



SDG 13, climate action: Environmental Impact Assessment as a Key Instrument of Environmental Protection

Introduction

The Environmental Impact Assessment (EIA) is one of the most essential mechanisms within environmental law, ensuring the early identification and prevention of ecological, social, and public health risks during the decision-making process. Its central objective is to evaluate the potential environmental consequences of proposed activities before a project is implemented. Through systematic scientific analysis, the EIA provides governments and private stakeholders with the foundation to make informed, responsible, and sustainable decisions. As modern states confront the combined pressures of economic development, climate change, and ecosystem degradation, the EIA has become indispensable for balancing growth with environmental protection.

Historical Foundations and Legal Development

The legal foundations of the EIA were formally established in the United States through the National Environmental Policy Act (NEPA) of 1969. NEPA introduced a transformative governance principle: all major federal actions must be guided by a prior, scientifically grounded environmental analysis. To ensure this, NEPA created the Environmental Impact Statement (EIS), a detailed document evaluating environmental, social, economic, and health impacts. Several landmark judicial decisions shaped the implementation and enforcement of NEPA, ensuring that environmental protection became a substantive – not symbolic – obligation.

I. Calvert Cliffs' Coordinating Committee v. U.S. Atomic Energy Commission (1971)²

This landmark case was the first to give NEPA enforceable legal strength. The D.C. Circuit Court ruled that the environmental review must be meaningful and substantive, not a procedural technicality. The decision halted the approval of nuclear facilities on the grounds



that the Atomic Energy Commission had failed to incorporate environmental analysis into its licensing procedures.

Calvert Cliffs' became a foundational precedent, establishing that environmental considerations must genuinely influence federal decision-making.

II. *Sierra Club v. Froehlke* (1972)

Another critical precedent concerned the Meramec Park Lake project in Missouri. The Sierra Club argued that the U.S. Army Corps of Engineers had not conducted a scientifically credible and comprehensive EIS. The court agreed, holding that:

- NEPA is legally binding and cannot be circumvented;
- Environmental studies must occur **prior** to project implementation;
- Agencies must evaluate all reasonable alternatives, including the **no-action alternative**;
- A project cannot legally proceed without an adequate EIS.

This decision significantly strengthened NEPA's enforcement and shaped federal agencies' responsibilities toward environmental review.

Key Stages of Environmental Impact Assessment under NEPA

NEPA establishes a structured, multi-stage system to ensure scientific rigour, transparency, and public accountability in federal decision-making:

1. **Scoping – Identification of critical issues**

Early identification of environmental, social, cultural, and public health concerns.

2. **Environmental Assessment (EA)**

A preliminary review determining whether a full EIS is necessary.

3. **Finding of No Significant Impact (FONSI)**

Issued if the EA shows that the proposed action poses no significant environmental risks.

4. **Environmental Impact Statement (EIS)**

A detailed and comprehensive scientific study that evaluates environmental impacts, cumulative effects, alternatives, and mitigation strategies.

5. **Public Participation**

Public hearings, comment periods, and transparent access to information are central to NEPA's democratic ethos.



6. Record of Decision (ROD)

A final, formal document outlining the agency's decision and explaining how environmental considerations influenced the outcome.

The European Union EIA Directive (1985)

The European Union adopted its first EIA Directive (85/337/EEC) in 1985, heavily inspired by NEPA's structure and philosophy. The Directive requires:

- EIA for specified categories of public and private projects;
- Assessment of **transboundary** environmental impacts;
- Public participation in decision-making;
- Alternatives analysis;
- Access to environmental information;
- Publication of a comprehensive Environmental Impact Study.

The Directive established harmonised environmental governance across the EU and influenced subsequent reforms, including the 1997, 2003, and 2014 amendments that strengthened public rights, transparency, and climate considerations.

Global Influence of NEPA and Judicial Precedents

NEPA and the judicial precedents that shaped its implementation have profoundly influenced international environmental law. Countries such as Canada, Australia, New Zealand, Georgia, Japan, and numerous EU member states have incorporated the NEPA model into their domestic frameworks. Key global principles derived from NEPA include:

- Mandatory environmental review prior to project approval;
- Systematic alternatives analysis;
- Cumulative and long-term impact assessment;
- Legally protected public participation rights;
- Enforceability through judicial review.

Today, more than 100 countries implement EIA procedures consistent with these principles.

Conclusion



The Environmental Impact Assessment remains one of the strongest and most widely adopted instruments in global environmental governance. The development of NEPA, together with landmark cases such as *Calvert Cliffs*’ and *Sierra Club v. Froehlke*, demonstrates that effective environmental protection requires strong legal mandates, scientific rigour, transparency, and active public involvement. As environmental challenges intensify globally, the EIA continues to serve as a crucial mechanism for ensuring sustainable development and safeguarding ecological integrity.

Questions

1. What were the main legal and environmental issues that led the court to intervene in the *Calvert Cliffs* case, and how did these issues reveal weaknesses in federal agencies’ implementation of NEPA?
2. In what ways did the *Sierra Club v. Froehlke* decision strengthen NEPA’s practical enforcement, and how did it redefine federal agencies’ responsibilities during environmental review?
3. What are the key stages of the EIA/EIS process under NEPA, and how does each stage contribute to transparent and scientifically informed decision-making?
4. Why is the ‘no-action alternative’ considered essential under NEPA, and how does it influence project evaluation and policy choices?
5. What similarities and differences exist between NEPA’s EIA system and the European Union’s EIA Directive?
6. How does the EIA process support long-term sustainable development goals and balance ecological protection with economic growth?
7. What role does public participation play in environmental decision-making under NEPA and the EU Directive, and why is it considered a cornerstone of democratic environmental governance?
8. Why are *Calvert Cliffs* and *Sierra Club v. Froehlke* viewed as foundational precedents in global EIA policy development, and what broader implications did they have for international environmental law?

List of references



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