

Strategies for Sustainable Design
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Lecture 36

International Conventions, Laws and Emerging Technologies for SD

Hello everyone, in this lecture we will discuss International Conventions, Laws and Emerging Technologies for Sustainable Development. So, sustainable development is actually the motto of recent times. So, how these international bodies are framing, international agreements, summits, the rules regulations etc, to have actually a sustainable format of growth and development.

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THE 'FRAMEWORK' FOR INTERNATIONAL CLIMATE ACTION, UNFCCC	NEGOTIATING PROCESS AND COMMITMENT PERIODS OF THE KYOTO PROTOCOL	NEGOTIATING PROCESSES UNDER THE UNFCCC FOR A NEW GLOBAL CLIMATE DEAL TO COMPLEMENT OR REPLACE THE KYOTO PROTOCOL	
UNFCCC SIGNED - 1992 The original UN climate treaty. Established the basic framework and principles for international climate change action. Developed countries committed to take the lead with developing countries agreeing to take action with financial and technological support as they developed. No legally emission targets agreed for any countries.	KYOTO PROTOCOL SIGNED - 1997 Requires industrialized countries to make a collective binding emission cut of 5% below 1990 levels by 2012. Introduced innovative new instruments, including the Clean Development Mechanism. US never ratified. First commitment period (2008-12) covered 50% of 1990 global emissions. Second commitment period coverage down to ~15% as Canada, Japan, Russia and New Zealand join US in opting-out and developing country emissions grow.	COPENHAGEN ACCORD - 2009 Lima must build on the momentum generated by key climate events of 2014 e.g. Ban Ki-moon's Climate Summit in September and China-US announcement in November about limiting emissions. In particular, it must reach agreement on: the elements of a draft negotiating text for new global climate deal; the form and structure of countries' targets and measures for the new deal; and how to enhance ambition in the pre-2020 period. Without these, reaching an ambitious deal at COP21 in Paris next December will be put at risk.	NEW GLOBAL TREATY TO BE AGREED - 2015 Process to agree new treaty covering all countries was established at COP17 Durban in 2011. Governments have to disclose their targets and measures in March, and then conclude negotiations in Paris in December 2015. The goal is a global climate agreement covering all countries that will reduce greenhouse gas emissions to a level that will keep the expected rise in Earth's mean surface temperature below 2°C in order to avoid the worst climate change impacts.

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Paris Agreement

So, majorly we can see through this slide, these are the actual four stages of like, how international conventions have happened over the time. So, the four major landmarks though, there are several, during this period, but these four can be taken as the four landmark ones, which have actually kind of can be called as a turning point also in the international conventions, as far as sustainable development is concerned.

So, the first one comes in the year of 1992, when UNFCCC was actually signed, the framework for international climate action, UNFCCC. So, the original UN Climate treaty, established the basic framework and principles for international climate change action, developed countries committed to take the lead with developing countries agreeing to take the action and financial and technological support as they develop.

No legally emission targets agreed for any countries. Well at this time, like as we know, like advanced countries, the developed countries, they are the actually major contributors of

carbon emissions or like global warming, so all of these actually, measure actual threats which have happened now, which have occurred as consequences of this posed industrialised actual era.

So, the biggest contributors are the developing, developed countries. So, these developed countries actually in this convention, they agreed to help the developing economies, the developing countries, financially and technology by the technology transfer also. So, these developing countries also can control their emissions, with the minimal actually the damaging potential etc.

So, this was the actual convention, in which actually these countries agreed to help each other. These two sets of countries actually agreed to go in a cohesive manner. So, that is why this actually treaty is considered one of the important ones, because the developed countries actually accepted their role accepted actually, the impact they are causing to the overall like a globe and they agreed to reduce it.

Further, we have this Kyoto Protocol, which happened in 1997 and also the negotiating process and commitment period of the Kyoto Protocol. So, it requires industrialised countries to make a collective binding emission cut of 5 percent below 1990 levels by 2012, and introduce innovative new instruments, including the clean development mechanism. But the newer United States of America actually never ratified this Kyoto.

The first commitment period of a year like 2008 to 12 covered 50 percent of 1990 global emissions, second commitment period coverage down to like minus 15 percent as Canada, Japan, Russia, and New Zealand join US in opting out and developing country emissions grow. Further came this Copenhagen Accord of like a to the year 2009. So, Lima must build on the momentum generated by key climate events of 2014, eg Ban Ki Moon, then actually secretary general of like United Nations, the Climate Summit in September and China US announcement in November about limitation, limiting emissions.

In particular it must reach agreement on the elements of draft negotiating text for new global climate deal, the form and structure of countries targets and measures for the new deal and how to enhance ambition in the pre 2020 period. Without these reaching an ambitious deal at COP 21. In Paris next December will be put up at risk.

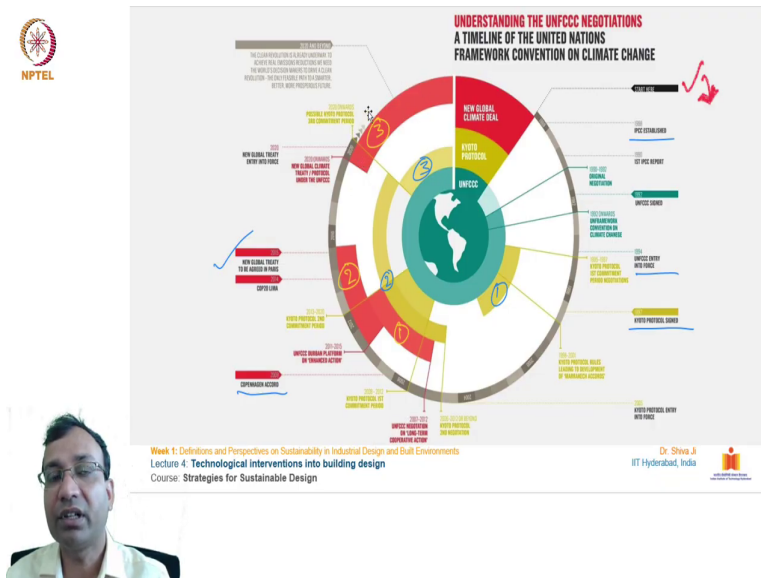
Further, this the Paris Agreement came in the year of 2015. So, the new global treaty, it was agreed in the year 2015. The process to agree new treaty covering all countries was

established at COP17 in Durban in 2011. The governments have to disclose their targets and measures in March and then conclude negotiations in Paris in December 2015, with treaty enforce from 2020.

The goal is a global climate agreement covering all countries that will reduce greenhouse gas emissions to a level that will keep the expected rise in Earth's mean surface temperature below 2 degrees centigrade, in order to avoid worst climate change impacts etc. So, this was actually negotiating processes under the UNFCCC for a new global climate deal to complement or replace the Kyoto Protocol.

So, this was actually the latest the recent actually the major actually agreement between the like the countries, the major economies of the world, whether they are like a developed or the developing countries, to actually prepare a consciousness, consensus for like a sustainable development.

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Further, if you see like on this chart, it is laid out clearly like how these processes have these agreements and conventions have actually happened over the time and the number of years they have covered under like their scope. So, the first one if you see like a UNFCCC well, it started in this over here and the range you can see like the original negotiations actually happened during like this period 1990 to 1992 and from here, it is enforce and till now, like also it is an in the force and also it is binding and the Kyoto Protocol, if you see like this happened at like this period 1995 to 1997.

So, this was actually the Kyoto Protocol. So, the first commitment actually period, so for like these many years, further it occurred over here you can see, from the period of 2006 to 2012. So, this is the actually this Kyoto protocols like a second negotiation actually, like a period which happened over here and then the third one you can see, which is here from the year like 2020 and onwards.


So, the third actually commitment period, it begins from like a this year. Further in the new like a global climate deal involving like this Paris Agreement and all. So, this, actually this negotiations actually took place at this point of time and it lasted for like these many years. Further, this is currently in the fourth you can see like a year 2020 and onwards. So, this is also an enforce currently. So, this actually table lists long these conventions, and they are like overlapping times.

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Brief history of climate change negotiations

- How did the climate change negotiation process start?
- In truth, it was the culmination of previous studies, discussions and issues brought up over the years, and the year 1990 saw major changes to the way this issue was perceived.
- During the UN General Assembly session of 1990, there were some negotiations that were undertaken with the aim of creating a formal body of addressing the issue of climate change.
- One of the results of the negotiations was the formation of a body that would come up with a convention that would deal with climate change; it was called the Intergovernmental Negotiating Committee (INC).



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So, a brief history of climate change negotiations, how did the climate change negotiation process start. In truth, it was the culmination of previous studies, discussions and issues brought up over the years and the year 1990 saw major changes to the way this issue was perceived. During the UN general assembly session of 1990, there were some negotiations that were undertaken with the aim of creating a formal body of addressing the issue of climate change. One of the results of the negotiations was the formation of a body that would come up with a convention that would deal with climate change. It was called the intergovernmental negotiating committee, INC.

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The Intergovernmental Negotiating Committee

- This committee took fifteen months to come up with a convention for tackling climate change, and it aptly named it the Climate Change Convention. This convention was then presented before the UN Commission on Environment and Development (UN CED) for signing in 1992 - this was the famous Earth Summit.



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Further the intergovernmental negotiating committee, this committee took 15 months to come up with the convention for tackling climate change and it aptly named it the climate change convention. This convention was then presented before the UN Commission on environment and development, UN CD for signing in 1992. This was the famous Earth Summit, you may have actually heard this name Earth Summit.

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The Heart of UNFCCC

- The Climate Change Convention (CCC) is the heart of UNFCCC, with everything else revolving around it. It is interesting how the CCC came into being. As a refresher, you may have heard of the 1985 Vienna Convention for the Protection of the Ozone as well as the stellar 1987 Montreal Protocol on Substances that Deplete the Ozone Layer. These two conventions covered some Green House Gases (GHGs) that were depleting the Ozone layer; however, there was emerging scientific evidence that there were more gases that were doing more harm than good to the environment, hence the need to tackle them. But then, there was a need to get continuous scientific information that would inform policy formulation with regards to reducing the GHGs.



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The heart of the UNFCCC, in this one like the climate change convention, CCC is the heart of UNFCCC, with everything else revolving around it. It is interesting how the CCC came into being. As a refresher, you may have heard of the 1985 Vienna Convention for the

protection of ozone as well as the stellar 1987, Montreal Protocol and on substances that deplete the ozone layer.


These two conventions covered some greenhouse gases GSGs, that were depleting the ozone layer. However, there were, there was emerging scientific evidence that there were more gases that were doing more harm than good to the environment, hence the need to tackle them. But then there was a need to get continuous scientific information that would inform policy formulation with regard to reducing the GHGs.

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Enter the Rock Star: Intergovernmental Panel on Climate Change (IPCC)

- IPCC is the scientific body that has brought Climate Science to the Rock n Roll podium of science: they even won the Nobel Prize!
- Anyway, as a first step towards addressing the issue of the remaining GHGs, World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP) formed the IPCC in 1988.
- Their mandate was to give the latest scientific research as well as how to inform policy with regards to mitigation and adaptation of climate change.



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Well from here enters the Rock Star, Intergovernmental Panel on Climate Change IPCC, you may be aware of this like organisation. IPCC is the scientific body that has brought climate science to the rock and roll podium of science. They even won the Nobel Prize also. Anyway, as the first step towards addressing the issue of the remaining GHGs world meteorological organisation WMO and the United Nations environmental programme UNEP formed the IPCC in 1988. Their mandate was to give the latest scientific research as well as how to inform policy with regard to mitigation and adaptation of climate change.

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The North – South Divide

- The findings by IPCC showed that something needed to be done with regards to mitigating and adapting to climate change, and the news was grim! As anticipated, this led to divisions with countries identifying them- selves either as “North” or “South”. But hey, it was not all about the geographical location: it was all about developed “North” and developing “South” countries. This divide was manifested in the 2nd World Climate Conference in Geneva.



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Well, the north south divide. The findings by IPCC showed that something needed to be done with regards to mitigating and adapting to climate change and the news was grim. As anticipated, this led to divisions which countries identifying them themselves, either as north or south. But they It was not all about geographical location. It was all about developed north and developing south countries. This divide was manifested in the Second World Climate Conference in Geneva.

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Issues! Issues! Issues!

- Just like human relationships, there were issues that were involved in the “separation” of the countries.
- The “South” countries blamed the “North” countries for being supremely responsible for most of the GHG emissions since the Industrial Revolution. So, what did this mean? Well, it meant that the “North” countries should take **drastic steps towards reducing their emissions. In addition, developing countries called on the developed ones to finance their climate mitigation and adaptation activities.** Whoa! This was a big issue as it caused the proverbial “storm in a tea cup!”



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Further, well, lots of issues, issues and issues. Just like a human relationships, there were issues that were involved in separation of this countries also. The south countries blame the

North countries for being supremely responsible for the most of the GHGs emissions since the Industrial Revolution.

What did this mean? Well, it means that the north countries should take drastic steps towards reducing their emissions. In addition, developing countries called on the developed ones to finance their climate mitigation and adaptation activities. This was a big issue as it caused the proverbial storm in the teacup.

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Common but Differentiated Responsibilities

- There was a consensus that action needed to be taken to combat climate change, and there were general commitments that both developed and developing countries were obligated to in responding to climate change. This principle simply observed that all the countries faced common problems, although they were varying to some degree. The next sensible thing to do was to classify countries: enter Annex I, non-annex I, and Annex II parties.



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So, common but differentiated responsibilities. So, you see, like how negotiations have actually progressed over the years and how countries like there were some countries who have evaded actually accountability and but finally, like they were brought to the table and discussions actually took place, well still like the world is struggling to, meet the targets these conventions have set over the years.

So, let us see, there was a consensus that action needed to be taken to combat climate change and there were general commitments that both developed and developing countries were obligated to in address, responding to climate change. These principles simply observe that all the countries faced common problems, although they were varying to some degree, the next sensible thing to do was to classify countries, enter Annex 1, Annex 2 and an Annex like a like a non-Annex 1 country etc.

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Annex Parties

- In order to allocate responsibilities to countries in addressing climate change through the reducing of GHGs, a classification system was created. In essence, two main groups were formed: Annex I and non-Annex I countries. Simply put, Annex I countries are developed countries that have contributed most to GHG emissions since the Industrial Revolution. Non-Annex I comprises of mostly developing countries. We will talk more on Annex I and non-Annex I countries sooner than later!



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Well, Annex parties. So, in order to allocate responsibilities to countries in addressing climate change through the reducing of GHGs, a classification system was created. In essence, two main groups were formed, Annex 1 and non-Annex 1 countries. Simply put annex 1 countries are developed countries that have contributed most to GHG emissions since the Industrial Revolution. Non-annex 1 comprises of mostly developing countries, we will talk more on annex 1 and non-annex 1 countries sooner.

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Birth of Kyoto Protocol

- The Kyoto Protocol came into force in 1995 after the Russian Federation ratified it, and it was adopted at the 3rd Conference of Parties (COP 3) in 1997 in Kyoto, Japan. The first commitment period of the Kyoto Protocol was from 2008-2012.



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So, let us see like the birth of Kyoto Protocol, the Kyoto Protocol came into force in 1995, after the Russian Federation ratified it and it was adopted at the third conference of Paris

COP3 in 1997 in Kyoto, Japan. The first commitment period of the Kyoto Protocol was from 2008 to 2012.

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Climate Change Convention vis-a-vis The Kyoto Protocol

- “Oh! Wait a minute, I am getting lost! What is the difference between the Climate Change Convention (CCC) and Kyoto Protocol (KP)?” Well, do not despair; the **line between the two is very clear. CCC was aimed at encouraging parties to reduce their GHG emissions, while KP was tailored to legally bind parties towards realizing their emission reduction targets. As easy as that!**



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Climate change conventions, vis-a-vis the Kyoto Protocol. Well, wait a minute, I am getting lost. What is the difference between the climate change convention CCC, and Kyoto Protocol? Well, do not despair. The line between the two is very clear. CCC was aimed at encouraging parties to reduce the GHG emission, while Kyoto protocol was tailored to legally bind parties towards realising their emission reduction targets.

So, I hope you understood well, CCC was actually to bring everyone together, to discuss under like a same table and also everyone agreed, but the Kyoto Protocol was actually a binding one which legally actually bound these countries to start reducing their like emissions. So, I hope you understood.

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Principle underpinning the Kyoto Protocol

- The main principle underpinning the Kyoto Protocol is the principle of “**common but differentiated responsibilities.**” As an example, think of a pizza, but **this time a distasteful one. Logically, most people would avoid eating such a pizza,** and if they are compelled to do it, then they will try to take the smallest piece possible – human nature!



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Well principle underpinning the Kyoto Protocol. The main principle underpinning the Kyoto Protocol is the principle of common but differentiated responsibilities. As an example, think of a pizza, but this time a distasteful one, logically most people would avoid eating such a pizza and if they are compelled to do it, then they will try to take the smallest piece possible, human nature.

Well, so this is the actually underlying actually principle you can understand from here and also this climate change actually negotiations are like such a thing that nobody, no actually country wants to, own it. Nobody, no country actually wants to, be answerable to actually there, the impacts what they have caused over the years, but they have to.

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In a nutshell

In a nutshell, the functional components of the Kyoto Protocol are known as the Kyoto Protocol Mechanisms. These are the functional components that actually make up the Kyoto Protocol, and they are:

- Emissions Trading
- Clean Development Mechanism (CDM)
- Joint Implementation (JI)

Let us first itemize the objectives of these mechanisms before delving into their details:

- To stimulate sustainable development through technology transfer and investment
- To assist countries to reach their Kyoto commitments in a manner that is cost-effective
- To encourage both the private sector and developing countries to contribute to emission reduction efforts



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So, in a nutshell, if you see over here, in a nutshell, the functional components of the Kyoto Protocol are known as the Kyoto Protocol mechanisms. These are the functional components that actually make up the Kyoto Protocol and these are the following ones emissions trading, clean development mechanism, joint implementation.

So, let us first itemise the objectives of these mechanisms before dividing them into further details. So, to stimulate sustainable development through technology transfer an investment to assist countries to reach their Kyoto commitments, in a manner that is cost effective, to encourage both the private sector and the developing countries to contribute to emission reductions efforts.

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The Paris Agreement

The Paris Agreement builds upon the Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.



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So, what is like a Paris agreement? Well, the Paris Agreement builds upon the convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effect, with the enhanced support to assist developing countries to do so. As such, it charts a new course in the legal climate effort.

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The Paris Agreement central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework.



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The Paris central agreement. Central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise, the century well below 2 degrees centigrade above pre industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees centigrade.

Additionally, the agreement aims to strengthen the ability of countries to deal with impacts of climate change. To reach these ambitious goals appropriate financial flows, a new technology framework and enhanced capacity building framework will it, will be put in place. The supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The agreement also provides for enhanced transparency of action and support through a more robust transparency framework.

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Nationally determined contributions

- The Paris Agreement requires all Parties to put forward their best efforts through nationally determined contributions (NDCs) and to strengthen these **efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts.**
- **In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs.**
- **There will also be a global stocktake every 5 years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties.**



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Nationally determined contributions. The Paris Agreement requires all parties to put forward their best efforts through nationally determined contributions NDCs and to strengthen these efforts in the years ahead. This includes requirements that all parties report regularly on their emissions and on their implementation efforts.

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What is the Paris Agreement?

- ✓ **Long-term temperature goal (Art. 2)** – The Paris Agreement, in seeking to strengthen the global response to climate change, reaffirms the goal of limiting global temperature increase to well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees.
- ✓ **Global peaking and 'climate neutrality' (Art. 4)** –To achieve this temperature goal, Parties aim to reach global peaking of greenhouse gas emissions (GHGs) as soon as possible, recognizing peaking will take longer for developing country Parties, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of the century.



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So, what is the Paris agreement? First one long term temperature goal article 2, the Paris agreement in seeking to strengthen the global response to climate change, reforms the goal of limiting global temperature increase to well below 2 degrees centigrade while pursuing a first to limit the increase to 1.5 degrees centigrade.

Secondly, global peaking and climate neutrality article goal parties aim to reach global peaking of greenhouse gas emissions as soon as possible. Recognising peaking will take longer for developing country parties. So as to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHSs in the second half of the century.

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Mitigation (Art. 4) - The Paris Agreement establishes binding commitments by all Parties to prepare, communicate and maintain a nationally determined contribution (NDC) and to pursue domestic measures to achieve them. It also prescribes that Parties shall communicate their NDCs every 5 years and provide information necessary for clarity and transparency. To set a firm foundation for higher ambition, each successive NDC will represent a progression beyond the previous one and reflect the highest possible ambition. Developed countries should continue to take the lead by undertaking absolute economy-wide reduction targets, while developing countries should continue enhancing their mitigation efforts, and are encouraged to move toward economy-wide targets over time in the light of different national circumstances.



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Mitigation article 4, the Paris Agreement establishes binding commitments by all parties to prepare, communicate and maintain a nationally determined contribution NDC and to pursue domestic measures to achieve them. It also prescribes that parties shall communicate their NDCs every five years and provide information necessary for clarity and transparency.

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- ✓ **Sinks and reservoirs (Art.5)** –The Paris Agreement also encourages Parties to conserve and enhance, as appropriate, sinks and reservoirs of GHGs as referred to in Article 4, paragraph 1(d) of the Convention, including forests.
- ✓ **Voluntary cooperation/Market- and non-market-based approaches (Art. 6)** – The Paris Agreement recognizes the possibility of voluntary cooperation among Parties to allow for higher ambition and sets out principles – including environmental integrity, transparency and robust accounting – for any cooperation that involves internationally transferal of mitigation outcomes. It establishes a mechanism to contribute to the mitigation of GHG emissions and support sustainable development, and defines a framework for non-market approaches to sustainable development.



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Further sinks and reservoirs article 5. The Paris Agreement also encourages parties to conserve and enhance as appropriate sinks and reservoirs of GHSs as referred to in article four paragraph 1 d of the convention including forests. Further, a voluntary cooperation market and non-market based approaches article 6.

Paris Agreement recognises the possibility of voluntary cooperation among parties to allow for higher emission and set out principles, including environmental integrity, transparency and robust accounting for any cooperation that involves internationally, transferal of mitigation outcomes. It establishes a mechanism to contribute to the mitigation of GHG emissions and support sustainable development and define a framework for nonmarket approaches to sustainable development.

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Adaptation (Art. 7) – The Paris Agreement establishes a global goal on adaptation – of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change in the context of the temperature goal of the Agreement. It aims to significantly strengthen national adaptation efforts, including through support and international cooperation. It recognizes that adaptation is a global challenge faced by all. All Parties should engage in adaptation, including by formulating and implementing National Adaptation Plans, and should submit and periodically update an adaptation communication describing their priorities, needs, plans and actions.

☞ The adaptation efforts of developing countries should be recognized



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Adaptation, article 7. The Paris Agreement establishes a global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change in the context of the temperature goal to the agreement. It aims to significantly strengthen national adaptation efforts, including through support and international cooperation.

It recognises that adaptation is a global challenge faced by all parties should engage in adaptation, including by formulating and implementing national adaptation plans and should submit and periodically update and adaptation communication describing the priorities needs, plans and actions. The adaptation efforts of developing countries should be recognised.

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Loss and damage (Art. 8) – The Paris Agreement recognizes the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage. Parties are to enhance understanding, action and support, including through the Warsaw International Mechanism, on a cooperative and facilitative basis with respect to loss and damage associated with the adverse effects of climate change.



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Loss and damage article 8. The Paris Agreement recognises the importance of averting minimising and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events and the role of system development in reducing the risk of loss and damage. Parties are to enhance understanding action and support, including through the Warsaw international mechanism on a cooperative and facilitative basis with respect to loss and damage associated with the adverse effects of climate change.

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Finance, technology and capacity-building support (Art. 9, 10 and 11) - The Paris Agreement reaffirms the obligations of developed countries to support the efforts of developing country Parties to build clean, climate-resilient futures, while for the first time encouraging voluntary contributions by other Parties. Provision of resources should also aim to achieve a balance between adaptation and mitigation. In addition to reporting on finance already provided, developed country Parties commit to submit indicative information on future support every two years, including projected levels of public finance. The agreement also provides that the Financial Mechanism of the Convention, including the Green Climate Fund (GCF), shall serve the Agreement. International cooperation on climate-safe technology development and transfer and building capacity in the developing world are also strengthened: a technology framework is established under the Agreement and capacity-building activities will be strengthened through, inter alia, enhanced support for capacity building actions in developing country Parties and appropriate institutional arrangements. Climate change education, training as well as public awareness, participation and access to information (Art 12) is also to be enhanced under the Agreement.



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Further, finance technology and capacity building support article 9, 10 and 11. The Paris Agreement reaffirms the obligations of developed countries to support the efforts of developing country parties to build clean, climate resilient future, while for the first time encouraging voluntary contributions by other parties.

Provision of resources should also aim to achieve a balance between adaptation and mitigation. In addition to reporting on finance already provided, developed country parties commit to submit indicative information on future support every two years, including projected levels of public finance.



The agreement also provides that the financial mechanisms of the convention, including the Green Climate front shall serve the element. International cooperation on climate safe technology, development and transfer and building capacity in the developing world are also strengthened.

A technology framework is established under the agreement and capacity building activities will be strengthened and through (())(22:46) enhanced support for a capacity building actions in developing country parties and appropriate institutional arrangements. Climate change education training as well as public awareness, participation and success to information article 12 is also to be enhanced until the agreement.

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- Climate change education, training, public awareness, public participation and public access to information (Art 12) is also to be enhanced under the Agreement.
- Transparency (Art. 13), implementation and compliance (Art. 15) - The Paris Agreement relies on a robust transparency and accounting system to provide clarity on action and support by Parties, with flexibility for their differing capabilities of Parties. In addition to reporting information on mitigation, adaptation and support, the Agreement requires that the information submitted by each Party undergoes international technical expert review. The Agreement also includes a mechanism that will facilitate implementation and promote compliance in a non-adversarial and non-punitive manner, and will report annually to the CMA.



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Further we have climate change education training, public awareness, public participation and public access to information article 12 is also to be enhanced under the agreement. Transparency, article 13 implementation and compliance article 50. The Paris Agreement relies on a robust transparency and accounting system to provide clarity on action and support by parties with flexibility for their differing capacities, capabilities of parties.

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Global Stocktake (Art. 14) – A “global stocktake”, to take place in 2023 and every 5 years thereafter, will assess collective progress toward achieving the purpose of the Agreement in a comprehensive and facilitative manner. It will be based on the best available science and its long-term global goal. Its outcome will inform Parties in updating and enhancing their actions and support and enhancing international cooperation on climate action.

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Further we have global stocktake article 40. Global stocktake to take place in 2023 and every 5 years thereafter, we will assess collective progress towards achieving the purpose of the agreement in a comprehensive and facilitated manner. It will be based on the best available science and its long term global goal. Its outcome will inform parties in updating and enhancing their actions and support and enhancing international cooperation on climate change.

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Decision 1/CP.21 also sets out a number of measures to enhance action prior to 2020, including strengthening the technical examination process, enhancement of provision of urgent finance, technology and support and measures to strengthen high-level engagement. For 2018 a facilitative dialogue is envisaged to take stock of collective progress towards the long-term emission reduction goal of Art 4. The decision also welcomes the efforts of all non-Party stakeholders to address and respond to climate change, including those of civil society, the private sector, financial institutions, cities and other subnational authorities. These stakeholders are invited to scale up their efforts and showcase them via the Non-State Actor Zone for Climate Action platform (<http://climateaction.unfccc.int>). Parties also recognized the need to strengthen the knowledge, technologies, practices and efforts of local communities and indigenous peoples, as well as the important role of providing incentives through tools such as domestic policies and carbon pricing.

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Status of ratification

The Paris Agreement entered into force on 4 November 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depository.



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Well, what is the status of ratification, the Paris Agreement entered into force, on fourth November 2016. 30 days after the date on which at least 55 parties to the convention, accounting in total for at least an estimated 55 percent of our total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or a accession with the depository.

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Paris Agreement - Status of Ratification

188 Parties out of 197 Parties to the Convention are Parties to the Paris Agreement.

The United States of America ratified the agreement on 3 September 2019. However, on 4 November 2019, the Government of the United States of America notified the Secretary-General of its decision to withdraw from the Agreement which shall take effect on 4 November 2020 in accordance with article 28 (1) and (2) of the Agreement. See [C.N.575.2019.TREATIES-XXVII.7.d](#) of 4 November 2019.



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Paris agreements, status of ratification 188 parties out of 197 parties to the convention are parties to the Paris Agreement. The United States of America ratified the agreement on third September 2019. However, on 4th September 2019, the government of the United States of America notified that the Secretary General of its decision to withdraw from the agreement, which shall take effect on 4th November 2020. In accordance with the article 28, 1 and 2 of the agreement.

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On 5 October 2016, the threshold for the entry into force of the Paris Agreement was achieved.

The Paris Agreement **entered into force** on 4 November 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary.



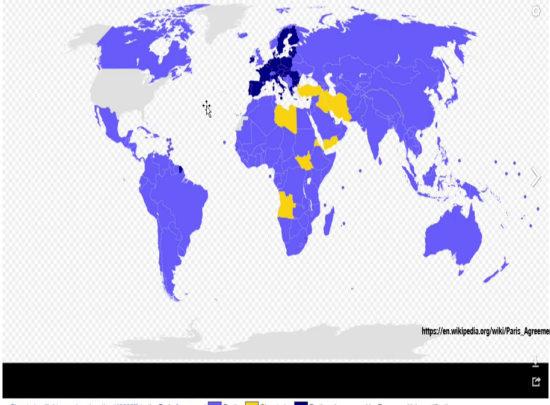

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https://en.wikipedia.org/wiki/Paris_Agreement

Signatories (light green) and parties (yellow) to the Paris Agreement | Parties | Signatories | Parties also covered by European Union ratification



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Further we can see over here the signatory countries or the parties who have signed to the Paris Agreement. So, the parties are actually given in this blue purple colour you can see over here, so these many countries have actually signed, signatories are shown in the yellow and the parties also covered by the European Union ratifications are given over here and the countries who have not signed for example here, you see this United States of America, who is the biggest emitter in the like recent times in the recent like a century, has actually not signed on this Paris Agreement.


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PARIS2015
ON CLIMATE CHANGE CONFERENCE
COP21-CMP11

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Well, further, we will see the role of India like how India has responded to the Paris summit, which happened in the year 2015.

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Is India on track to meet its Paris commitments ?

India's greenhouse gas (GHG) emissions accounted for 6.5 per cent of 2014 global total, according to data from the World Resources Institute. This made the country the fourth-largest emitter after China, the United States and the European Union.

Per capita, India's emission from fossil fuels (in 2017) is by far the lowest among major economies:

India: 1.83 MT carbon dioxide (CO₂)

China: 7.72 MT in China

The EU: 6.97 MT

The US: 15.74 MT

<https://www.downtoearth.org.in/blog/climate-change/is-india-on-track-to-meet-its-paris-commitments-67946>

Despite its low per capita emissions, India has made significant commitments in its Intended Nationally Determined Contribution (NDC) submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2015 as part of the Paris Agreement.

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Is India on track to meet its Paris agreements. India's greenhouse gas emissions accounted for 6.5 percent of 2014 Global total, according to data from the World Resources Institute. This made the country the fourth largest emitter after China, the United States and the European Union. Per capita India's emissions from fossil fuels in 2017 is by far the lowest among the major economies.

You can see the numbers over here, India has this number of 1.83 metric tonne carbon dioxide, China has 7.72, EU has 6.97 and the United States has 15.74. Despite its low per capita emission, India has made significant commitments in its intended nationally determined contributions submitted to the United Nations Framework Convention on Climate Change. UNFCCC in 2015 as part of the Paris Agreement. So, you can see over here, even though India is not one of the like a biggest, bigger emitters, but India has still shown and given is like a resort to fight this the crisis of this global warming and the impact on the planet.

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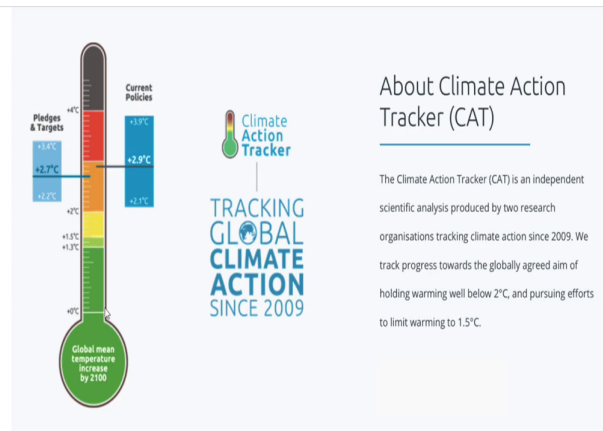


The Climate Action Tracker website has rated its climate efforts as "2-degree compatible" — that can contribute to limiting warming by the end of the century to 2° Celsius; making India the only major economy to be so highly rated.



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About Climate Action Tracker (CAT)

The Climate Action Tracker (CAT) is an independent scientific analysis produced by two research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

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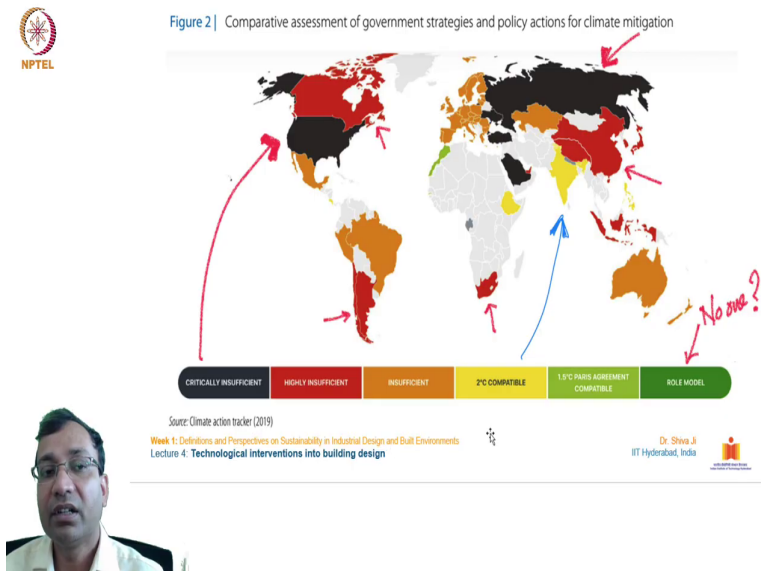
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You can see this illustration over, so if we continue to with our current policies, I am talking more at the like a global level, the temperatures are like expected to rise in tune of like a four degree and then above centigrade, but if there are like are these corrective measures are taken as recommended by these conventions, it is expected that the global warming actually this potential this increase in the like a global like a surface temperature, can we actually bring,

can be actually brought to this, in the range of like 2 degrees and further like 1.5 degrees centigrade.

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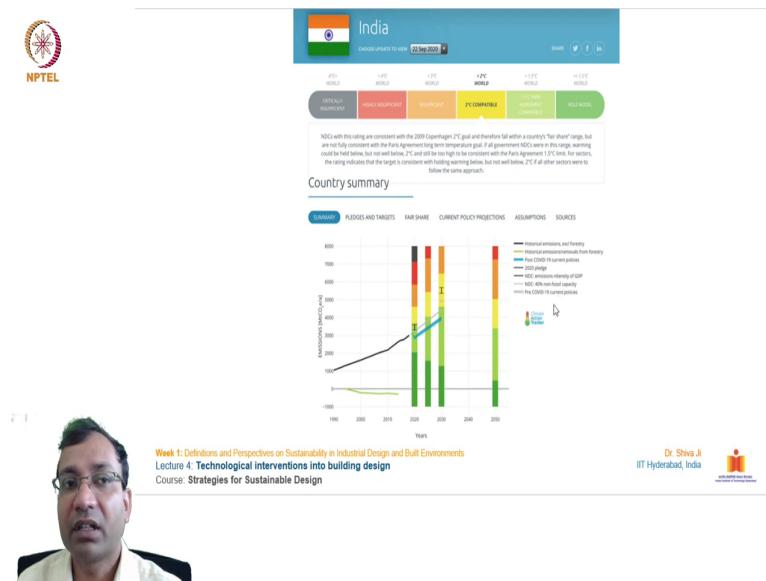



Further in this discussion, let us have a look on the comparative assessment of government strategies and policy actions for climate mitigation. So, in this actually slide it is shown over here the critically insufficient actually a first given by the major actually country. So, who are these ones.

So, you can see in the dark colour the United States of America, Russian Federation and one some more countries, from this Gulf area and further like a highly insufficient efforts which are given by these colour countries in the red. So, Canada and China is one of the major polluters and they are not even agreeing to may enforce this control and this sustainable growth and development model, further like South Africa and the Chile and Argentina over here and insufficient well Brazil, Australia and Mexico under some more countries and most of the Europe falls under like an insufficient actually category.

And two degrees actually compatible in that range actually, India is one of the countries which falls in that category and 1.5 like a degree actually category there is one or two countries are in this like a Western like Africa, we can see over here, well it seems like there is no one under this role model actually category which is like a dark green. So, the world is awaiting actually in emphasis are actually a conscious effort. So, that the countries can move actually from the darker shades to the lighter greener sheets to it is actually requested from everyone to contribute actually towards these causes.

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Further if you see over here like how India has actually performed over the years, so the I have taken here the country wise summary of our own country, so how like the emissions have actually targeted to actually for like bringing them down over the years. So, in this actually table you can see the years are divided here at the x axis and on the y axis, we have this the emissions in the metric tonne, of like a CO₂.

So, here with this (32:18) you can understand like historical emissions like is it has like a happened over the years. So, this is actually black line, which depicts that up to the year like a 2020 little before that I think up to like a 2019 and historical like emissions removals from the like a forestry post COVID-19 current policy are showing the blue over here.

So, you see there is a drastic actually shift is a raft kind of shift which has happened over here due to the situation of this prevailing actually pandemic and then 2020 pledge, so these are actually like how India actually has a planned to reduce its emission and presently also like India conforms to like a 2 degrees compatible actually temperature rise of the global level.

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INDIA		Summary of pledges and targets	Climate Change Tracker
PARIS AGREEMENT			
Ratified	Yes		
2030 unconditional target(s)	33% to 35% below 2005 emissions intensity of GDP by 2030 [413–445% above 1990 by 2030 excl. LULUCF] [146–161% above 2010 by 2030 excl. LULUCF]		
2030 conditional target(s)	Non-fossil share of cumulative power generation capacity 40% by 2030 [371–373% above 1990 by 2030 excl. LULUCF] [126–127% above 2010 by 2030 excl. LULUCF]		
Condition(s)	Transfer of technology and low cost international finance incl. from GCF		
Coverage	Not specified		
LULUCF	Additional (cumulative) carbon sink of 2.5–3 GtCO ₂ e by 2030		
COPENHAGEN ACCORD			
2020 target(s)	20–25% below 2005 emissions intensity of GDP by 2020 [216–245% above 1990 by 2020 excl. LULUCF] [52–66% above 2010 by 2020 excl. LULUCF]		
Coverage	Excluding agriculture sector		
Condition(s)	None		
LONG-TERM GOAL(S)			
Long-term goal(s)	Per capita emissions never to exceed those of the developed world		

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Finally, on this last slide, we can see like how India has actually played role on like a different actually conventions and how it has actually, how India has actually set its goals, to bring the actually, emissions down and adopt a path of sustainable development. So, the summary of places and targets are actually given over here, maybe you should take a screenshot of this slide and you should keep it with you for your reference, so that you can understand what are the specific like steps are taken by like the our own country in this regard.

So, the Paris agreements like a yes, India has ratified it and Copenhagen Accord like targets of like a 2020, so 20 to 25 percent below the 2005 emissions intensity of GDP by 2020. So, this is actually target taken by your long term goals, if you see, per capita emissions never to exceed those of the developed world. So, that is actually overall all very long term actually target of India, that we should never actually exceed, the per capita emission levels of like the developed countries.

So, it is one of the very actually promising economies, promising countries which is a kind of a role model today for the other countries, despite of having like a huge, population the second largest population in the world presently and despite actually facing like a several like a challenges as like a compared to the other developed nations. So, with this actually promising, actually hope like India will do the India will actually adopt this sustainable model of growth and development and will become a role model for the world. So, with this, this lecture has come to its end and thank you, everyone.