Environmental Impact Assessment
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Lecture 57
EIA – Reporting & Review of EIA Quality

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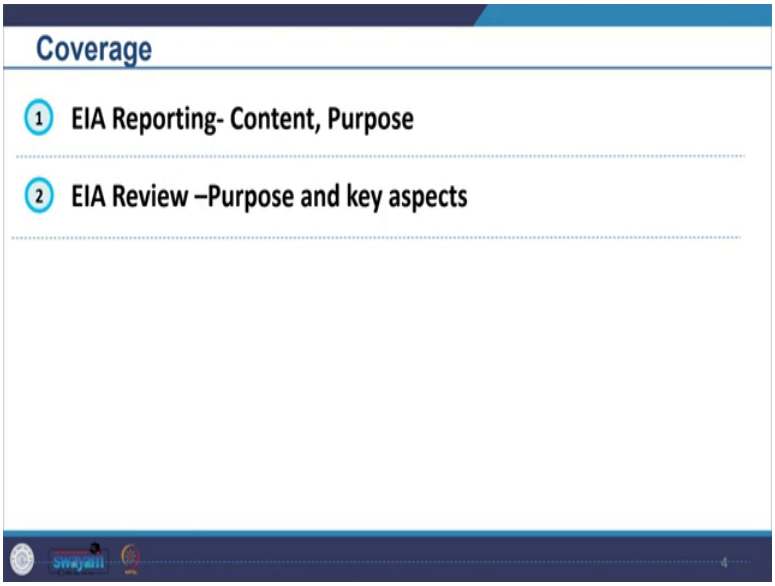

Welcome to the course Environmental Impact Assessments. In today's session, we are going to look at EIA reporting, and how it is done, and then we will also look at how EIA reports are reviewed for their quality. So, accordingly, our coverage will include that we will look at EIA reporting, we will look at its content and purpose and then we will look at the EIA review process, what is its purpose and what are the key aspects when EIA reports are looked into when they are reviewed and how do reviewers look at that.

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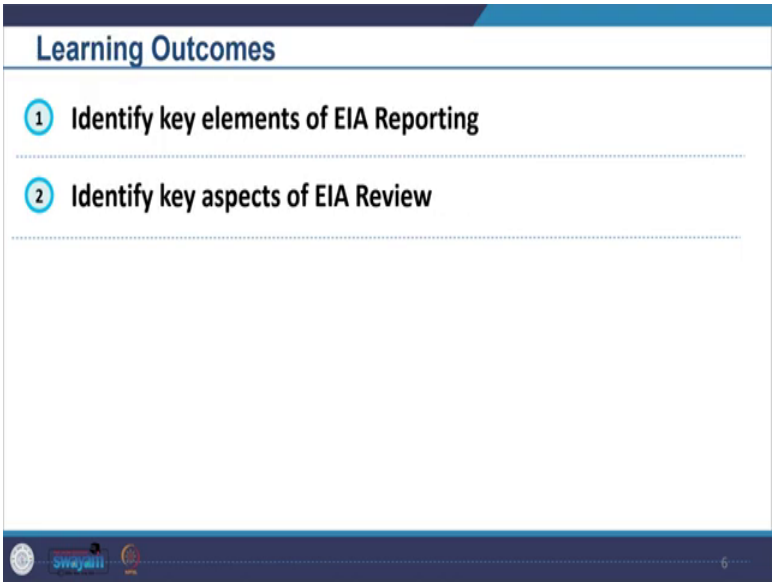

So, accordingly, the expected learning outcome is that after completion of this session, you should be able to identify key elements of EIA reporting what all should be put, so you should be able to list and structure EIA reporting and then understand what should come in which part of the reporting.

Further, you should be able to identify key aspects of EIA review, and what the good quality report looks like, so you should be able to identify those and then be able to judge EIA report quality.

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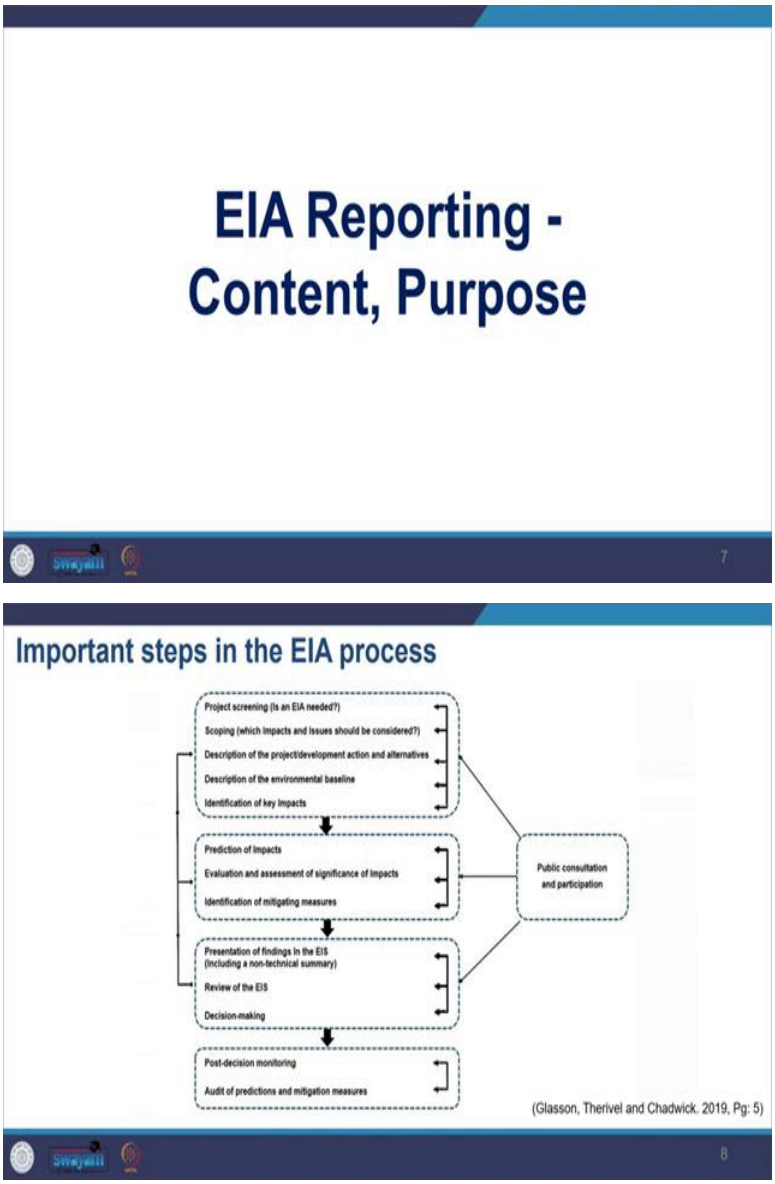

So, looking at EIA reporting content and purpose we see that just to locate ourselves where we are, which process we are talking about, we are here in the fourth box where we are doing like the review of environmental impact assessment. So, that part we are in, and then after the report has been prepared and it is submitted for review we will look at the review part.

So, we will look at both how the report writing is done as well as how the report is reviewed. So, if you are a reviewer what things you would look for when you are checking, that you are evaluating an EIA report as well as when you are preparing it what would be the key structure and within the structure also how do you understand each component of that structure. So, we are basically in the third box of this EIA process.

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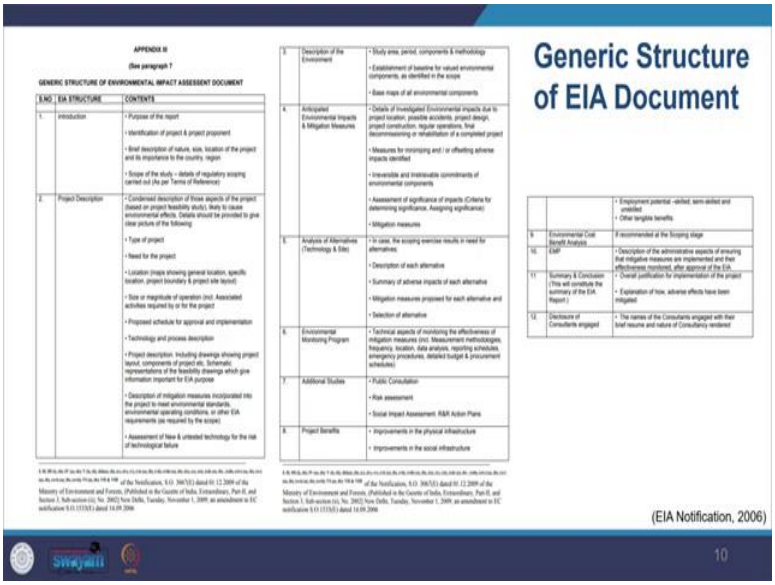

So, looking at like EIA report structure we follow generally in the Indian context we look at Appendix Three of EIA Notification 2006, which helps you to identify what should be the key report structure so that is the available guideline. As well as here I have also taken inputs from ToR which also gives you a sectoral view of what kind of report layout has to be there, and what would be the key elements which have to come in here.

So, looking at the EIA notification 2006 you can see here that I have taken the snip from the notification. So, you can see that you have an introduction where you put the purpose of the report, and why the report has been prepared. Then you identify the project and project proponents, and you tell about those things.

Then you also tell about the nature, size, location of the project, and its importance to the country and region. So, you tell its significance, it is important because that is why you are doing it and it has this particular project has to be done because it is needed, it is important, and then the scope of the study what all the EIA would be covering here and details of the regulatory scoping carried out as per the terms of reference.

So, what terms of reference, what was the guideline that you were supposed to cover within the EIA report, and how did you cover that? Then you look at the second part which deals with project description. So, here you give a range of things ranging from a condensed description of the aspects of projects, so you give like in a very condensed form, what are the different aspects of the project including the feasibility study, why it is feasible and likely to cause environmental effects, what kind of environmental effects it would cause and detail should be provided to give a clear picture to any reader of the report.

So, it would tell about the type of projects, the need for the projects, and the location, size, or magnitude of operation at what scale it is going to operate. And propose a schedule for approval and implementation, what is the schedule that has been followed, and then the technology and the process description?

Then the project description and all the detailed drawings, maps, components, diagrams, all these things have to be provided and what kind of mitigation measures will be incorporated into the project that all needs to be told here. An assessment of new and untested technology for risk of technological failure.

So, if any kind of technology has not been assessed before it has been used you need to describe the information in the report. So, that would come as a project description and you may also reconnect with all the components we have talked about like the process part, the different domain parts, and different components within that domain which we had discussed in terms of legislation, in terms of its process and methods. So, all those have to be accordingly put in the project description.

Then number 3, you see that description of the environment. So, here you would be telling wherever the project is located about the environment. So, what is the study area, what is the duration of the study, and then the components and the methodology that you have adopted for this particular study?

And then you need to establish the baseline for the valued environmental components VEC which we have studied, so you will be doing the baseline you have seen for every domain you have seen, and already seen how to conduct a baseline study. So, that has to be given here in the description of the environment. And then base maps of all environmental components. So, all the maps have to be provided.

Then the fourth part of the report you see anticipated environmental impacts and mitigation measures. So, here you provide details of investigated environmental impacts due to the project's location, possible accidents, possible project design, project construction, and because of its operations and because of its other stage of decommissioning or related rehabilitation of the completed project.

So, based on all these we have seen that we do impact assessment for all the stages, the broad stages are the construction stage, operation stage, and decommissioning stage, and aligned activities with that with the process and then also if rehabilitation is involved. So, all that would be coming in this segment of the report.

Then you would also give measures for minimizing and or offsetting adverse impacts that have been identified. So, how you are going to minimize the impact and impact and how you are handling it? And then you will also identify the nature of what we had discussed in the very beginning you will review what is the reversible or irreversible impact, what is the magnitude of the impact, what is the duration, nature, and temporal nature of the impact, and so on.

So, that all aspects you would be looking at and discussing in this segment and you will be assessing the significance of the impact based on all these criteria which we had already discussed and upon that which cannot be handled what would be the mitigation measures so that all usually go in this part of the report anticipated environmental impacts and mitigation measures.

So, now looking at point number 5, you look at the analysis of alternatives. So, you discuss that not just that side or that particular design but you also discuss the changes in the technology and change in the site. So, you review that you have not only looked at that particular site but you have looked at the alternative sites as

well and then you have also looked and explored various available technologies, and based on that you have chosen the optimal option.

So, in case the scoping exercise results in a need for alternators, when the scoping is done and if there is a need for alternatives you would be identifying, and analyzing alternatives here and you would describe each alternative like what a similar way the project descriptions each alternative would be described with that in that terms what kind of technology and what kind of site changes are happening.

You would also give a summary of the adverse impacts of each alternative like how each alternative is changing. So, mitigation measures proposed for each alternative also have to be discussed, and then out of all those alternatives you have seen in many cases when we were doing the sectorial methods you have seen how we discussed alternatives compared upon the alternatives.

So, in the sixth segment, you can see the environmental monitoring program EMP, so here you give the technical aspects of monitoring the effectiveness of the mitigation measures. So, you look at how you are dealing with all kinds of impacts and what kind of solutions you are giving how you are going to measure all these things what will be the frequency location, how you are going to analyze the data, what will be the reporting schedule, emergency procedures, detailed budget and procurement schedules, so how you are going to give that. So, we have already seen EMP, so that part comes here.

And then in the seventh segment, you see any additional studies, any kind of references which you have put together has to be placed here, so you look at and then key point here is the public consultation, so how you have undertaken public consultation that all has to be recorded and what inputs you got from the public consultation and how that was taken care of have to be recorded here.

Plus, the risk assessments like what are the involved risks and then also social impact assessment and rehabilitation and resettlement action plans if that is also involved in your project that has to be placed here. And then you see the project benefits so not only the adverse impact but the positive impact that you will have from the project. So, how it is going to improve the physical infrastructure, and social infrastructure has to be provided here.

And you see in the ninth segment you have environmental cost-benefit analysis, you need to put it only if it has been identified at the scoping stage otherwise it is not a necessary element of EIA reporting. Then here you will have an EMP environmental management plan. So, here for category a it is mandatory to provide EMP and certain category b might also require EMP so first category a it is mandatory.

So, whatever the residual impacts are that cannot be minimized how you are going to handle them through the EMP environmental management plan? So, that has to be provided here, and then you will describe the administrative aspects of ensuring that all the mitigation measures are implemented and their effectiveness is monitored it also has like it is usually like we had discussed done after the approval of EIA.

So, this EMP is usually done after the project has, these actions taken once the project has been approved. And then later part deals with the summary and conclusion which helps anybody to evaluate what kind of, what direction, what judgment it leads to. So, the overall justification for the implementation of the project and, explanation of how adverse effects have been mitigated is what you will be putting under the summary and conclusion.

And then disclosure of consultants engaged so you see the 12 parts. So, if you are part of the team then all this information has to be disclosed here. So, that is the overall structure given by notification 2006.

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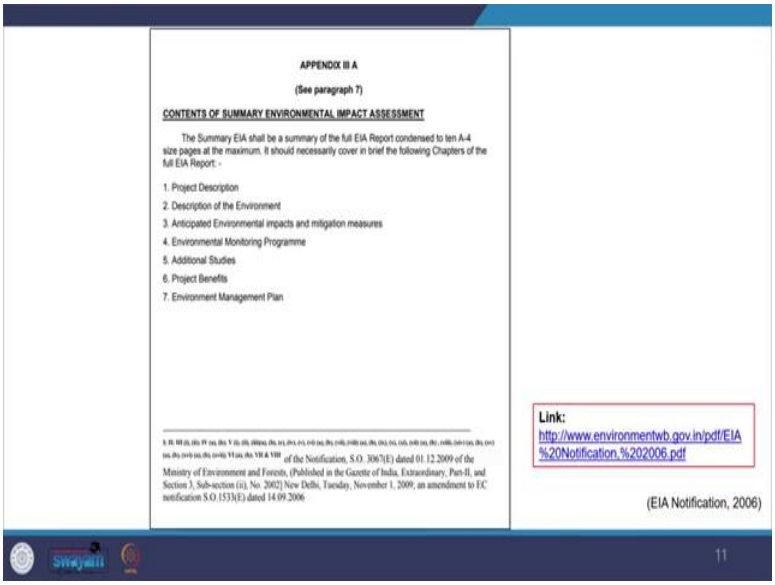

You also see it gives you the summary of EIA reports so it would also have a summary which would be mostly read and a summary will have all these 7 points which you can see, project description, description of the environment, and anticipated environmental impacts and mitigation measures, environmental monitoring program, additional studies, project benefits, and environmental management plan.

So, all these things would also be there in the summary part and the summary is said to be very important because most of the time this would be read frequently in any report. So, I have given you a link to these particular examples, there are many you can download from the Ministry of Environment, you can download from their site.

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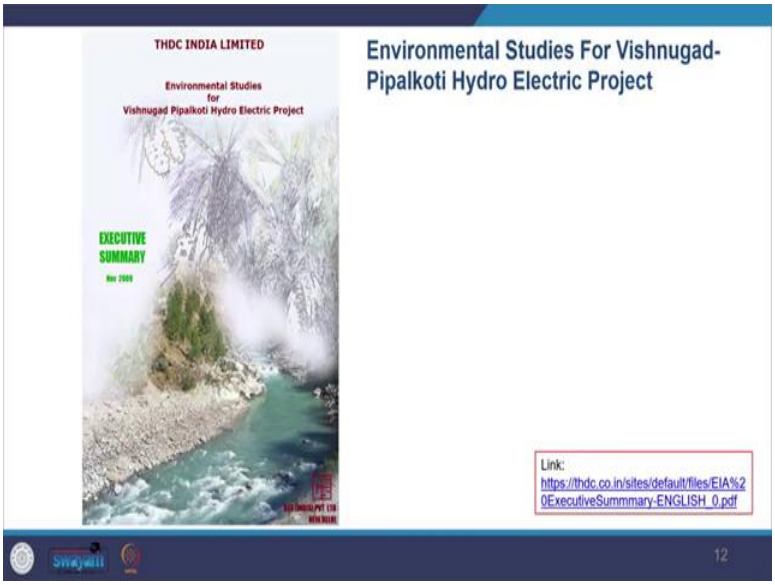

I have given you the link to one of the reports here, it is a lengthy report in certain volumes. So, you can go through that and try to understand how the report is I have put some of the snip here for your understanding but it is a very detailed report so I am giving you separately to understand.

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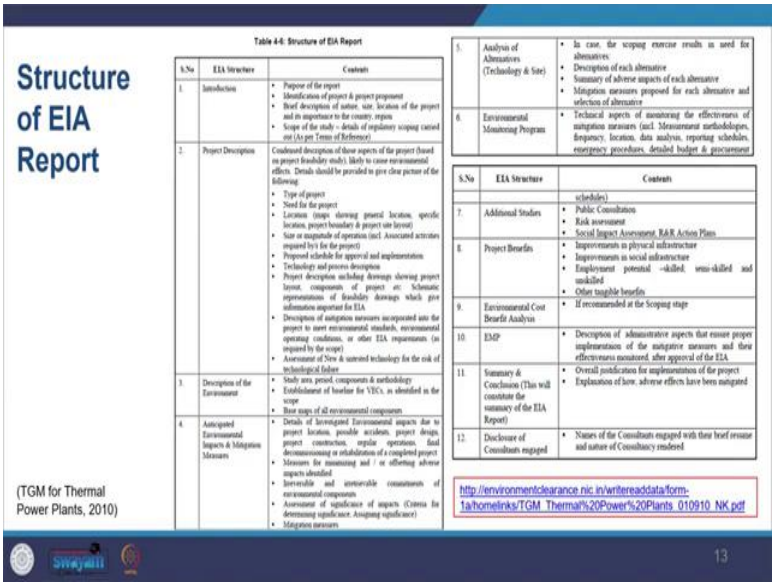

So, that was about the structure, very generalized structure and I have again snipped another EIA report structure from the sectoral guidance from the, this is from the thermal power plant guidelines which have been prepared again by the ministry. So, here you see how they give different components and these are aligned with thermal power plants, so all sectorial wise you can see a very standard, they have suggested a report structure which you can also use apart from that ToR would be the key reference.

So, many of these suggested ToR are given here plus you have it in sectoral guidelines, plus how through the system of ministry they would also provide stand, aligned ToR for the preparation of the report. So, here you can see the thermal power plant EIA report and then you see the more or less the structure, introduction, project descriptions, and the kind of details that would slightly vary, or added things would be there given the domain, and nature of the project.

So, description of the environment's anticipated environmental impact and mitigations, analysis of alternative and then environmental monitoring program, additional studies, project benefits, environmental cost summary, and disclosure of consultant engaged. So, you can also look at the sector-wise structure as well for the EIA report.

So, looking at the key purpose of the EIA report the idea is to provide very coherent statements, when we say coherent it is very consistent clear statements of what kind of impact the proposal, whatever project is coming will have, and the measure that can be taken to reduce and remedy them so what happens it contains essential information for like the report will be read by the proponent to implement the proposal in an environmental and socially responsible way.

So, it is meant for proponents, it is also meant for the responsible authority which is going to make an informed decision so you have to also put all the information in a very systematic way so that the responsible authority can make the decisions regarding what has to be done whether it is in an environmentally suitable way or not.

And what kind of terms and conditions that which it applies to all need to be attached for the approval and authorization of the responsible authority and then also for the public, report you are going to make or you are public then you need to know that it has to have a certain quality.

So, the report is meant for the public to understand the proposal and its likely impact on people and their environment. So, there will be three broad categories of readers who are going to read your report. And then a good report, an EIA report would meet the following targets like it would be actionable whatever we are talking about we should be able to implement it.

So, a document that can be applied by the proponent to achieve environmentally sound planning and design. So, whatever you are planning should be actionable, it should not be impractical but very practical to translate on the ground. Further, it should be decision relevance, this document should help present necessary information for the people to make decisions. So, your document should help decision-makers to make relevant decisions.

Further, it should be user-friendly, and your document should communicate the technical issues to all different parties in a very clear and comprehensive way. So, your report needs to be very user-friendly so keep those things in mind irrespective of the technical details it needs to be user-friendly, very readable, and actionable and should help in making the decision.

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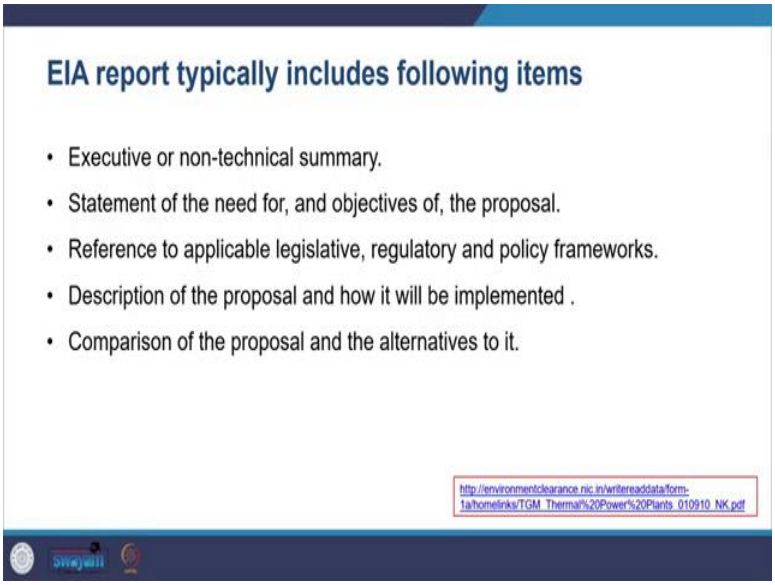

So, the EIA report as we have already seen includes many components so here you see that it has like we said should be a summary executive or non-technical summary which would probably be used for the public communication document so you see the importance of the executive or a non-technical summary.

And then you would also have statements for the need for an objective of the proposal. The reference to applicable legislation so all the legislative which we studied so all that reference have to be made and then a description of the proposal as we saw in the notification 2006, so how those descriptions, what content has to come that all need to be made and comparison of the proposals and the alternatives. So, even if you are comparing that to all the alternatives you have looked at all the possible alternatives before you came to one particular solution.

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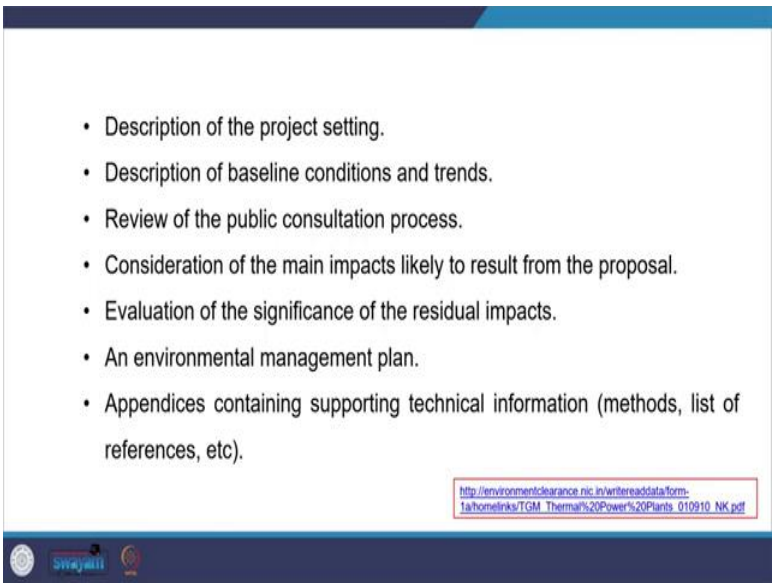

And then your report should also describe the project setting including the relationship so that is all you see in the notification 2006 structure. Description of the baseline condition as well as what kind of inputs you got from the public consultation process. And then how you are taking care of the main impact so that all should come very clearly.

And then how you evaluate the significance of all kinds of impacts what are the residual impacts and how you are designing the practical, best environmental options you are coming up with. And then you would be also giving the environmental management plan like you saw in the notification and then how all the technical information is laid out.

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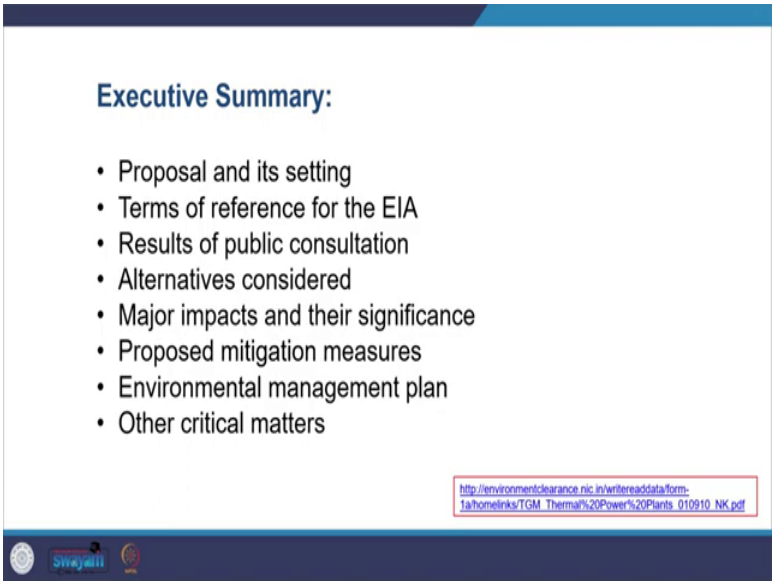

So, looking at the executive summary it should like when you are taking care of executive summary, it should describe the proposal and its setting in a very brief manner, terms of reference, what terms, terms of reference become very key here because that is the line in which you need to work and that is what is desired as the outputs from your EIA report.

So, terms of reference for the EIA, what was the terms of reference, the results of the public consultation, alternatives considered, major impacts and their significance, proposed mitigation measures, the environmental management plan, and any other critical matter that bears on the decision so all that has to come in the executive summary and a very crisp concise manner.

And then in the report you would also be telling in your introduction the need and objective of the proposal. So, it gives a clear statement of the need for an objective of the proposal, why it has been done and you need to substantiate the reference for why within which policy, within which plan the particular project is done. You can also refer to the demands and issues which the place that the project is trying to address.

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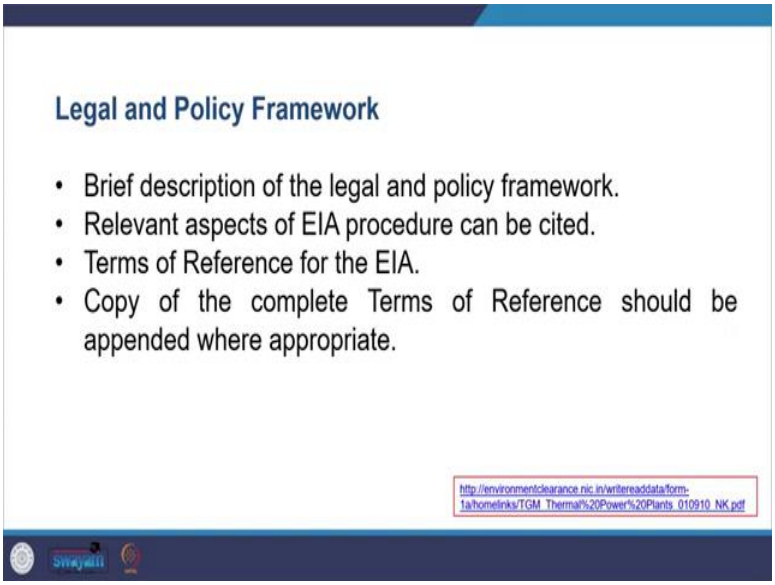

And you need to give the legal and policy framework and this is usually a very brief description about which within what legal and policy framework you are working on. Usually, terms of reference would also guide you on which legal and policy framework you need to adhere to.

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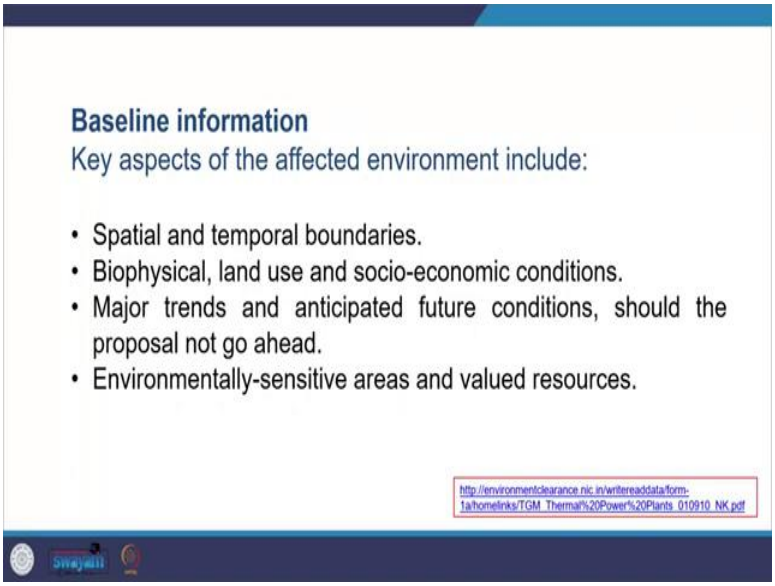

You need to describe the proposals and alternatives like we have already discussed here and then the baseline information which becomes the key to the entire report. So, you need to provide the spatial and temporal boundaries, biophysical land use and socio-economic conditions, the major trends and anticipated future conditions, and environmentally sensitive areas.

So, all that is what you studied in the legislation as well as method parts from the scoping part to the baseline assessment domain-wise so all those domain-wise domains that are relevant to your project have to be provided in this particular report.

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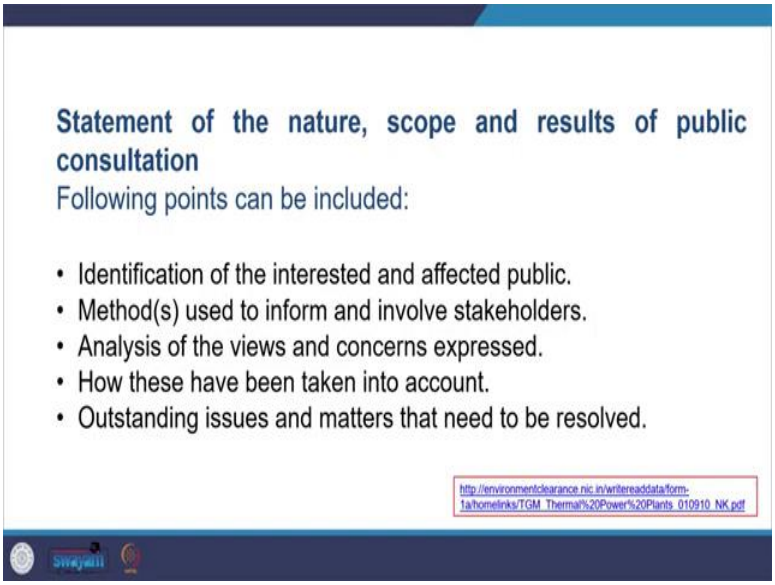

You would be providing a very concise but complete statement of the nature scope and results of public consultation. So, how you have taken care of public consultation, the number of places you conducted public consultation, and what kind of problems came up? So, you need to take care that, you have identified what were the interests of the people, you took, you also mentioned what methods were adopted to engage with the stakeholders and then also what kind of views and concerns were expressed and how you take into account all these kind of concerns.

And what kind of issues are there which are yet to be resolved in your case? So, that all needs to be informed here. Then you would also take care of each impact and how you predicted the impact so all domain-wise what we did you will also do domain-wise relevant to the nature of your project.

So, the prediction of each major impact, consideration of their compliance, how did you comply with that, what kind of recommendations are there, how are you evaluating the significance of the impact, and then what are the limitations associated with impact predictions, so what method you adopted, what is the limitation of that particular method, so what you would know about and what you are likely not to know. So, all those things have to be given.

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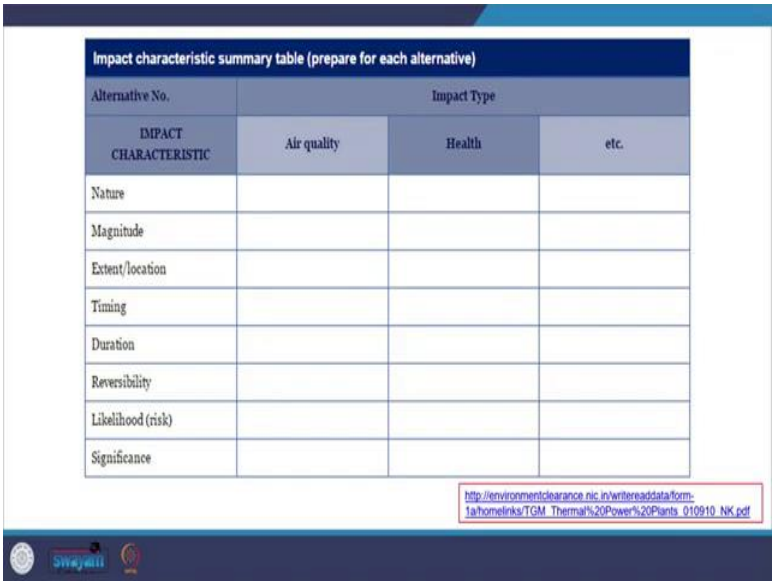

And just to recap we have seen most of it so here your impact characteristic summary table will be prepared, showing what are the impact characteristics, and impact type on what it will have an impact. And then this would be given in a very summarized form. And you would also do a comparative evaluation of like what kind of adverse and beneficial impact would be there, so there will be certain positive impact, there will be such negative impact, so you would be comparing between that as well.

And how effective your mitigation would be, how your benefits and costs are distributed locally and regionally and what are the opportunities for community and environmental enhancement. So, we have seen all these so that all need to be combined here.

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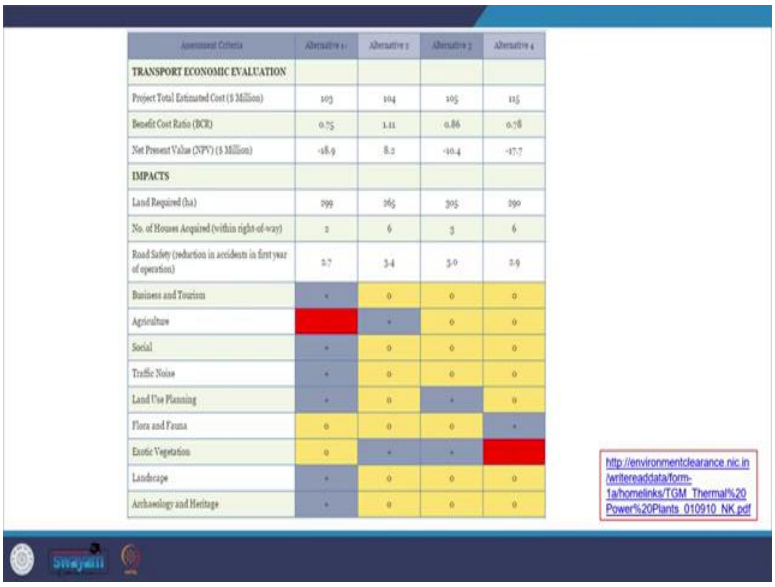

So, here you can see how the transportation economic evaluation has been done. So, here you see how alternative 1, alternative 2, alternative 3, and 4, all that evaluation, what are the impacts, and what are the positive, what are the negative impacts all that has been evaluated across the alternatives here and across the

different domain, traffic noise, land use, flora fauna, exotic vegetation, landscape and so on. So, it helps, so in all that domain-specific what you have done has to be summarized here.

So, that was about EIA reporting so you see how, whatever we have studied from the environmental status to legislation to different methods, domain-wise methods, how all of them come together in these segments, so your report can be massive, voluminous, given the intensity in which you have to undertake the study. So, we have already seen how big the team would be and how you would need different domain experts. So, this would be how it would culminate and the final product would look like.

Now, we are looking at the reviewing aspect, and how the EIA would be reviewed. So, once your report is made or while you are also making a report you need to understand how the report would be reviewed so that your report is of considerably good quality what is desired and it addresses the purpose of EIA reporting.

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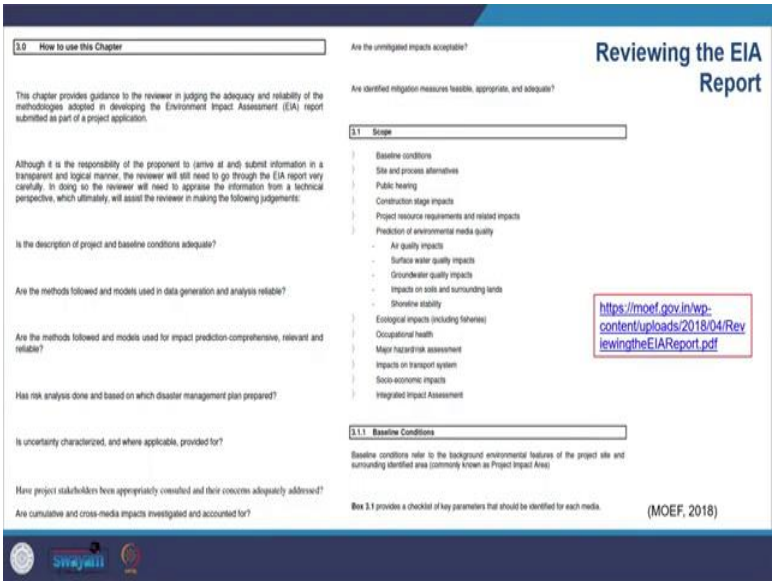

So, we see that there is guidance which is used by the reviewers so here we see that it guide the reviewing and judging the adequacy and reliability of the methodology adopted in developing the EIA report. So, when judges and the reviewers review your report how they would look at your report now?

So, this is from the FCC website, so this is the guidance that is given to the reviewers you also take note that these keep changing the guidance information keep changing so you need to check what is updated and the latest data available from the website of your different agencies, ministries, department which as per your context. So, you need to continuously check that.

So, here it provides you that detail so you can see that it gives there is the description of the project in baseline conditions adequate so they look at questions like that, are the methods followed in models used in data generation and analysis reliable so they will see that whatever models, methods you have used whether they are reliable or not and other methods followed and models used for impact prediction, comprehensive so are they comprehensive or not, they give all the details not are they relevant whatever models you have

used are they relevant and reliable or not, so do they give reliable results or not so the reviewers would be looking at that.

So, you have, whenever you make a judgment about which models to use with methods to use, you need to have a strong understanding of its relevance, its reliability what kind of information it would give. Then the risk analysis is done and based on which disaster management plan is prepared. So, whether you have done it or not and on what basis have you prepared the disaster management plan?

And then is uncertainty characterized where applicable provided for. So, we did talk a lot about uncertainties involved in prediction so have you categorized that and have you, what kind of information you have provided about that? Then a reviewer would also look at have the pay of project stakeholders has been appropriately consulted, whether they have appropriately consulted as per the norms, and whether their concerns have been addressed or not.

And then are, and also you see here they look at cumulative and cross-media impacts investigated and accounted for. So, you might do it domain specific then how have you taken care of course media impacts also have you looked at the cumulative impact so that all will be evaluated for the completeness of your report, and are the unmitigated impacts acceptable, so if there are unmitigated impact are they acceptable or not, and are identified mitigation measures feasible appropriate and adequate or not.

So, that is all it will the reviewers would look at and then they would look at the scope and within the scope what kind of baseline condition, sites, process alternatives, public hearing, all that you have given or not then they will look at how you are looking giving the baseline conditions and they would usually have a checklist of key parameters as per the domain with which they would be checking your report so you can see some of the checklists here.

This document also we are providing you the link and also through the discussion forum will be sharing this. And then how the site, process, and alternatives have been discussed and then how what kind of drawings and details have been given and what the preferable scales, all those have been mentioned and mentioned and they are available for the reviewers to see and then also like here for the public hearing itself an overview of the issues discussed whether you have discussed it not, how the concerned raised were responded by the project proponents they will look at, they would tell you what was the concern raised and have you addressed it back or not.

And then how these responses were conveyed back to the consulted, so not only how you took their feedback and how did you responded but did you also communicate back with them. And what were the public hearing panel observations and so on?

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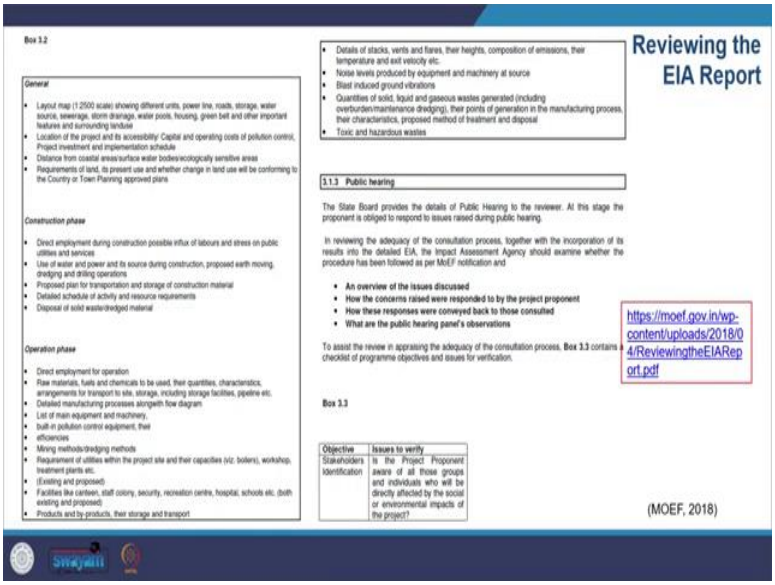

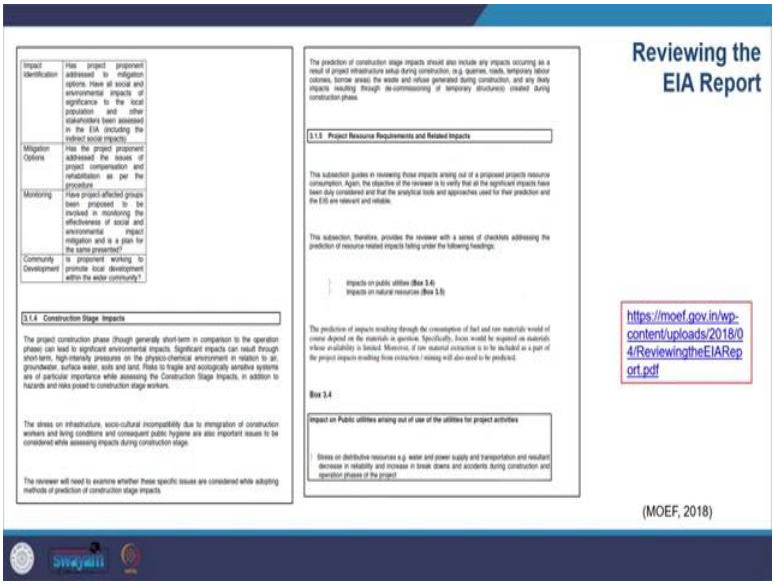

So, you see the box 3.3 here so stakeholders identification, impact identification, mitigation options, monitoring, and community development. So, all these aspects will be looked at by the reviewers. Also at different stages, construction stage impact, then project resource requirement and related impacts so would be used as a checklist and reviewing all these aspects.

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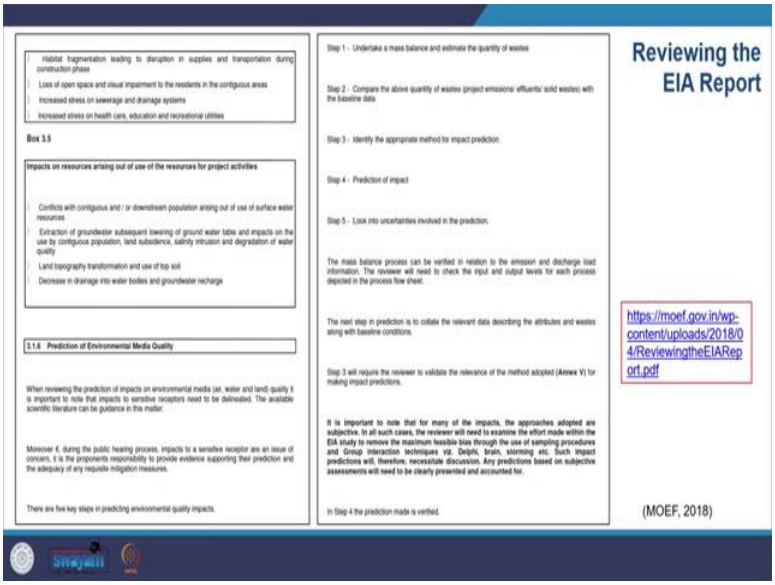

And then the prediction of environmental media quality how you have taken care of, so we have studied here resource balance so like here they specify how different steps you have taken and how the impact prediction has been done or not so they would be checking that way.

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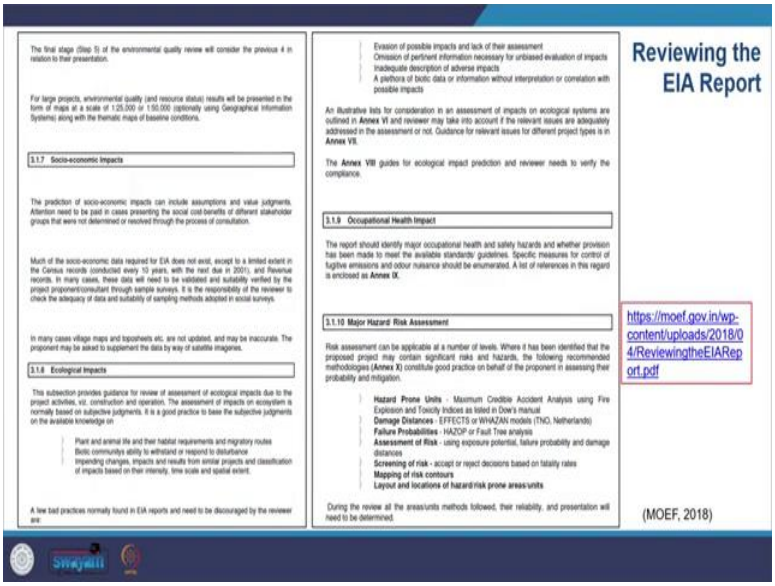

Likewise, they would be checking for socioeconomic impact, they would be checking for ecological impact, occupational health impact, major hazard, and risk assessments so we have covered all these.

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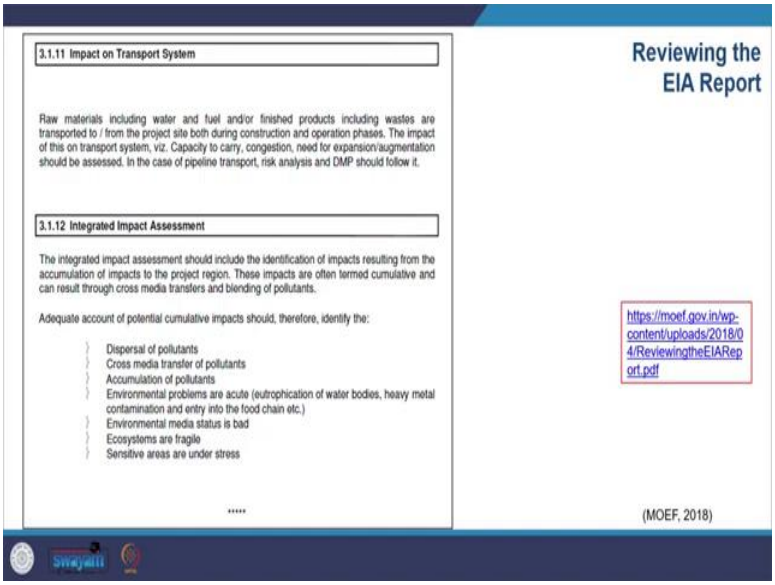

And then also look at the impact and transportation system so this as well we have covered so the reviewers would be looking at how well you have done that and then also integrated impact assessment so all these will be reviewed. So, these are the guidelines given to the reviewers so keep that in mind how the reviewer is going to evaluate, whether your project will get clearance or not would depend also how well your report is communicating.

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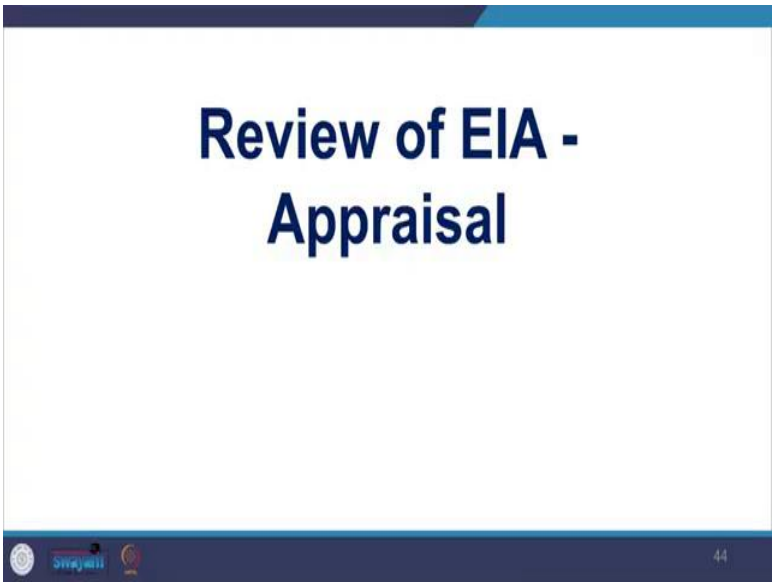

So, now moving on to the second part where we look at the review of EIA, where the appraisal is done. So, what we saw here was how your reports will be judged. So, now your assessment of what you have done, and the quality of EIA what you have done would be reviewed here.

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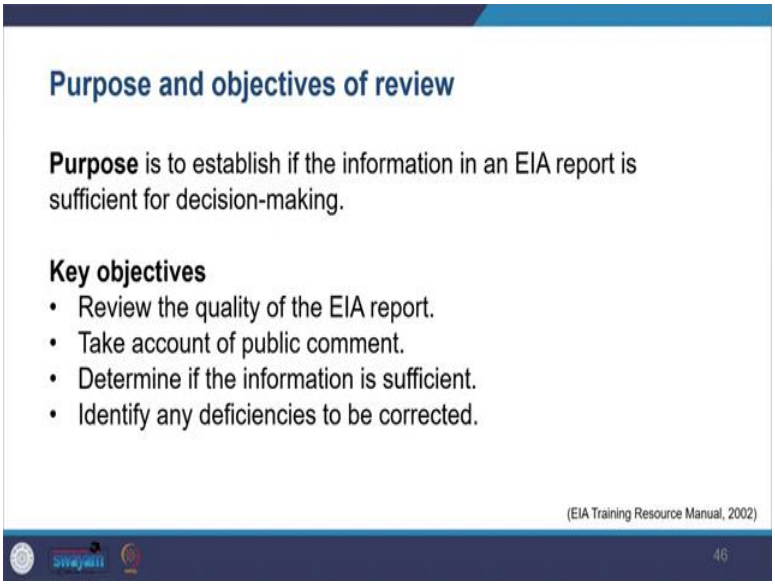

So, the purpose and objective of the review is to review the quality of EIA reports so that we have already seen part of it and then it also takes care account of public comments so how you have taken care of public comments and then determine if the information is sufficient or not so whatever information you have given whether it is sufficient or not and are there any deficiencies that needs to be improved upon.

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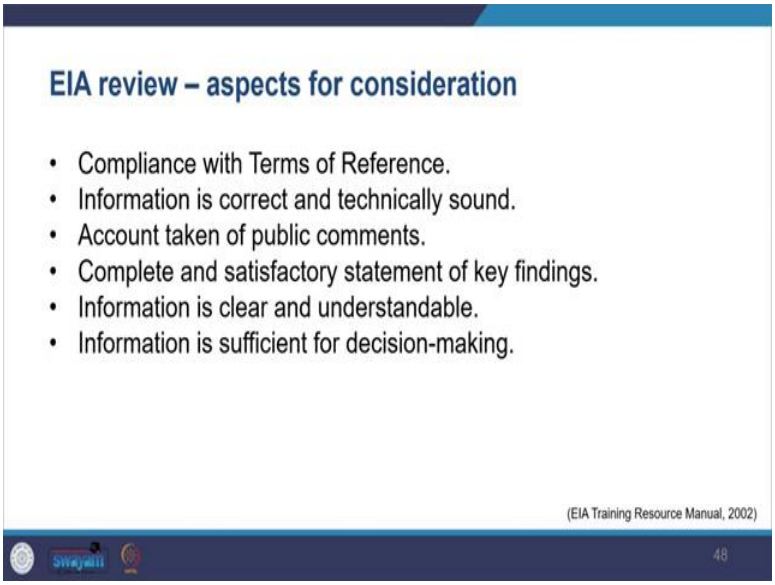

Different aspects are considered while reviewing the EIA whether you have complied with terms of reference, whether taken information provided is correct and technically sound then public concerns have been taken into are complete and satisfactory, information provided is clear and understandable, and whether the information is sufficient for decision making.

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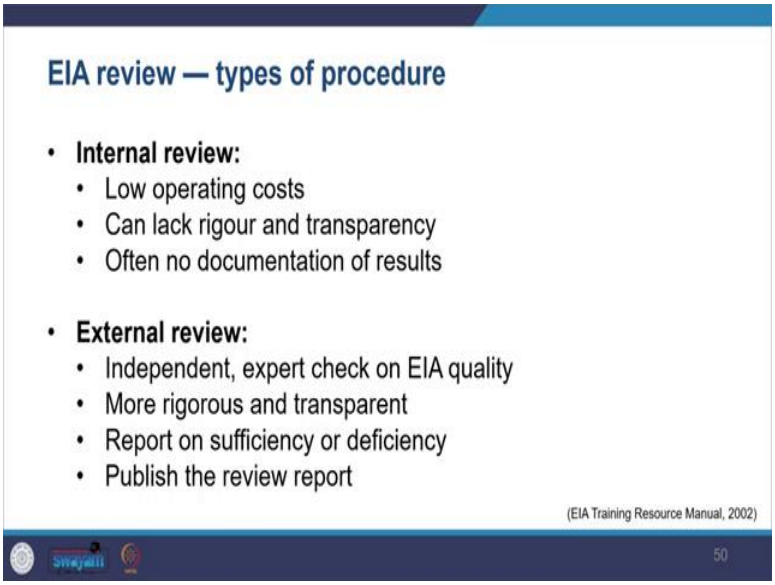

EIA review types of procedures you see that there can be internal review and there can be external review. When you do an internal review it has certain limitations that it can lack rigor in transparency and you might not have enough documentation it can be low in terms of budget it might save you money but then you can also have an external review which can have an independent expert check on EIA quality.

So, you can check the EIA quality, it can be more rigorous and transparent and then it can also show what is sufficient, and what is deficient, and you will be able to publish the review report. So, you have these internal reviews and external reviews but you see that there is much more advantage of taking external reviews.

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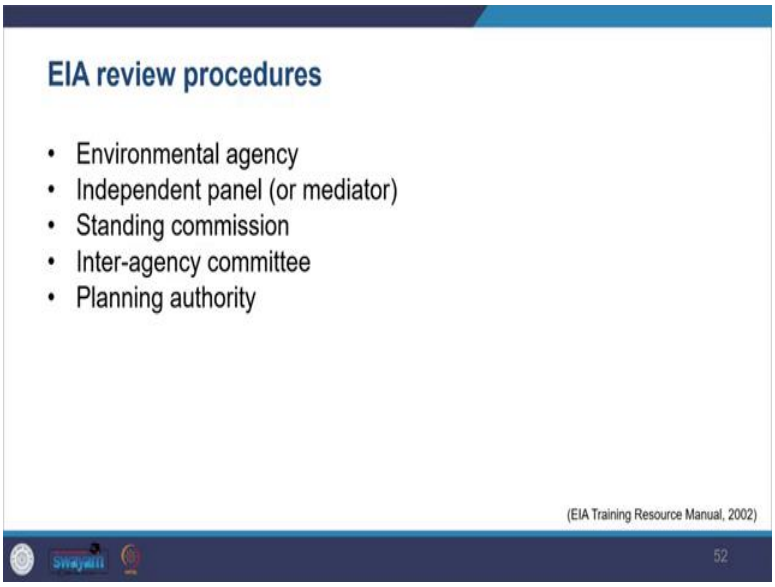

The EIA review procedure includes for this you can have environmental agencies that can come in, you can also have an independent panel, then you can have standing commissions, inter-agency committees, and planning authorities which all can help to take the EIA review.

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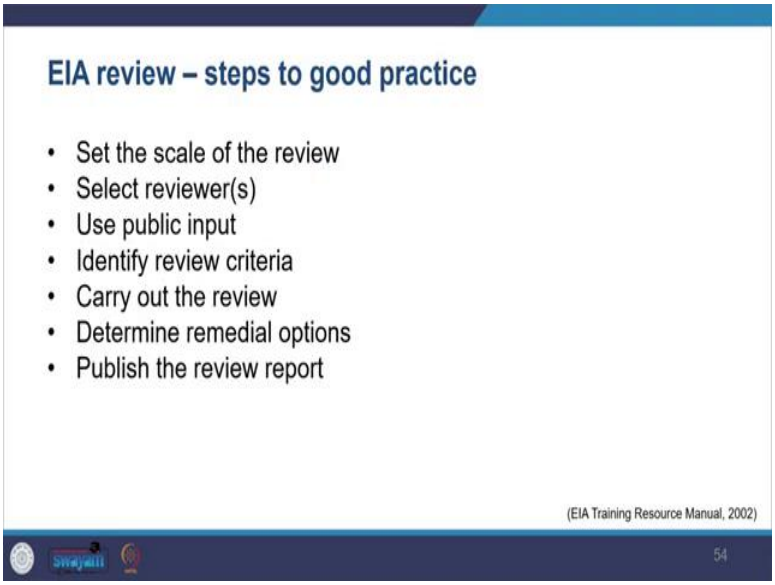

While you are doing an EIA review there are certain steps to a good practice that is like it can be a scale of review whether good or bad, how you scale it up, evaluate the review, then you can select the reviewers you can, you use the public input, you identify review criteria, how you going to review and you can carry out the review. Then determine remedial options and how you are going to take care of it whatever the problems are and publish the review report.

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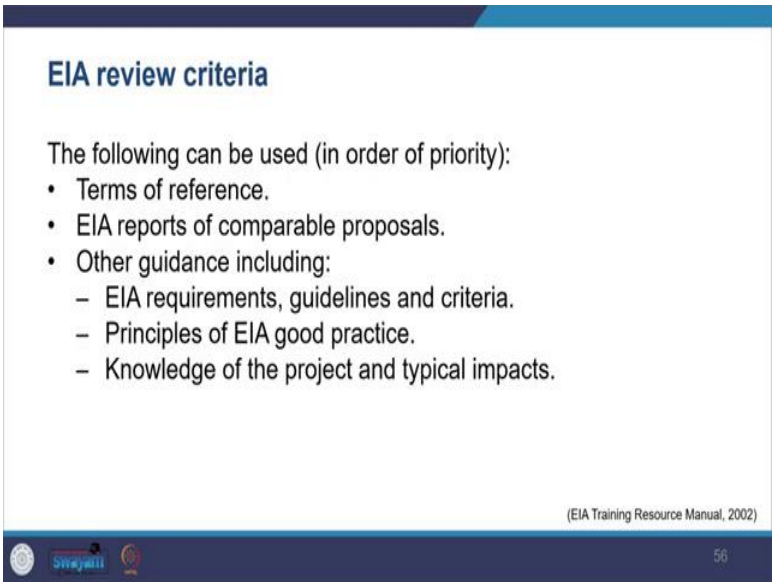

So, the following can be used in order of priority, for review criteria the key aspect here again and again which has been repeated is the terms of reference. And EIA reports of comparable proposals so wherever you find EIA reports from other cases, similar cases you take as a reference point and you also have other guidance like what are the EIA requirements, guidelines, and criteria and then you can also look at certain good principles of EIA and the entire course where we have learned it so all these can be used as a reference.

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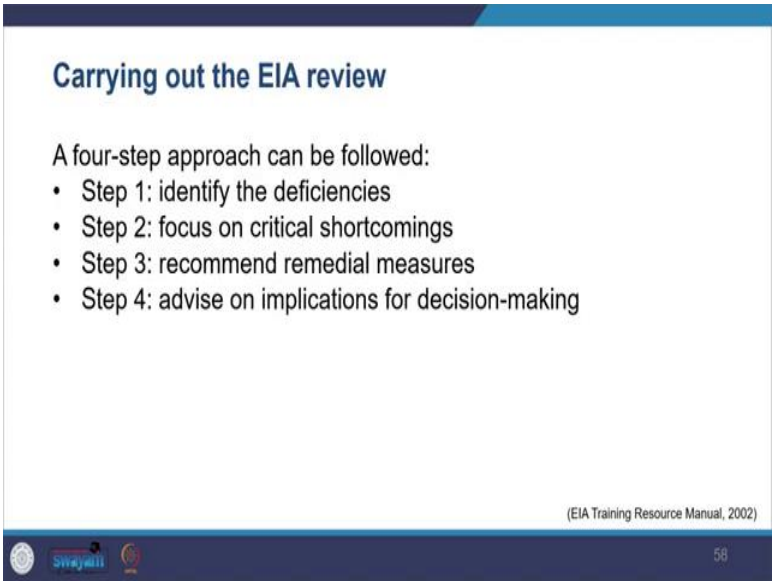

Then you carry out the EIA review process which is like here by the UN training program you see that it has been updated by four steps, step 1, identify the deficiency, focus on critical shortcomings, recommend remedial measures, advise on implication for decision making. So, you are reviewing the report path here so you can take care of these four things.

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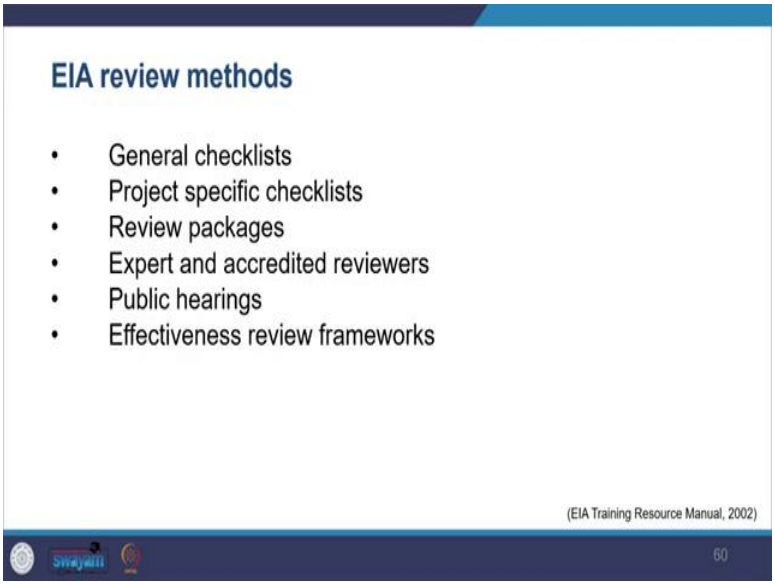

And then there are a lot of review methods, you have general checklists which are used generally, then you have project-specific checklists also, review packages are also offered by many institutions and research institutions, experts and aggregated reviewers also can come in, and you can also have a public hearing and also there are frameworks which helps you to review.

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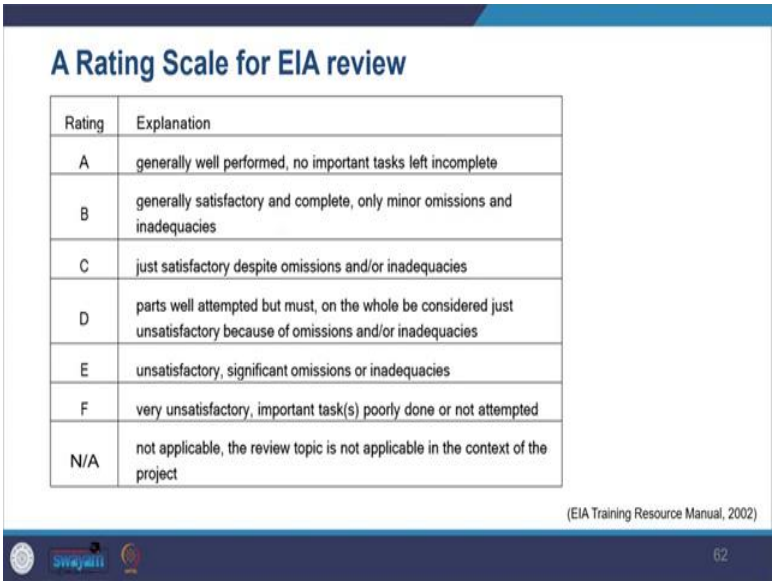

So, for some of them, this is the scaling part that I talked about so you can have A, B, C, and D ratings, so you can have reviewers tick to this that A generally well performed no important task left incomplete. So, B is generally satisfactory and incomplete only minor omissions and inadequacy of the report. So, even you can see, you can as an exercise you can look at certain reports and see how well it addresses all the aspects of EIA.

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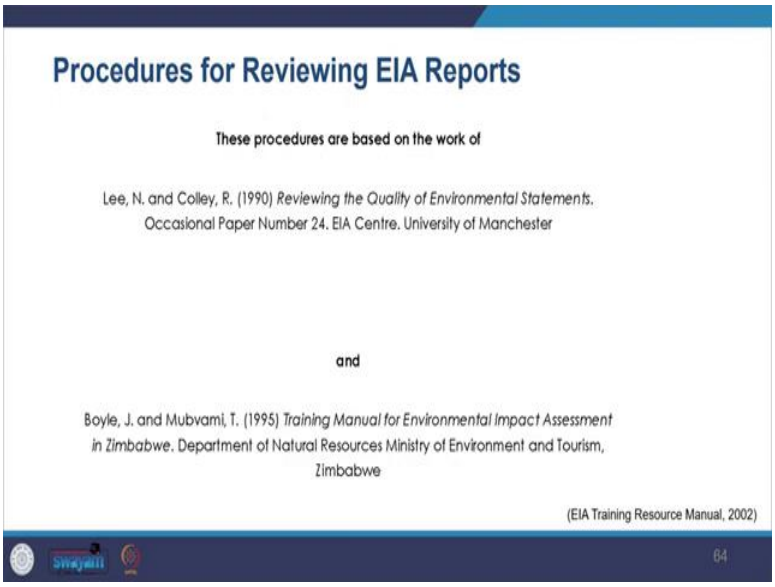

So, here from one of the examples from the UN training manual and then also from the Zimbabwe training manual we see the process which is adopted for EIA reporting.

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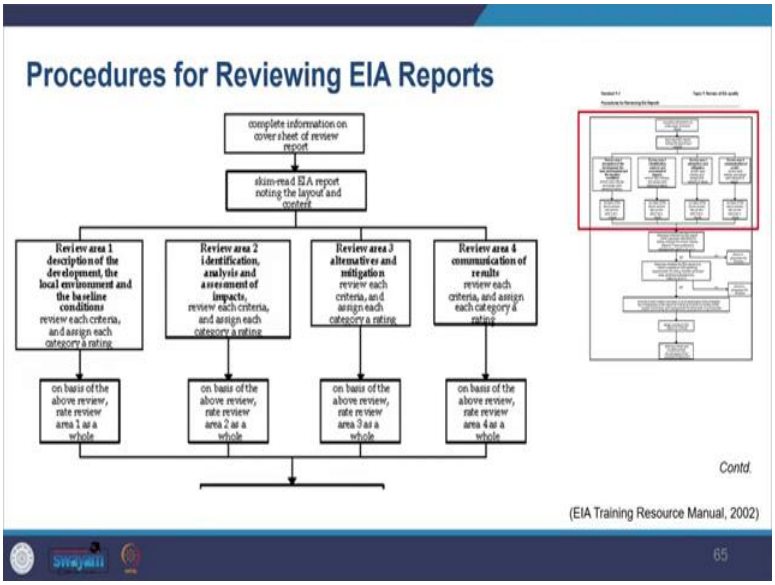

So, here you see how you have complete information on the overall sheet of the review report, then you skim read EIA reports, then you have review area one and all these areas, review area 2, review area 3, and review area 4 depending on the description of the development and the local environment and baseline condition, review area 2 identification analysis and assessments and alternatives and mitigation, communication of the results.

So, all these areas how you are describing, how you are identifying, how you are looking at the alternatives, and how you are communicating the results all become very important in how you are going to, how your report will be evaluated for its quality.

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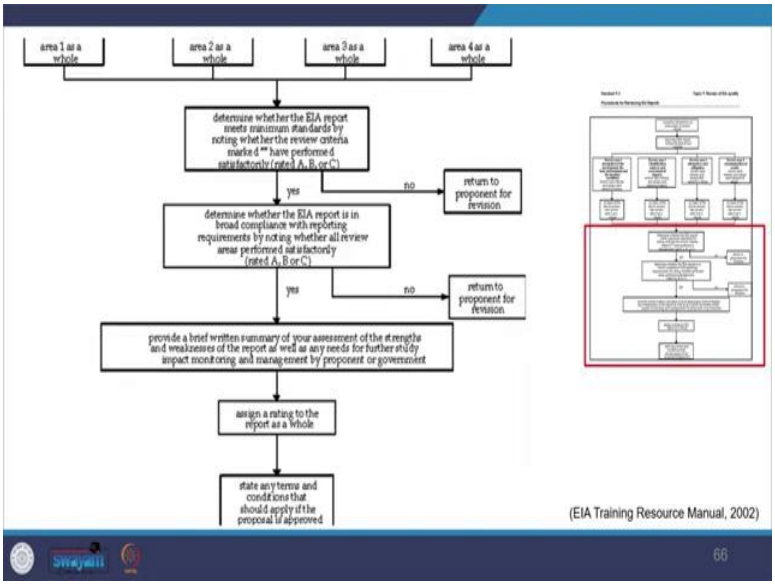

So, you see how yes or no you look into all these segments here. So, this is the kind of checklist that is used in Zimbabwe for their reviewers.

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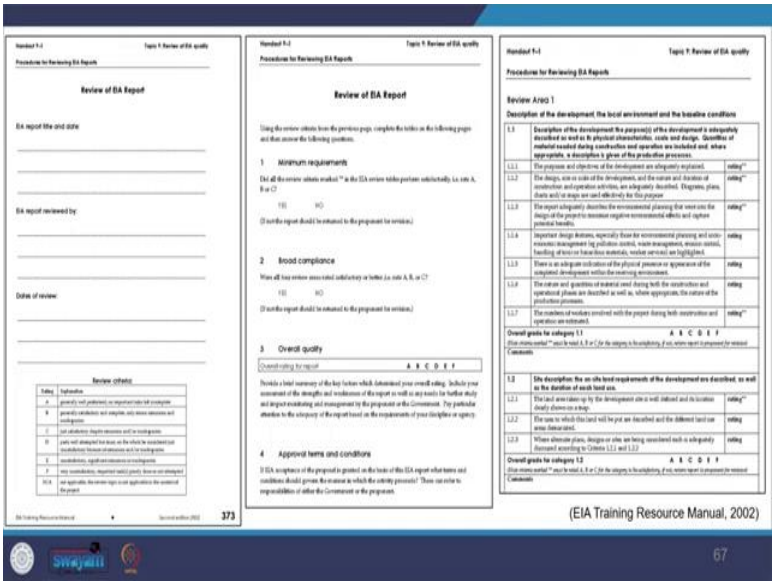

So, review of EIA report to examine the people reviewers, the committee would review and put in reports in this way. So, EIA report title, date, EIA report reviewed by date of review, reviewer criteria they would give a rating to your report, and then they would look at the minimum required broad compliance, overall quality and then review area 1 and so on all the reviews areas would be seen. So, I will be giving you these documents, so you can see the complete review areas here.

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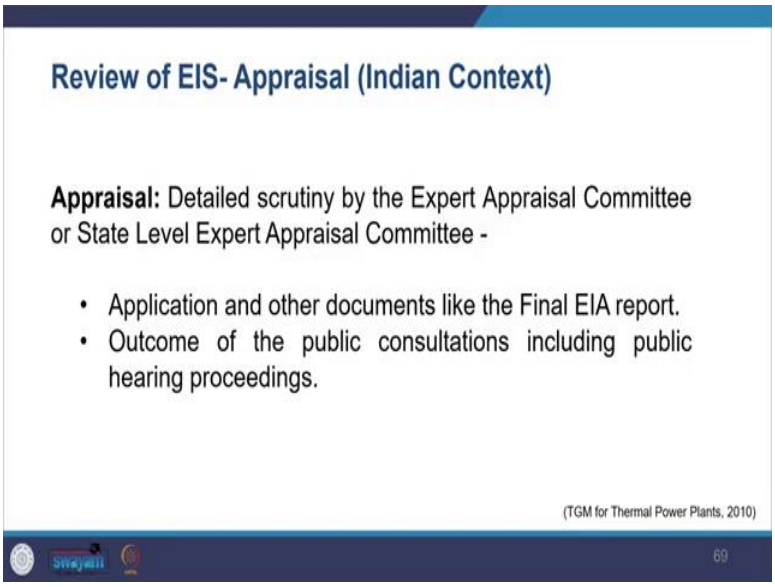

So, looking at the Indian context, here we use the term appraisal, appraisal which means the detailed scrutiny by the expert appraisal committee or it can be state-level expert appraisal committee which we have also covered before while we were doing the process part. So, there you look at the application and other documents like the final EIA report plus you also look into the outcomes of the public consultation and how you have incorporated that in the overall EIA report, so that is what is checked.

It is said that the review process when the quality of the review is checked is like the inbuilt process to see the balance, the sustainability aspect so how the report is taken care of even the environment is taken care of, and the intention of the EIA, the broad intention of the EIA is addressed within that.

So, it allows us to see whether the information is enough and whether it is helping to make the judgment or not. So, this is as per the like I have taken these parameters from the sectorial area of the thermal power plant and I will be also giving this link to these documents which you can also download from the ministry website. So, there for this particular domain thermal power plant they have given how the appraisal would happen.

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So, in the appraisal, it would in general mean detailed scrutiny of all the assessments you have done by the committee so the committee is going to look into it and the appraisal will be made by the advisory committee to the central government or SEAC or to SEIAA. So, the key aspect again is the ToR where if that is not been completely addressed it would be returned to the person who is prepared or it can be rejected as well.

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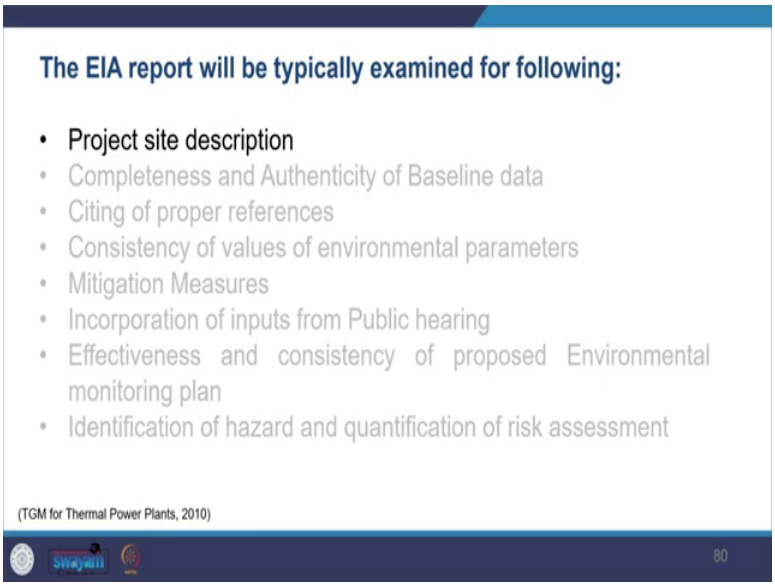

And so again they would be as per this domain the project site description would be looked at.

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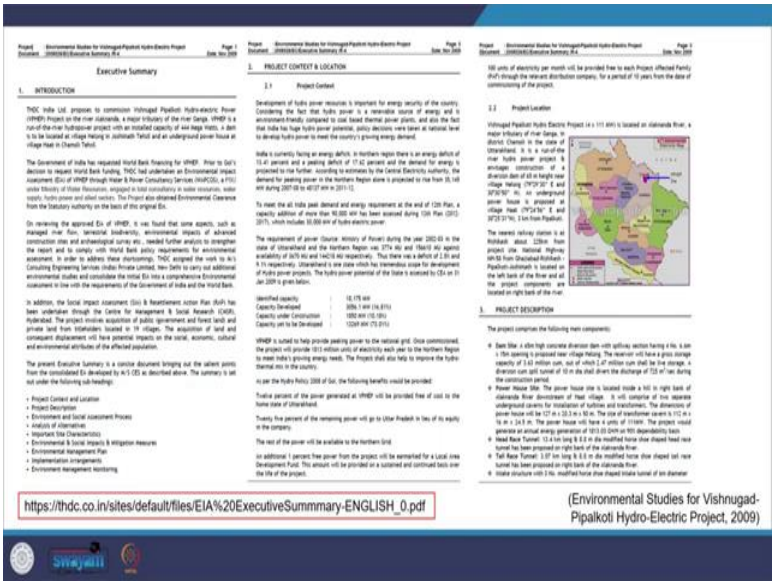

So, here you can see in the example I have taken from DHDC the project from the ministry website how the document is used I have just taken from the summary they are providing and this is the cleared report, so this report got environmental clearance, so I have just taken from that. So, you see how they are providing all the information related to the project and location.

And then clarity and descriptions, so how all the things are clearly described and for the thermal power plants there you need to give the drainage pattern, location of eco-sensitive areas, vegetation characteristic, wildlife status, and so on. So, here you again see from this report how they have provided.

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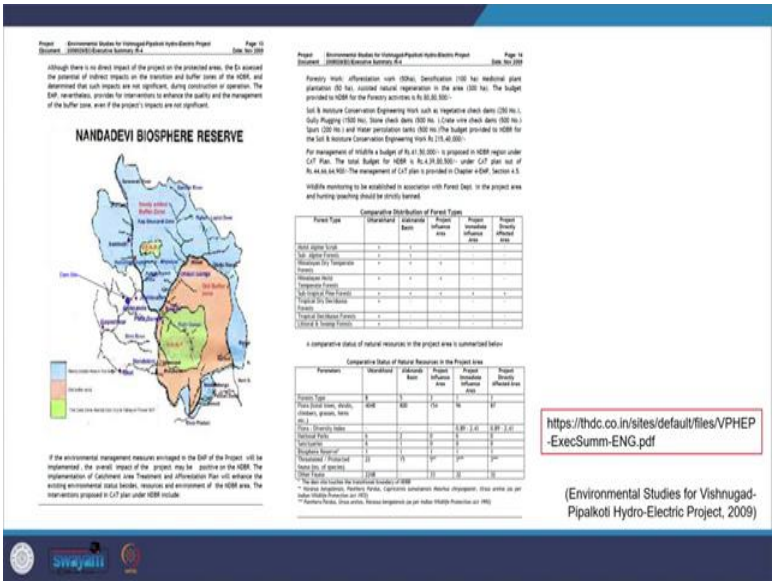

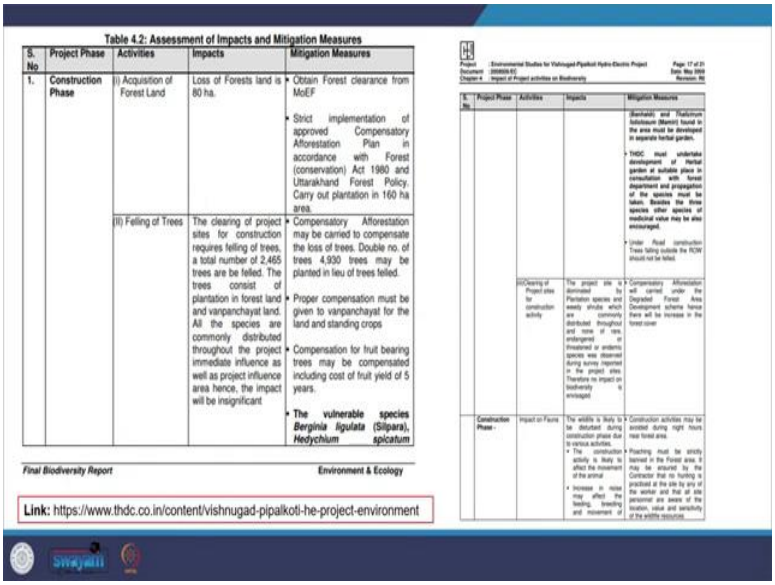

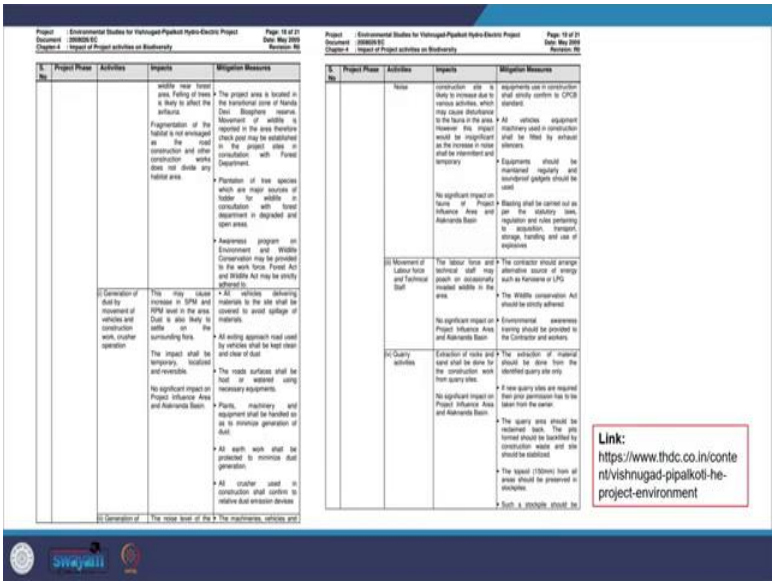

So, also the description of the project site, how well it has been communicated, so here and then how various impacts have been communicated here, so they have summarized all the impacts and how the mitigation measures are there so this so all this you see here project phase-wise they have done it.

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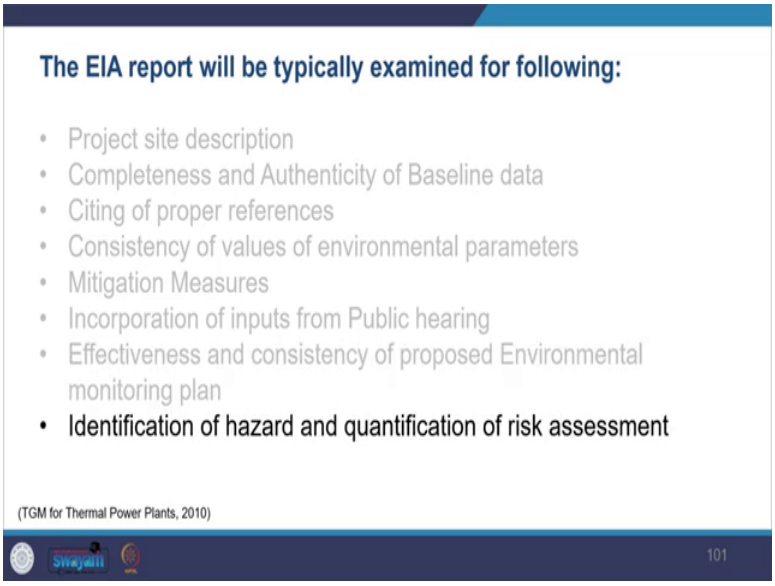

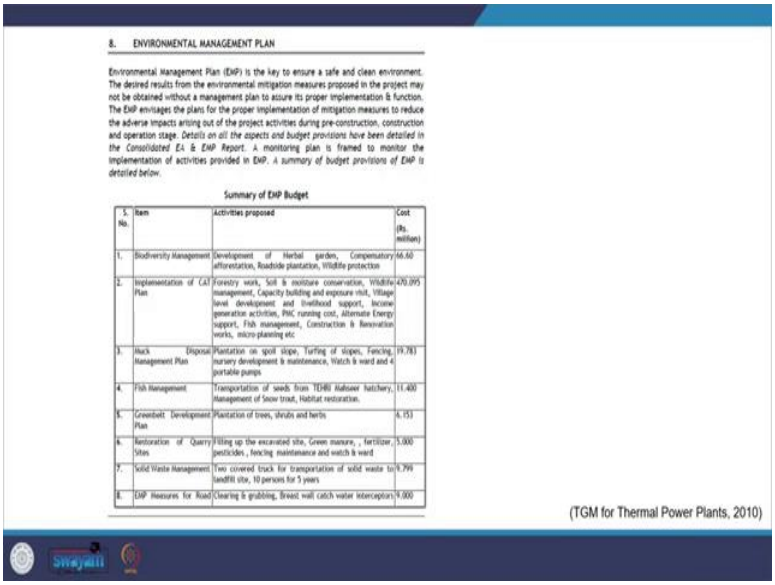

So, they will also check for the completeness and authenticity of baseline data. Citing of proper reference, so whether you have taken all the data from where you have taken all that has been properly indicated or not. Whether the values of environmental parameters are consistent or not with each other also be checked.

What are the mitigation measures, that is all given in this as well, and then you can see here a summary of the EMP budget also provided as the requirements. And how the input from public hearings has been incorporated. And then the effectiveness and consistency of the proposed environmental monitoring plan. And then how hazard and quantification of risk is done.

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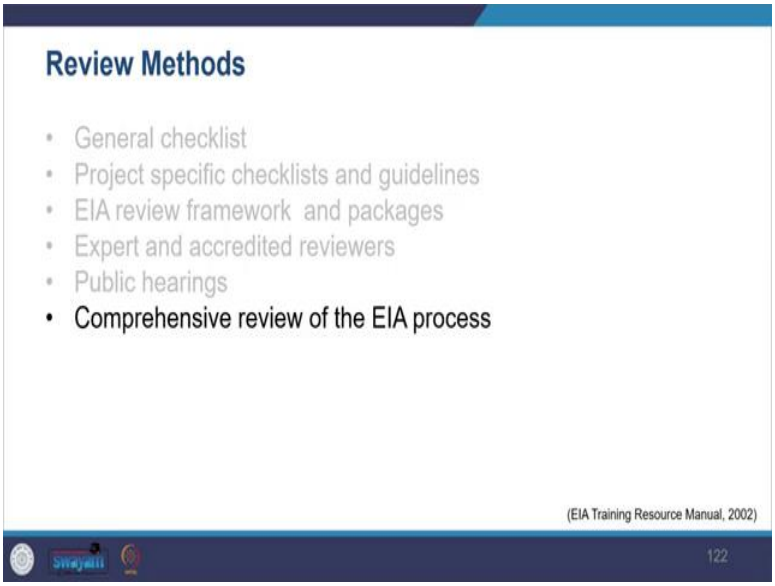

So, while reviewing you can use the general checklist method so you see that MOEFC gives a checklist. It can also have a project-specific checklist and guidelines as per the domain. Then you can use the framework and packages the ones which we saw from Zimbabwe. Then you also have expert and aggregated reviewers. A public hearing is also part of it.

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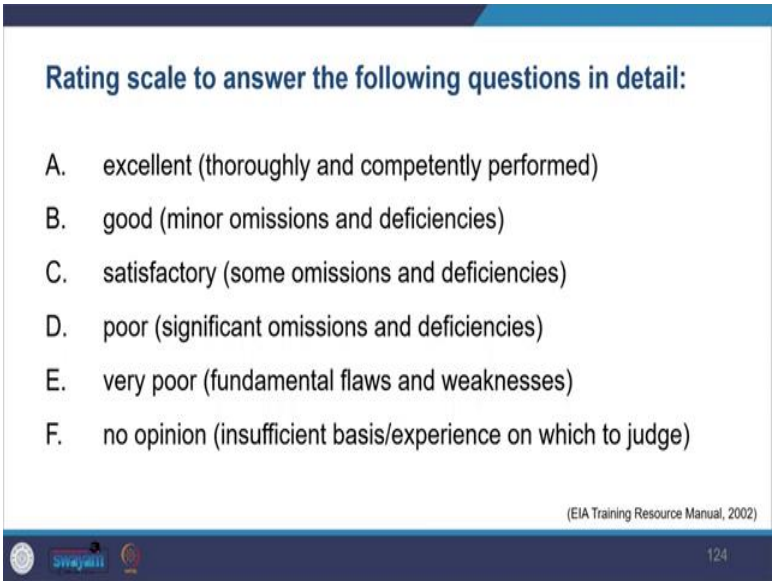

This is another scale that you can see where the report can be evaluated like excellent, good satisfactory, and so on.

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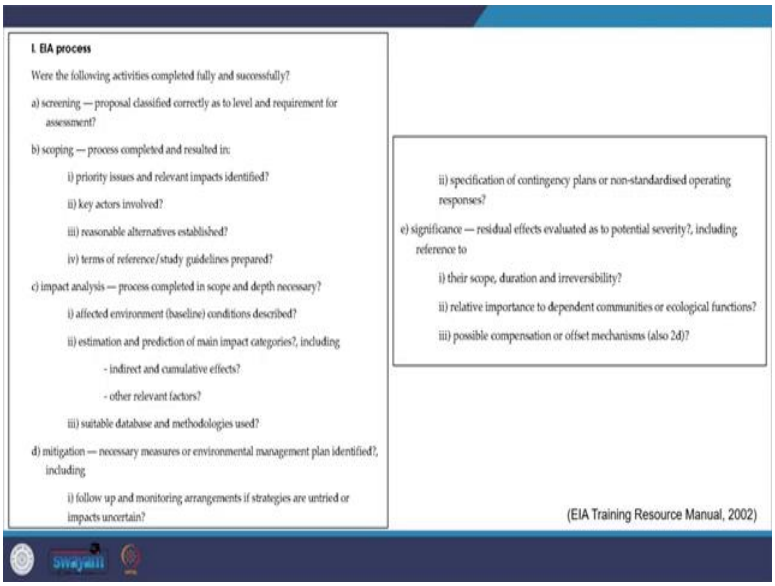

Within the process itself, the process ensures EIA quality so you can see how screening, scoping, impact analysis, mitigation, and significance, so whether the entire process has been carried out properly or not would also help you to review the quality of EIA.

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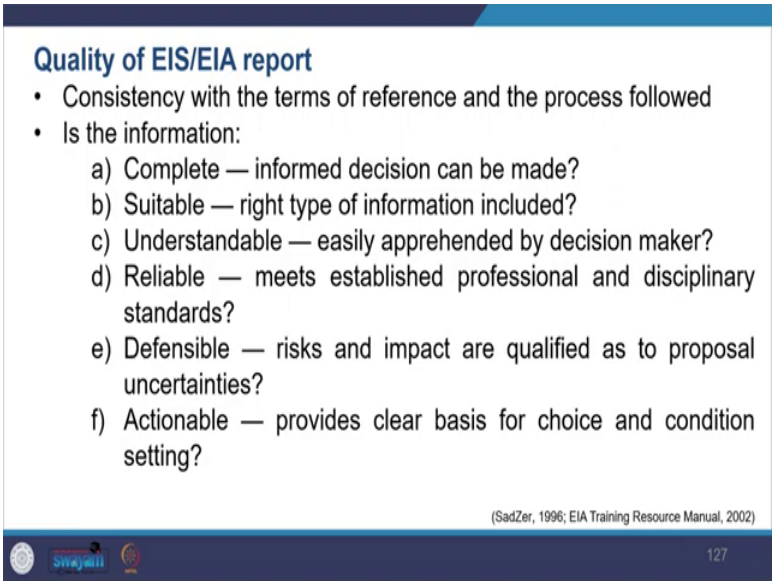

So, another scale which you can see for the EIA report.

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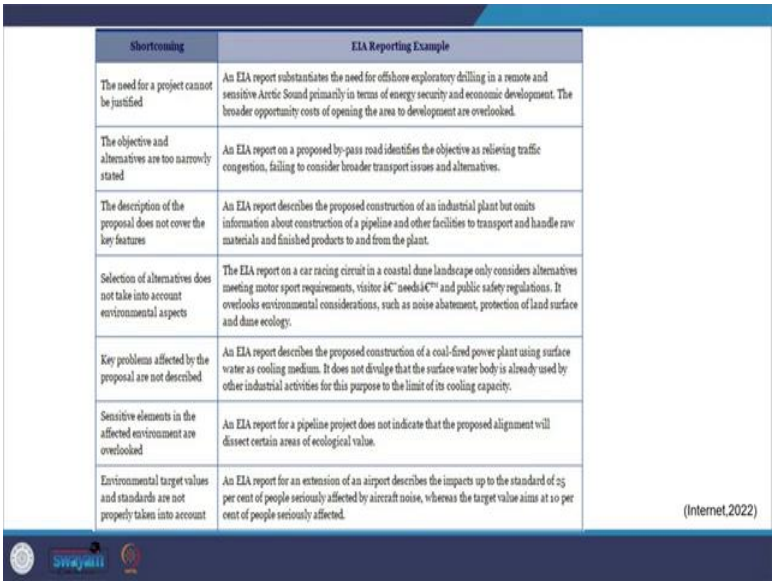

Usually, there are certain shortcomings in the EIA report, reports the general observed, and then the cases marked are indicated here. So, these examples are here as per the UN training manual so the list is given to you here which you can see I will just highlight which are the key shortcomings.

So, the need for a project cannot be justified so sometimes reports where it is written the key aspects are not justified for the project, the objective and alternatives are too narrowly stated so you do not enough, you do not sufficiently describe it. The description of the proposal does not cover the key features so then also most of the time these problems are there.

The selection of alternatives does not take into account the environmental aspect. So, those problems are also seen. Key problems affected by the proposals are not described so that can also happen, sensitive elements in the effective environment are overlooked. Environmental targets values and standards are not properly taken into account.

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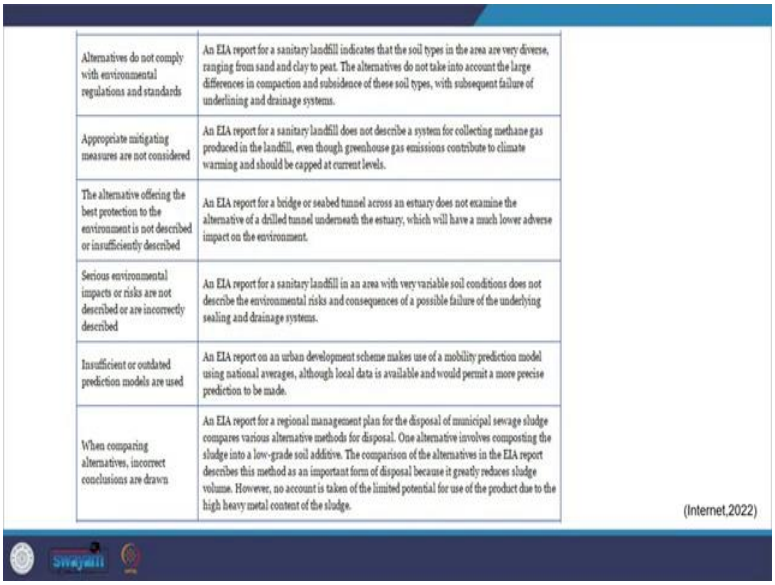

And then you also see that alternatives do not comply with environmental regulations and standards that are also observations. Appropriate mitigation, measures are not considered so that is generally what has been seen in EIA reporting. Alternative offering the best protection to the environment is not described or insufficiently described.

Serious environmental impacts or risks are not described or incorrectly described so those kinds of problems also come. So, insufficient or outdated predicted models are used, so not the latest models are used, outdated models are used or the models that have certain limitations are used. And when comparing alternatives incorrect conclusions are drawn, so that kind of problem also comes here.

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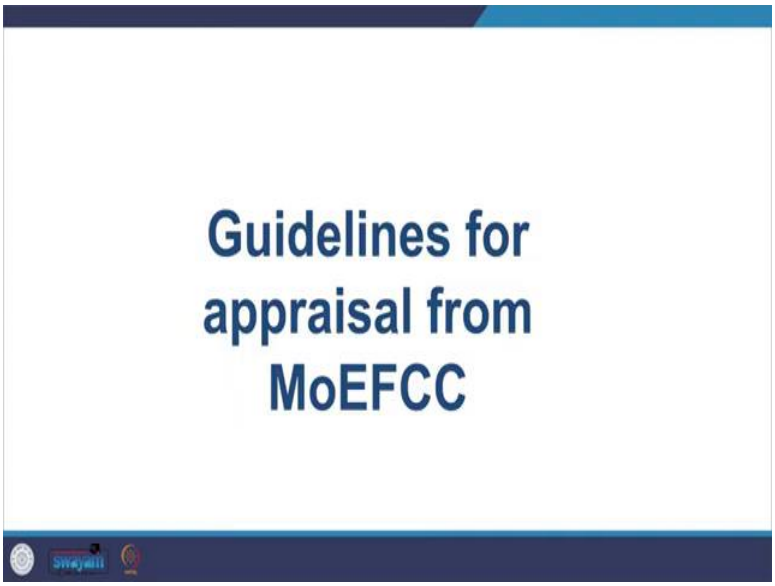

So, here you can see guidelines for appraisal from MoEFCC, so they have given this guideline. So, we are giving this checklist to you, you can have a look.

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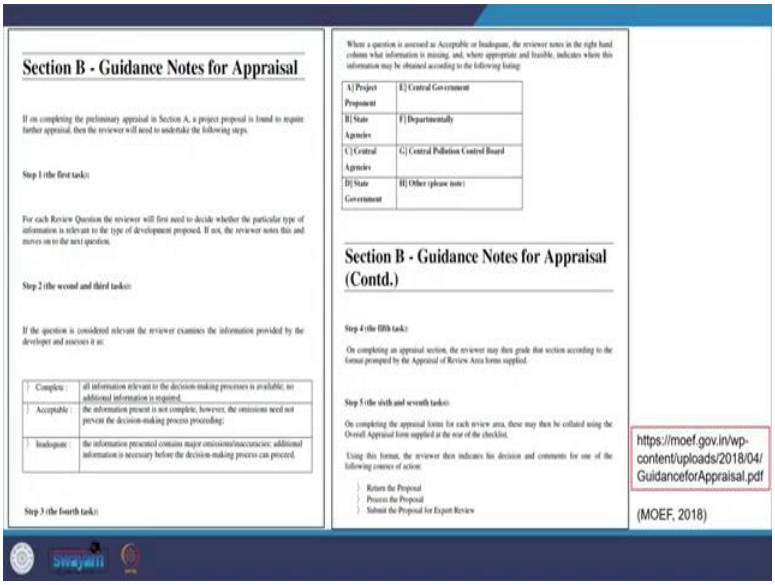

So, this is how the reviewers would be again seeing in the Indian context like they would have step 1, step 2, they would see how the report is complete, acceptable, inadequate, and then who is the proponent, government, department, center, and central pollution control board and others through what it has been reviewed. And what kind of action step 5, return the proposal, process the proposals, and submit the proposal for expert review so that this is how they are going to check.

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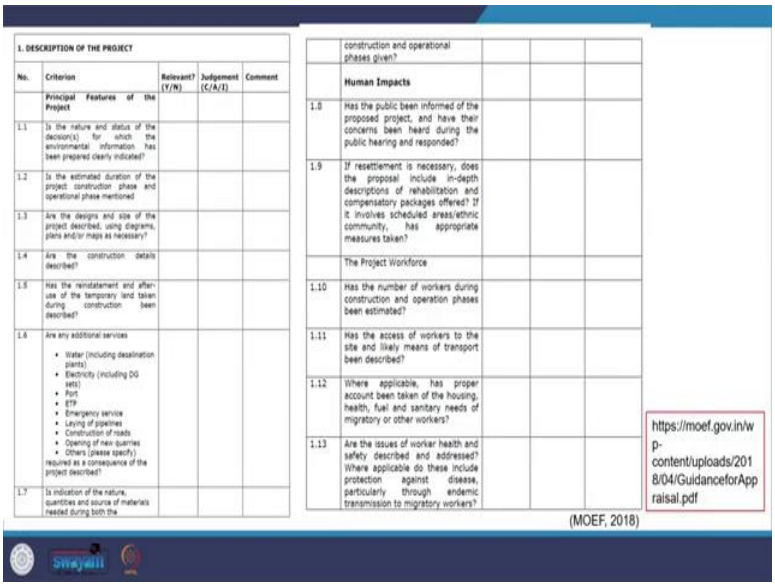

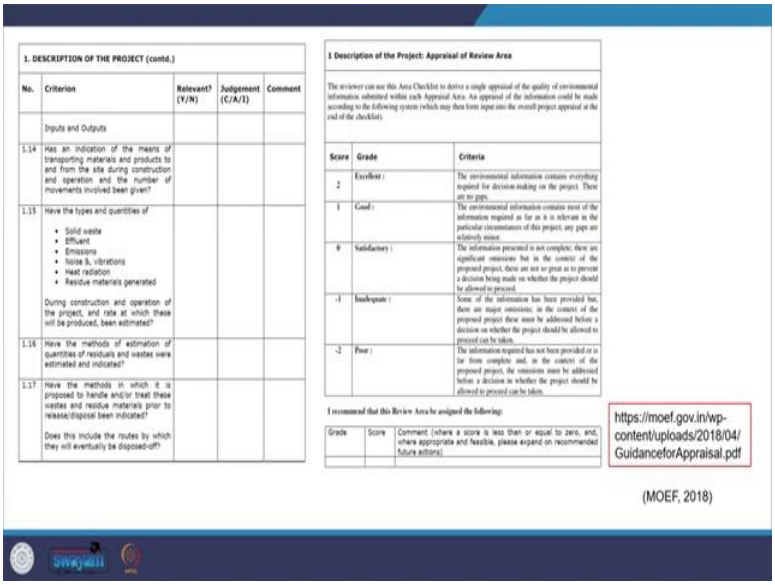

In our scenario we use the checklist to describe the project and all the parameters they would see and relevant, yes, no, judgment, and comment so they would make these comments, you can have a look at this checklist. So, this has a complete checklist I have snipped it for you from the website, and I will share it with you.

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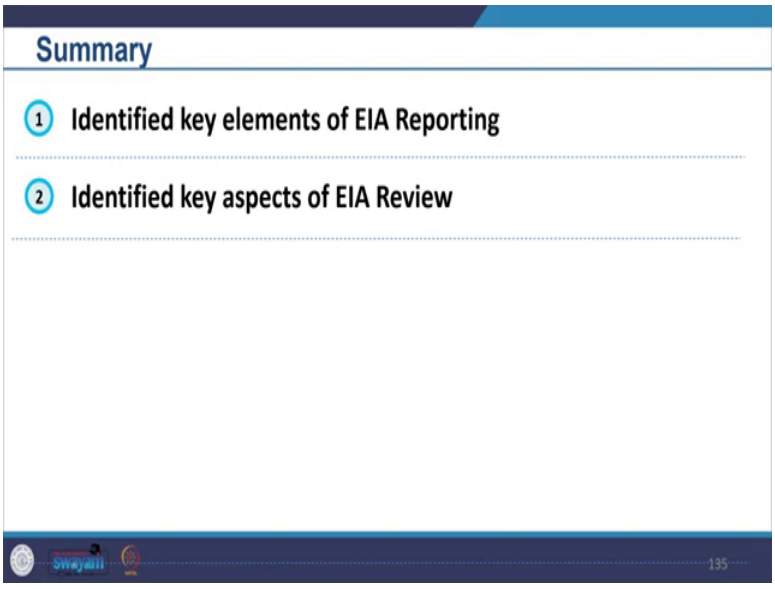

So, that is all that we saw today, we covered, and looked at key elements of EIA reporting the complete elaborates on what report, what the different components of what the purpose of each component and how it is evaluated, and what is looked into when the report is evaluated.

The same way we saw how the EIA reviews the quality of EIA. So, the review process itself is a way of ensuring how the quality is maintained and how the key objective of EIA is met so that is what we covered today.

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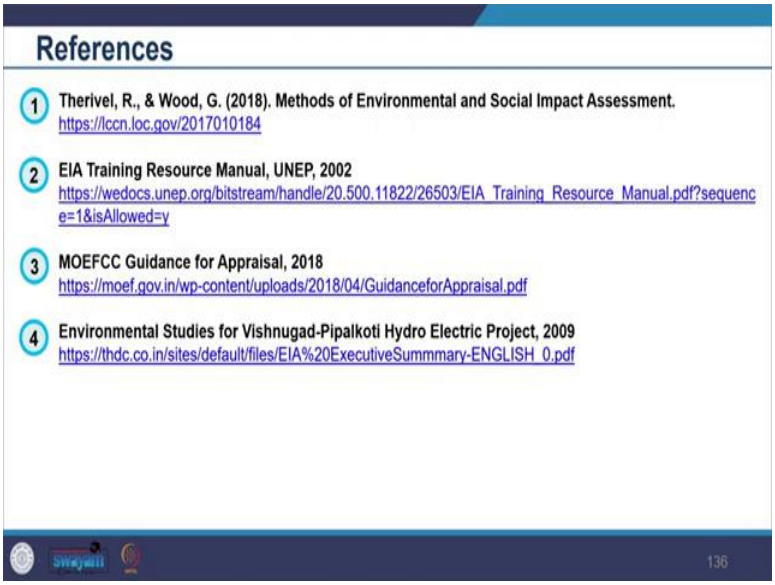

So, these were the key references, today's key reference was the UN training manual plus we took some parts from our textbook which we have been referring to Therivel and Wood, and then most of the documents were taken from the ministry website.

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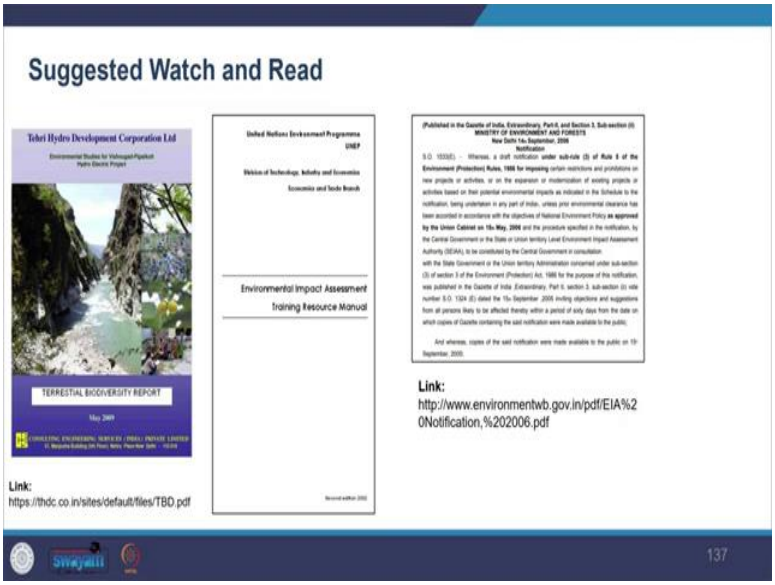

So, these are the suggested watches and reads related to the EIA reporting and quality of EIA.

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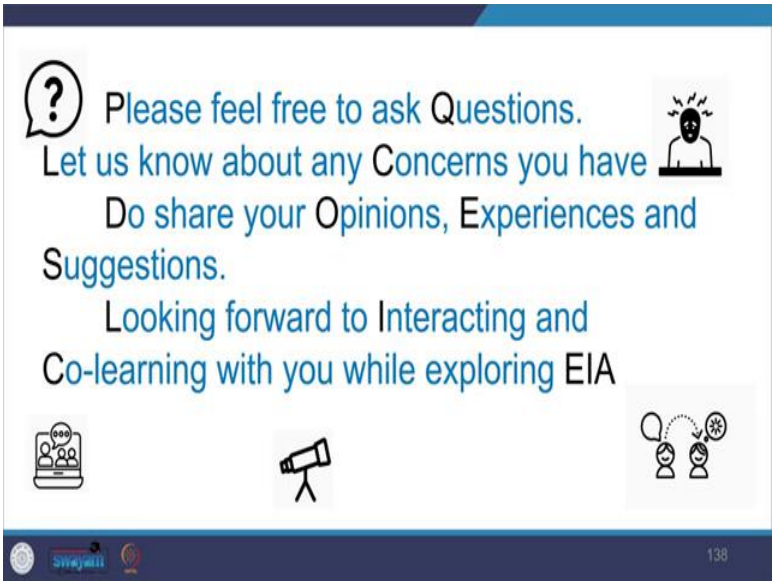

And winding up please feel free to ask questions, let us know about any concerns you have. Do share your opinions, experiences, and suggestions. Looking forward to interacting and co-learning with you while exploring EIA, thank you.