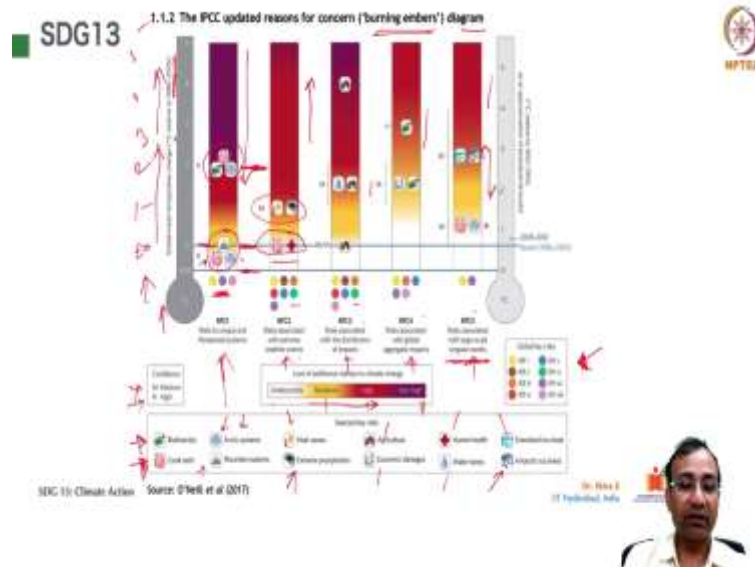


United Nations Sustainable Development Goals (UN SDGs)
Professor Doctor Shiva ji
Department of Climate Change
Indian Institute of Technology, Hyderabad
Lecture 13
SDG 13: Climate Action Part 2

(Refer Slide Time: 00:12)



Yeah, so we will see the IPCC updated reasons for concerns this diagram. So, it is given over here on this scale. So, it starts with zero, at this, plus minus zero and slowly it is increasing 1, 2, 3, 4, 5. So, Global mean temperature change, so that change is given over here related to Centigrade related to 1986 to 2005. So, in relation to that. So, this is this range. And we have these concerns listed down over these verticals.

So, you can see RFC1, 2, 3, 4, 5. and in these there are, these color codes you can refer over here. Global Key Risks, well, what are those? By these examples, biodiversity by this frog, Coral Reef, Mountain Systems, Arctic Systems, Heat Wave, Extreme Precipitation, Agriculture, Economic Damages, Human Health, Water Stress, Greenland Ice Sheet and Arctic Ice Sheet. So, these ones you can see if it happens at the range of here.

So, already if you see in this range and below this, this Coral Reefs and this Arctic Systems, they are below this level and this Mountain System is at there. And Coral, on the, in this range and Human Health also in this range, so RFC2. So, risk to unique and

threatened systems, risk associated with extreme weather events, risk associated with distribution of impacts, risk associated with global aggregate impacts, risk associated with large scale singular events.

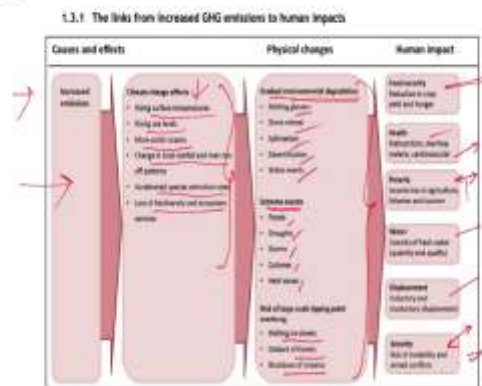
So, unique and threatened systems, already if you see, we have kind of with the zero degrees also, it has, already it has surprised. And then at the next level we have a biodiversity, Coral Reefs again and Arctic Systems in this side. So, high and medium. So, this is divided into two. So, in the high and again here also this is high. And here we have this high and this one is in the medium range RFC2. So, with this color, Global Key Risks also you can refer from this scale.

There are actually multiple things in the same, this graphic, represented through one graphic. So, yeah, and this color, actually notation on this screen if you see, undetectable, this, this white range to yellow moderate to red high and this purple violet in very high. So, in this one, if you see, this very high is coming much sooner, right somewhere at this level itself. And this one, red, is spreading more and this one is lighter and lighter, lighter little more lighter.

So, the lightest I is found in here risk associated with large scale singular events in RFC5 where these ranges are also little above on this and this one. So, this talks about what could be the burning concern and the most critical concerns at a global level. If they collapse on huge issues will rise up, if biodiversity collapse happen, that it threatens the agricultural systems, forestry and all of those things plantations. If coral reefs actually die, the whole ecosystem is going to get re disseminated along with its any other life forms and so on. Maybe you can refer this source and see it in detail for your understanding. This is an interesting diagram.

(Refer Slide Time: 04:18)

SDG13



Source: Working Group II, IPCC (2007), p. 11.

SDG 13: Climate Action

Dr. Rishi K. J. Prasad, IIT Madras



Then we have links from increased GHG emissions to human impacts, causes and effects. So, increased emissions the major reason that is giving lots of different effects, rising surface temperatures, rising sea levels, more acidic oceans, change in local rainfalls and river runoff pattern, accelerated species extension, loss of biodiversity and ecosystem services.

And these are collectively leading to many degradations, like see environmental degradations, melting of glacier, shore retreats, salinization, desertification, water events, then extreme events, floods, droughts, storms, cyclones, heat waves et cetera. Then, risk of large scale tipping point events such as melting ice sheets and dieback of forests, shutdown of streams, all of these things are happening.

Then, overall impact of on the humans if you see of all of these events, there is issues related to food security we discussed in the first and second one and many other SDGs. Whatever happens, so there is a first and foremost impact on the food security, agriculture supplies, food supplies and all of that.

Health, a lot of people are going to get diseased, malnutrition and diarrhea, cardiovascular situations also might arise et cetera. Then poverty related thing, all of these unstabilities and things are going to push many people into loss of jobs and opportunities, work opportunities.

Water, yeah. Scarcity of fresh water. Displacement, there will be forced migration of people from places, security. In the civic science, public administration, everywhere, instability, civil war or something, armed conflicts, all of these things are actually possible. And many of such things are happening even right now in different parts of the world if you look at.

(Refer Slide Time: 06:16)

The slide displays the following table content:

Target	Description
13.1	Strengthen resilience and disaster preparedness planning, capacity building, and early warning systems to reduce human and economic losses and vulnerability.
13.2	Integrate climate change measures into national development planning, policies, and legislation.
13.3	Improve education, public awareness, and global communication on climate change.
13.4	Strengthen resilience and adaptive capacity to climate-related hazards, extreme events, and disasters, especially in developing countries.
13.5	Enhance climate science and research, improve monitoring and evaluation, and increase the availability of climate-related data.

So, here we have some strategic framework for climate action. Let us see. So, the approach, collaborative approach, evidence-based, innovative, inclusive. So, on the law and policy operations and UNHCR's environmental footprint. These are the objectives prepared. There are five ICs.

So, the first one talks about guide the interpretation in application of relevant legal and policy frameworks, develop guidance and catalyze international discussions, preserve and rehabilitate the natural environments and mitigate environmental degradation displacement settings, enhance the resilience of displaced people and host communities to climate related and other environmental risks.

Strengthen preparedness and anticipatory reaction in response to support protection and solutions for people displaced and their hosts, in disaster situations, improve UNHCR's environmental sustainability by reducing greenhouse gas emissions and minimizing

negative impacts on the environment. And the picture if you see below, so this is a camp, refugee camp kind of setup, set up in Sudan, Darfur. And the name is Djabal camp.

So, you see these settlements. There is a road going in between and then there are these dense settlements. And it looks very raw dessert kind of place with very little green and almost nil blue element, this whole setup is established. So, these are the in pictures of a humanitarian crisis ongoing in different parts of the world.

(Refer Slide Time: 08:04)



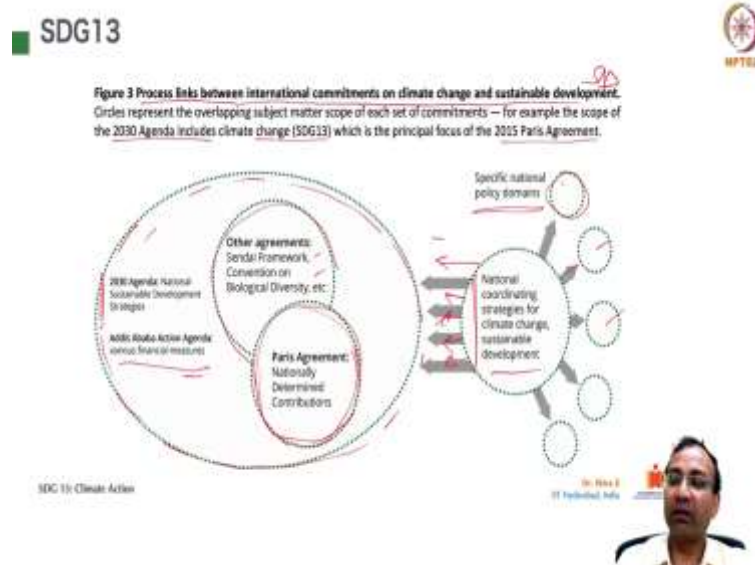
Well on the clean energy challenge, so this is a picture of the changed scenario. This is from 2017 to '19. This is from Cox's Bazaar, Bangladesh. How the greening has actually taken place. So, you see this place, soil, exposed soil. And in the later two years period, you see this big change of several trees coming up in all of this place and changing the whole landscape. So, it is not that things are not possible, definitely things are possible. If there is right intent and efforts in right direction, definitely things are possible.

So, some challenges on clean energy front, clean energy challenge seeks to ensure access to affordable, reliable, sustainable and modern energy for all refugee settlements and nearby host communities by 2030. Under the global plan of action, UNHCR is steering this multi-stakeholder approach to achieving clean energy solutions for refugees and host communities.

The action group of the challenge has over 50 members, including member states, international organizations, private sector companies and NGOs. The initiative is designed to be self-sustaining with contributions from its members. Well, outcome areas, priority areas needs of refugee household and emergencies, cooking, lighting and heating. That can be executed swiftly, refugees and host communities have sufficient access to safe sustainable energy to cook three daily meals.

Refugees have access to 200 Watt-hour per household per day allowing for basic lighting and connectivity, energy efficient technologies and renewable energy are used to meet the electricity needs of communities, centralized water supplies, street lighting, educational, health facilities and humanitarian support facilities such as officers and staff accommodation.

(Refer Slide Time: 09:59)



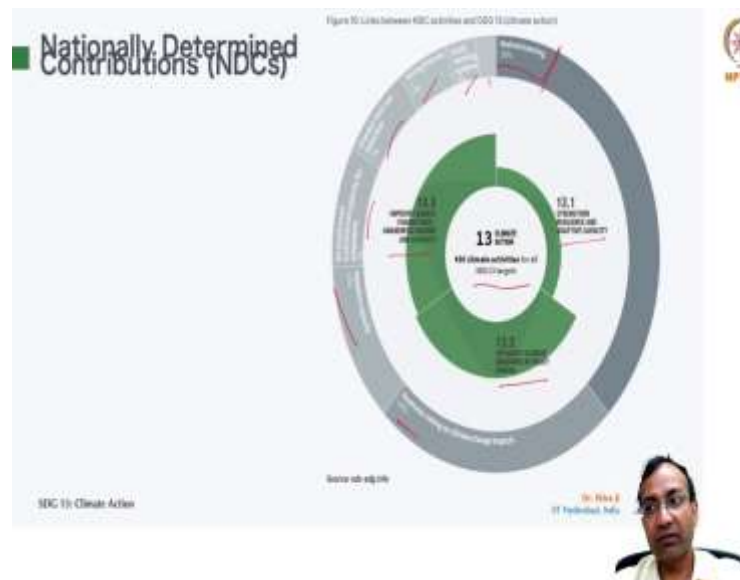
So, moving on, in this figure, we will see process links between international commitments on climate change and sustainable development. Circles represent the overlapping subject matter, scope of each set of commitments, for example the scope of 2030 agenda includes climate change, which is the principal focus of 2015 Paris Agreement.

So, this is the Paris Agreement, nationally determined contribution indices, then we have other agreements also in parallel. Sendai Framework, Convention on Biological Diversity

et cetera, et cetera. And overall, there are even more agenda, like 2030 Agenda, Addis Ababa Action Agenda and all of these. So, these are the efforts, you can call it as, circle this thing.

And here, we have national coordinating strategies for climate change, sustainable development et cetera. So, this is actually taking help from this and you can devise your own national action plans also. Plus, specifically regional and international, there was specific national policy domains. So, more than one policy domains can be created based on maybe industrial sector or sections of the society or maybe regions of the country et cetera et cetera. So, these are all actually helping each other to create those kind of frameworks.

(Refer Slide Time: 11:27)



So, climate action, if you see, it is divided into 1, 2, 3, Three, strengthen resilience and adaptive capacity, integrate climate measures in policy making, improve climate change, education, awareness raising and capacity here. So, inside this, you can see 38 percent mainstreaming, here we have 24 percent awareness raising on climate change, 12 percent adaptive capacity, then strengthened institutional capacity by adaptation, 9 percent, disaster and risk reduction, 7 percent, strengthen, 5 percent, early warning systems are 3 percent, and others will be here.

(Refer Slide Time: 12:09)

SDG13

Goal 13: Take urgent action to combat climate change and its impacts

5 7

TARGETS INDICATORS

Target	Indicator
Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Indicator 13.1.1: Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population Indicator 13.1.2: Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 Indicator 13.1.3: Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
Target 13.2 Integrate climate change measures into national policies, strategies and planning	Indicator 13.2.1: Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy / plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

SDG 13: Climate Action

Department of Statistics Malaysia

Dr. Hina B
IT Professional, Info



So, inside this, if you see five targets and indicators, strength and resilience and rapid capacity, integrate climate change measures into national policy.

(Refer Slide Time: 12:21)

SDG13

Goal 13: Take urgent action to combat climate change and its impacts

5 7

TARGETS INDICATORS

Target	Indicator
Target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	Indicator 13.3.1: Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula Indicator 13.3.2: Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
Target 13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	Indicator 13.a.1: Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the \$100 billion commitment

SDG 13: Climate Action

Department of Statistics Malaysia

Dr. Hina B
IT Professional, Info



Improve education awareness et cetera, implement the commitment taken by developed country priorities to the United Nations Framework, UNFCCC.

(Refer Slide Time: 12:31)

SDG13

13 Climate Action

Goal 13: Take urgent action to combat climate change and its impacts

5 7

TARGETS INDICATORS

Target	Indicator
Target 13.5 Focus the mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	Indicator 13.5.b: Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities

Department of Statistics Malaysia

Dr. Rina B
IT Professional, Info

And promote mechanisms for raising capacity for effective climate change.

(Refer Slide Time: 12:36)

Climate action

Challenges

ANTHROPOGENIC GREENHOUSE GAS EMISSIONS have increased steadily pre-industrial era, driven largely by ECONOMIC AND POPULATION GROWTH, and are now higher than ever

Solutions

Paris Agreement

Reduce Emissions

Adapt to Climate Change

Protect the Most Vulnerable

Dr. Rina B
IT Professional, Info

So, finally, some challenges and solutions. So, if you see, anthropogenic greenhouse gas emissions have increased since pre-industrial era, driven largely by economic and population growth, and are now higher than ever, largest than ever. Solution? Simply cut down onto this. So, there are in many such forums, commitments and summits et cetera where countries have a place to reduce gradually. One of them is Paris Agreement and many others.

The world is warming overall, I think we have seen, at an alarming rate, damaging our ability to grow food and impacts on various fronts. Simply reduce emissions, innovate and develop technological solutions to mitigate and adapt to climate change, storms, floods and hurricanes, droughts et cetera are intensifying, their frequencies are increasing, their peaks and troughs are also increasing.

They are getting higher and higher, warming, weakening, more acid, ice is disappearing, seas are rising, and all of those impacts. So, overall if you see, these impacts can be reduced by a collective approach. And we have discussed in the lesson plan in this module, and we can safeguard the, our society and most vulnerable groups also from the impacts of climate change.

So, as a phenomena, I hope this is clear, clear to you all now, like why is it happening, how is it happening, what needs to be done et cetera. So, maybe at your own local level you can take help of assignments and you can make a small project on studying what are the reasons behind maybe some unusual occurrences which are resultant of climate change in your locality and maybe you can look for local solutions, how this can be addressed.

That will be a wonderful exercise. And maybe, if possible, you can take it ahead in your own community, vicinity with the help of public administrators, different NGOs, organizations et cetera to take it forward for implementation. So, with this, I wish you all the best and yeah, thank you all for joining this module. We will see you in the next one.