

## **Episode 15**

### **Conservation Practices**

#### **Happy Birthday, Shrishti**

**Script: Dr: Anurag Sharma**

**Transcription: Sukanya Datta**

**Scene 1:**

**Festive and happy sounds of a party in progress. Children's voices. Lots of hullabaloo.**

**Meera:** OK Shrishti, come and cut the cake now. Come on everyone...gather around...Shrishti is going to cut the cake.

**Shrishti:** Mummy, call Nutan didi.

**Voice:** Yeah...yeah someone call Nutan didi...Shristi doesn't do anything without her Nutan didi.

**Nutan:** I am right here behind you Shrishti. Come on now, blow out the candles.

**Laughter.**

**Voice:** Meera, I don't see Dr sahib anywhere...isn't he here? Has he gone somewhere?

**Meera:** Yes, Mrs Gupta, but he will be returning by flight tonight...(change of tone) Ready, Shrishti?

**Clapping and singing**

**All sing:** Happy Birthday to you. Happy Birthday to you, dear Shrishti. Happy Birthday to you. **Sound fades. Scene change music.**

**Scene 2**

**Shrishti:** Look at all these lovely gifts Nutan didi. I especially like this one...all you have to do is add a little salt and water and look, the watch is ticking!

**Nutan:** What about this one that uses a solar cell to run the fan?

**Shrishti:** Yes, that one is also nice.

**Ma:** Bedtime now, Shrishti...you can look at the other gifts in the morning.

**Shrishti:** I am too excited to sleep, let's chat a little and by then it will be time for Papa to return.

**Ma:** 12 years old and a right chatterbox...she talks non stop and my presentation is still to be completed.

**Nutan:** No problem, Ma. You carry on with your presentation while I chat with her. It is her birthday today and we cannot overturn her wishes on this day.

### **Laughter.**

**Shrishti:** Ma, what is the subject of your presentation?

**Ma:** I have to speak about the importance of Energy conservation.

**Shrishti:** This is a nice topic but you must not just speak about it...you must act on it too to save energy.

**Nutan:** Oho...look firsts he has to speak on it, think about it, understand it and only then can she take steps to conserve energy.

**Shrishti:** Nutan didi, it is this speaking about energy conservation that has landed kids like me in trouble.

**Ma:** How so?

**Shrishti:** Look, everyone knows...even I know that we must save electricity. And I even put up posters in school.

**Ma:** Posters? What posters?

**Shrishti:** You know...it was about how we should conserve energy and not waste electricity...like switching off all electrical appliances when we go out of a room. Use public conveyance and car pools.

**Nutan:** Well said, Shrihti but will doing all this actually help save energy?

**Shrishti:** Certainly, didi...just begin by switching off the light in the bathroom.

**Nutan:** There! Done! Mummy, your NGO works directly with the people, so why do you need a presentation each time? When will the actual work begin? Shrishti is right, you know.

**Shrishti:** Thank you Nutan didi. Mummy what is your answer?

**Ma:** Look...we discuss the issue. Then we formulate the strategic action plan. Then a budget is drawn up. After that the fund is released. Only then does our team actually hit the ground and begin work with the people.

**Shrishti:** Oh my! How much energy is used up in an attempt to conserve energy! So, where will you be making your presentation, Mummy?

**Ma:** Raipur.

**Nutan:** Delhi to Raipur! Mummy...please try to understand what Shrihti is actually asking... Do you think Shrishti is still a child?

**Shrishti:** Yes Mummy, please try to understand what I am saying. You will be going from Delhi to Raipur to make your presentation...whether by air or by train...energy will be expended won't it? So you will be using energy to spread the message of conservation.

**Ma:** Quite right dear, this is called carbon footprint. It is the total amount of carbon dioxide released as a result of the activities of a person.

**Nutan:** Well, we do have the technology ...so why don't you use video conferencing.

**Shrishti:** Yes Ma . You can try video conferencing...and anyway Papa is returning tonight and we will miss you if you go to Raipur tomorrow....why don't you try video conferencing?

**Ma:** But...

**Nutan:** Why the "but", Ma? You are the head of this NGO and have worked so hard to lead it successfully for the last 15 years...so why not actually get down to conserving energy?

**Ma:** You are right. Let me send emails to my team members and stakeholders.

**Shrishti:** Yes, very good Ma.

**Ma (sounds of typing):** Well, do you think there are other ways of conserving energy?

**Shrishti:** I have noticed that the affluent seem to have the most trouble with energy conservation.

**Ma:** How so?

**Shrishti:** Take Uncle and Neelam aunty for example. They are so concerned about everything...including plants and tiny insects. Yet they cannot tolerate the slightest heat.

**Nutan:** The temperatures have also gone up quite a bit these days, haven't they now?

**Shrishti:** Didi, the ambient temperature has gone up for everybody. Look, we have winter uniforms and summer uniforms in school...why do we have different uniforms for the different seasons? Simple. Wear light cotton clothes in summers and heavy woollens in winter!

**Ma:** Shrishti is right. And Neelam almost never switches off her air conditioner.

**Shrishti:** That's it Ma...as if sweating ever hurt anyone! And her refrigerator is always loaded with food and imported fruits.

**Nutan:** Yes indeed, the fruits in Neelam aunty's refrigerator are exceptionally good ones.

**Shrishti:** But shouldn't we consume seasonal and locally grown food items including fruits and vegetables so that our...our...that footprint ..what's that word....footprint...

**Nutan:** Carbon footprint.

**Shrishti:** Yes...our carbon footprint can be managed. I know that these days apples are available around the year...but look nature has given us the watermelon—the perfect fruit for summer. It is because of our demands that global warming is growing and the incidence of many diseases is growing too.

**Ma:** I agree with you, Shrishti. The apples you see in the stores have reached there after being kept for a long time in cold storage. Probably there is little to recommend these except the sweet taste; the nutritional value would have plummeted over time. And the cost of cold storage has no doubt added to the price.

**Nutan:** Mummy, your NGO works at the village level, doesn't it?

**Ma:** Yes Nutan. We facilitate employment and educational opportunities for the villagers and also work to raise their awareness about environmental issues.

**Nutan:** But Mummy, it is the urban environment that is under threat of pollution...exhaust fumes from cars and factories...water contamination because of effluent discharge and air pollution...all these impact the cities much more don't they? So why the emphasis on villages?

**Shrishti:** Didi, isn't it like the developed countries that have a large carbon footprint passing the blame for global warming to the poor developing nations?

**Nutan:** Mummy, you are doing wonderful work. But given the situation where urban people have not yet fully grasped the concept of segregating waste...I mean throwing wet or biological and degradable waste in the green bin and non-biodegradable waste in the blue bin....how can we even think of educating them about energy conservation?

**Shrishti:** And Mummy did you see how Varun bhaiya...Naresh Uncle's son...drove his huge, brand new SUV so far just to show it to us. I did not like that at all.

**Ma:** Why didn't you like it Shrishti...it is Varun's first car.

**Shrishti:** Varun bhaiya never offers a lift in his car to anyone...and it is such a big car...I am worried about just how much pollution it may be causing.

**Nutan:** Don't say "may be causing" it is definitely causing pollution. Of course cars these days have air purifiers...that means the interior of the car has pure air but neither the companies nor the owners are concerned by the air pollution outside the car.

**Shrishti:** Mummy...tell me glass is a poor conductor of heat, isn't it?

**Ma:** Yes it is a good insulator...and that is why glasshouse is made of glass...so that light enters but the internal temperature and humidity levels are maintained at a relative constant and the environment remains under control...

**Nutan:** Yes, just like the waft of hot air that greets us when we enter a car with closed windows...that is because the heat was trapped in the car...like the greenhouse effect.

**Shrishti:** Perhaps that is why glass is a much used architectural element in houses constructed in countries that have a cold climate. Glass makes sure that the heat remains trapped inside..

**Ma:** Quite right, Shrishti.

**Shrishti:** So why are we in our country, which by the way, qualifies as a tropical country with a hot climate...using so much glass in our buildings these days? Entire surfaces and walls are covered in glass...and then we use ACs to cool these over-heated rooms and buildings. Now how can anyone conserve energy in this atmosphere of showing off?

**Nutan:** Rightly pointed out Shrishti. Green design is very important to make buildings energy efficient. These days they are carrying out energy audit of buildings too. Essentially this involves checking how much energy the building saves and evaluating what measures can be taken to make it energy efficient.

**Ma:** Yes Nutan, this is correct. Our NGO helps in energy audits too. We also encourage the use of solar energy and raising awareness about it. For example we tell people that the government gives subsidy on solar panels that are affixed to the roofs.

**Shrishti:** Yes, but despite all this, have people living in residential societies in places such as Delhi, Gurugram and NOIDA truly embraced solar energy? At the most they have installed solar geysers...if you question them they say maintenance costs are very high.

**Nutan:** You are so right Shrishti. It seems like the Thomas Edison affair all over again.

**Ma:** Thomas Edison affair? What is that dear?

**Nutan:** You know Sanjay Uncle, don't you...he lives in the residential society next to ours. Well, he wanted solar powered lights on the boundary wall but no official helped him...on the contrary they told him that he did not need solar power since the Society was registered on the electrical grid and drew power from it. He is still running around in circles, poor Uncle Sanjay.

**Shrishti:** But didi, how does Thomas Edison enter the story?

**Nutan:** Yeah...you see when Edison spoke about lighting up New York city with electric lights the oil companies took him to court saying this was an impossible task and that electricity was a dangerous thing...you know, I feel the same thought process is at work here.

Why would electric companies allow consumer dependence on them to fall? People will have to stubbornly insist on using solar power...and anyway they have governmental support.

**Shrishti:** And the support of many NGOs such as the one that Mummy heads.

**Laughter.**

**Ma:** Shrishti is taking full advantage of today being her birthday...time to go to bed now.

**Shrishti:** I'd like to stay up till Papa comes home.

**Nutan:** Now that we are talking about energy conservation, don't you think transportation and electric- consumption are significant factors?

**Ma:** Of course. Why else is there so much emphasis on mass transportation systems such as the Metro. Electrical appliances are being given star ratings too.

**Shrishti:** Yes, the more the number of stars, the more energy efficient it is and the more electricity its saves.

**Nutan:** And the cost goes up too...Mummy do you think we should not sell appliances that do not merit five stars?

**Ma:** That may be a little difficult. You see, technology will always advance. We have to keep people's problems in mind. New technology is always more expensive because the company that evolved it has invested large sums in it. May be everyone would not be able to afford it.

**Shrishti:** But rules do have to be formulated, don't they?

**Nutan:** We do have rules and regulations in place. Three stars, Four stars, Five stars ratings have been awarded. There are good manufacturing practices in place....and many other standards. These are all related to environmental protection and conservation of energy.

**Ma:** Still, a lot needs to be done. For example if electric cars are to enter in a big way, we need charging stations. The Metro is introducing the kinetic energy recovery system- a new technology that will harness energy released while braking and repurpose that to assist movement.

**Shrishti:** And these new generation electric lights such as CFL and LEDs...these help in saving energy too, don't they?

**Nutan:** Absolutely right, Shrishti. The LED bulbs save up to 90 per cent more electricity a compared to the traditional round bulbs. Why do you think the government is making LED bulbs available at really inexpensive rates to the public? Just take your electricity bill and return with LED bulbs for your home.

**Shrishti:** Sounds like a poem. Here is my electricity bill. Use LEDs, we will!

### **Laughter**

**Ma:** The Petroleum Corporation Research Association or PCRA advertises and sponsors programmes a lot on radio and TV. And we also have the Bureau of Energy Efficiency to enhance the conservation and facilitate efficient use of energy.

**Shrishti:** Mummy, I want to ask you something...today Nutan didi was reading aloud from the newspaper that our diets are now no longer as nutritious...does that mean they lack in some vital nutritional element?

**Ma:** Yes Shrishti. The National Institute of Nutrition has published a report saying that this is because the soil is impoverished and that is why the nutritional value of fruits, cereals and vegetables are on a downward slide.

**Shrishti:** Didi, have you been able to spot any connection between this and energy conservation?

**Ma:** It correlates more to our agricultural practices rather than energy conservation, dear.

**Shrishti:** That is exactly the connection I am drawing. Look how we invest more energy in our fields...for example the energy expended in making chemical fertilizers...the energy cost of transporting the fertilizers from the factory to the field plus the energy used to make pesticides...

**Nutan:** What is the point you are making?

**Shrishti: Oh Ho Didi, isn't this what Mummy's NGO and so many other NGOs are doing?** Trying to reintroduce organic farming...facilitating the use of organic manure etc.

**Ma:** Yes, we try to make fertilizers by bio-composting the stalks that are left behind when the crops are harvested and using animal manure such as cowdung. We advocate the use of bio pesticides too.

**Shrishti:** So what originated in the fields goes back to enrich the field naturally. Isn't that a huge energy saving practice? And won't the nutritional elements be replenished?

**Nutan:** Wow! Yes indeed...and don't forget Biogas.

**Shrishti:** And just count the energy savings!

**Ma:** The best part is that modern agriculture is based on three elements: Nitrogen, Phosphorus and Potassium. But manure or cow dung and vermicompost provide 16 important nutrients to the crops.

**Shrishti:** There you see, had we gone for organic farming, our food items would not have been deficient in nutritional value, our soil would not be depleted and above all, just imagine how much energy could have been conserved.

**Ma:** Good heavens, our Shrishti's words have the wisdom of a 120 year old...who will say she has just turned 12.

### **Laughter**

**Nutan:** And her words are relevant and logical too...I think the future is in safe hands.

**Ma:** And you sound as if you are 50, not 15 but I must admit that I too feel that the future is secure and in safe hands.

**Shrishti:** Why do you say so, Mummy?

**Ma:** Well because you have distanced yourselves from a flashy life style and think about the planet before exercising your choices. You have distanced yourselves from greed and have dedicated yourselves to understanding, thinking and finding solutions to the issues concerning nature and the environment. And finally, because above all, you do not just talk about the solutions but are not afraid to implement these.

**Nutan:** Oh! Mummy have you received any reply to the emails you sent?

### **Sounds of a computer key board.**

**Ma:** Yes...and look... everyone has agreed to a video conference.

### **Sounds of cheering**

**Nutan:** Mummy, hasn't Shrishti given you a lovely return gift?

**Ma:** Thanks Shrishti.

**Shrishti:** You are welcome, Mummy. But yes, now you and your NGO must start working on water conservation in residential societies.

**Ma:** Yes darling. We will conserve water in villages, in towns and also in cities.

**Nutan (chanting like a slogan):** The water in the field will remain in the field.

**Shrishti (chanting like a slogan):** The city's water will remain in the city.

**Ma(chanting like a slogan)::** In winter switch off the heater and in summer forget the AC.

**Shrishti (chanting like a slogan):** Don't let the tap drip; turn off the electric switch.

**Nutan (chanting like a slogan):** Join a car pool. Try public transport; so cool!

Embrace solar energEE; avoid large cars or the S-U-VEE.

**Shrishti:** Well done, Nutan didi.

**Ma:** Generate compost and electricity the easy way...celebrate Mother Nature's birthday...everyday.

**Nutan and Shrishti (together):** Wow!

**Bell rings**

**Shrishti:** That must be Papa.

**Sound of door being opened.**

**Nutan:** How are you, Papa.

**Papa:** Oh-ho...all of you are awake...no wonder I could hear you from far...you were making such a racket. And Shrishti darling, happy birthday.

**Laughter.**

**Nutan:** Actually Shrishti insisted on staying awake to welcome you back home and all this while she has lectured Ma and me on energy conservation. Don't even ask!

**Ma:** What birthday gift have you got for Shrishti?

**Papa:** Nothing.

**Nutan and Ma:** Nothing? And that too all the way from Japan.

Papa: Well, it was Shrishti's idea. She told me not to get anything but to save the money so that we could all go out for a meal tomorrow.

### **Laughter**

**Ma:** Oh..looks like Shrishti has really grown up but then why should we go out for a meal. I can make her favourite dishes right here at home.

**Shrishti:** Wow Mummy.

### **Laughter**

**Papa:** But Meera don't you have to go to Raipur tomorrow?

**Nutan:** No way...Shrishti has managed to get Mummy's trip cancelled.

**Papa:** How did she do that?

**Ma:** Ask her tomorrow. I am sleepy and if you ask her a question now she will keep talking till tomorrow.

### **Laughter.**

**Papa:** Well, you go off to sleep then and let me catch up on my chat with Shrishti...I haven't had the chance to talk with her for so many days.

**Nutan:** Shrishti is going to be thrilled...she has found someone to talk with her.

**Shrishti:** So Papa, we will talk about Shrishti today.

**Papa:** Talk about you, you mean.

**Shrishti:** No Papa, we will talk about Shrishti...that is about creation... about nature... about the environment.

**Papa (taken aback):** Meera, this girl has just turned 12 hasn't she? She is taking like a mature person.

Nutan and Ma: Welcome Papa...Happy Birthday, Shrishti.

**All laugh.**

**The end**