THE CLIMATE CONVOCATION
SECOND CHAPTER, 2024
From Numbers to Narratives
Understanding Extreme Weather through Data
What we will cover

• What are extreme weather events
• Why to talk about them in our classrooms
• How extreme was India in 2023
• How to talk about them in our classrooms
• How to use India’s Atlas on Weather Disasters
• Key CSE resources
What are extreme weather events

They are occurrences of unusually severe weather or climate conditions that can cause devastating impacts on communities, livelihood, agriculture and natural ecosystems.

Why to talk about them in our classrooms

- Climate change has for long remained invisible, extreme weather events are the most visible impact of the same.
- Climate change makes such events more frequent, widespread and in some cases more extreme.
- An extreme weather event can both stall and reverse development and growth of a region.
Why to talk about them in our classrooms

- India, like the rest of the world, is largely unprepared to adapt to this changing world.

- The Adaptation Gap Report released last November by UNEP says globally adaptation is slowing down in terms of funds, planning and implementation on ground.

- Developing countries including India need an astronomical US$215 billion to $387 billion per year till 2030, even if the global average temperature rise to below 1.5oC.

- The adaptation finance needs of developing countries are 10-18 times more than the current international public finance flows.
How extreme was India in 2023

- India experienced extreme weather events on 318 of the 365 days in 2023
- All 36 states/UT reported extreme weather event on at least one day in the year
- Himachal Pradesh recorded the highest number of days of extreme weather events (149 days), followed by Madhya Pradesh (141 days), Kerala and Uttar Pradesh (119 days each)
- Eight states recorded more than 100 days of extreme weather events in 2023
How extreme was India in 2023

Heavy rains, floods and landslides recorded on 208 days in 2023

Lightning/storms (202 days)

Heatwaves (49 days)

Cold wave/cold day (29 days)

Cloudbursts (9 days)

Snowfall (5 days)

Cyclones (2 days)

India recorded extreme weather events for 122 consecutive days between June and September 2023
How to talk about them in classrooms

**Activity 1:** To kick off a discussion tell a story/news article and discuss it in class
(Eg: story of Arikomban and Chakkakomban, Elections, SC)

Ask prompt questions

- Have you ever heard of extreme weather?
- What does it make you think of?
- Have you seen any extreme weather in the news?
- Do you know where in the world it happened?

Ask the class to help you create a mind map. Take suggestions from the class for different words they associate with the term ‘extreme weather’. This will help gauge the level of understanding of what extreme weather is.

Use supporting film and images

*Is the weather actually becoming more extreme?*

*Disasters Dodgers: Severe Weather*
How to talk about them in classrooms

Role play

Activity 2: Divide the class into small groups and ask them to imagine they are working for the local weather office in an area where an extreme weather event is expected to happen in the future. Tell them their task is to research and make a poster to help local people understand what they can do to mitigate (take action) the impacts if and when the extreme weather event occurs.

Prompt questions

• How might the event affect people? (businesses, infrastructure, school, social lives)
• Who should people contact if they need help?
• Do different people need to prepare differently? (Very old, very young etc.)
• A map of safe places within the city
The database shows:

- **Loss and damage**
- **Number of days** per extreme weather events
- **Daily number of states/UTs** with extreme events
- **State/UT wise** break up

It can be filtered by:
- year
- month
- state
- and extreme weather event-wise
Let us draw a class exercise now

Activity 2: Divide in 4 groups and draw a learning tool using the dashboard.

Things to remember:
  Message/key take away
  Target age group
  Outcomes

Time for this activity is 15 mins
How to bring it to our classrooms

**Activity 4:** Use the dashboard to find the incidence of extreme weather events

Example: Delhi in 2022: Alarmingly high heatwave during summer months, causing heatstrokes 2023: Hailstorms that kept the weather cool but, resulted in poor agricultural production/high losses in north Indian states

Steps involved: Identify a state/region and analyse seasons across years to understand the events and the loss and damage
Activity 4: Link Sustainable Development Goals (SDGs) and extreme events
Divide the class into small groups and assign them one SDG per group. Next ask them to look at the specific impact extreme weather event has on the SDG they are researching.

Variation: How a country’s performance in an SDG, helps its citizens adapt better to extreme weather events.
Bookmark these key CSE resources

India’s Atlas on Disasters
Updated every month

CSE analysis of the database (Jan-Sept 2023)
Released just before COP every year

State of India’s Environment in Figures
Released annually around the World Environment Day June 5

Thank You
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