

“In Reverse Gear”

Or

“Learning from the Past Experiences”

Episode No-7

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Opening Music of the Series

Opening Announcement

Part of opening Music

Scene: - Background musicstreet noise.....Loud laughter.....etc.

Sunil:- (Laughing) My dear Ramesh! Do you think that the whole world is going to hell?

Vivek :- (laughing) Well said Sunil. But which hell? The hell may be on this very Earth or it may be somewhere else. Is there any end of our planet?

Both are laughing loudly

Ramesh:- O.K. it is fine.....But I am not a scientist like you. Being a student of Social and environmental sciences, I know something about it. Do you think that the world is going in the right direction?

Effect of cups and plate and women’s bangles

Sneha:- What happened? For moments we were inside the kitchen and all of you have hot discussion.

Sound effect of bell

Radhika:- Dear Mammi ...I can guess. Srishti may be there on the door. Let me see who is there on the door?

Sneha:- Your coaching classes were so late very exhausting.

Sunil:- Come on Srishti....You might have heard about Vivek. He is my childhood friend. Earlier I told you about him. Do you recollect?

Srishti:- Namaste uncle!

Ramesh:- Namaste beti..... Are you going for your coaching classes? But which batch are you attending?

Srishti:- Uncle, I am not taking any coaching. I am studying and my major subject is Zoology.

Vivek:- What a surprise? She is a science student.

Srishti:- Uncle you were saying something. Let me have some refreshment for all of you.

Sunil:- (In loud voice) Oh Beti Srishti....Please have our breakfast in the drawing room. See...Srishti is there.

..... Srishti you may be happy to know that your uncle Vivek is an eminent and well known Genetic Engineer. Ramesh uncle teach Social and Environmental Sciences in the college.

Vivek:- Your papa is a rough tough Engineer (laughing). Srishti Beti, do you know Radhika? She is my wife and she taught you Botany in your college. What a good combination? Just like your mummy you are going to teach Zoology. You know about her too (laughing).

Srishti:- Yes uncle...you are right. But sometimes the situation changes based on circumstances.

Ramesh:- Beti! It is your time....There can be a good time in future too. But that will need new thoughts, new innovations and new ideas. There is some inherent defect in our present Developmental Model. Your papa and Vivek are of the views that science can give solution to all the problems that exist on our planet.

Radhika:- Srishti, we are just following you. We don't have much knowledge about the current discussion that is going on. Listen Vivek...what Ramesh is saying seems to be right. What is going on in the name of Science and development can't sustain for a longer time.

Ramesh:- Well said Bhabi Ji. See Vivek....your one candidate is now with us (laughing). Sunil and Vivek do you know, earlier agricultural Scientists were of the views that Nitrogen, Phosphorous and Potassium are essential for farming. But now it is almost clear that there are 17 others crops nutrients which are essential for crops growth. They can only be supplemented by bio-fertilisers and animals dung.

Sound effect of cups and plates#####

- Sneha:-** Srishti..... your meal is ready. Bhai Sahib, I get your point. But it was hybrid varieties and their seeds that caused Green Revolution. Then how can you blame science?
- Srishti:-** Ramesh uncle! You were talking about bio-fertilisers and organic farming. In our country, they are in practice since long. There are many farmers who are still practising organic farming. Now the world is giving a thought on it, where as we were practising it since decades. Doesn't it mean a step backward?
- Sunil:-** Beti! The principle of motion is working here. For a long jump, you have to put your one step backward. That is why organic farming is necessary.
- Ramesh:-** But Sunil...who told you that Organic farming is a backward step. Environmental pollution is our own and a present time problem. This is now an established fact. We are now turning to traditional knowledge. Scientists carried out their experiments in laboratories and not on themselves.
- Vivek:-** Dear Ramesh! Don't take it otherwise. Let's have some discussion on the United Nations agenda of sustainable development. On the very first sight, how do you think that elimination of poverty is essential for sustainable development?
- Sneha:-** Vivek ...poverty can only be eliminated by giving work to one and all. The rich who have earned huge money should be percolated downward and must reach to the poor.
- Radhika:-** Well said Bhabi Ji. First let's have a discussion.... why there is poverty?
- Ramesh:-** Radhika Bhabi ji you too are right. In our society there is great disparity between rich and poor. One research shows that one percent of the world population have a hold on the 50% wealth of the world.
- Sunil:-** But Ramesh , we all know that technology is not required to provide work to one and all.
- Vivek:-** Well said Sunil....Work is to be generated for one and all and new technology is required to fight poverty in the world.
- Ramesh:-** Technology is not needed to eliminate poverty from the world. It simply manipulates the vicious circle of poverty in the world...See! Agriculture is the single field which provides maximum employment. But what will you say about the condition of our farmers. It is not technology which is responsible for their poverty.
- Srishti:-** Uncle! How is technology responsible for all these?

- Ramesh:-** Sharasti Beti....let me take it in other way! They are purchasing seeds from the market, fertilisers from market, tractor from market, oil from market, tube well parts from the market. Ultimately the investment on agriculture rises and this lead to huge debt. Which ultimately lead to poor condition?
- Vivek:-** But rates of farm produces have been raised from time to time by our Government .
- Sneha:-** Vivek Bhaiya as per my knowledge, if farmers produce bumper crops , rate come down and if there is poor crops, it is he who is going to suffer. Always they are losers. What a bad luck?
- Sunil:-** Ramesh, do you find and see any solution in organic farming?
- Vivek:-** That is not possible. Scientists are of the views that there is not sufficient amount of dung and natural fertilisers are available in our country to sustain organic farming.
- Ramesh:-** Wrong VivekYou are completely wrong In organic farming, earthworm and dung are simply some components. Whereas mix farming and proper distance between plants and seedlings are different aspects. Here the plants are compliment to each other in one ways or the other. To understand it, there is need to know the principles and components of our Nature. Then we can only find some solution and can also follow the path of sustainable development.
- Srishti:-** Do you know? United Nation is working a lot on sustainable development. It can only be possible through our friendly and cordial association with our Mother Earth.
- Vivek;-** It is not possible without science.
- Ramesh:-** Let's discuss the importance of science in it. You can point out if you find some wrong statement. Sneha and Radhika Bhabi Ji are on my side...(laughing)
- Radhika:-** We are only with truth and nothing beyond that(Laughing). When we are talking about Nature definitely that will be based on truth.
- Ramesh:-** Let me take it differently. For our body requirement and to supplement all essential ingredients of a sound health, first we have to understand our Nature and then cultivate crops based on our past experience.
- Vivek:-** Very interesting question. Congratulations Ramesh! But we don't understand what do you want to say? As per my common sense, you want to say that we

can learn lots from our Nature and its process of production for our own sake. Science is also of the same view. I agree with your statement.

Ramesh:- Right...it should be our aim as well as the way of doing our farming. Men have sufficient common-sense to work on the principles of Nature. But it is true that success is yet to be achieved. We have not tasted the fruits of success. That is why man is changing his practices time and again; I mean man is following the principle of trial and error.

Sunil;- Yes...nothing is perfect. Research and development is going to achieve perfection in it.

Srishti:- But Papa....Our Nature is perfect in all ways.

Ramesh:- Yes Srishti. Nature is perfect ...there is no doubt in it. The reason of our failures is our half and incomplete knowledge about Nature. Have you noticed that for the success of Green Revolution, we are considering important roles of chemical fertilisers and machineries? Due to our half knowledge about life, needs, and labour component, we are of the views that by minimum investment, we can have maximum output to achieve progress and development.

Radhika:- Probably it may be true. Most of the Scientific inventions are meant to make our life comfortable.

Sunil:- Ramesh you mean that comforts are available in abundance. It can be made possible by understanding Nature and its process of reproduction. Experience and knowledge that we learn from Nature can be put in use in agriculture too.

Ramesh:- Yes Sunil. It is still difficult to understand the harmonious correlation between the two. We are concentrating, how we can exploit our natural resources to the fullest for human consumption. We are now using our knowledge, technology and resources for exploitation of natural resources.

Sneha:- Ramesh, on one point you may agree with me. It can even raise our agricultural and food grains production.

Ramesh:- Partially you are right Sneha Bhabi ji. Although quantitatively our production has risen. Our farmers and agriculture are facing great problems. Hunger, malnutrition and unemployment are on higher side. We fail in all our planning and development process. At economical level we are also facing the problems of water and air pollution.

- Srishti:-** Uncle! On one side we are destroying our mother Earth and on the other hand our scientists are trying to established colonies on Mars. This is a blunder mistake as we fail to understand the value of lives on our own planet.
- Ramesh:-** Yes my dear princess! That is why it is must to know the facts and what is the real situation. How much our land and soil can sustain lives and what types of correlation should be there between the two. For this we must study the process of sustainable lives on the Earth.
- Vivek:-** Ramesh! I am not clear what you want to say? If it is so our Scientists have discovered seven more new planets which are similar to our own planet. Let us go there and have our colonies.(Laughing).
- Ramesh:-** Vivek...this shows that we are still ignorant about the beauty of sustainable development. There are two types of theories on Human evolution. The first one is the concept of God and related mythologies.
- Sunil:-** In this theory we believe in one God and His super power.
- Sneha:-** God is more than any miracle. With little differences there are two views about God's existence. Different religions have their own interpretations of God.
- Radhika:-** Sneha Bhabi Ji....every religion and belief have their own concepts, and each believes themselves to be better than any other religion. But what is the best, yet to be proved.
- Ramesh:-** Radhika Bhabi..... in principles all religions and beliefs accept the power of God but in real lives they fight and struggle with each other. Human civilization is striving to have better knowledge for better survival, whereas man can never be so wise and all depends on the wishes of God. We are blaming God for good and bad, justice and injustice, right and wrong etc. In short we can say that we have to travel a long journey to know the truth.
- Srishti:-** But uncle! There is no harm if people are thinking differently about the God. This is their freedom of belief.
- Ramesh:-** There is nothing wrong in it. It is simply an adjustment with new circumstances without any solution. To be a good human being and have a good character are still lacking. What is happening we all know?
- Vivek:-** Dear Ramesh....You have so deep knowledge. I can only understand a bit of it. Anyhow please continue your lecture (laughing).

Ramesh:- After the God centric philosophy the second theory is based on materialistic world of modern time. In this ideology people believe in money and material gain and try to store maximum resources with little pains.

Sunil:- Yes...this is right. The simple philosophy is less work and maximum gain. Those who believe in this theory try to exploit maximum. They never believe in giving and sacrifice for others. Mean no pain and all gain (laughing).

Srishti:- You are right Papa. The same thing happened with our farming. We failed to replenish the essential nutrients that have been taken from the top soil.

Ramesh:- Yes Srishti Beti...you have raised an important point. Men exploited men and we all exploited our Nature. This is all beyond our imagination. Due to this, we are now considering struggle, security, scarcity, exploitation and mistrust as part of our life. Machines are now considered essential for production of harmful chemicals, which are polluting our environment and mother Earth. Knowingly or unknowingly we are destroying our natural resources which have been generated by Mother Nature in billions of years.

Sneha:- Yes...this may be the reason for global warming. Everything is becoming too much commercialised to be narrated. The present economic model is increasing the differences between the rich and the poor. We all are facing this problem these days.

Vivek:- Oh Bhabi Ji! See Ramesh Ji going to be so serious and excited. Please have some water (laughing).

Sound effect of water sipping

Srishti:- Ramesh uncle! What has been told by you is a great message which is to be followed by all of us for the welfare of humanity? There are many solutions given by science. This is the reason that United Nations is now talking about the sustainable development.

Sunil:- Ramesh.....It is not so. Efforts have been done. Science and religion are now coordination for the welfare of human being.

Ramesh:- Sunil ! There is a need to take them together to find something good for our lives. But there is one thing; first we have to discard selfish interests.

Vivek:- How that can be possible?

Ramesh:- Vivek please have some thought on it. UNO is always initiating good steps in this direction. Targets have been set to achieve progress in the field of sustainable development by 2030. We have to eliminate poverty, hunger from the world and simultaneously take necessary steps in the direction of

good health, good education, gender equality, availability of clean drinking water, good hygiene, cheap and clean energy etc.

Srishti:- And there are many more like economic development, innovation, good infrastructure, to reduce the gap between the rich and poor, smart cities and overall a conducive and harmonious society.

Radhika;- One can understand the purpose of smart and sustainable cities but what do you mean by sustainable society? Is there any difference between people of different societies?

Ramesh;- Yes Radhika Bhabi Ji. Is it good to accept the wrong doings, corruption, cheating etc. as part of our life? These qualities are now becoming part of our society.

Sunil:- Ramesh...it is truth of modern time. Such bad qualities of the society are now encouraging crimes and even supporting terrorism. Money extraction and bribery are now becoming paths of success in short time.

Ramesh:- Rightyou are hundred percent right my dear Sunil. People are accumulating ill-gotten wealth in huge amount. It is difficult for our Mother Earth to fulfil the unlimited desire even of a single person.

Sneha:- Ramesh Bhaiya ! All developmental works are simply a form of exploitation of our planet Earth. Whereas we are doing simple drama and not taking any concrete steps to save our natural resources.

Ramesh:- Sneha Bhabi your knowledge is super. That is why a new definition is needed to define development in changing scenario. United Nations is now giving a thought on it . It is not possible to have development on one hand and conservation on the other side.

Srishti:- Yes uncle! Conservation can only be possible through our wiser use of resources. Whereas exploitation means undesirable accumulation of wealth. Now we are thinking that maximum consumption mean good quality of human life. This is a simple illusion and our ignorance.

Sunil:- Srishti...your views and thoughts deserve all appreciations.

Ramesh:- Well said Srishti. Your views are supported by some studies which were based on men and Nature. On our Earth all plants and animals are living harmoniously. It enriches the Nature. Whereas man is in struggle with this Nature.

- Sunil:-** Ramesh you too are right. It is all due to our ignorance. In our present education system we are giving more stress on comforts in life. But United Nations is now giving more stress on quality education.
- Ramesh:-** This means no man is complete in his knowledge. On the other hands we are blaming ignorance and half knowledge. What is true knowledge is yet to be defined?
- Vivek;-** Dear friend! It is not so. Books are full of knowledge. Science has its progress through these books. Indian scientists have launched 104 satellites through a single rocket. This is all due to science and space knowledge.
- Radhika:-** Vivek...you are taking Ramesh Bhaiya very lightly. What he is saying and wants to convey is of very importance.
- Sunil:-** Well said Radhika. In my view, he is trying to convey the very message of United Nations. Vivek...it not all against science. The basic rule is that we should understand what a real knowledge is. Am I right Ramesh?
- Ramesh:-** Sunil you are correct. Knowledge is truth and we can't ignore knowledge for long. When I started my work on environment related problems, the level of carbon dioxide and other greenhouse gases was 280ppm and at that time it was said that we are going to face lots of problems at 300ppm. After that the level was raised to 350ppm. Problems are there on our doors but developmental works are still going on at much faster pace.
- Srishti;-** The level of carbon dioxide is now 400 ppm which is more than what it was about 8 lakhs years back.
- Radhika;-** Oh! We are facing the unexpected holocaust.
- Sunil:-** How much you can prepare? Nature is showing its ferocity from time to time. Sometimes it is hunger, sometimes flood and sometimes we are facing epidemics problems. Even than we can't understand it.
- Vivek:-** But we can't blame education for it. The main problem is that we are not practising the very basic ethics of education and the knowledge that we have.
- Ramesh:-** Vivek, in modern times the art of knowledge is like the art of living. To read books, memorise them and to write them is the basic test of true knowledge. There are so many subjects, which have nothing to do with our life.
- Vivek:-** You are talking of "The Art of Living". It is a subject of in-depth knowledge. To do agriculture we need to cut our forests. We are not against Nature. It is human tendency to think himself first then do something else.

- Ramesh:-** Vivek..... This is the reason of present days problems. More the use of knowledge for development more are the problems we are facing.
- Srishti:-** Yes.....It is the reason. Efforts are going on at very fast speed to find some suitable solutions.
- Ramesh:-** Yes Srishti. Basically we are not going in the very root cause of the problems. We all have our own agenda and this creates confusion.
- Sunil:-** Ramesh, similar problems are there in organic farming. We are doing our best to take maximum production but for whom and for what? More production means more exploitation of natural resources. This disturbs the very balance of our Nature.
- Ramesh:-** Sunil, you may know the bad effects of chemical fertilizers, pesticides, weedicides etc. These chemicals have generated an imbalance in the food chains. The situation is so dangerous to be narrated. The desires of more and more production ultimately harming our farm production. The soil fertility may be temporarily enhanced to have short term gains. After reaching a certain level, the overall production falls. Farmer's investments have been increasing but overall production is falling.
- Srishti:-** This is true. Who is responsible? We all are responsible for it. It all happens not suddenly but due to our own ignorance. We are moving and working for some changes. From Green Revolution to Ever Green Revolution. This is our new moto.
- Sunil:-** To find some solution we have to work in totality. Day by days problems are taking serious turn. Who is going to win is not the question? But we all are going to lose is very clear. Therefore better to find some solution for the welfare of humanity.
- Ramesh:-** But the main question is still with us without any answer. Either we can avoid the problems or we can find some solution to face the problems. A big question. Demonstration by a section of our society will raise the problem but it is difficult to find any solution through demonstrations.
- Vivek:-** Ramesh! I can guess...what are you saying is correct? The United Nations resolution for sustainable development shows there are some serious problems. Development, education, housing, innovations, economic development, Bio-diversity, pollution etc. are to be viewed in new ways and through holistic perspectives. Science can't be blamed for this.
- Sunil:-** Vivek ! Do you think it is a fault of science? No it is not so. Science is also defined by us. The capability to work, our wonderful memories, power to

think , capacity to act and moreover a well-developed brain have been given by Nature to all human being. The solution is to be found out by ourselves. Do you agree with me Ramesh?

Ramesh:- Sunil, what are you saying is true? If we can understand the purpose of life, we can succeed in our purpose. Without it success is not possible. This is going on since long. The purpose of our life, our needs, our acts and actions, and our concepts has no specific definition. What have been said by religions is not always acceptable to all.

Vivek:- What is relation between man and Nature? I think it is not clear. Over exploitation of natural resources and fuel consumption are the main causes of pollution. The problems are going more complicated day by day.

Ramesh:- Vivek, you may agree with me that man is a part of Nature and environmental system. He must follow the rule of Nature and must try to have harmony with it. But due to ignorance he is not following the very basic principles of Nature.

Radhika:- But man is trying to know the secret of Natural phenomenon.

Ramesh:- Radhika Bhabi Ji, there is no miracle or secret in Nature. This is a beautiful system being managed by Natural forces.

Sneha:- Is there any harmful effect of chemical fertilizers and others chemicals that farmers are using in agriculture.

Srishti;- Mummy the biggest problem that has arose is that the micro-organisms which degrade the dead parts of plants and animals have been destroyed. This cause depletion of carbon in the soil systems. The soil's PH has been disturbed. As the nutrient value depletes the infection of termites and nematodes increases.

Ramesh:- Srishti you are true but it is hunger which forces someone to do so. Through experiments it has been proved that termites and other living organisms are very useful to increase the carbon content of our soil. Whenever there is depletion in soil carbon content the natural system tries to balance it through its activities.

Sunil:- Do you know? The rules of Nature are perfect. There is an automatic self-control and balance system. In Nature there is nowhere undue distraction.

Ramesh:- Sunil give a thought on what I am saying? There are both carnivorous as well as herbivorous animals on Earth. There is perfect harmony between them. There is a need to study the perfect harmony among them. Carnivorous like

lions and tigers eat in limited quantity and their breeding power is comparatively slow. Whereas the herbivorous eat too much and having very fast breeding power. This is the reason that there arises no food problem for the carnivorous animals. The smell of flesh eating animals also increases the diseases resistance.

Vivek:- Is there any scientific proof of it. It is good to have natural ways of farming. Can we sustain enormous population which is rising at fast rate?

Ramesh:- (laughing) Vivek I remember one incident, once a farmer told me that these days most of his colleagues, I mean farmers are on war footing with the Nature. Man is using natural resources for his luxuries and comforts. He is accumulating wealth at the cost of health of our planet. It is a vicious cycle. He earn while exploiting the Nature and when problems arise then he try to get it balanced and ultimately earning more wealth. Struggle is going onit may be terrorism, it may be for supremacy, it may be due to over earning or it may be due to our greed. Who is responsible for all these? We..... the human beings.

Vivek:- Dear Ramesh! I can't go with you. But partially I can agree with you. Struggle of man is still against the Nature. This should not be there? Here I am with Srishti.....

Ramesh:- Vivek....Only greedy people can go after wealth and that too without doing hard work. Man knew how to coexist with the Nature. But he forgets all these, due to his ignorance. In the interest of humanity, it is not bad to follow the very same sense of coexistence that our ancestors were doing. It will be good step for all of us to lead a sustainable life.

Srishti:- Wah Ramesh uncle! You are great. Your statement too is so nice. It is in our own interest. To live in harmony with Nature does not mean that we are going backward. It is a step for a long and sustainable journey. It is in our own interest.....in the interest of all of us.

(Jointly).... That isLive and let live.....and now let us have a cup of tea.....

(All Laughing)

Closing Music



Quiz:-

Question 1 What do you mean by sustainable society?

Answer:---- A society...where there is no exploitation of our Nature, our natural resources and neither there should be the exploitation of our fellow human beings.

Question 2What is the tentative level of Carbon dioxide in our environment at present?

Answer:- About 400 ppm. It is almost at the same level that existed about one million years back on our Earth.