

Environment Impact Assessment
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Lecture No. 10
EIA in India

Welcome to the course Environmental Impact Assessment. In the previous lectures, we saw the origin of EIA in the US and its worldwide development. So, today we will be covering, we will be looking at how what is the current state of EIA in India and we will map it in the global context.

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Coverage

- ① Contextualizing EIA in India on Global Context
- ② Initial Environmental Movement in India
- ③ Evolution of EIA in India

Learning Outcomes

- ① Review the evolution and state of EIA in India on Global Context
- ② Discuss progress with respect to EIA
- ③ Describe the Initial environmental movement in India and its impact on EIA legislation

Contextualizing EIA in India

Developed countries	Developing countries	India
EIA legislation <ul style="list-style-type: none"> From Initial level and hence the framework are much evolved 	<ul style="list-style-type: none"> There is Lack of formal EIA legislation. For instance, EIA is not mandatory in many African countries 	<ul style="list-style-type: none"> We have Formal legislation for EIA. It has been enacted by making an amendment in the Environment Protection Act 1986. Prevalent act is EIA Notification 2006 Draft Notification 2020
Public and Government Involvement <ul style="list-style-type: none"> Active involvement of all participants including competent authority, government agencies and affected people at early stages of the EIA. Process more robust and gives a fair idea of issues, which need to be addressed in the initial phase of EIA. 	<ul style="list-style-type: none"> Limited involvement of public and government agencies in the initial phases. This often results in poor representation of the issues and impacts in the report, adversely affecting the quality of the report. 	<ul style="list-style-type: none"> Limited involvement of public and government agencies in the initial phases.
Integrated approach to EIA <ul style="list-style-type: none"> All aspects including social and health taken into account. 	<ul style="list-style-type: none"> Mainly environmental aspects considered. Poor on social or health aspects. 	<ul style="list-style-type: none"> No provision in place to cover landscape and visual impacts in the Indian EIA regulations
The process of screening <ul style="list-style-type: none"> Done by competent authorities For instance, in EU countries competent authorities decide whether EIA is required after seeking advice from developer, NGO and statutory consultants. In Japan, screening decision is made by the authorizing agency with respect to certain criteria. In Canada, federal authority determines whether an environmental assessment is required or not. 	<ul style="list-style-type: none"> In developing countries, screening practice in EIA is weak. In most cases, there is a list of activities that require EIA but without any threshold values. 	<ul style="list-style-type: none"> Screening done on the basis of a defined list. Threshold values on the size of the project has been used to decide whether the project will be cleared by the state government or the central government.

Further, we will look at the initial environmental movement in India so, that we understand what is our perspective what challenges we have, and how far we have moved on, on this line. Further, we will also side by side look at the evolution of EIA in India. So, the expected learning outcomes that we see are that you should be able to contextualize EIA in India in the global context.

You should be able to describe the initial environmental movements in the country further you should be able to describe the evolution of EIA in the Indian context. So, let us first locate India concerning EIA with the developed countries as well as developing countries, and this particular session is taken from the UN training manual. So, looking at, and comparing developed countries, developing countries, and India we see concerning EIA legislation.

We see in the developed countries EIA legislation is very well framed for example, we can see it in Canada Canada Environmental Assessment Act regulates EIA as well you see, the EU countries are also guided by directives on EIA. So, their legislations are very well framed as they have started at the initial level. Whereas in the developing countries, you see that there is most often in many of the countries there is lack of formal EIA legislation.

For instance, EIA is not mandatory in many of the African countries. In India, you will see that there is formal legislation for EIA, it has been enacted by amending the Environmental Protection Act of 1986 the prevalent act is EIA Notification 2006. And right now, we have a draft which is 2020 which is under consideration.

So, moving on to the other aspects, when we look at EIA regarding public and government involvement, we see that in the developed countries as per this review, what we see is there is the active involvement of all participants in the process of public involvement including you see, competent authority all the stakeholders are involved, the government agencies are involved and even the effective people are involved at a very early stage of the EIA.

So, the process we see is also more robust and gives a fair idea of the issues that are there from the very beginning of the inception of the project. And likewise, when we talk about developing countries, there is limited involvement of the public and the government agencies in the initial phases, though, there is some involvement at the latest stage. So, because of this, often results in poor representation of the issues and impacts in reports.

And which adversely negatively affects the quality of the report. So, if people are not involved in government, their engagement is less and lesser in the initial praetor then there are a lot of things that are left out and eventually impact the quality of the report. Whereas then we see in India, we have public and government agencies involvement, but what is being revealed is that there is limited involvement at the initial level of the process. So, which also leads to a lot of confusion in complex situations at the later stage.

So, looking at another aspect is an integrated approach to EIA. So, while we see how integrated our approach is within concern with EIA. We see that all aspects including social and health are taken into account while in developing countries, it is mostly focused on the geophysical aspects. And other socio-unhealed aspects are not well considered as well when we look at India, we see that we have expanded a lot in many domains socio-economic impact assessments, and other things.

But still, there are limitations to what we have expanded to for example, landscape and visual impact have been not yet considered in the process. Further, we see that when we look at the alternatives in EIA, how much home how alternatives are considered in the EIA process when we say alternatives, we mean how many options have any proposals we are looking into in terms of the design alternatives in terms of location alternatives.

So, when we take a look at the EIA process from that perspective, we see that in the developed countries this proper consideration and all the alternatives are evaluated for we see in the developing countries, it is more or less absent. And our cases are also not that developed in terms of evaluating the alternatives. So, looking at another aspect of EIA looking at the process, and especially the screening part of the process.

So, we see that in developed countries, it is very well defined. For instance, in U EU countries competent authorities decide whether EIA is required after seeking advice from the developers, NGOs, and statutory consult consultants. In Japan, we see that the screening decision is made by the authorizing agency concerning the certain criteria that are available to them the same applies to Canada as well where federal authority determines whether an environmental assessment is required or not.



And in the case of developing countries, when they process they adopt it like here the screening practice is set to be considerably weak. In most cases, there is a list of activities that require EIA and also in that list many times the threshold limit values are not specified. Whereas, when we look at India, we also do it by screening is done by the list and our list has a certain threshold value in terms of the size nature of the project. So, on that basis, the screening is done.


So, the advantage of this though, we do it by this list method, it saves a considerable amount of time and it also avoids a lot of litigation that might come. So, there is a double advantage of going by list. It gives clarity it saves time and because it is clear, it avoids a lot of litigation that might arise because of interpretation or the decisions which is made by the committee.

So, looking at the other part of the process, the next if you can recollect we studied the various stages of the process. So, the first one was the screening, and if we look at the scoping process.

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Scoping process in Developed countries	Scoping process in Developing countries	Scoping process in India
<ul style="list-style-type: none">• Comprehensive and involves consultation with all the stakeholders.• In many countries like US, Netherlands, Canada and Europe, the involvement of the public and their concern are addressed in the scoping exercise.• Besides this, funding organisations such as World Bank, ADB and ERDB have provision for consultation with the affected people and NGOs during identification of issues in scoping exercise.	<ul style="list-style-type: none">• Scoping is very poorly defined.• In many countries including China, Pakistan, and many more, there is no provision for scoping.• In some countries like in Nigeria and Indonesia, a term of reference is followed for scoping while in some countries like Ghana, Taiwan and Chile, a general checklist is followed.• In countries where it is undertaken, there is no public consultation during scoping.• In most developing countries, scoping is often directed towards meeting pollution control requirements, rather than addressing the full range of potential environmental impacts from a proposed development.	<ul style="list-style-type: none">• Earlier scoping was done by consultant or proponent with an inclination towards meeting pollution control requirements, rather than addressing the full range of potential environmental impacts from a proposed development.• However, the new notification has put the responsibility of scoping on the expert committee based on the information provided by the proponent.• Consultation with public is optional and depends on the discretion of the expert committee.




भारत का राजपत्र
The Gazette of India

EXTRAORDINARY
PART II—SECTION 3
NOTIFICATION
G.O. MS/11/2006/4507
4. 11. 2006

संबन्धित अधिनियम
अधिनियम

द. प्रकी. 11 दिनांक 2006



पर्यावरण, वन्यजीव एवं जल संसाधन विभाग के अधीन आने वाले परियोजनाओं के प्रस्तावों का पर्यावरणीय प्रभाव का परीक्षण करने हेतु परियोजनाओं को प्रस्तावित करने से पूर्व प्रत्येक परियोजना के पर्यावरणीय प्रभावों का परीक्षण करने हेतु परियोजना प्रस्तावकों को निम्नलिखित दिशानिर्देशों का पालन करना होगा—

(क) परियोजना प्रस्तावकों को निम्नलिखित दिशानिर्देशों का पालन करना होगा—

1. परियोजना प्रस्तावकों को पर्यावरणीय प्रभावों का परीक्षण करने हेतु परियोजना प्रस्तावकों को निम्नलिखित दिशानिर्देशों का पालन करना होगा—

2. परियोजना प्रस्तावकों को पर्यावरणीय प्रभावों का परीक्षण करने हेतु परियोजना प्रस्तावकों को निम्नलिखित दिशानिर्देशों का पालन करना होगा—

Snip of EIA Notification 2006(Environmentclearance,2022).

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Scoping process in India

7. Stages in the Prior Environmental Clearance (EC) Process for New Projects:-

(a) The environmental clearance process for new projects will comprise of a maximum of four stages, all of which may not apply to particular cases as set forth below in the notification. These four stages in sequential order are:-

- Stage (1) Screening (Only for Category 'B' projects and activities)
- Stage (2) Scoping
- Stage (3) Public Consultation
- Stage (4) Appraisal

(b) **Stage (1) - Screening**
In case of Category 'B' projects or activities, the stage will entail the scrutiny of an application seeking prior environmental clearance made in Form 1 by the concerned State level Expert Appraisal Committee (SEAC) for determining whether or not the project or activity requires further environmental studies for preparation of an Environmental Impact Assessment (EIA) for its appraisal prior to the grant of environmental clearance depending upon the nature and location specificity of the project. The projects requiring an Environmental Impact Assessment report shall be termed Category 'B1' and remaining projects shall be termed Category 'B2' and will not require an Environmental Impact Assessment report. For categorisation of projects into B1 or B2 except item 8 (b), the Ministry of Environment and Forests shall issue appropriate guidelines from time to time.

(c) **Stage (2) - Scoping**
(i) "Scoping" refers to the process by which the Expert Appraisal Committee in the case of Category 'A' projects or activities, and State level Expert Appraisal Committee in the case of Category 'B1' projects or activities, including applications for expansion and/or modernization and/or change in product mix of existing projects or activities, determine detailed and comprehensive Terms Of Reference (TOR) addressing all relevant environmental concerns for the preparation of an Environment Impact Assessment (EIA) Report in respect of the project or activity for which prior environmental clearance is sought. The Expert Appraisal Committee or State level Expert Appraisal Committee

(ii) "Scoping" refers to the process by which the Expert Appraisal Committee in the case of Category 'A' projects or activities, and State level Expert Appraisal Committee in the case of Category 'B1' projects or activities, including applications for expansion and/or modernization and/or change in product mix of existing projects or activities, determine detailed and comprehensive Terms Of Reference (TOR) addressing all relevant environmental concerns for the preparation of an Environment Impact Assessment (EIA) Report in respect of the project or activity for which prior environmental clearance is sought. The Expert Appraisal Committee or State level Expert Appraisal Committee

Snip of EIA Notification 2006,Page no:5(Parivesh,2022)22

Scoping process in India

concerned shall determine the Terms of Reference on the basis of the information furnished in the prescribed application Form/Form 1A including Terms of Reference proposed by the applicant, a site visit by a sub-group of Expert Appraisal Committee or State Level Expert Appraisal Committee concerned only if considered necessary by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned. Terms of Reference suggested by the applicant if furnished and other information that may be available with the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned. All projects and activities listed as Category 'B' in item 6 of the Schedule (Construction/Township/Commercial Complexes Housing) shall not require Scoping and will be approved on the basis of Form 1/Form 1A and the conceptual plan.

(ii) The Terms of Reference (TOR) shall be conveyed to the applicant by the Expert Appraisal Committee or State Level Expert Appraisal Committee as concerned within sixty days of the receipt of Form 1. In the case of Category A Hydroelectric projects item 1(c) (i) of the Schedule the Terms of Reference shall be conveyed along with the clearance for pre-construction activities. If the Terms of Reference are not finalized and conveyed to the applicant within sixty days of the receipt of Form 1, the Terms of Reference suggested by the applicant shall be deemed as the final Terms of Reference approved for the EIA studies. The approved Terms of Reference shall be displayed on the website of the Ministry of Environment and Forests and the concerned State Level Environment Impact Assessment Authority.

(iii) Applications for prior environmental clearance may be rejected by the regulatory authority concerned on the recommendation of the EAC or SEAC concerned at the stage itself. In case of such rejection, the decision together with reasons for the same shall be communicated to the applicant in writing within sixty days of the receipt of the application.

(iv) Applications for prior environmental clearance may be rejected by the regulatory authority concerned on the recommendation of the EAC or SEAC concerned at this stage itself. In case of such rejection, the decision together with reasons for the same shall be communicated to the applicant in writing within sixty days of the receipt of the application.

Snippet of EIA Notification 2006, Page no:6 (Parivesh,,2022)

So, in the scoping process usually, when we look towards the developed countries, there is like the comprehensive process that is said to involve a lot of consultants and it is it engages well with the stakeholders and it is the countries like the US, Netherlands, Canada, and Europe the involvement of public and their concerns are addressed in the scoping exercise.

So, at the very beginning like we said public participation is addressed if the public is involved at the very beginning of it. So, here you see that at the scoping level also public consultation takes place. We also see that funding organizations such as the World Bank, ADB, and ERDB have provisions for consultation with the affected people and NGOs during the identification of the issues in the scoping exercise. So, what the review suggests is that it is very well-defined the process.

So, by looking at the developing countries, the review suggests that it is like really poorly defined, and including many countries like China and Pakistan, there is no provision for scoping. So, in some countries like Nigeria in Indonesia, a term of reference TOR is followed for scoping, while in some countries like Ghana, Taiwan, and Chile general checklist is followed.

So, in countries where it is undertaken, there is no public consultation during scoping, and in most developing countries, scoping is often directed towards meeting pollution control requirements. So, mostly it is the geophysical environment that is looked at rather than addressing the wide range of issues that you saw in our previous class.

So, when considering India in terms of the scoping process, earlier scoping was done by consultants or proponents with an inclination toward meeting pollution control requirements. And in the same way, it was not meeting the wider goal. So, we see that with the amendments now, this process has improved. And there are a lot of wide range of aspects which are now covered in EIA.

And the terms of reference, we have a standard reference TOR as well as it is also provided by the respective authority. So, looking under the components of EIA we look at the report.

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Developed countries	Developing countries	India
Reports <ul style="list-style-type: none"> • Most reports in local language 	<ul style="list-style-type: none"> • Most reports in English and not in the local language. 	<ul style="list-style-type: none"> • Most reports in English and not in the local language. In some case, executive summary is translated into local language.
A multi-disciplinary approach. <ul style="list-style-type: none"> • Involvement of expert with expertise in different areas. 	<ul style="list-style-type: none"> • Lack of trained EIA professionals often leads to the preparation of inadequate and irrelevant EIA reports in developing countries 	<ul style="list-style-type: none"> • Same in India. Preparation of EIA is done by consultants. Therefore, the selection criterion for the organisation is fees/cost rather than the expertise of EIA team.
Review and Monitoring <ul style="list-style-type: none"> • Two tier of EIA review. One conducted after the completion of EIA to check the adequacy and effectiveness of EIA and the second done before decision-making. 	<ul style="list-style-type: none"> • Poor review or monitoring. 	<ul style="list-style-type: none"> • In India too, EIA review is not upto the marks. The review agency called Impact Assessment Agency (IAA) lacks inter-disciplinary capacity. No representation of NGO in IAA, which is a violation of the EIA notification.
Expertise and capacity building in EIA: <ul style="list-style-type: none"> • The International Association for Impact Assessment (IAIA) and other organisations demonstrate that there are a large number of individuals with the capability to design, conduct, review and evaluate EIAs from countries of the North. • The major portion of teaching about environmental assessment also takes place in industrial countries. 	<ul style="list-style-type: none"> • The expertise in EIA is slowly developing. • In most cases, students from the developing countries go to the developed countries to gain knowledge of the subject. 	<ul style="list-style-type: none"> • Expertise in this area is developing.

So, regarding the quality of the report and the content of reports, what is suggested by this review is that most reports are in the local language in the developed countries. Whereas in developing countries, most reports are in English and not in the local language. So, you think about how much it can reach the people. So, in India as well, most reports are in English, and they are not really in the local language. But we see that the executive summary is translated into local languages now.

So, further looking at another aspect of EIA or multidisciplinary approach, we see that in the case of developed countries, the involvement of experts with expertise is considerably high in different areas. However, that is not the same in the case of developing countries. In India, we see that the preparation of EIA is done by consultants. The selection criteria for the organization are very much guided by the cost, but our system has evolved a lot, and a lot of certifications and things have come into place now.

So, moving further, we see that in the case of reviewing and monitoring, there are two tiers of EIA reviews in the case of developed countries. So, one is conducted after the completion of EIA to check the adequacy and effectiveness of EIA and the second is before the decision making. So, there are two sets of reviews and here the review suggests that in developing countries is mostly the review system is one stage as well, and only monitoring is done.

In India EIA review is now, and we have a specific system of how the review has to be done. The review agency is called the Impact Assessment Agency. They undertake this process and a lot of processes have now been streamlined. So, looking at another aspect, like the expertise and capacity building in the EIA.

So, for any EIA to undertake we need human resources who can take care of it. So, what is the scenario for that? So, we see that in developed countries the International Association for Impact Assessment and other organizations demonstrate that there are a large number of individuals with the capability to design.

So, since it started from there, they have learned in the process, a lot of capacity building has been done. So, there is a pool of human resources whereas in developing countries, there is less human resource which is

available to undertake the EIA process. And in India, the training for EIA has started for some decades now. So, we have a considerable pool resource pool in this regard.

So, that was about where we stand in terms of all the parameters constraint EIA. So, we have streamlined public participation is also considerably at this moment at this time as well as we see that human resources are good and that the processes are streamlined here. So, that is how we see from the entire all the aspects like where we place ourselves. So, this is what the study tells us.

So, let us now see how did we reach here? And what stand we kept in the process. So, at a certain point in time, we adopted the EIA. And then, the concern for the environment was from the very beginning. So, let us see, quickly look at that environmental movement in India. So, taking from the writings of Nabi on environmental movement in India. So, we see that if you can recollect, we talked about all the events, and we are going to talk that again we will frequently revisit that.

So, the institutionalization formation of bodies of global environmental concerns within the United Nations system had started and it started with the establishment of the United Nations, Environment Program UNEP during the Stockholm Conference in the 1970s. So, that time it started, and a body institutional institutionalization started happening.

At the same time, you also see that Brandt lad commissioned report further strengthened the process of making this environmental movement at the global level, taking it to the global level. All of these were starting to make a powerful impact on global policymaking. So, how we were moving how we target to address? So, it was having a considerable impact on that.

So, in India too, during that time there was a strong emergence of the environmental movement to save natural resources. So, our journey starts like much before that. So, as a natural resource, we started addressing natural resources like land, water, aquatic wealth, forests, wildlife, and air, fossil fuels. And we were looking at the rapid depletion and pollution in our country also.

So, mass movements were prominent in our context and we are raising concerns for environmental issues. So, the people here in the country were questioning the process like we were heading towards targeting development. So, people community normal people were asking questions about the ends and needs of natural resource management.

How we were managing natural resources? How we were moving towards industrialization? And the distribution of the resources within the like when we looked at sustainability equality and justice. So, how we were looking at that. So, the agenda of these environmental movements, if we look at them, was rooted in the communities that were dependent on all these resources like forests, water, and land for the right to life and livelihoods.

So, if all these people, people started to initiate this movement and if you recollect, if you we saw the US journey. So, saying that similar in the lines that environmental movement in India must be understood in the

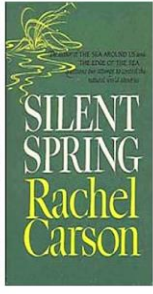
perspective and their emergence as a like we need to see that there were a lot of symbiotic relationships we were like, we have been till now we are more dependent on agriculture, forest resources.

So, there exists a lot of symbiotic relationships between humans and nature. And if we see, the movements were led by Dalits, tribals, forest, and Hill dwellers, peasants, the farmers, the fisher folk fishermen, women, who are who are were defining their struggles. And then they were the ones to create this movement here. So, it was from this community background from this group of people that it was from this group of people from the society that the entire country was getting the momentum.


It was trying to understand that environmentalism was being popularized, it was the concept that was introduced to them. So, let us see how did we reach here and what stand we kept in the process. So, first, look at the initial environmental movement in India.

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Rachel Carsons' Silent Spring (1962)
(activist culture specially youth)




The book was published on September 27, 1962,




June 28, 1969
Fire on the Cuyahoga River




In 1969, the Cuyahoga River in Ohio becomes so polluted that it catches on fire. The fire led to an overhaul of water pollution control activities such as the Clean Water Act and the Great Lakes Water Quality Agreement. By bringing national attention to water pollution issues, the Cuyahoga River fire was one of the events that led to the creation of the federal Environmental Protection Agency and the Ohio Environmental Protection Agency.
[Read more about the Cuyahoga River fire.](#)


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Tilari Shahid Smarak
(UMJB,2022)



Location of Tilari in Uttarakhand

1977	Baharain begins first after government auctions trees of Adwari and Sali forests; In October, women from 15 villages control of Adwari forest for 7 days	Narendranagar, Tehri
	In celebration of 'Forest Day' on May 30, activists enter local forests and apply mud and sack planters to clear pines damaged by over-tapping	Hemnal Ghati, Tehri Garhwal
1976	Rain Investigation Committee report identifies deforestation as cause of environmental disasters in Himalayas—leads to 10-year limited ban on commercial felling	Kamron
	Successful Chipko protest	Hemnal Ghati, Tehri Garhwal
1975	Uttar Pradesh Van Nigam formed, taking over forest administration and declaring a ban on forest felling	
1974	Reni Protest in March	Reni, Chamoli
1973	Reni forests auctioned at annual government forest auctions in November	Reni, Chamoli
	Second DGSS protest against Symonds' realignment in June	Phata, Makinda Valley, Chamoli
	DGSS protest against Symonds loggers in March	Gopeshwar, Chamoli
1972	Government denies tree allotment to DGSS, grants to Symonds—sparks widespread protest	Gopeshwar, Chamoli
1971	DGSS members protest a governmental forestry meeting in October	Gopeshwar, Chamoli
1970	Widespread and destructive flooding	Alaknanda Valley, Jharwal, Chamoli
1968	Protests on Tilari Martyr's Day, May 30	Gopeshwar, Chamoli
1964	DGSS receives contracts from Forest Department and sets up small industry to produce furniture and agricultural equipment	

(Kedzior,2006)


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Uttarakhand Glacier Burst | What is GLOF? | Dhruv Rathee
Dhruv Rathee ✓
1.4M views • 11 months ago
<https://www.youtube.com/watch?v=7LmXl7YisVQ>

What caused the flash floods in Chamoli, Uttarakhand?
<https://www.youtube.com/watch?v=qFalSxUXLVE>

अलकनंदा नदी खतरे
2:33 आज पर PREVIEW
<https://www.youtube.com/watch?v=pukVl5I8cE>

HIMALAYAN HORROR
GLACIER DEVASTATION
BREAKING NEWS
Chamoli Glacier Burst | Tapovan Dam Damaged By Flash Floods, Here's What Exactly Happened?
<https://www.youtube.com/watch?v=7Y1LZCRxD8>

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The Chipko Movement, 1973

Chipko Movement
<https://youtu.be/qBuOoYZ-U4A>

The Chipko Movement
https://www.youtube.com/watch?v=r_N4gJLmJt4

Villagers hugged the trees and encircled them to prevent being hacked. (Indiatimes, 2022)

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So, taken from the writings of Omar Nabi on environmental movements in India we see that like, when we compare, we saw that in the USA Silent Spring, The Population Bomb, and Curia Hoga River fire created a movement. So, that is what we saw while we were looking at the USA, in India too, or during the time, there was a strong emergence of environmental movements to save natural resources, land, water, aquatic wealth, forests, and wildlife.

And there was a movement to save all these from rapid depletion and pollution. There were mass movements, that were prominent and they were raising concerns for environmental issues. So, the committees were questioning the means through which the development was addressed. So, we were focusing on development and how it has been addressed, it was questioned by the communities.

How the natural resource management was taking place in the context of sustainability, in the context of equality and justice. So, all these were questions. So, these questions and concerns were causing environmental movement in the country. These movements came from the communities who were dependent on these natural resources for their rights. So, life and livelihood.

So, in the Indian context, the relationship with the environment was much more symbiotic, there was a close human and nature relationship and we were we have been much more into an aggregated agri-gradient society. So, these movements and struggles were led and defined by mostly Dalits, tribals, forest and hill dwellers, peasants, fisher folk, and women.

So, it was this group of people we are talking about, who created the sensitive concept of environmentalism and created the discourse for a lot larger community in the country. So, just to have a reference, to understand the context, like what was happening in a landscape, we will look at the Tilari Matri day of May 30, 1930. So, Tilari cannot which cannot when we say cannot we mean an incident emerges from forest settlements of 1927-28.

So, you look at the revolts happening from that time. These forest boundaries were redrawn in the administrative aspect, an encroachment was made on the old and established cattle pastures. So, this caused great anger among the people of the stress local people set fire to a part of the forest in May 2019-30. The district forest officers arrested the leaders but the agitated local people freed them while proceeding to towards Tehri.

Then the army surrounded the protesters and opened firing fire killing many. So, now you can see that the memorial was created at Tilari which is like a 2.5-kilometer bar in Bar Court Uttarakhand. So, these sequential events like this were constantly happening. And you can also see the timeline there. So, these sequential events years later followed widespread destructive floods in Alaknanda Valley in Chamoli.

Simultaneously, you are seeing at the global level there is the institutionalization of global environmental concerns at the United Nations Environmental Program at the Stockholm conference and the Brundtland Commission report. So, all these were taking place simultaneously you see and then it was reinforcing each other. We also learn that Swami Danand Ji a spiritual leader, who was also traveling from the conference to the country also strengthened the movement.

We see that there was the Chipko movement, where women hugged the trees to stop their felling for protection and to protect their environment. So, you see how there was a question about equality, there was a question about justice in the environment and also you are seeing the linkages with the disaster here. So, it is also important to look at nations stand at the United Nations Conference on Human Environments held in Stockholm.

So, this also helps us to understand like to understand what stand we kept in what landscape we were ever in there were challenge challenges as a nation and how we perceived development and the environment. So, what does it mean for us to undertake the environmental concerns? So, there were a lot of environmental concerns, but what it would cost us? So, to understand we will look at this.

(Refer Slide Time: 26:23)



(Source: Times of India, 2021)



Late Prime Minister Indira Gandhi said:

“The environmental problems of developing countries are not the side effects of excessive industrialization but reflect the inadequacy of development. The rich countries may look upon development as a cause of environmental destruction, but to us it is one of the primary means of improving the environment, for living or providing food, water, sanitation and shelter, of making the desert green and the mountains, habitable.”

(Nabhi, India Quarterly, 2006)

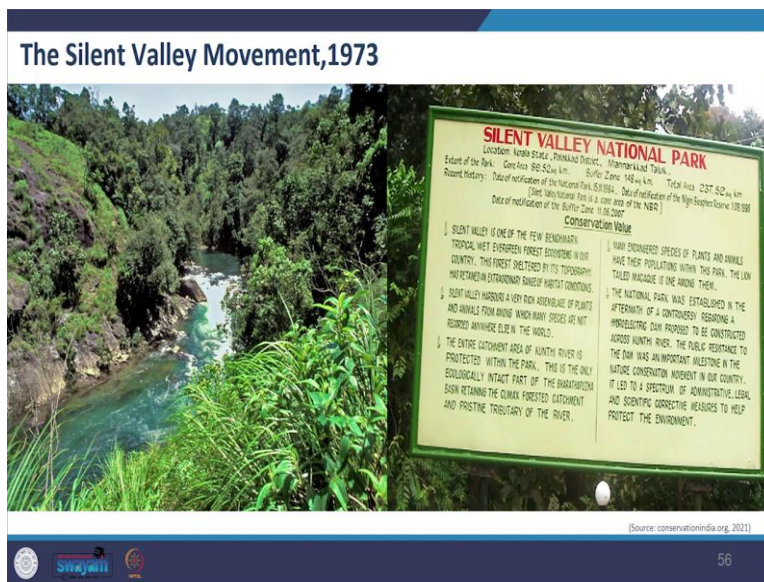


Mrs. Gandhi, speaking before a gathering of distinguished Indian scientists on 3rd January 1981, had proclaimed:

“Development with conservation means that growth priorities do not sacrifice the needs of tomorrow for immediate compulsions...poverty and economic backwardness are themselves the biggest constraints to growth”.

(Nabhi, India Quarterly, 2006)





And we will be looking at the keynote address of then Prime Minister, Mrs. Indira Gandhi in the conference, where she powerfully outlined the hopes and the fears of the developing countries in response to the prevailing understanding of environmental priorities. So, there was a lot of emphasis given on the environment, but as a developing country, how much we could do, and what it would cost us?

So, the environmental issues that largely emerged from industrial development were put into a more realistic framework. So, that the basic cause of environmental degradation in poor and underdeveloped countries could be identified and tackled.

So, listening just taking from her keynote, we see that she said, the environmental problems of developing countries are not the side effects of excessive industrialization. So, it is not the side effects of industrialization, but it is the reflection of the inadequacy of development. So, if the development sustainable development would happen, they would be able to take care of the environmental problems. And, comparing it with the rich countries, the rich countries may look upon development as a cause of environmental destruction.

But to us meaning the developing countries it is one of the primary means of improving the environment for living or providing food, water, sanitation, and shelter or making the desert green and the mountain habitable. So, the interpretation of the statement suggests that the degradation of the environment is not merely a question of pollution generated by industrial activities, it is also the complete concept of quality of human life.

So, it is just not the pollution, it is also the quality of life. So, destruction of forests, erosion of soils, depletion of wildlife, accumulation of waste, and then migration to the urban areas. These all were considered to be indicators of underdevelopment. As well as if you will see the disease, the hunger, malnutrition, all of these.

So, the concept of environments in developing countries like India brings a vision of society where the human settlements would be healthy drinking water would be easily accessible, sanitary conditions would be

on the acceptable level and society would be able to provide basic opportunities to its members to live in dignity. So, that is what we were looking at as a concept.

So, further, we also see that Mrs. Indira Gandhi highlighted the developments with conservation and what it means to us. What has to be prioritized and what should not be done? So, are we in the Indian context, we further see that NGOs played a very important role in developing and enhancing the people's attitude and creating scientific knowledge and technical skills here?

So, another key movement in this like we saw the Chipko Andolan. So, another key movement, especially in terms of EIA was the silent valley movement which we will see in detail as well. So, the Silent Valley movement stands out as one of the most important milestones in shaping public opinion. So, how the public came together as well as the formation of the official policy.

So, this particular case had a key role to play the Silent Valley Hydro Electric Project in Kerala is the only scheme which has at that time was the only scheme which was halted on the environmental grounds. So, this project was not undertaken on the environmental concerns.

Narmada Bachao Andolan, 1985

The slide features a map of the Narmada river basin in central India, showing the main canal, Rann of Kutchch, Command area, Gandhinagar, Ahmedabad, Rajkot, and Dam site. It also shows the states of GUJARAT, RAJASTHAN, MADHYA PRADESH, and MAHARASHTRA. A large photograph shows a massive crowd of people at a protest, holding a banner that reads 'नर्मदा नचा आंदोलन' (Narmada Ncha Andolan).

(Hindustan Times, 2022)

(Source: theWire, 2021)

The Tehri Project, 1980's till 2004

The slide includes a photograph of the Tehri Dam, a map of Uttarakhand showing the dam's location near the border with China and Nepal, and a portrait of Sunder Lal Bahuguna. A text box describes him as the 'DEFENDER OF THE HIMALAYAS' and mentions his 4,700 km trans-Himalaya march in 1986-88. It also lists his contributions to the Chipko Movement and the Anti-Fisheri Dam movement.

(Source: BBC news, 2001)

(Source: lingaraj, 2008)

(Source: newslfics, 2021)

Sea Turtles and their Conservation

The slide shows an olive ridley sea turtle and a large group of turtles on a beach. A message 'Give Us Space TO Live' is written in the sand. A conservation status chart shows the following categories: Extinct (EX), Endangered (EW), Critically Endangered (CR), Vulnerable (VU), Near Threatened (NT), and Least Concern (LC). The olive ridley sea turtle is marked as Vulnerable (VU).

An olive ridley sea turtle at Gahirmatha beach, Odisha, India

Conservation status

Extinct (EX) Threatened (EW, CR, EN, VU) Least Concern (NT, LC)

Vulnerable (IUCN 3.1)¹¹

(Source: Insights, 2016)

(Source: Deccan Chronicle, 2016)

Chilika Bachao Andolan, 1992



(Source: the hindu, 2016)



(Source: ejanfax.org, 2019)



So, similarly, we see Narmada Bachao Andolan and if you look at it the major problem associated with was about there were many damages like large-scale deforestation, loss of flora and fauna, and then the waterlogging and salinity that a range of problems which we have already discussed. So, these were one of the major problems associated with that likewise we also see the opposition for the Tehri projects.

The height of the project and the displacement that was happening because of that. So, this also raised a lot of environmental concerns and environmental movements. Similarly, we see another movement which was related to sea turtles and their conservation and Gahirmatha Bhitarkanika marine century in Orissa. So, another one is the Chilika Bachao Andolan we see.

So, all this was happening where the conflicts were seen about the dependency of a dependency of various stakeholders on the resources if you can remember the recollect the diagram which we had studied before.

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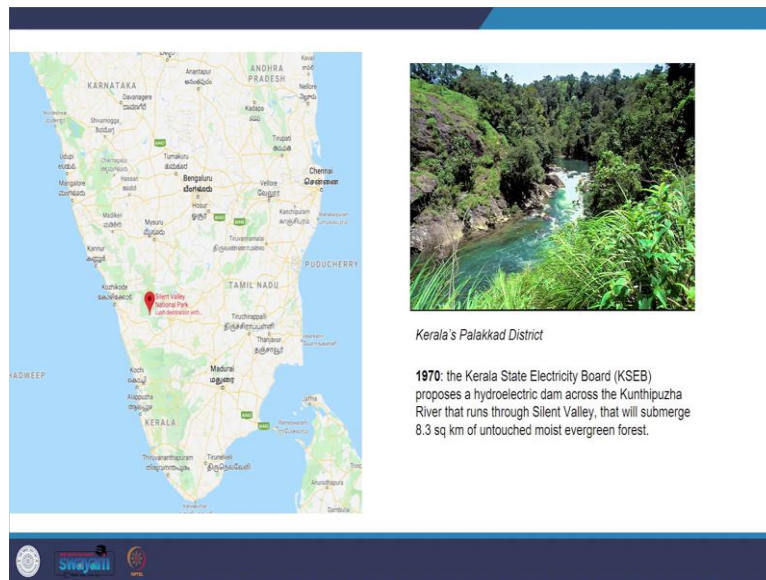
View of water Holy Faith (left) and Tower 1 of Alfa Serene (right) being razed down in Maradu, Kochi on Saturday.

[Thulasi Kakkat, The Hindu, 2021]

EIA Evolution in India

Silent River Valley Hydroelectric Project

- **Proponent:** Kerala State Electricity Board (KSEB)
- **Project details:** 130 m high dam across the Kuntipuzha river and a reservoir,
- **Problem:** was considered a big threat to the biodiversity and forest ecosystem of the Silent valley.
- **Result:** In 1985, the project was abandoned and Silent Valley was declared as a national park.
- This case marked a new beginning in India and since then, EIA was extended to other activities.



And now, all these movements led to that and the recently must have seen the Alfa Serena apartment which was built on the coastal zone in Kochi how it was pulled down due to the violation of the coastal regulation zone at Maradu. So, use that was done in 2020. So, how strongly we have come up from the initial movement to now, the application of EIA. So, I have not covered all the parts here, but just picking a few of the important milestones to understand the context of the landscape here in the country.

So, now let us look at the legal parts of EIA evolution and the process part of evolution in India. So, in India, the first EIA was ordered, like the Silent River Valley So, in 1980 while considering the Silent River Valley Hydroelectric Project. Which was a controversial project. This case marked a new beginning in India and since then he has extended to other activities also.

So, and was also extended to larger public sector projects requiring public investment board clearance. So, this was a key case like I said before So, we are going to just spend a few moments on this one. So, this project Silent River Valley Hydroelectric Project, was proposed the proponent of this project was Kerala State Electricity Board, and the project involved like 130 meter 130-meter-high dam across Kuntipuzha River and a reservoir.

So, the problem was that the dam was considered a big threat to the biodiversity and the forest ecosystem of the Silent Valley. The consequences of the opposition was that in 1985, the project was abundant and Silent Valley was declared as a National Park. So, this case mounts a new beginning in India and since then EIA has extended to other activities as well.

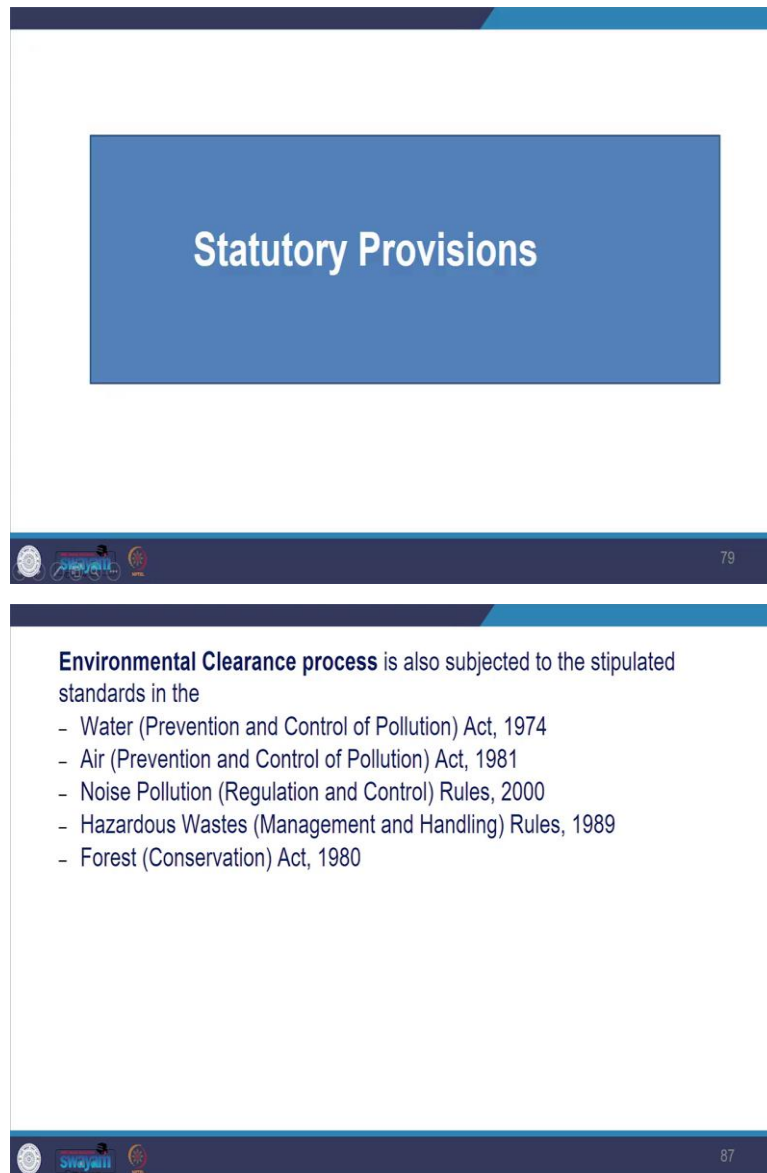
So, if you would look at the key argument what was the conflict here? So, the key argument from the proponent of the dam So, that you understand the complexity involved. Proponents of the dam Kerala State Electricity Board was that it would generate electricity for the state of Kerala, it would was that it would generate electricity for the state of Kerala with installation of 4 units of 60 megawatts each.

Then, they claimed that the state's electricity requirements would not be met without this additional power so it was needed. It would irrigate additional areas and employ several people. And whereas, this is what

proponents were arguing that the conservationists argued that the entire lower valley would be submerged by the dam and it would destroy its biodiversity.

And there was also the political intervention in 1981 giving up to the like there was a lot of public pressure. So, Mrs. Indira Gandhi declared that Silent Valley would be protected however, it was not protected but then there was integration. Eventually, this project was abandoned. It was in 1983, that the site Silent Valley Hydroelectric Project was called off and then Prime Minister Rajiv Gandhi inaugurated Silent Valley National Park in 1985.

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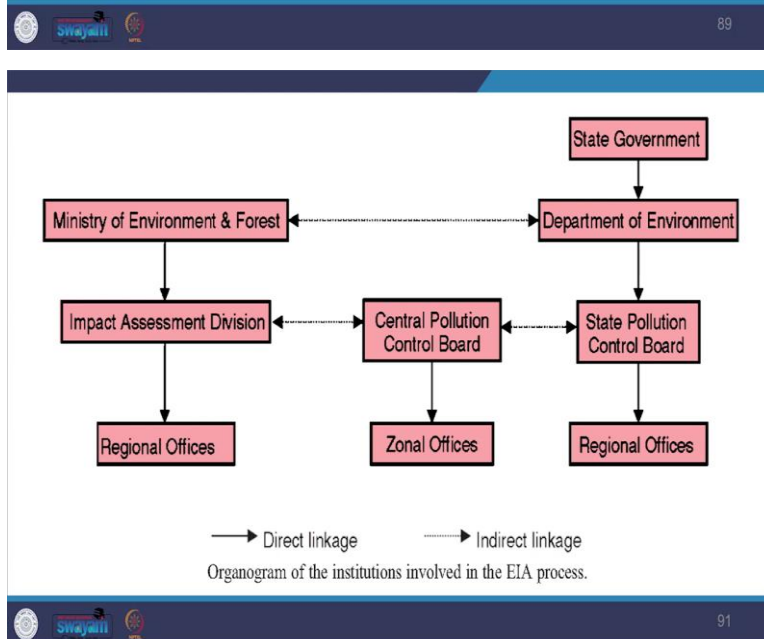
The image shows two slides from a presentation. The top slide has a blue header and a central blue box with the text 'Statutory Provisions'. The bottom slide has a blue header and a white body with a list of environmental laws and rules. Both slides have a footer with logos and the number 79.

Statutory Provisions

Environmental Clearance process is also subjected to the stipulated standards in the

- Water (Prevention and Control of Pollution) Act, 1974
- Air (Prevention and Control of Pollution) Act, 1981
- Noise Pollution (Regulation and Control) Rules, 2000
- Hazardous Wastes (Management and Handling) Rules, 1989
- Forest (Conservation) Act, 1980

Administrative framework



So, we will discuss the status of EIA in India from the perspective of statutory provision. So, this is the case we see where EIA came into. Like where it was first implemented, and the project was halted because of applying the EIA and as well as the people coming together. So, that is why that case is very important. So, and from this, the EIA was aligned with others.

So, now, looking at the status of EIA in India from the perspective of a statutory provision, administrative structure, and procedural arrangement, we see environmental management issues as we have already seen that it came into existence in 1972. Especially when the National Committee on Environmental Planning and Coordination NCEPC was constituted following the Stockholm conference.

This was constituted under the Department of Science and Technology. So, the planning commission directed this and NCEPC to undertake EIA for this particular project. This later Department of Environment was established as per the recommendation of NCEPC in 1980 and which was finally converted into a full-fledged Ministry of Environment and Forests years later.

So, you see that The Ministry of Environment and Forests enacted the Environmental Protection Act of 1986, which is an umbrella act covering various environmental aspects. So, under EPA 1986 and EIA

notification 1994 was brought out making like this notification made EIA mandatory for a particular group of activities. So, this notification not only specifies the types of activities requiring EIA but also fixes a schedule for the whole process.

It also defines the role of MOEF like the authority and what it will do in the entire process. So, with this like projects like mining industries, and hydroelectric plants, all this came under the purview of EIA. One of the major amendments made was to introduce a public hearing procedure in 1997. In this, it outlined the process of conducting public hearings and how the public hearing has to be done.

And how the sub-reports have to be submitted to which authority. So, that was made clear. And then the environmental clearance process was made clear. Then related standards were created, like the Water Prevention, control Act, Air Prevention and Control Act noise pollution control rules. So, all these were set up, you will also find hazardous waste management and handling rules.

So, all these were created. So, that was the statutory aspect of the EIA now looking at the administrative framework. So, the existing environmental clearance process is now in a layers system involving both central and state authorities. So, there is also a central authority, as well as a state authority, which you can see in the figure at the central level Impact assessment division EIA undertakes under the regional offices of the ministry.

And also with the help of the Central Pollution Control Board. All these like the impact assessment division, the CPCB, and the ministry, all these three important institutions. They create they are responsible for this and you also see the State Pollution Control Board and State Department of Environment are working at the province level. So, you see, at the central level, you see impact assessment division, ministries, the Central Pollution Control Board.

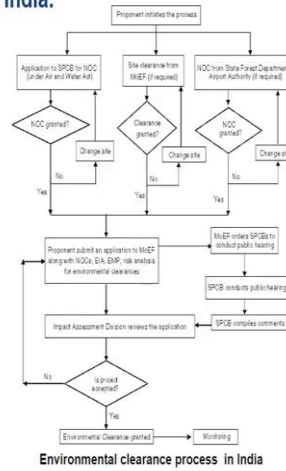
Whereas at the state level, you will see the state Pollution Control Board Department of Environment. So, these work at the state level. So, they are defined roles for you for the agency for assessment, as well as you will find, that it gives a clear role for the process, and how the process will be identified. Then you also see the role of CPCB. It is an autonomous organization under the administrative control of the ministry.

So, its purpose is to guide and to make standards and support it, it is not directly involved in the environmental clearance process. So, you similarly see that there is a defined role for the Department of Environment and also for the State Pollution Control Board. Likewise, you also see that there are regional offices for the Ministry of Environment and Forest.

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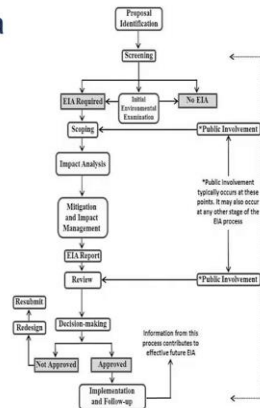
Procedural Framework

Environmental clearance process in India.

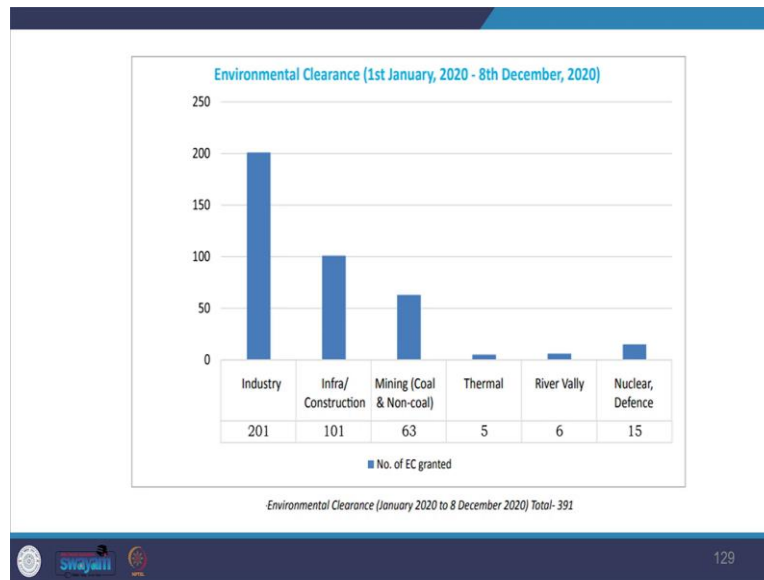


Environmental clearance process in India

EIA process in India



INDIA EIA PROCESS:
Source: ENVIS Center on Human Settlements, 2022)



So, now looking at the procedural framework. So, the whole process of environmental clearance involves many ministries and departments. The process starts when project proponents apply for NOC to the respective State Pollution Control Boards or other local authorities. So, as per the local context. So, the site clearance is required for some of the activities such as the mining and so on. So, all those processes have to be followed.

So, you can see here the environmental clearance process, which is followed in India, you can see how the application process takes place, the site clearance process takes place, and NOCs are given, and then how the entire process takes place and then the decision, in the end, is made like whether the project is to be accepted or not. So, if you look at a broader category EIA process is divided into three basic steps.

So, one is the preparation of EIA, and then the other is about the review and decision making and then the third is the post-project monitoring. A public hearing also is considerable here Indian system provides an opportunity to involve affected people and vulnerable groups to develop terms of reference for EIA. And their concerns are made and are involved in the process.

So, we see that there is a well-defined legal structure in the country. And then there is also the presence of well all the regulatory structures. And if you look at the weakness of our system EIA practice in India is restricted to project level. So, EIA is already at the project level and has a lot of weaknesses in terms of it being seen as merely a requirement for clearance purposes.

Still, it is said to be the reviewer suggests that this screening and scoping processes are not well defined in the country leading to a lot of other complications as well as we see there are a lot of problems about the insufficiency of the baseline data which is available and also there is inconsistent application of evaluation and predictive tools about the methods also there is inconsistency.

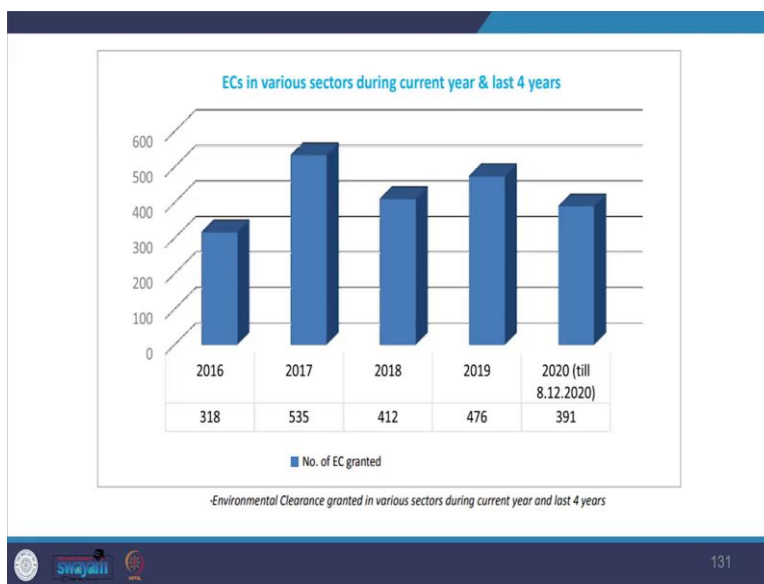
And then there are limitations or there are issues with monitoring and implementation also. And we also see that public participation is inadequate as well. And even though the quality of the EIA report is also set to be not of the desired quality. Further, we also see that since the EIA process needs the involvement of a lot of

people there is a lack of coordination among various authorities and then there is the coordination and decision making is poorly defined.

So, in the image here you can see the EIA process in India again, and see how the entire process takes place here. So, looking at how many projects we have done, this is taken from this annual report of 2021. And in which you see the environmental clearance which was done from January 2020 to December 2020. You can see the number of industry infrastructure mining thermal River Valley and nuclear defense projects that have been cleared so far.

So, you see that this also shows the number of projects, that are meeting the environmental climate criteria, and how the process has been going on. So, in this image, you also see the sector-wise list of environmental clearance here.

(Refer Slide Time: 45:37)



SCHEDULE
(See paragraph 2 and 7)
LIST OF PROJECTS OR ACTIVITIES REQUIRING PRIOR ENVIRONMENTAL CLEARANCE

Project or Activity	Category with threshold limit		Conditions if any
	A	B	
1 Mining, extraction of natural resources and power generation (for a specified production capacity)	(1) 2-30 ha of mining lease area in respect of coal	(2) 150 ha of mining lease area in respect of non-coal mine lease	General Conditions shall apply except for project or activity of less than 1 ha of mining lease area Provided that the above exemption shall not apply for project or activity if the sum total of the mining lease area of the said project or activity and that of existing operating mines and mining projects which were accorded environmental clearance and are located within 500 metres from the periphery of such project or activity equals or exceeds 1 ha Note Where environmental clearance is sought in the state of Jharkhand, for which an application shall be pending in two years prior to the date due (Bifurcal) Provided that an such environmental clearance shall be required for a mining project or activity in the state of Jharkhand which has already obtained environmental clearance under the Notification. (a) Mineral prospecting is exempted
	(1) 150 ha of mining lease area in respect of coal	(2) 1150 ha of mining lease area in respect of coal mine lease	
(a) Other projects	(1) All projects	(2) All projects	
(a) Other projects (coal, lignite and other mines) passing through national parks, sanctuaries, coral reefs, ecologically sensitive areas			

2. Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

- All new projects or activities listed in the Schedule to this notification;
- Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization.

Screening only for category B projects
Project requiring EIA termed as B1 rest B2 except item 8(b)

3				
Materials Production				
(1)	(2)	(3)	(4)	(5)
3(a)	Metallurgical industries (ferrous & non ferrous)	a) Primary metallurgical industry All projects b) Sponge iron manufacturing ≥ 200 TPD c) Secondary metallurgical processing industry All toxic and heavy metal producing units $\geq 20,000$ tonnes annum i) All toxic and heavy metal producing units $< 20,000$ tonnes annum ii) All other non-toxic secondary metallurgical processing industries > 5000 tonnes annum	Sponge iron manufacturing < 200 TPD Secondary metallurgical processing industry i) All toxic and heavy metal producing units $< 20,000$ tonnes annum	General Condition shall apply Note: (i) The recycling industrial units registered under the HSM Rules are exempt. (ii) In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electric arc furnace, and cupola with capacity more than 35000 tonnes per annum (TPA) would require environmental clearance. (iii) Plant units other than power plants (given against entry no 114) of the schedule, based on municipal solid waste (non-hazardous) are exempted.
3(b)	Cement plants	≥ 1.0 million tonnes annum production capacity	< 1.0 million tonnes annum production capacity All Stand alone grinding units	General Condition shall apply

(Parivesh, 2022)

So, you see as per the sector, how different projects are being cleared. So, this is the list that we follow for clearance purposes you can see the category A B, and C. So, category A is taken care of by the central government, and category B is taken care of by the state government. So, there is the list which you see of all the elements which are there. So, this is what we saw about the Indian context.

So, summarizing, what we covered today. So, we saw how the how compared to the other countries, how EIA is there in India.

(Refer Slide Time: 46:19)

Summary	
1	Contextualizing EIA in India on Global Context
2	Initial environmental movement in India
3	Evolution of EIA in India

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References

- 1 Glasson J, Therivel R (2019) Introduction to Environmental Impact Assessment 5th edition, Press Routledge
- 2 United Nations Environment Programme (UNEP) (2002) Environmental Impact Assessment Training Resource Manual Second edition
- 3 Asrar, G. R., Lucas, P., van Vuuren, D., Pereira, L., Vervoort, J., & Bhargava, R. (2019). Outlooks in geo-6-Source: Global Environment Outlook (GEO-6): Healthy Planet, Healthy People
- 4 Uma S. Nabhi., Environmental Movements in India: An Assessment of their Impact on State and Non-state Actors (pp. 123-145). Vol. 62, No. 1, January-March 2006 of India Quarterly on JSTOR



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Suggested Watch and Read

Books:



1. Environmental Impact Assessment for Developing Countries: Asit K. Biswas
2. Environmental Impact Analysis Handbook : G. J. Rau and C.D. Wooten
3. Environmental Impact Assessment by C.W. Canter
4. Environmental Impact Assessment Theory and practice Peter Wathern


Videos:


- The Chipko Movement: a milestone in Ecofeminism | Feminism In India https://www.youtube.com/watch?v=YXTakx-3Q0&ab_channel=FeminismInIndia
- Chipko Movement | Sunderlal Bahuguna | Eco-Activist https://www.youtube.com/watch?v=qBuOoYZ-U4A&ab_channel=PrasarBharatiArchives
- Narmada Bachao Andolan- An overview of the 32 year long struggle https://www.youtube.com/watch?v=ZB_YtmZIMY&ab_channel=MediaCollective
- Tehri Dam Conflict https://www.youtube.com/watch?v=ZxSQ2H3Xus8&ab_channel=2thepoint
- Success Story of Silent Valley National Park https://www.youtube.com/watch?v=DwUrIV7_do&ab_channel=KeralaForestsandWildlife



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 Please feel free to ask Questions.
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 . 



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Then we also describe the initial environmental movement. And then we also saw like currently, what act is there in place? And then what kind of process is followed? And then what is the strength of it? And how many projects we have been able to clear? What indicators do we see here?

So, that was all that we covered today. And then these are the references that we used, and then our coverage was not like it is limited by the time we had in hand. So, there are certain suggested watch and read for your purpose if you want to explore more. Please feel free to ask questions. Let us know about any concerns you have to share your opinions experiences and suggestions. Looking forward to interacting and CO learning with you while exploring EIA. Thank you.