

Episode 46

Radio Serial on Climate Change Off-kilter Weather

Duration: 27 minutes

Script: Srinivas Oli

Characters

1. **Mahendra: Village Chief (60-65 years. Baritone, heavy voice)**
2. **Hema: (Mahendra's wife)**
3. **Savita: (Their daughter. College student)**
4. **Dr. Rajesh: (Scientist. Heavy voice)**
5. **Meena: (Middle-aged village woman)**
6. **Suraj: (Villager. Young man)**

SIGNATURE TUNE...Fade out

Anchor: Welcome + Recap+ Intro. Namaskar Listeners to another episode of the Radio Serial on Global Warming as a result of Climate Change. In the last few years we have been witness to unseasonal rains, severe duststorms, cyclones, floods and hot winds all which have plagued us as fallout of climate change. Like in other parts of the world, the strikingly changed weather patterns have also manifested in our country. To better understand this altered weather conditions let us visit a small village in Rajasthan, where the locals are facing such a problem.

SIGNATURE TUNE

Scene -1

Evening. Mahendra's house. Hailstones falling on tin roof of cowshed. Sound of strong wind blowing in through doors and windows.

Hema (Panic-stricken tones): Look here...I have been telling you for so many days...we need to change the roof of the cowshed...or sooner or later it's going to be blown away by the strong winds. Only then will you pay heed to my words.

Mahendra: That we can do later...right now we need to close all doors and windows...how strongly the wind is blowing. (Sounds of strong wind)

Hema: Listen...bring in the bag of manure kept in the verandah or else it will get wet and be ruined...I'll close the windows (Sounds of windows being closed. Sounds of hailstones and wind fade a little).

Mahendra: (Sound of heavy bag of manure being dumped on the floor) Oh!! The weather! There is no predicting it anymore...it can turn any moment...Oh dear...the hailstones are bouncing into the room! (Muttering to him). If the door is not closed the hailstones will cover the rooms too (Sounds of door slamming shut).

Hema: It was so pleasant in the morning but by noon the weather started changing so rapidly and now...(Sounds of thunder).

Mahendra: And now, the electricity has failed...won't be restored till morning I think.

Hema: Please call Savita...it is already time she reached. She left the hostel around noon today.

Mahendra: Yes...yes I will call her immediately...she will be about to reach I think. I did tell her not to venture out in case of inclement weather....but she insisted...(Muttering to himself)...what can I do....Ah! Her phone is ringing.

Mahendra: (Angrily) My battery is dead! My mobile is not working!

Landline Telephone rings

Hema: That must be Savita..at least the old phone has proved its usefulness.

Mahendra: (On landline) Hello...yes....yesSavita...where are you? Ok. OK...Take care...Don't rush. Fine...Fine...OK.

Sounds of the landline receiver being replaced on the cradle

Hema: Well, what did Savita say?

Mahendra: She said she should be reaching in five to ten minutes...she is almost home.

Hema: (Sound of opening window...noise of hailstones become somewhat louder) Well. The hailstorm is abating somewhat...hopefully the storm and heavy rain will stop soon too. (Closes window. Hailstorm sounds fade)

Mahendra: But the damage caused by the hailstorm is done. I really do not know what enmity the weather has with us...sometimes it is drought...at other times it is flood...or else hailstorms and cyclones.

Hema: Very correctly said. The weather baffles me too. Earlier, till Holi we used to have pleasant weather..not too hot, nor too cold. Now look! So much has changed in the last 10-15 years...and we farmers are suffering the most because of the vagaries of the weather.

Mahendra: Everyone is suffering...everyone is confused and worried too. But what is to be done? Do you think the hailstorm and rains have not caused any damage today? We will only know the entire damage by tomorrow...who knows what catastrophe has been unleashed by this hailstorm.

Hema: A meeting is scheduled for tomorrow at the Panchayat Bhavan...you will be attending, won't you?

Mahendra: Thank you for reminding me...it is important that I attend this meeting. Some officers of the Agriculture Research Centre are supposed to come...and of course, the Block Development Officer will also be present. If the weather permits, the meeting will surely be held.

Hema: Do ring up the topic of the damage caused to the crops in the field. (Sad and resigned tone) Months of labour wiped out by a few hours of rain. Why isn't someone doing something?

Knocking on the door

Mahendra: I think Savita is here.

Footsteps/ Sounds of door opening

Hema: Savita! You just don't listen...what was the need to venture out in this weather?

Mahendra: Oh...just let her enter first...she must have got wet, the poor dear.

Savita: Yes Papaji, although I stepped out only after the hailstorm stopped...I had already reached the bus stand and this umbrella was useless...the wind was blowing so fiercely and the electricity had failed too. I saw that the storm has uprooted quite a few trees too...but the weather is clearing up now.

Scene transition music

SCENE -2

Noon. Panchayat Bhavan. Villagers assemble. Sound of villagers talking. Sounds of motorbikes passing. Sounds of bicycle-bells.

Savita: Papaji....yesterday's hailstorm has really caused a lot of damage...see this big tree has crashed on top of the Panchayat Bhavan.

Mahendra: Yes indeed. Yesterday's storm has caused a lot of damage to our village.

Meena: Pradhan ji, the rough weather yesterday has flattened all the crops in the field...and that is why I had come to the meeting today. But the Panchayat Bhavan has been damaged so badly that it is not fit to be used...there is no place to sit...I think I should return home.

Mahendra: No, No...please stay. We will definitely hold the meeting today. We cannot hold the meeting in the Panchayat Bhavan but we can use the school...I have already arranged this with the Head teacher yesterday. School is going to get over shortly...then we can use the classroom for our meeting.

Meena: This is a good arrangement, Pradhan ji.

School Bell rings...From far ...sounds of children leaving en masse

Savita: Well, school is over. Papaji, let us go there now.

Sounds of muted conversation. Footsteps

Mahendra: Namaste doctor sahib...How are you? When did you arrive? Please take a seat.

Rajesh: I reached a short while ago. Our BDO was supposed to come here but he had to visit another village so he could not make it here...as you know yesterday's storm has caused damage over a widespread area.

Mahendra: Yes...so it has.

Sounds of chairs being dragged. People speaking

Mahendra: (Loud voice, addressing the gathering): Please take your seats, everyone. Please settle down.

(Sounds of people talking, moving etc., are muted)

Mahendra: As you can see Dr. Rajesh from Agriculture Research Centre is here with us...I welcome him on behalf of our entire village. We had something else as our Agenda for this meeting but yesterday's storm has caused such havoc in our fields that I now invite you to speak about it.

Meena: (in complaining tone) Sir, usually we get advance warning about the weather on the radio...but this time there was no cautionary advice or anything. Can the weather turn suddenly like this without notice?

Rajesh: Well, erratic weather patterns are plaguing not just this region but is evident everywhere. As you can see the desert areas of Rajasthan are facing either droughts or floods. This has been the pattern for the last few years.

Meena: Yes, this is so.

Rajesh: Take Barmer for example. In 2015, more than two thousand villages were affected by drought. However, the very next year there was very heavy rainfall. In 2016, in the same district there was four times the normal rainfall in October alone. It led to the worst floods in Rajasthan in 200 years.

Mahendra: Very correctly observed. Then again the monsoon does not arrive on time. Unseasonal rains make reaping of crops quite difficult. This is affecting our entire agricultural cycle. Strong winds flatten the standing grains of moong, bajra and till.

Rajesh: That is exactly what I am saying. Everything is changing. Rains, Storms, Cyclones...the patterns are all changing. Meteorological data reveal that the kind of rain we had in 2016 occurred here after a hundred years.

Mahendra: How strange. Once upon a time we used to feel happy on seeing lakes and ponds brimming over with water...now the lack of enough water is an issue. First it is the Sun that caused us distress. Now it is the rain. Why is this happening? Have we done something wrong?

Rajesh: This is not the fault of an individual alone. It is the result of global climate change.

Meena: Result of global climate change? I am sorry but I do not understand.

Savita: Let me explain Meena aunty...Our Earth is getting warmer and warmer every year and this increase in temperature, is affecting the weather worldwide. Thus there is no accounting for rainfall and no accounting for droughts. Have I explained correctly, Sir?

Rajesh: Absolutely correct. And you are....?

Mahendra: She is my daughter. She studies in college and has come home because today is a holiday.

Rajesh: I see.

Meena: I still do not clearly understand global climate change but from experience I can say that the weather patterns are changing and we are facing its anger more often.

Rajesh: Yes indeed. Areas of Rajasthan which were dry and desert-like now face regular flooding. This includes the floods of 2006.... the floods of 2015 or the floods of 2016 and 17. These areas were never known to face floods but now floods are recurrent and cover larger areas each time.....Yes, ...do you want to say something?

Suraj: Yes please. My name is Suraj. I want to say that we can bear the heat but not floods...and this is happening so often.

Mahendra: Yes...you are correct Suraj, we never worried overmuch about coping with floods and all but now we fear cloudbursts.

Rajesh: Look...do not be afraid. Be AWARE. Cloudbursts happen mostly in Himalayan regions and sometimes in the plains too.

Suraj: Wasn't it a great calamity in Uttarakhand when there was a cloudburst in 2013.

Rajesh: Yes the catastrophe in Kedarnath region, in June 2013, is recognized as one of India's worst floods, ever. The floods that occurred after a cloudburst led to the deaths of over 5000 people. Because it happened in a localized area, the number of casualties was very high...probably the highest number of deaths in the country from floods.

- Meena:** This is a scary situation. I have heard that rains in the hilly regions used to persist for days. But I have never heard of damage and loss of this magnitude before.
- Savita:** Aunty, Disasters such as these have increased in recent years. And these natural disasters have led to enormous loss too. But of course, such incidents have happened earlier too. Take for example the cloudburst on 15 August 1997 in Chirgaon in Himachal Pradesh. 1500 people died.
- Rajesh:** Absolutely correct. Incidents such as these are becoming more numerous and more dangerous too; take the 2018 floods in Kerala for example.
- Suraj:** Yes, I heard on the news that over 500 people lost their lives because of this flood. Lakhs of people were rendered homeless too.
- Rajesh:** Yes, it began to rain on 8 August 2018 and it rained incessantly for 10 days. The clouds showered two and a half times more water than what is considered normal. The flood led to total collapse of electricity, drinking water and transport systems. More than 2000 relief camps were needed for the affected people.
- Suraj:** Really! It was such a huge problem!
- Rajesh:** But it wasn't just the loss of property and lives, you know. Natural resources were affected too. Vast areas of the Western Ghats that are considered Eco-sensitive zones suffered because of the flood. A similar flood had occurred in Kerala in 1924 and for three weeks the area had reeled under it.
- Meena:** You mean ...we ...in Rajasthan must also gear up to face a similar situation.
- Rajesh:** It isn't like that. However, this much is certain that the weather patterns are becoming unpredictable. We cannot forecast the weather patterns solely relying on the past history. Currently we have many examples of recent incidences of sudden heavy rainfall and floods.
- Meena:** Many examples? Like...?
- Rajesh:** Well...in Year 2005 a large area in Maharashtra suffered huge loss of lives and property because of heavy rainfall. In Mumbai alone over 400 people lost their lives. It is not just that incidents of heavy and incessant rainfall happened only in the plains. It happens in Himalayan areas also. Leh is considered to be an area that receives scanty rainfall but in August 2010 floods caused havoc here. More than 250 people lost their lives because of it.
- Savita:** But Sir, Leh is called a cold desert, isn't it?
- Rajesh:** Yes Savita. Then again in 2012, Brahmaputra flooded parts of Assam; Jammu and Kashmir faced floods in 2014, not to forget the floods in Bihar in 2004 which caused such devastation.
- Savita:** And the Chennai floods on 2 and 3 December 2015 were pretty terrible too.

Rajesh: Yes. Chennai recorded highest rainfall in a century during this short period. More than 250 people died because of the flood. Actually it is becoming pretty apparent in the last few years that the pattern of the rainfall is changing. Instead of June, more rain is falling in the months of August and September. This trend has become more common in recent years.

Mahendra: Doctor Sahib, if rainfall patterns and the nature of rainfall have changed over the past few years, we have noticed that the summer season has changed too. Summers are more severe and last longer...as compared to the winter season.

Rajesh: You have observed correctly Pradhanji. In the last 50 years or so, hot winds or the Lu has increased in severity...it is at least two and a half times more severe as compared to the last few years. Our country lost about 2000 people in 2015 because of scorching heat and the Lu.

Mahendra: I remember it well. The hot winds and terrible heat affected not just humans but birds and beasts too.

Rajesh: In our country more than 1000 people perished in 2016 because of the heat wave conditions. In Telengana alone about 300 people died in the months of Aril and May. The heat wave affected South India, Central India and Western India the most. Apart from this, I must say that 2016 was the hottest year on record.

Mahendra (exclaims): Really????!!

Rajesh: The most significant point is the hottest decade in India has been the last one. The years between 2007 and 2018 have been the hottest ones.

Meena: The storm we had yesterday in our village cannot have been any less dangerous.

Rajesh: Very right. In recent years the number of sudden storms is on the rise. And amongst these incidents, the dust storm that occurred in May 2018 deserves to be noted.

Mahendra: Yes Doctor sahib...I think that dust storm started in our state and proceeded to engulf Haryana and Uttar Pradesh too.

Rajesh: Correct Pradhan ji. The dust storm that started on 2 May 2018 caused the deaths of more than a hundred people in North India. Plus it led to enormous loss of property too. Although these strong winds do not persist for very long, these lead to a lot of destruction and damage. In 2018, about 50 dust storms in India led to the death of more than 500 people. You will be surprised to learn that between 2003 and 2017 there were only 22 dust storms.

Meena: You mean to say that the incidence of dust storms is also on the rise. The hailstorm and dust storm yesterday also caused widespread destruction in our village. Can we expect some aid or not?

Mahendra: Yes yes...aid will be provided (Addresses the crowd) Look...all of you who have been affected...please write an application for compensation for damage to crops and houses. Those of you who have already written our applications may submit those to me.

General Commotion

Mahendra: It was a pleasure meeting you Doctor Sahib. We learnt a lot from you. Come, please join us for a cup of tea.

Rajesh: Sure, Pradhan ji.

Savita: Papaji, you go on and have tea...but I must return home now. (Addresses Rajesh) Sir, I still have a few unanswered questions ...if you have some spare time, may I drop in at the Science centre to meet you?

Rajesh: Yes...why not. You may come any time after noon.

Savita: OK Sir I will...Now I must go...Good bye.

Scene Transition Music Science Centre/Evening/Bird song/Footsteps

Savita: Papaji, you must have visited this place earlier also.

Mahendra: Yes dear, I come here quite often.

Savita: See...there he is ...Dr Rajesh...he must be waiting for us.

Mahendra: (Raising his voice): Namaskar Doctor sahib.

Rajesh: (Voice comes from far): Namaste Pradhan ji...Please come.

Footsteps

Savita: Namaste Sir.

Rajesh: Come ...come in...I was waiting for you. Please take your seats.

Sounds of chairs being moved.

Rajesh: What is it that you wanted to ask?

Savita: Sir, it is quite clear to me that in the last few years extreme weather events have manifested oftener. Whether it is torrential rainfall or dust storms or hot winds...these are happening more frequently than before.

Rajesh: Very true.

- Savita:** But Sir, isn't it a good thing that a dry and arid area like Rajasthan is getting rainfall...even floods? At least there will be greenery in the arid areas.
- Mahendra:** I was thinking the same thing but did not ask.
- Rajesh:** Look Savita, in a way what you are saying is correct. But think of it in this way. Floods will no doubt add moisture to an arid landscape. However, the presence of this extra water will cause the extinction of those plants that are adapted to thrive under arid conditions. Take for example Phalodi in Jodhpur where the temperature touched 47 degrees in 2015. Do you think those plants, insects and other creatures that can survive such high temperatures can survive floods or heavy rain?
- Mahendra:** This is correct observation, Doctor sahib. I have noticed that ever since it has started raining heavily in this area, the deer have vanished. No one knows where they have gone.
- Rajesh:** The deer like dry land for grazing. Incessant heavy rains and floods have transformed the dry terrain into swampy areas so the deer have left the area.
- Savita:** That is such a problem for the deer...come to think of it this actually impacts the entire eco system. I have read that extreme weather conditions are plaguing the world; it is not restricted to our country. And it is increasingly being thought that climate change and global warming are behind this phenomenon.
- Rajesh:** It is not possible to simply observe and determine if the changes are merely local weather phenomenon or a result of climate change.
- Savita:** But hasn't all this begun when the Earth's temperature was shown to be increasing?
- Rajesh:** Yes this is correct...and the correlation between global warming and extreme weather events has been established too.
- Savita:** How so?
- Rajesh:** Well...take cloud bursts or un-seasonal torrential rains. Clouds are necessary for rain to fall. Clouds act as linking agents between an area and the planetary water resources. You must have heard of the western disturbance. Well, global warming has impacted western disturbance and this has, in turn, affected the weather of India.
- Mahendra:** Doctor sahib, we often hear these terms on the weather bulletins but what do they mean and what connection does it have with the weather conditions of our country?
- Rajesh:** Let me explain. Western disturbance is a type of tropical storm. It passes over the Caspian Sea and reaches India. These winds temporarily change the weather conditions.
- Savita:** But what connection does it have with global warming?

Rajesh: There is a definite connection. The effect of increased temperature has impacted the climate of the Arctic region and as a result affected the way the western disturbance behaves. Usually we would see 2-3 western disturbances in a year. These days their incidence has increased. Usually these breezes would reach us in winter and these brought rain to the Himalayan regions. Nowadays these are reaching in April, May or June...and the results are before you!

Savita: This means that the increased temperatures have brought about a change in the pattern of western disturbance...and also triggered a sudden change in our country's weather patterns.

Rajesh: Absolutely! This is true to a certain extent. It is not restricted to cloud burst, hot winds, or dust storms and cyclones. It includes excessive snowfall or even extremely poor snowfall in the Himalayan regions.

Mahendra: But doctor sahib, un-seasonal rains were not unknown before. And we did face floods once in a while.

Rajesh: What you are saying is correct, Pradhan ji. But if you take the first few years of the last century and compare those with the first few years of this century you will notice that the incidence of extreme events is on the increase. Actually it has increased a hundredfold. It means that the backlash of climate change is manifesting swiftly.

Mahendra: So what can we do to avoid facing nature's wrath?

Rajesh: There is nothing we can do that will give immediate results. This is because global warming is a result of one hundred years of neglect or more. However, attention to conservation of energy resources and efficient techniques of water conservation may alleviate the situation somewhat. If the Earth heats up relentlessly then we must be ready to face nature's backlash.

Mahendra: We must do something...all this is impacting our animal husbandry practices and agriculture too. Rajasthan is India's second largest producer of milk. The increase in temperature is affecting milk production too.

Rajesh: Quite right. In the earlier days, one rainy season would last, roughly speaking, four months. Now that has shrunk. It is raining much more over fewer days.

Mahendra: Let me put it in this way...the heated Earth has disturbed the rhythm of nature.

Rajesh: The responsibility of restoring the disturbed rhythm to its original state lies on us all.

Thunder

Savita: Papaji, looks like the weather is worsening again. Let us go home. There is high chance of getting caught in the storm. Sir, Thank you so much. You spared so much time.

Rajesh: It is alright...My pleasure. But I must finish some work too. You two take care.

Thunder.

Closing music