# Environmental Impact Assessment Professor Harshit Sosan Lakra Department of Architecture and Planning Indian Institute of Technology, Roorkee Lecture 17

## EIA – Law, Policy and Institutional Arrangements for EIA Systems (Part-V) Ecology

Welcome to the course Environmental Impact Assessment, continuing in our process to learn law, policy, and institutional arrangements for the EIA system. Today we will cover the domain of ecology. According to the key legislation, guidance, and standards available in the domain of ecology, it can be divided into four components we see that we can see key legislation and guidance and standards; legislations are available at international and multinational agreements and conventions. Then you see it at the level of national and regional legislation. And then you also see components like industry codes and best practices then also see that there are special interest groups.

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<ul> <li>National and Regional Legislation.</li> <li>Codes of Practice and Best Practice.</li> </ul>	
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<ol> <li>Special Interest groups.</li> </ol>	

So accordingly, the coverage of today's session will include that we will cover international and multilateral agreements and conventions, we will look into the national and regional legislations, codes of practice, and best practices, as well as we will just touch upon special interest groups.

1	Identify International and multilateral agreements and conventions and review its implications on your country EIA process.
2	Identify National and regional legislation.
3	List different Codes of practice and best practice.
4	Identify Special interest groups.

So, the learning outcomes after completion of this particular session would be that you would be able to identify a list of the international and multilateral agreements and conventions, and you should be able to review its implications on our country's EIA process.

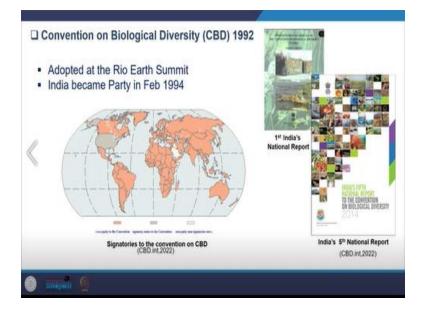
So that you should be able to do further you should be able to identify national and regional legislation, and then you should be able to list different codes of practice and best practices you should know which one to refer to when you are dealing with a certain domain and then you should also be able to identify special interest groups and so that you can take review and they could be part of your EIA process.

So, in any country, when, you look at when they enter the international convention or multilateral agreements, it affects their assessment process and also their policy. So that is why we are reviewing it because at the larger level, how you decide how it percolates down. So, they need all the agreements and conventions we get into, they need to align these things we need to align our targets with as per the global policy and the global targets.

So many of these biodiversity-related conventions require the country to implement targets in the planning process, they also need to implement them in the protection mechanism, and then include them in the EIA process, so that all will influence how you do things. So, therefore, we will be looking at these aspects of international and multilateral agreements and conventions.

And you also try to link it back with what we have seen during the timeline and how we were developing understanding in this perspective. So if you recollect, at the Rio Earth Summit in 2002, many goals and sustainable development principles were initiated, which led to international agreements supporting sustainable development and biodiversity.

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Looking at some of the key agreements included you see the Convention on Biological Diversity CBD of 1992, which was adopted at the Rio Earth Summit, India is one of the earliest signatories of the Convention on Biological Diversity CBD and became a party in February 1994. So, MoEFCC has been designated as a nodal ministry. So this ministry looks at the CBD convention and biological diversity in the country. In the image in the center, you can see all the signatories to the convention and India's national report on the left-hand side.

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So, later biodiversity targets were set in 2002. Targets were set for 2010. Like what targets will meet the purpose was to attain considerable reduction that was the intention in the current rate of biodiversity loss. And then important point for us was that they used, recommended, or imposed tools such as EIA and also strategic environmental assessments for consideration and planning of development.



So, looking at the CBD Tenth Conference of Parties (COP 10) their decision to develop a strategic plan for biodiversity from 2011 to 2020 was directed the prime agenda was to achieve several strategic goals like having goals in place, and specifically goals in place to address the root cause of biodiversity loss, what was causing this biodiversity loss, and how we can have strategies in place to address and reduce those or to control those root cause. And then further, the idea was to reduce the direct pressure on biodiversity.

And then also you will look at promoting sustainable use of all the resources that are there further you see that the idea was to improve the status of biodiversity, by safeguarding the ecosystem, and especially looking at species and genetic diversity, so that all not only protection, or reduction, but also improvement of that scenario, and then enhance the benefits to society.

So it is just not one-sided, but then how the benefit would be improved for the society from the biodiversity and ecosystem services, and enhance implementation through participatory planning, knowledge management, and capacity building, so how that people have to be involved and how the knowledge has to be managed, and how the capacity of the people have to be built.



So we also see the Bonn Convention, which was on the conservation of migratory species of wild animals in 1979. So this convention is targeted to protect threatened animals that migrate across seas and or national boundaries, and specifically for our interest in using EIA as a tool for recognizing areas that need maintenance. And there also the areas apart from their areas and also their migration routes. So through the process of EIA, using EIA as a tool, we need to identify and then also protect these areas. So on the right-hand side image; you can see the signatory Parties to the Convention.

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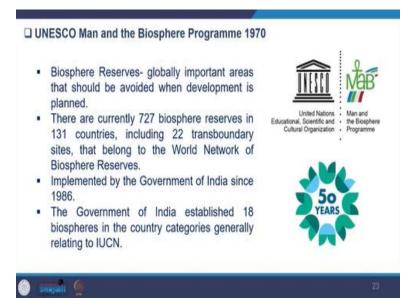


Further, you see the Ramsar Convention on Wetlands of International Importance in 1971. Through this convention, the target was to conserve the wetlands of international importance. And then these sites are called Ramsar sites and then again use environmental impact assessment and also as using strategic environmental

assessment as tools to consider like, what will happen with the biodiversity with the development and then how we plan to have development of this area and how we ensure safeguarding and protection of these wetlands.

And in India, if you look at this entered into force on first February 1982, India currently has 49 sites designated as Wetlands of International Importance this keeps changing, so you may be very careful about that. Two new Ramsar sites have been added one in Gujarat and another in Uttar Pradesh, which was recently announced on the World Wetland Day at Sultanpur National Park in Gurgaon on February 2022. So, in the image, you can see all the Ramsar sites across the world as of date.

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Further, we see that UNESCO Man and Biosphere Programme 1970. This established biosphere reserves. So, through this biosphere reserves were established and then also there was a need to identify different innovative approaches to conserve and address sustainable development. There are generally recognized the these are also like biosphere reserves are also recognized as globally important areas and that should be avoided when development is planned we cannot plan in these areas around this, so you have to be very careful about those and you need to take into consideration where all these areas lie.

And then Man and Biosphere Programme has been implemented by the government of India since 1986. So we have been involved in this the first Biosphere Reserve of the world was established in 1979. So According to UNESCO, there are currently 727 biosphere reserves in 131 countries including 22 transboundary sites that belong to the World Network of Biosphere Reserve. So the government of India established 18 biospheres in the country categories generally related to IUCN. So IUCN provides the categories according to that we have identified.

UNESCO World Heritage Convention 1972



Further, we also see the UNESCO World Heritage Convention 1972. The convention targets to protect natural and cultural areas and these areas of outstanding value as world heritage sites. So, you can see some sites, and sites identified because some sites are identified because of the biodiversity importance. So we see that it came into force in 1975, and India ratified the convention in 1977.

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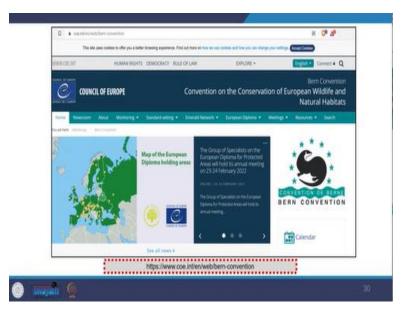
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Thereafter, we see the Bern Convention on the Conservation of European Wildlife and Natural Habitats 1979. And this one aims to protect endangered species and their habitat. It later included an emerald network of areas of special conservation interest and supporting the European Habitat Directives. So with that, it added the Emerald, and if you see what is Emerald.

The Emerald Network is an ecological network made up of areas of special conservation interest, and its implementation was launched by the Council of Europe. Then we see that 49 out of 51 European countries are

signatories of the convention and four African countries are part of this, including Burkina Faso, Senegal, Tunisia, and Morocco.

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So for more information, you can find it on the website of the Council of Europe, links are provided in the following slides and the suggested watch also.

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So after that, we also see the Pan-European Biological and Landscape Diversity Strategy, developed by the Council of Europe UNEP and the European Center for Nature Conservation. And through this, the target was to link the European and national protected areas together, and the ecological network. All of this is to ensure the conservation of Europe's key species habitats and ecosystems. And then you can also find the book P.E.B.L.D.S explained, which is a guide for IUCN members to pan-European biological and landscape diversity. So, this guide is also available, you can have a look at that link is also provided for you.

If we look at the European level, there are several policies and directives, that require the establishment of areas to protect biodiversity and planning of development, and particularly to ensure that all the threatened species can be maintained at a favorable conservation status so we can maintain that.

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European policies include:	
EU Biodiversity Strategy (COM(98)42) Produce biodiversity	
action plans.	http://wei.pitt.edu/5088/1/5088.pdf
Wild Birds Directive 1979/409/EEC	
Special Protection Areas (SPAs) protection of rare species , protect wild bird species and their habitats	

And so in that, we find the EU Biodiversity Strategy, which requires the European Commission to produce Biodiversity Action Plans, so they are going to make BAP Biodiversity Action Plans, and then you have the Wild Birds Directive. The target is to protect wild bird species and their habitats with particular protection of rare species. So for that, also, they need to prepare special protection areas, they need to identify special protection areas. I have also given you the link to look at it in detail to explore further.

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And then we also find Habitat Directives. The target of this directive was to protect habitats and species, especially by using measures to maintain and restore favorable conservation status. And again, you have you

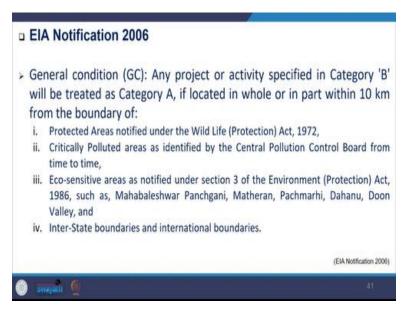
prepare special area conservations; you declare special areas of conservations here. And, and you would also use land use and development policies and landscape management outside these special areas of conservation. So again, I have provided you the link here, then you can also see the Water Framework Directive, which also requires that you maintain aquatic, wetland, and terrestrial ecosystems to achieve good status.



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That was about the international level, now looking at the national and regional legislation.

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Most countries have passed national-level environmental assessment legislation so even we have done that. And then that requires Conservation of Ecology and Biodiversity in the process of doing EIA, so that is required, so whenever the country has signed, that has to be translated in the EIA process. So, the protection, conservation, and management of wildlife within each country is enacted under national legislation.

So, how we protect, how we conserve, how we manage, we take care of all, all of it under the national legislation. This will affect the scope of EIA. So, whatever we do in EIA will be affected by what kind of national legislation is there, and how we do the, undertake the assessment.

So, you can see like in the EIA notification, you can see that like, I had shown you the list Category A, B, and so on. So, in general conditions, any project or activities are specified if they fall under the B category. So, we see that the protection, conservation, and management of wildlife within each country are enacted under national legislation. So, if we have national legislation in place to look after this wildlife protection, and conservation management, and whatever this national legislation is, it is going to affect the EIA process. So, how you process it what, what all you will cover the scope of EIA would be guided by these national legislation.

So, for example, you can see that in the EIA notification, we have as you have seen Category A and Category B, B1, and B2. So, whenever you have certain such kind of areas like protected areas, if they are notified under wildlife, then you have eco-sensitive areas as notified under like Environmental Protection Act. Some of the areas that fall under this, then have to be dealt with separately in Category A even though they come under Category B so, you see how it influences the scope of the work and then the process which you would follow.

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So, national legislation either enacts multilateral agreements or provides dedicated legislation on biodiversity so, the national, national legislation can enact whatever agreement has happened or they can have their legislation on the biodiversity. For example, you can see in the UK you have Conservation of Habitat and Species Regulation 2010, which follows EC directives on the conservation of natural habitat and wildlife flora, wildlife fauna, and flora. And then you also see national legislation on biodiversity and ecology can be either comprehensive or specific as well.

So you can have Comprehensive legislation, which contains measures to protect habitat, species, and area so everything is in one umbrella act. So you can have Comprehensive legislation, for example, you have the Wildlife Conservation and Management Act, which you can see from Kenya, and then you have India's Wildlife Protection Act 1972, which is also a comprehensive act. And then you can also see the UK Wildlife and Countryside Act 1985, which is again, a comprehensive act.

So, there are specific legislations also. So, you can have comprehensive or you can have specific, you would see those variations across so specifically legislation relates to the protection of specific areas, habitats or species such as like you can have where specific legislation would identify some areas. And based on those areas, you have to take care of things. So the most widely used example is the National Park Legislation. So if the National Park is being determined, then you cannot, like you have to take care of the development of what is happening there.

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- National Legislation on Biodiversity and Ecology
- Specific legislation relates to protection of specific areas, habitats or species:
  - Areas: National Park legislation- 1980 New Zealand National Parks Act ; 2003. South Africa Protected Areas Act.
  - · Species: 1992 UK Protection of Badgers Act.
  - · Habitats/land use: Forest laws of Brazil and India.



And then example of this includes, like 1980, the New Zealand National Park Act, and then you can also see the 2003, South Africa Protected Act as well. As you can see, areas of international conservation concerns such as the Galapagos also have national area protection. So we see that there can be legislation specifically for species so these regulations usually supplement the overarching national legislation.

So you can have various species-specific also as you can see for example, the 1992 UK Protection of Badgers Act, so is only focusing on badgers and then you all can also have habit or land use specific legislation this legislation relates to specific habitats or land uses, but have implications on ecological conservation example is like Forest law of Brazil or you can see Forest law of India.

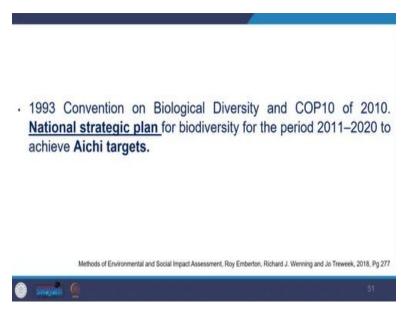
# □National and Regional Legislation

- · Kenya : Wildlife Conservation and Management Act (No:47 of 2013) .
- India: Wildlife Protection Act of 1972 (amended in 2006).
- UK Wildlife and Countryside Act 985 (as amended).
- · 1980 New Zealand National Parks Act (specific area/Habitat / Species).
- · 2003 South Africa Protected Areas Act (specific area/Habitat / Species)
- · 1992 UK Protection of Badgers Act (individual specific).
- Forest laws of Brazil (Habitats/land use).
- Forest Law India (Habitats/land use).



So, you can also see examples of countries that adopt national and regional systems. So, you have a range of all the legislation provided system provided to you, so, you can have a look at them the list is given to you here Convention on Biological Diversity (COP 10) of 2010 signatory countries to agree for the National Strategic Plan and this also helped to achieve the I key targets which are important to consider in the context of EIA, an assessment of the potential for development of to affect the biodiversity.

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We see that because of the Convention of Bio Biological Diversity and COP10 of 2010 the signatory countries are also the signatories, signatory countries agreed to prepare a national strategic plan, and to national strategic plan would help us to attain key targets.

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### In India as per the MoEFCC annual report :

- · Conservation (Biodiversity)
- Convention on Biological Diversity (CBD)
- · Nagoya Protocol on Access and Benefit Sharing (ABS).
- National Biodiversity Action Plan (NBAP)
- National Biodiversity Targets (NBTs)
- National Reports to CBD
- Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)
- Domestic measures, namely, Biological Diversity Act 2002 and National Biodiversity Authority (NBA)



In India, as per the MoEFCC annual reports we see the areas of work dealing with the conservation of biodiversity are aligned with the conventions and related activities you can see here you have the Convention on Biological Diversity which India is part, and then the Nagoya Protocol on Access and Benefit Sharing (ABS).

Then you can see the National Biodiversity Action Plan and National Biodiversity Targets you have National Reports to CBD then you have the Intergovernmental Platform on Biodiversity and Ecosystem Services, Domestic measures like Biological Diversity Act 2002, and National Biodiversity Authority (NBA) so all that you see which is there in the provision, how we align our things with the global requirement.

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So, you also see that in countries as per the policy and mechanism countries also adopt a national, regional-like-like-like like, it could be a state system. Wildlife legislation can occur both at the national and regional legislation levels. So you see that, for example, at the National level example you can see the National wildlife

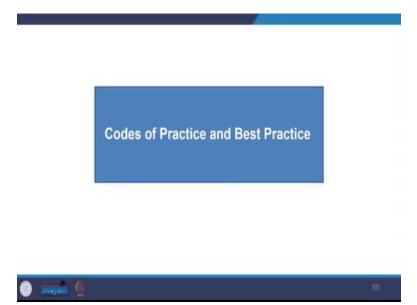
legislation of Uganda and you can see at the same time the Regional level, the regional National Park legislation of Australia, which is like for the state of New South Wales.

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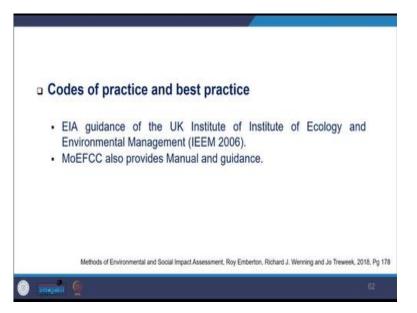
National Environmental Policy (1994)
2000 National Wildlife Act
1997 Local Government Act
2003 National Forestry and Tree Planting Act
1995 Wetland Act
2008 Oil and Gas Policy for Uganda
2000 Fish Act Cap 197
Animal (Prevention of Cruelty) Act Cap 220
2000 Cattle Grazing Act Cap 227
Plant Protection Act
2000 Prohibition of Burning of Grass Act Cap 33
2000 Animal Disease Cap 218

So, you can look at many other policies for review purposes, you can see all those lists have been provided to you here national environmental policy, then the National Wildlife Act, Local Government Act, and national. So, this is all international, national examples given to us, you see the range of acts, which are there in different countries at different levels.

So, you can see them here, you can see the Wetland Act, the Oil and Gas Policy for Uganda, the Fish Act Cap, the Animal (Prevention and Cruelty) Act Cap the Cattle Grazing Act, the Protection Act, Prohibition of Burning of Grass Act, Animal Disease Cap. So, all these you can see it is important that see, you would realize or you must be thinking that you would not know about a particular domain. So it is important that you have experts involved in the scoping of EIA, and so that there is a full understanding of the involved legislation affecting the protection of wildlife in the country which you are studying.

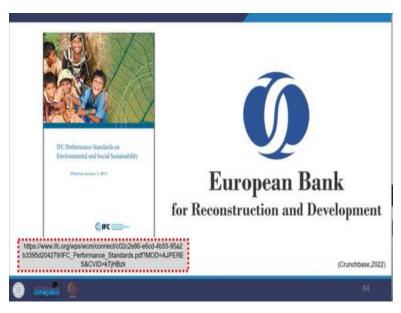


So, now looking at the codes of practice and best practices.



So you will find several ecological codes of practice in best practice guidelines such as you can find EIA guidelines of the UK Institutes of Ecology and Environmental Management you would also find MoEFCC in India also provides manuals and guidelines for various sectoral in which they have it or have all this information given so these you can use this for the EIA purpose.

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At the international level, you can also find IFC you can see environmental and sustainability performance standards. Then you can also see the European Bank for Reconstruction and Development also provides the African Development Bank provides Asian Development Bank as well and Inter American Development Plan. Inter-American Development Bank also provides information on this.

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So, bilateral funding agencies also require this to be taken care of like the Danish International Development Agency and then you see USAID then you also see JICA all these have requirements related to projects financed under the bilateral loans. You need to take care of ecological and environmental studies associated with the project if that loan if you are taking a loan for your project.

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Snip of The Inte	mational Finance Corporation (IFC) Performan	nce Standards (#c.org, 2022

So, looking at IFC, you see that Performance Standards, which are particularly related to this are Performance Standard 1, which involves assessment and management of environmental and social risk and impact. And then you also see Performance Standard 6, which deals with biodiversity and sustainable management of living natural resources. So, you can find those things, the link is also given to you.

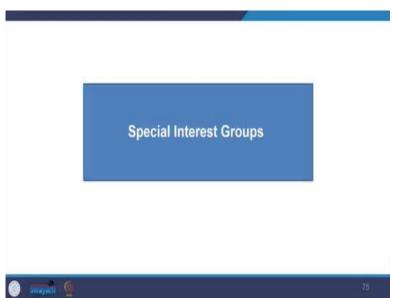
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And, if you look at PS6 particularly targets protecting biodiversity and maintaining the benefits of ecosystem services, and these things are given here you can also look at the certain classifications that PS6 introduces like you have habitat classification, modified land, natural habitat, critical habitat, legally protected, and intern, internationally recognized areas. So all these classifications are there, so you need to take care of that classification while performing EIA.

So, further moving on, we see that in many countries, professional institutions, and then societies, there are also special interest groups, which can be of help, and then can review so it is a good practice when you prepare EIA to get it reviewed, so that review can be taken care of.





So looking at various special interest groups, it is required that when you prepare EIA, you get it reviewed, so that you get inputs in terms of its scoping in terms of its process, and in terms of the identified impact. In this way, you can engage with different authorities, planning authorities ministries, and consultants, as well as NGOs and even research institutes. So that enriches your report and makes it much more refined. And you can also engage with the local experts. And they can be helpful at many stages of EIA.

# Appraisal can be taken with respect to scope, technical competence, validity, and proposed mitigation measures; and an indication of whether it would support or oppose planning consent. Special interest and conservation groups for taxa such as bats, butterflies, birds, reptiles, and amphibians. The Royal Society for the Protection of Birds in the UK and the Audubon Society in the US; Local museums and Data centers; Non-professional special interest groups such as local natural history or wildlife groups or cultural groups. Meteds of Environmental and Social Impact Assessment, Roy Emberton, Richard J. Wenning and Jo Treveet, 2018, Pg 20

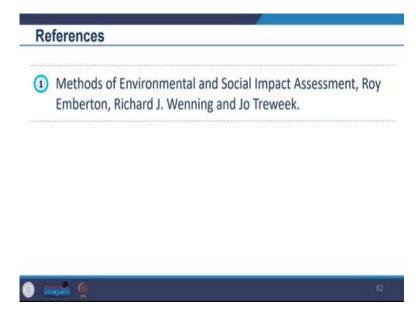
The appraisal by them will help you to improve the scope the technical competence of your report as well as how valid is your report and what kind of measures and mitigations you have supported. So, there are a range of special interest groups and they can be specific interest groups also.

Then they can be interest groups related to just species like bats, butterflies, birds, reptiles, and amphibians. For example, you can find the Royal Society for Protection of Birds in the UK and then you can also find the Audubon Society in the US. Then, you can also find local museums and data centers which can be helpful for you. And then there can be also nonprofessional special interest groups like local natural history wildlife groups or cultural groups, which can help review your EIA report. So, that was what we saw today.



So summarizing, what we covered, we looked at the domain of ecology, and what kind of laws and standards and all those apply. So, we looked at the international and multilateral agreements and conventions to which we align our activities, then we looked at national and regional legislation, what are the different categories and how they are different so that we saw and then we looked at codes of practice and best practices, then we looked at these special interest groups.

You can also look at some of the other laws in this area like you can look at Doon Valley notification, you can also look at the Protection of Top Hill Bombay, and the Aravalli ranges. And then you can also look at another sensitive zona, like Dhanoa Ecology Protection and the Eco-sensitive zone, Punchmuli notification, and then Mahabaleshwar, and Panchgani areas these eco-sensitive zones you can look into for further understanding.



This was the key reference for us we took from the book Methods of Environment and Social Impact Assessments.

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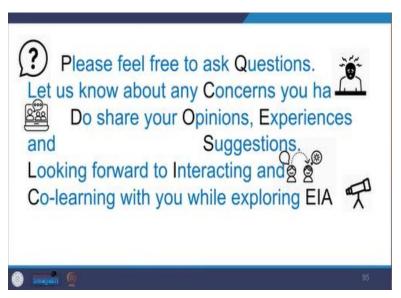
<ul> <li>INDIA'S FIFTH NATIONAL REPORT TO THE CONVENTION ON BIOLO https://www.cbd.int/doc/world/in/in-nr-05-en.pdf</li> </ul>	GICAL DIVERSITY
KENYA GAZETTE SUPPLEMENT http://extwpriegs1.fao.org/docs/pdf/ken134375.pdf	COMMISSION OF THE EUROPEAN COMMUNITIES
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And you can look at the suggested read here provided to you so all the reports and other documents you can read only if you want to know more.



And some watches have been suggested to you, you can see some videos here.

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So, ending up here please feel free to ask questions. Let us know about any concerns you have. Do share your opinions, and experiences, and feel free to make suggestions looking forward to interacting and co-learning with you while exploring EIA. Thank you.