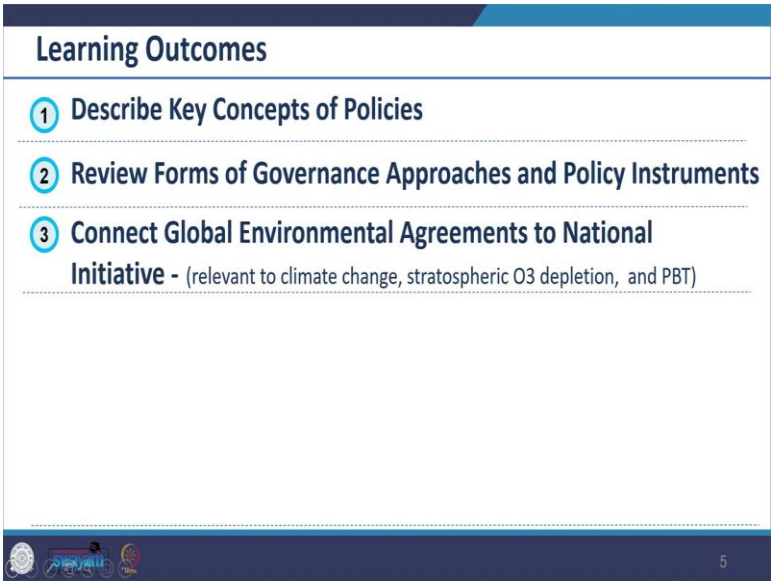
Environmental Impact Assessment
Professor Harshit Sosan Lakra
Department of Architecture and Planning
Indian Institute of Technology, Roorkee
Lecture 14
EIA – Law, Policy and Institutional Arrangements for EIA Systems (Part-II)- Air

Welcome to the course- Environmental Impact Assessment. In the previous lectures, we set the base for law, policy, and guidelines and saw key aspects. And then we also looked at the differences between law and policy with examples. So, from this session onwards, we will develop domain-specific understanding, we will look at domain-specific law policy and guidelines, and for today, we will look at air.

(Refer Slide Time: 00:54)

So, our coverage for today would be like this, we will add a few more things to the concepts of policy. Then, we will look at the forms of governance approaches and policy instruments in particular to air and then we will look at the global environmental agreements, which are relevant to climate change stratospheric ozone, depletion, and PBT.

(Refer Slide Time: 01:19)



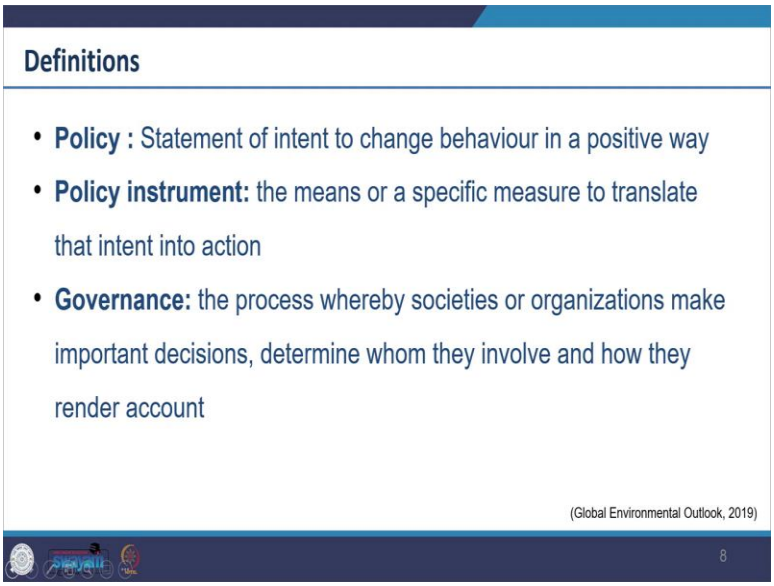
So, the expected learning outcomes from you after completion of this session include that you should be able to describe key concepts of the policy, you should be able to review different forms of governance approaches, which are adopted, and different policy instruments which are adopted for the purpose of meeting any particular objective.

Then you should be able to connect the global environmental agreements to the national initiatives. So, we have been looking at the global level a lot of things, then how they connect at the Global Initiative level, and we will look at all these global initiatives related to climate change and ozone depletion and so on.

(Refer Slide Time: 02:02)

So, moving on to the key concepts of the policies, policies play an important role in creating and improving the state of our environment, how our environment, is determined by the policy, and how we can improve what that also is guided a lot by the policies.

(Refer Slide Time: 02:26)



So, policy as such is the statement of intent to change behavior positively. So, what we want to do is what policy determines whereas policy instruments are the means or a specific measure like how we are going to make those positive changes, and what means we are going to use to translate that intent into action.

So that, is what is meant by policy instruments. So, whenever, we say policy instruments, we talk about the means of translating those intents into actions, further, we see that governance is also like, is the process whereby, societies and organizations, make important decisions to determine whom they will involve, and how they will be held accountable for all these aspects.

So, you see, policy, policy instruments as well as the governance part of it, where you assign people to undertake responsibility, people and institution, as well as you make them accountable for their responsibilities. So, whenever we look at the policy, we look at both aspects the intent and the instrument.

So, policy, which involves goal setting, including targets, what indicators and timeframe well have, is an important step towards making it real. So, we need to have a target we need to have indicators a time frame, and execution of the policy instrument through effective governance.

And we saw that governance is it is the process whereby the society organization, makes important decisions. So, one of the examples of this is SDG, where we are governing through goals. So, we have certain targets and we are like at the global level at the national level, or even at the state level, regional level, we are trying to attain those goals.

So, when we deal with environmental policies, we use multiple methods of governance. So, not just one but we determine we comprehensively use different modes for governance and involve different sets of factors when I say a set of factors we mean, governments, private sectors, NGOs, politicians even think tanks, researchers, education institutions, NGOs, even the lobbyist and then the communities and also industries and companies.

So, we involve different sets of actors, and they all have a role to play they influence what will be the final results of the policy the policy outcome, and they influence it in the different contexts. So, policy objectives are achieved through instruments, instruments are structured activities targeted to meet the goals in practice, we see both primary and secondary policy instruments.

(Refer Slide Time: 05:40)

For example, in Primary Instrument Policy like, you have energy and transport policy, which include Environmental Policy Goals. So, Primary Environmental Policies are which are targeted toward the environment, then we see secondary policy which has prime non-environmental goals.

So, it is not targeted at environmental goals, but then it does contribute to reducing or reducing the burden on the environment. So, for example, you can see the reducing congestion, traffic congestion. So, when we reduce the traffic congestion and return indirectly, we also contribute to handling the environmental problems.

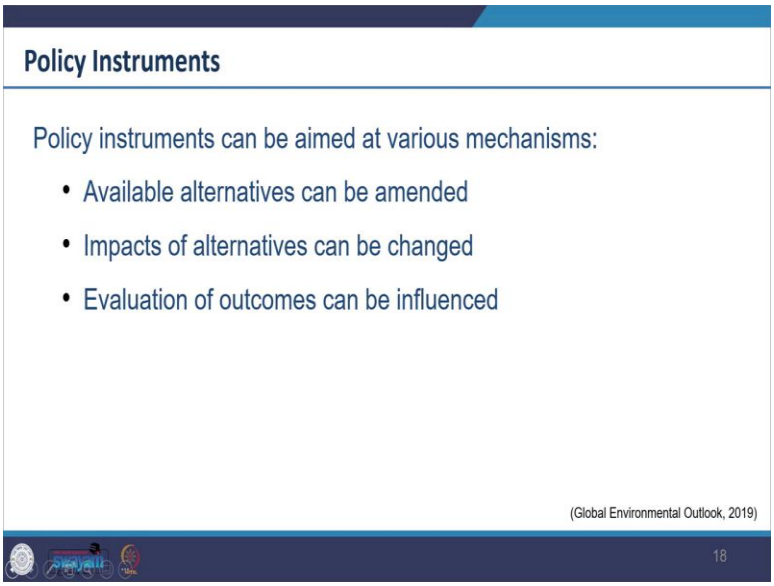
So, these are called the secondary policy. So, policy instruments are created and implemented at the regional level, at the global level, and also at the national level. So, you have already seen a lot of global-level policies. Now, will also align, it with national and regional levels. So, now, there is a growing number of also we see public-private partnerships and corporate sustainability initiatives.

So, even the different players are coming in, where people are coming together and then there is also sustainability initiative, which is going on, and then also NGOs are also actively participating, even the companies are actively participating. So, for the design and production of goods, we also see risk assessment, training, monitoring, reporting interventions, and so on.

So, it is just not the one thing there are a range of things that are used to handle environmental problems and then you see where EIA falls and then how other ranges of things policy law and also influenced each other. So, with such a collective approach, it is through such a collective approach that we can realize the targets and goals we can meet. So, the prime challenge like you can see how different actors are there, there are multiple tools.

So, the prime problem with this is how to integrate all of them and they are at different scales, they are at different times, and a different contexts. So, that challenge remains, but that has been handled. So, what, when policy instruments are, they can take different forms, what we tried to do so, we have like, we look at like three important things here.

(Refer Slide Time: 08:23)



Like how the available alternatives can be amended like whatever is happening right now, and what kind of change we can bring in that We also look into what are alternatives like what ways are available to us at this moment, how the impact of those ways can change how the same process can be altered so that the impact is reduced.

And the last one we see is that how we evaluate the outcomes, the evaluation of it can be influenced. So, majorly we see these three mechanisms which are employed. So, now there is a lot of policy integration and raising, of public awareness of policy coherence. So, you see all of these there. So, there is another term that you look at which is policy coherence. So, it is about putting all the things together well coordinated and in a very systematic approach.

And for that, now, you must be hearing about the green economy. So, it allows us to put everything systematically in a coordinated manner all different kinds of mechanisms, which are used and applied. So, some common types of policy instruments include, like, we had seen the difference between policy and law, whereas some of the documents indicate that the policy legislation also comes within the policy instrument.

(Refer Slide Time: 10:02)

So, some of the policy instruments include legislation regulation policies, standards market-based instruments, financial incentives, when you encourage people to buy something or you discourage people from buying something, this incentive and then voluntary approaches then also, Treaties and agreements and then the International soft law, Voluntary agreements, Research and development, and Information instruments.

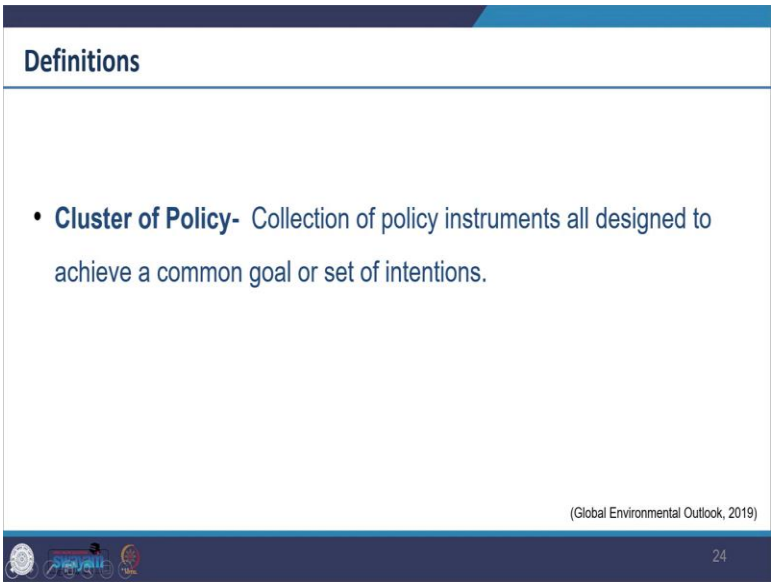
So, all these are like policy instruments. The success of any policy is measured by how it speeds up the work to achieve all these internationally agreed goals and especially successes seen when it addresses the root cause if you recollect, we talked about the drivers of environmental change we saw.

So, if we through policy, can attack the root cause, and change the root cause, then that is considered to be more successful. So, environmental policy has been typically developed to protect different environmental aspects like air, water, and land, these are usually under the control of an environmental ministry.

So, we have the Ministry of Environment, forests, and climate change in our country, we need to take care of both the state of the environment and also cordial drivers of environmental change. So, if you look at the ministry, it takes care of what is the situation right now and then how what kind of changes we are bringing.

So, these institutions and policies are developed to address the most important polluting sectors like energy mobility in industry, so, you will find a range of other ministries also looking into this. So, let us try to understand one more term, which is usually used in terms of policy. So, that is a cluster of policies.

(Refer Slide Time: 12:05)



So, when we say the cluster of policy, it is a collection of policy instruments, all designed to achieve a common goal or set of intentions. So, what intention do you play in policy, and then the instruments it is the group collection of policy instruments together that we refer to as a cluster of policy. So, when developing policy mixes.

So, when we prepare this, we prepare the cluster of policy or policy mix, there also need there are needs to have coherence. Coherence means that they all should align well with each other and have to be ensured to achieve the desired goal. So, like the policies are mutually reinforcing, they should strengthen each other and they should not negate each other. And this could be like the sectorial policy is like some in the energy section, some in the transportation section.

So, all these should come together and reinforce each other. And then they should also reinforce at different levels at the state level, national level, and the global level. So, we also need policy synergy. So, there is another term that comes as synergy, which is also said to be necessary, and will look at the meaning of this, which means that environmental concerns need to be incorporated into other policy sectors.

So, it is not just the environmental policies, but these concerns have to be embedded and considered in the other policies of other sectors also. So, when we do that, then this kind of approach helps in attaining, integrating things, and then also bringing them together to attain coherence.

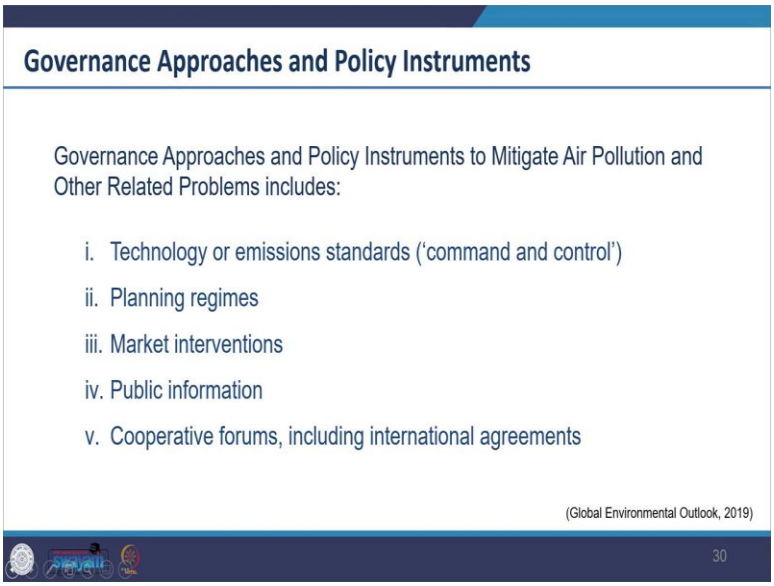
So, policy synergy occurs when all policy instruments have a cumulative or reinforcing impact in achieving the common goal. So, this was a little more about the policies, which we discussed in the previous class. So, some more terminologies to learn about.

(Refer Slide Time: 14:26)

So, now looking at the forms of governance approaches and policy instruments in particular to the air domain what we are going to look at. So, to tackle the air pollution problem, a range of governance approaches and policy instruments are used, we use them for like mitigating the source like from where the pollution is coming. So, we need to reduce that. So, how do we mitigate the source, then, the impact of air pollution how what kind of impact is happening how do we reduce that, and then how do we reduce climate change?

And then how do we reduce ozone depletion? And then how do we curtail persistent bio-accumulative and toxic substance PBTs how do we curtail that, we saw all of these in the environmental status report. So, when we tackle the pollution problem, we look at all these aspects, and several international national sub-national, and regional policies have been arranged to address these challenges. So, if we look at these, so, you may focus on these terms, these terms are frequently used.

(Refer Slide Time: 15:47)



So, you see that the fundamental forms include technology or emission standards. They are mainly referred to as command and control see will take care of this term command and control which covers all the technologies emission standards, which are covered under this. So, all the aspects of pollution control, emission reduction, everything, what technology and emission standards are used, are referred to as command and control.

And then there is another term which says planning regime, then you see market intervention, public information, and then also cooperative forums, including international agreements. So, how do we collaborate, what kind of agreements are there? So, these five terms you would be seeing frequently? So, command and control includes the technology emissions or ecosystem restoration standards, it can also have record keeping and then how the reporting has to be done.

So, you see in SDG, also how we have an annual report where we report our attainment how we have reached all the targets or limits on manufacturing like what is limit we set up what how

much the one can, what is the upper capping, that has to be there in the manufacturing industries, then what capping we do in the trade or what usage of specific chemicals or products and each of which is implemented through permitting and enforcing programs.

So, it is also done with permissions and enforcement programs. So, that is called command and control, when we look at planning regimes, planning regimes are important and are basic to managing air pollution, climate change, and ozone depletion and also controlling PBTs, persistent bio-accumulative and toxic substances, because they provide a way of integrating several actions.

So, the planning regime is the entire domain where you look at the air, and then you see how they are contributing towards controlling the air. So, planning regimes are like they are the actions they are the strategies and which are designed to attain ambient air quality standards. So, how we have set certain standards and how we are going to attain them.

So, there is not just one way but we are going to attain it through multiple modes and we are going to have certain emission ceilings will put capping as you saw in all the timelines also that how we had cappings, we determined capping all nations determined day capping. So, how we are going to attain that these all combined with analysis and also this planning regime includes environmental impact assessment?

So, how we are going to do all these? How we are going to incorporate them into environmental impact assessments? How we are going to have a ceiling and then how are we going to implement the quality standards? So, a planning regime or what we can also call a framework or ways of doing things establishes ambient targets, like what kind of concentration standards will be there, and what kind of total pollution load will be there.

So, if pollution happens, what will be our upper capping to that, and emission budgets or the ceilings and so on? So, that helps us to determine that so that is one term we see. Another terminology we see is a cluster of policies, which I explained before as well. So, a cluster of policies is then developed and implemented to meet the targets or the budget. So, you create a group of policies. Then you have marketing interventions. So, these include economic instruments such as taxes, fees, or markets for tradable emission rights.

So, you also saw in all the timelines when we were seeing that we had tradable emission rights. So, all these are market interventions. And then apart from that you have public information including product labeling, air quality forecasting, near real-time observations, and training. So, how do you prepare people?

How do you inform people have constantly you feed information? And then you have a cooperative framework like where you have international agreements and NGOs and all those sectorial standards come in. So, now, moving on to our other thing are looking at global environmental agreements.

(Refer Slide Time: 20:41)

So, with concern to air, what are the Global Environmental Agreements and then, simultaneously will also look at the national level.

(Refer Slide Time: 20:51)

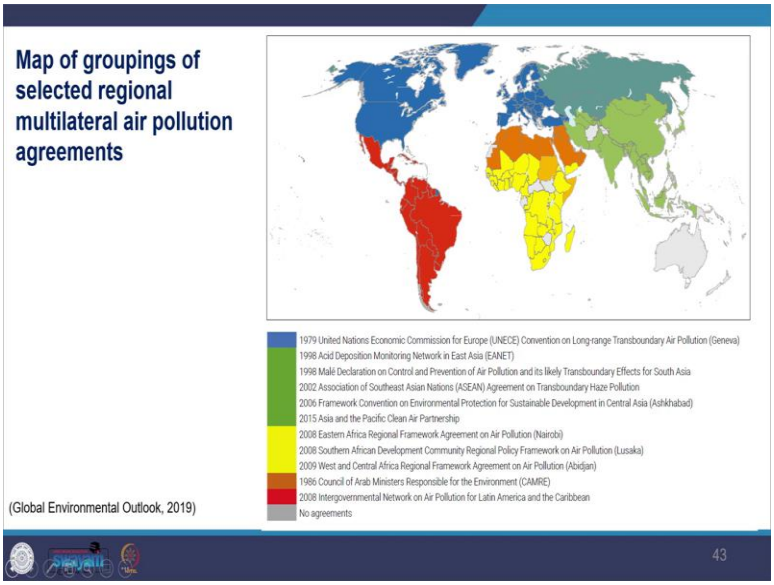
We have seen in the timeline range of global agreements, that the successful global agreements are the Vienna Convention and Montreal Protocol to address ozone depletion, which in 2009, became the first UN convention to be ratified by all United Nations members. So, the most recent amendment to the Montreal Protocol is like Kigali, 2016 where we designated the limits, and limit the impact of ozone-depleting substances on climate change.

So, we had set those targets in the image you can see global environmental agreements relevant to climate change, ozone depletion, and PBT. So, you can see a range of agreements which are there which are concerned with air, you can see the 1992 United Nations Framework Convention on Climate Change, Kyoto Protocol, and Paris Agreement, and then you can see something related to ozone depletion.

So, you have the Vienna Convention in Montreal, and then you can also see PBT chemicals you have the Basel Convention, Rotterdam, Stockholm, and Minamata Convention on mercury, which you see here in the list. So, we see that air pollution travels around the world. So, if you see that we have discussed the oceans also like how it is very difficult to have a governance regime for that similarly, with air pollution, air pollution also travels around the world.

But we see that there is no Single Global Agreement on air pollution. It is as per the context that everyone has different sets of rules and Regional International Agreements. So, in this figure, you can see how they are, they vary all the policies vary across the countries.

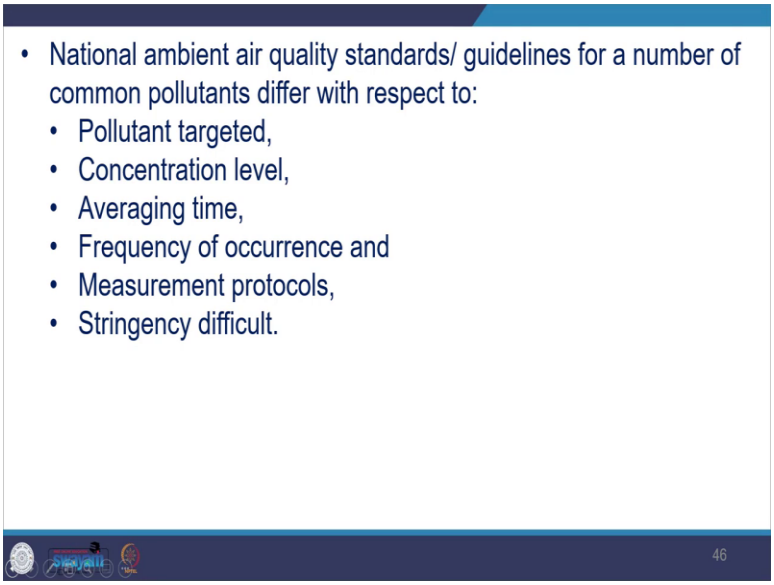
(Refer Slide Time: 23:02)



So, the oldest and the most developed is the 1979 Convention on Long-range Transboundary Air Pollution. And then you also see the Russian Federation and Central Asia overlap with the grouping of agreements with the umbrella of Asia and specific clean air partnerships. So, there are three regional agreements on air pollution in Africa, which overlap each other and have few members in common with the Council of Arab ministers responsible for the environment.

So, you see how those work are there. Further, we see to guide their air pollution policies, many countries have developed national ambient air quality standards. So, you see that with the global targets, how and the local context how to handle that. So, many countries have developed national ambient air quality standards or they have developed guidelines for several common pollutants.

(Refer Slide Time: 24:04)

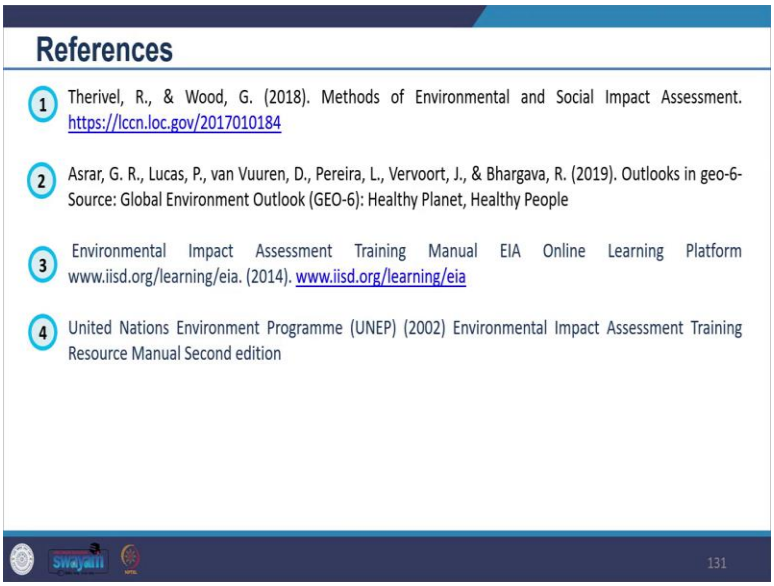


So, and these standards vary with like, these standards would vary across countries. So, you would see that they can differ concerning like what are the pollutants which are targeted? What are the concentration levels? What is the average timing, averaging timing, and then what is the frequency of all these pollutants occurring and then what is the measurement protocol in that particular country, and then how strict they could be and how difficult or easy it would be to implement any kind of strategy? So, depending on that you set up standards or guidelines in any country related to the pollutant.

(Refer Slide Time: 24:46)

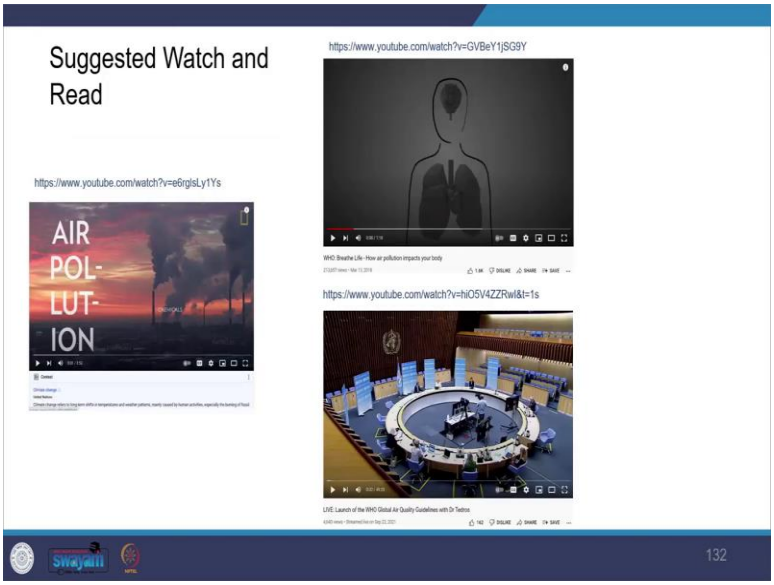
So, we just summarized what we covered in this session, we looked at the key concepts of the policies. Then we reviewed the governance approach for policy instruments and we also looked at the global environment agreements and same time we looked at our context and then with a complete focus on air.

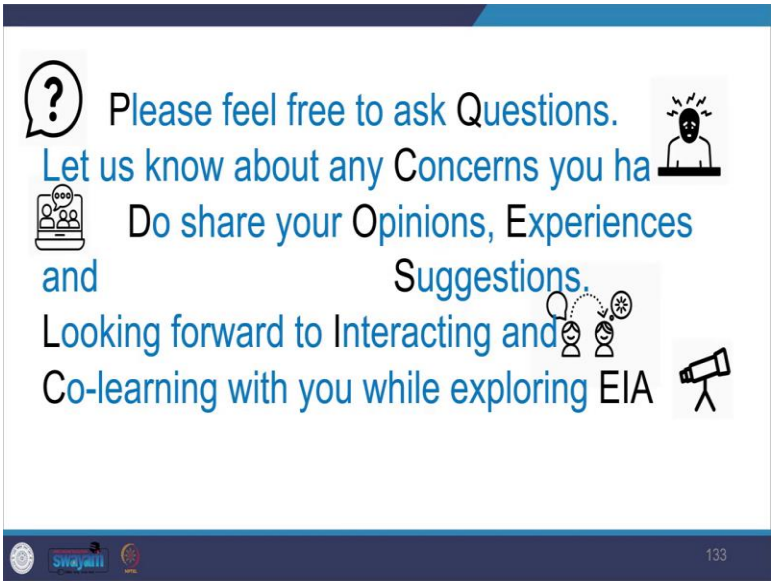
(Refer Slide Time: 25:06)



So, with the references for reading purposes, you can see that I have already suggested the book on the subject. So, you can look at these and go on telling the chapters also which are involved while we do this.

(Refer Slide Time: 25:22)





These are the suggested watch and read which you can see for this particular section. So, please feel free to ask questions and let us know about any concerns you have. Do share your opinions, experiences, and suggestions, looking forward to interacting and co-learning with you while exploring EIA. Thank you.