land is degraded like this how can we grow more food for all the mouths?

Mr Sharma: It is indeed unfortunate that although the first book highlighting the negative impact of environmental degradation was published as early as in 1962, we do not seem to have taken its lessons to heart.

Ramu: (*Surprised tone*) In 1962! Over half a century ago. Who wrote it?

Mr Sharma: She was an American marine biologist and conservationist named Rachel Carson. She called her book, *Silent Spring*. In 2006, *Silent Spring* was included in a list of one of the 25 greatest science books of all time. Yet, can we claim we have woken up to her message?

Kamala reaches. She is breathing a little heavily. Sounds of bangles as she puts down her basket.

Kamala: (*a little out of breath*) Namaste Sharmaji. Why the serious faces?

Mr Sharma: Namaste Kamala bhabhi, we were just talking about land degradation.

Kamala: Why just degradation. They are chopping away trees. Soon there will be no forest cover and rains will wash away the fertile topsoil. My son tells me that an estimated 18 million acres of forests are destroyed each year and that half of the world's forest cover has been chopped down.

Mr Sharma: (*Sadly*) Yes, all this is termed development.

Kamala: I will give you one example. They used to mine minerals near my ancestral village. The minerals were used for development! Now, the depleted mines have been abandoned. They have not done any remediation to bring back the fertility of the land.

Ramu: The environmental contamination is so bad that the agricultural fields nearby are being affected. Native plants are dying. Crop plants have such high levels of chemicals that these are not fit for consumption. Now they say, they will build an entertainment park here and they are digging up the fields.

Mr Sharma: (*Sighs*) Yes....Urbanisation displaces millions of hectares of high-quality agricultural land each year. Land is finite and essential for food production and arable land availability is decreasing in India effecting production of crops. This is not sustainable practice. In addition, cities are having to handle huge population pressure. It is estimated that by 2050, two out of every three people will live in a city

Ramu: Yes, the tentacles of the cities are reaching the villages. Already, our children are dis-satisfied with our simple lifestyle. They want many things which they see on TV. I cannot afford to buy large packets so I buy them small sachets of shampoo...potato crisps...namkeens.....such attractive packaging but inside there is very little actual stuff (*Laughs sadly*)...

We throw away the packaging. Actually there is a lot of plastic packaging, as compared to the actual amount of the edible stuff in the packet. We cannot get rid of it. No point burying it or composting it and it is worse if we burn it. Blown by the wind the discarded packets litter the village.

Kamala: My son asked me yesterday why I did not buy disposable diapers for his sister! (*Laughs.*) Kids pick up their values from what they see and hear. They want to emulate the affluent lifestyle. They do not understand the long-term impact of such wasteful practices. He wants us to buy a motorcycle instead of the bicycle that we have. His dream is to own a car.

Mr Sharma: (*Laughs indulgently*) Many people desire to own cars and in the coming days your son will definitely own one. The number of cars in the world is expected to double by 2030. Already in our cities, families own more than one car. So we will need to build broader roads and we will use more fuel.

Kamala: That is the problem...from where will we get so much extra petroleum? Have you seen how expensive kerosene has become? We have to queue up outside the kerosene shop these days. There is never enough for everyone! My sister in law tells me that even LPG cylinders are costing more. Everything is in short supply. My mother did not face this problem much...but if I am not careful and frugal, my children will have to face scarcity.

Mr Sharma: Globally, oil will remain the dominant source of energy over the next 25 years. The crude oil prices will continue to rise in the global market driven by shortage of supplies and rapidly increasing energy demand in countries like India. Yet supplies are limited and once, this runs out...(*Voice trails off*)

Ramu: Forget petroleum...let us talk about water. My sister lives in the shantytown near the city outskirts. She says she has to buy water because the piped water is not enough. I have asked her to stop taps from leaking, to harvest rainwater and to reuse the water in which they have washed rice and vegetables to water their plants.

Kamala: Yet, my sister in law says that she has seen people keep taps open when washing dishes in the sink or brushing their teeth. She says she feels jealous and angry when she sees affluent people having access to so much water.

Mr Sharma: I can understand her feeling. It is applicable not just to humans but also on a global scale...between developed and developing countries too. The way we are living, we are already using 2 to 3 times more of the Earth's natural resources than what is sustainable in the long run. It has been estimated that high income countries have an Ecological Footprint on average five times that of low-income countries.

Ramu: As resources deplete, they will become more expensive. This is when there will be serious economic divide. The wealthy will pay more and more for

scarce resources. Those who cannot afford it will have to go without. The rich think they can afford it so they can buy a larger slice of the pie!

Mr Sharma: But no one is thinking that one day demand for resources fuelled by the wealthier population will hit a roadblock. There will come a time when finding and extracting new sources of supply will become impossible to sustain. When there is no pie, how will you slice it?

Ramu: Exactly!

Mr Sharma: The real issue is not consumption itself but its patterns and effects.... Inequalities in consumption are stark. Even about a decade ago, the wealthiest 20% of the world accounted for 76.6% of total private consumption. The poorest fifth just 1.5%. Currently, the poorest and most vulnerable nations are subsidizing the lifestyles of wealthier countries.

Kamala: We have to stop running after material things. We have to stop copying the philosophy of nations that indulge in wasteful lifestyle. We should look back and pick up some traditional sustainable practices once again.

Ramu: Yes but look at it this way Kamala, we in villages aspire for a lifestyle like they enjoy in cities. Those in cities aspire to lead a life like they do in rich and developed foreign countries. This is a constant struggle. It is a natural progression...we want to give our children a better life. Were you not happy when electricity came to our village?

Kamala: Yes I was. And I have also taught Hariya that he must switch off the fan and the light if he leaves the room. That is what I am saying. Let us not waste. Science is giving us technology to squeeze the most out of natural resources which are Mother Earth's gift to us. Let us cooperate by not wasting the advantages. Natural resources are not free. These are not unlimited. Anything wasted will one day be sorely wanted.

Mr Sharma: Quite right Kamala bhabhi. If emerging nations follow the same path as today's rich countries, their consumption patterns will also be just as damaging to the environment. Resources are needed to power India's

economic growth. These resources may be from domestic sources or imported. We have to ensure that the resources are used wisely and optimally. Waste not Want not. The current global inefficient use of water, energy and agriculture inputs, cannot be allowed to continue.

Ramu and Kamala: So how can this be done?

Mr Sharma: People have to realize that resource use is interlinked. So we can have what is called a nexus approach. This approach integrates management and governance across sectors and scales. A nexus approach can support the transition to a Green Economy, which targets resource use efficiency and encourages greater policy coherence, so that as a society we can tread the green path .

Kamala: You left out an important point.

Mr Sharma: What is it, Kamala bhabiji?

Kamala: We have to retain many of our traditional systems of re-using and re-cycling. We have to teach our children that the Earth can provide for everyone's needs but it cannot meet even one person's greed. And it is in our own interest to safeguard the precious resources so that the next generation can use it.

Mr Sharma: Yes indeed. Once our policymakers and our future generation are in sync then sustainability will be an achievable dream.

Earth: Remember sustainability is not just a word. It is a lifestyle choice that MAY spell the difference between survival and extinction in the years ahead. And even if you survive, life will have to be extremely frugal indeed in the era of severe resource-crunch.

So, make your choice now.

Reference

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<http://www.globalissues.org/issue/235/consumption-and-consumerism>