

Comparative analysis of environmental impact assessments: Western Australia and the Netherlands

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ABSTRACT

This paper analyzes and compares the environmental impact assessment (EIA) process in Western Australia and the Netherlands, an important regulatory tool currently used to assess the environmental, social and economic impacts of development projects. The actual situation of different countries leads to different understandings of the environmental impact assessment process and the formulation of corresponding rules. This paper reviews the environmental assessment process of Western Australia and the Netherlands from several key aspects, analyzes the similarities and differences of their environmental assessment processes, and reveals their institutional advantages and problems in the environmental assessment process. Understanding the differences of EIA in different regions can promote more scientific environmental assessment methods and provide references for regional environmental managers who need to construct environmental impact assessments.

KEYWORDS

Environmental Impact Assessment (EIA); Western Australia; Netherlands; Management; Public participation

1 Introduction

Environmental Impact Assessment (EIA) is currently an important regulatory tool for evaluating development projects around the world, helping to assess the potential environmental, social and economic impacts of development projects. Global development projects are evaluated to ensure that projects such as large-scale development and industrial activities do not cause significant harm to the environment. In this report, the focus is on comparing environmental impact assessments in Western Australia and the Netherlands, and their approaches to regulating large-scale development projects. The differences and similarities of EIA processes in the two regions were analyzed, and specific environmental policies, regulatory processes, and social contexts were considered to ensure a full assessment of their potential impacts.

2 Environmental assessment processes in Western Australia

The Environmental Protection Agency (EPA) plays a central role in the Environmental Impact Assessment (EIA) process in Western Australia. If the project developer think that its project will have a significant impact on the environment, the project should seek an Environmental Protection Agency (EPA) review to determine whether an environmental impact assessment is required and to determine the extent of its impact. After determining the need for a project assessment, EPA requires the project proposer to submit an Environmental Review Document (ERD). EPA reviews the

report and submits an investigation report to the Minister of the Environment considering public comments, including whether the project should be approved and the conditions under which it should be implemented. The Minister of the Environment, in consultation with other ministers, will decide that approved projects must comply with the specified conditions, and subsequent monitoring and implementation will be managed by EPA and the relevant agencies. The assessment process is fully transparent and emphasizes the importance of public participation, with the possibility of appeal if a decision made during the environmental assessment process is not convincing. (Environmental Protection Authority, 2017).

Western Australia's environmental impact assessment process consists of six key stages, as shown in the chart below.

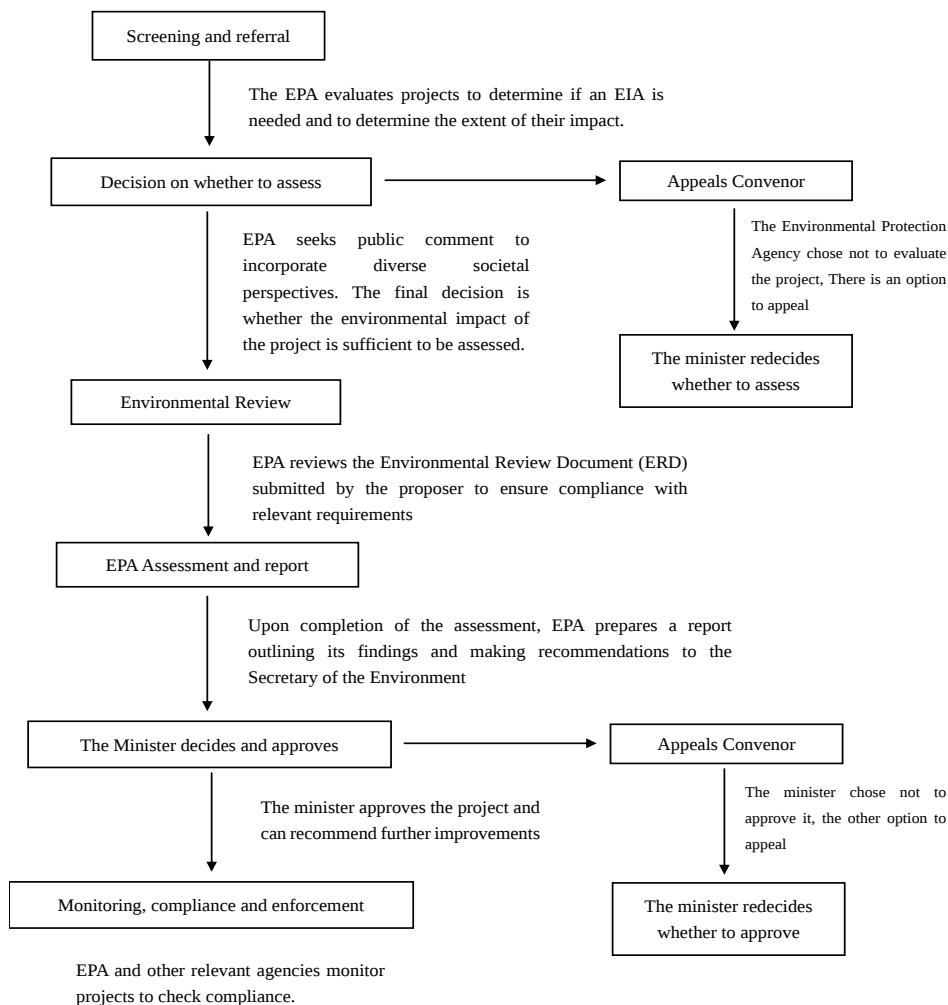


Figure 1 flow chart of Environmental Impact assessment for Western Australia

3 Environmental assessment process in the Netherlands

The Netherlands Environmental Assessment Council (NCEA) plays a leading role in the Environmental Impact assessment (EIA) process in the Netherlands, providing advice throughout

the environmental assessment process. In the Netherlands, environmental assessment can be carried out at two decision-making levels:

Most engineering projects, such as DAMS, highways, and airports, use relatively simple, straightforward permits to conduct environmental impact assessments directly: Social impact assessments (ESIA).

Environmental impact assessment for complex decisions and environmental impact assessment for plans and programs will use a more comprehensive process: Strategic Environmental Assessment (SEA).

In the environmental assessment process, the type of permit determines whether a simplified procedure or a full procedure is used.

NCEA first needs to determine whether a proposed project requires an EIA, identify and scope the types of projects that are likely to have a significant impact, and screen out those that do not require an environmental assessment. Once the scope of the project has been determined, the project proponent is required to prepare an environmental impact study to examine the potential environmental factors that may exist in the project and their impacts, and to propose relevant mitigation measures. NCEA checks reports and ensures they meet standards. The completed review report will be made available to professionals, stakeholders and the public for review and comment. Public participation is included throughout the environmental assessment process to ensure transparency. The authority will make its decision based on the NCEA's review report, public comments and stakeholders, and may request the project sponsor to amend the report or provide further information. Further monitoring and evaluation is necessary to determine whether the environmental impacts predicted by the report are in line with the actual situation, and continuous improvement through regulatory approaches. key stages as shown in the chart below.

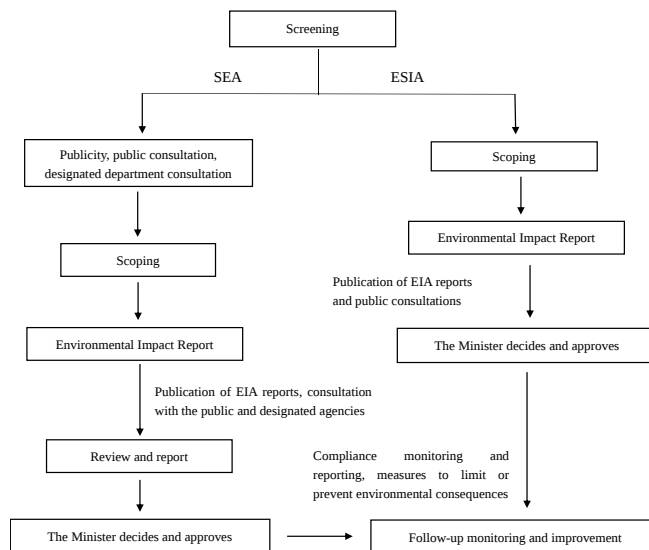


Figure 2 flow chart of environmental assessment in the Netherlands

4 Comparison of EIA processes: Western Australia and the Netherlands

A comparison of the environmental impact assessment processes in Western Australia and the Netherlands found that the two regions had similar processes, although Western Australia and the Netherlands reflected different regulatory philosophies, governance structures and social contexts in establishing the EIA. The advantages and disadvantages of the two regional management

methods are comprehensively understood and analyzed through the comparison of the tables.

Table 1 Comparison of environmental impact assessment processes between WA and NED

Process	WA	NED
Screening	The EPA assess projects, solicits public comment, and makes a decision	NCEA consults with relevant agencies to screen projects and define the scope of environmental impact
Environmental impact report review	The Environmental Protection Department will review the ERD to ensure compliance and consider the implications	NCEA set up a working group to review the report, consult with stakeholders and the public in the process, and propose changes
decision	The Secretary of the Environment makes a final decision on whether to approve the proposal based on a report prepared by the EPA, in consultation with other ministers and combined with public comments	The authority takes into account the NCEA report, as well as consultation with local communities, institutions and the public, and the relevant environmental impacts, before making its final decision
Follow-up monitoring	EPA and related agencies monitor compliance during program implementation. And effectively address any potential environmental impacts through regulation	The competent authority assumes responsibility for determining EIA projects, investigating their actual environmental consequences and taking measures to limit or prevent them as far as possible

4.1 Management process

The environmental impact assessment (EIA) process in Western Australia is centralized, with the EPA responsible for making decisions on the selection and scoping of projects in consultation with stakeholders, taking into account public input, assessing projects and providing advice to the Minister for the Environment. This is a simplified and centralized process where the EPA provides objectives and related responsibilities to different stakeholders, which makes the process simple and efficient, but can also limit broader and long-term planning considerations. In contrast, the Netherland Environmental Assessment Council (NCEA) is an independent advisory body whose main role is to provide professional advice and guidance throughout the assessment process. The Netherland EIA process is mainly involving stakeholders, including local communities, public institutions and scientific experts. This decentralized management model allows for broader planning and more flexibility, but it is more responsive to local conditions, and multi-stakeholder involvement can complicate the process.

4.2 Public participation

In Western Australia, the public will comment on the Environmental Review Document (ERD) at the assessment stage, which simplifies the assessment process but may also limit the extent to which the public can influence decisions. The Dutch EIA process incorporates public participation throughout the process, involving stakeholders and the public from the very beginning of the project, which ensures that people with a stake in the project are involved throughout the assessment process, which is consistent with the objectives of democratic governance in the Netherlands. However, the opinions of the public participation may not coincide with the thinking of the competent authorities. In the Netherlands, the River Space Program aims to protect the Rhine River from the danger of overflows. The project follow-up management after EIA is very important. Local stakeholders and the public clearly support strict follow-up supervision, but due to the large amount of material and financial investment in the early stage, the competent authorities are

unable to actively monitor and support the follow-up project. (Steinhauer, 2012) This indicates that the subject of public participation needs to adapt to decision-making, and the competent department needs to fully consider the results brought by public participation and the efforts required to support public opinion. Full public participation needs to face more challenges.

4.3 Review mechanisms

The review mechanism in Western Australia is similar to that in the Netherlands, where environmental assessment reports are reviewed by a committee, taking into account public opinion and consulting experts to ensure that the reports are scientifically sound and comply with relevant legislation. It is important to note that the assessment of the NCEA in the Netherlands is independent, and the NCEA only reviews the environmental assessment report, separate from public participation and expert consultation, and the committee only provides professional advice on the report. The review reports of both regions are fully public, ensuring the transparency and credibility of the decision-making process.

4.4 Decision

In Western Australia, because the EPA has written a comprehensive recommendation report based on the consultation and discussion of various parties, the Environment Minister only needs to make the final decision on the feasibility of the project based on the EPA's recommendations and public comments. This is a very centralized and efficient decision-making process, but due to the large scope of the EPA's authorization, incomplete consideration of environmental impacts and subsequent sustainability issues may arise. In the Netherlands, the manager's decision needs to take into account not only the NCEA report and public comments, but also the local community and administration, as well as the international impact of the large-scale project. This approach allows for more holistic decision-making, however, combining the decision-making processes of the two regions, it can be seen that the Dutch EIA process shifts more pressure to the authorities, which creates the same problem, as too much information is considered at the same stage, and too many stakeholders are involved, which makes the process more complex and delays.

4.5 Monitoring and compliance

In Western Australia, the Environmental Protection Authority and related agencies are responsible for the subsequent oversight process, monitoring environmental impacts during project implementation, and leading the implementation of mitigation measures. Monitoring allows for adaptive management, and policies can be modified as the environment changes, an approach that helps address unforeseen environmental impacts and keeps project management consistent with standards. In the Netherlands, post-decision monitoring is led by the competent authority to ensure that the project meets the conditions of the competent authority in consultation with the agencies. The monitoring results are used to consider subsequent environmental impacts and improve mitigation measures. The approach to follow-up monitoring in both regions is essentially the same, but there are still problems with over-centralization of responsibility and the potential for negative attitudes of the relevant authorities after project approval. A number of successful cases have shown that the main reason for the success of EIA projects is the establishment of similar "project committees" to promote mutual understanding and cooperation among various departments and stakeholders (Runhaar et al., 2007). An open and positive attitude is very important for the department responsible for the project and will also make a significant contribution to the subsequent construction of the project.

5 Conclusion

This paper provides a comparative analysis of the environmental impact assessment processes in Western Australia and the Netherlands, revealing their strengths and challenges in the environmental assessment process. Western Australia benefits from its simplified regulatory framework and centralized regulatory regime. The Netherlands' emphasis on democratic participation and environmental sustainability makes its processes more inclusive and sustainable. Understanding these differences and learning the strengths of each region can promote a more scientific approach to environmental assessment.

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