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The 'No-Alternative Scenario' in the Alternative Analysis of NEPA

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Abstract
Environmental impact assessment report is the primary document required to assess sustainable issues of any business/commercial activity, but it is most often overlooked for serious anomalies in its presentation to the public. It is most often incomplete and there is a need to review the standards of impact assessment procedures that help preserve environmental integrity among developing nations. The absence of sanctions for improper assessment of environmental, social and economic impacts of commercial activities, including extraction of natural resources by domestic and multinational corporations undermines sustainable development across the globe. The procedures in place to study various impacts of a business activity that enable access to genuine, verifiable and actionable information by the public require review and oversight by a third-party institution. The standardization of procedures and universal harmonization of enforcement and compliance regulations by nations has to become a topic for debate at various academic levels to gain importance. Essentially, EIA reports in large infrastructure projects serve as a blueprint for low carbon economies. Developing nations ignore vital provisions relating to the listing and analysis of alternatives in their attempt to meet developmental goals. Environmental protection is to maintain the ecological integrity of habitats and ecosystems. EIA reports, ultimately, aim at conserving and replenishing the reserves of natural resources. Judicial law has played an important role in highlighting the importance of alternatives in EIA. It is therefore important as how developing nations use the provision for the alternative analysis within their environmental laws. This paper will discuss EIA under the auspices of International law relating it to Sustainable Development. It shall emphasize the significance of providing alternatives in large infrastructure projects that have enviro-social impacts including transboundary effects and how the use of "no-action" alternative helps preserve and conserve a nation's resources, reducing negative impacts

Keywords: NEPA, CEQ, Impact Assessment, Alternatives Assessment, Alternatives Analysis, no-action alternative, hydropower, mega dams.

1. Introduction

Climate change, scientifically proven to be emanating from anthropogenic causes calls for scientific, regulatory and legal mechanisms to mitigate its impacts. Credible questions on unsustainable business processes are raised as the world witnesses inexplicable and recurring incidents of natural disasters. Emerging economies showcase their infrastructure as visible signs of economic progress fail to account for natural capital infused into business activities. All nations are morally and ethically bound to review consumption patterns and energy needs of their citizens by attuning small-scale activities to reduce individual carbon footprints and implementing large-scale activities in a transparent and scientific manner. Developing nations need to offset their emissions by suggesting alternatives including mitigation in their Environmental Impact Assessment (EIA) reports as prescribed by the National Environmental Policy Act (NEPA).

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2. Theory, Methodology and Basis for Research

The present paper sets out to study a few of EIA reports on hydroelectric projects in India, made available to the public on the internet. It aims to analyse the consequences of the absence of alternatives for large-scale infrastructure projects. It discusses the manner in which courts in the United States of America have emphasized on the importance of complying with the provision. It further discusses the feasibility of applying judicial law-making principles in the Indian context.

The statutory mandate under NEPA calls upon agencies "to rigorously explore and objectively evaluate all reasonable alternatives, devoting substantial treatment to each alternative and review comparative merits, including the 'no action' alternative, and its application in the domestic legislation of emerging economies such as India. There is a clear nexus between economic development and environmental protection that cannot be side-stepped. Industries posing environmental risks to a nation through usage of energy from fossil fuels and hydropower remain beyond the scope of an international regulatory regime. The 1994 Energy Charter Treaty, a regional initiative, establishes a legal framework to promote long term co-operation in the energy field. It lays emphasis on state sovereignty and the need to exercise sovereign rights over energy resources in accordance with international law. It calls for commitment by parties to 'strive to minimize in an economically efficient manner harmful environmental impacts occurring either within or outside its area from all operations within the energy cycle in its area, in pursuit of sustainable development'. It requires parties to take into account all environmental considerations throughout the formulation and implementation of energy policies that more fully reflect environmental costs and benefits. The provisions of the Energy Charter Treaty and the subsequent International Energy Charter Treaty, 2015 reiterate the significance of assessing environmental impacts of all energy related projects by taking into consideration various alternatives before implementing large-scale infrastructure projects. In the light of the fact that India is not a party to the Charter, it is all the more relevant to assess the enviro-social impacts of all large-scale energy-related projects as per international standards. Hydroelectric power generating large mega dams are environmentally and geopolitically controversial.

To state an example, the project Grand Inga mega dam project on the Congo River, seemingly is expected to serve local communities steeped in energy poverty but power so generated is to cross borders and serve the interests of mining companies in South Africa. The government of Congo does not render itself accountable to those displaced by the construction of the dam and has been facing legal and regulatory challenges from several entities over the implementation of this project. The underpinning concept behind the need for alternative analysis in an environmental impact statement is the "precautionary principle", a fundamental tenet under international environmental law. The 1982 United Nations World Charter for Nature apparently gave the first international recognition to the Precautionary Principle suggesting that when "potential adverse effects are not fully understood, the activities should not proceed."

3. Jurisprudence of EIA under NEPA

NEPA, the pioneering legislation on managing the environment and natural resources of a nation, provided the internationally recognized instrument, EIA, that was subsequently implemented as a federal initiative by many nations. NEPA, as a procedural provision required all agencies to list the environmental impacts of all federal actions that significantly affect the quality of the human environment, which included private projects that require federal approval. EIA is expected to preserve ecosystem services for habitat management and restore depleted resources. The document prepared pursuant to this provision is known as the Environmental Impact Statement (EIS). The EIS is to include a statement of purpose and need for the proposed action, its description, and alternatives that include mitigation measures. The existence of reasonable and true but unexamined alternative renders an EIS inadequate.

NEPA does not force federal agencies to select the most environment-friendly option, but courts have held that the agencies need to consider the impact of their actions on the environment leading to informed decision-making. NEPA's basic substantive policy directed federal agencies to alter their actions to account for the environment and environmental impacts of all activities that include construction of federal buildings, leasing of public lands for mining, cutting trees for timber and construction of dams across major rivers.

As is the case of all statutory provisions whose implementation circumvents the stringent scrutiny of regulatory authorities, NEPA's mandate "to rigorously explore and objectively evaluate all reasonable alternatives, devoting substantial treatment to each alternative and review comparative merits, including the alternative of no action", stands diluted in the half-hearted implementation of its provisions despite strictures from various federal courts and the International Court of Justice(ICJ). Nevertheless, it is important to note that international law itself is presently lacking in setting standards in conducting an EIA and the mandatory requirement of alternatives analysis. The Espoo Convention and the guidelines issued by the United Nations Environment Programme (UNEP) on EIA do not mandate alternative assessment and analysis, the absence of which is a lacuna in the development of customary international law.

Alternative analysis in EIA is designed to bring environmental and social considerations into the upstream stages of development planning, including site selection, design and implementation and need to meet stated objectives of the project. The Council on Environmental Quality, or CEQ, coordinates NEPA activities and its regulations serve as a benchmark for suggestions for reforms to the EIA procedure in India, while customary international law reinforces the need to enhance existing domestic legislation to match international norms of EIA practice.

Alternative assessment appears, both in domestic and international legislation, but due to inappropriate implementation has become statutorily redundant. There is no gainsaying that the objective served by alternative analysis is in the higher echelons of environment protection. The provision has the ability to stand on its own in meeting the objectives of the domestic environment protection legislation, preventing depletion of natural resources and innovating for sustainable development. Presently, implementation of alternative assessment is mere tokenism, and demonstrates a failure to consider steps

that can meet the needs of future generations.

4. Judicial Law on Alternatives Analysis

The International Court of Justice (ICJ) in hearing *Pulp Mills on the River Uruguay*, has mandated the use of EIA as an obligation of general international law, defining it as "a national procedure for evaluating the likely impact of a proposed activity on the environment." The decision, further mandated that individual countries take a precautionary approach via environmental impact assessments when there is a serious environmental risk. In *Sierra v. Marsh, 872 F2d 497 (1st Cir 1989),* the court held that NEPA's purpose is not to prevent environmental harm, but rather to avoid inadequate *ex ante* consideration.

Courts apply the 'Rule of Reason' standard to determine whether the commission faithfully discharged its duties under NEPA when it evaluated alternatives to assess whether they are sufficient to permit a reasoned choice among the options. Judicial review of the sufficiency of stated project purpose is conducted under the 'hard look doctrine', which the statutory compliance of every EIS placed under scrutiny. In this context alternatives need to be in keeping with the purpose and need of the project and should pass the test of feasibility. On a bare reading of the CEQ regulations it is evident that they do not offer factors that go into finding whether an agency has adequately formulated the project purpose, leaving it to the courts to determine the efficacy of an EIS by applying "two-part test to properly analyse an EIS's stated project purpose when performing a hard look review of how alternatives must be considered under NEPA: 1) a determination of whether there are any alternatives presented, followed by (2) an objective inquiry into the stated project purpose….. The objective inquiry is an impartial assessment of the stated purpose to determine whether the purpose needs to be more broadly defined to allow for the proper consideration of reasonable alternatives to the project.

The Ninth Circuit has created substantial legal precedents to re-emphasise NEPA's essential purpose of environmental conservation. The court viewed NEPA as "a means to advance environmental protection, not the economic interests of those adversely affected by agency decisions." It made clear that agencies enjoy "considerable discretion" in defining the purpose and need of a project, but they may not define the project's objectives in terms so unreasonably narrow that only one alternative would accomplish the goals of the project. The court, further set a rule that an EIS lacking analysis of "viable alternatives" violates NEPA, reiterating that NEPA requires a thorough alternatives analysis for any proposed resource use.

In *Kootenai Tribe of Idaho v. Veneman, 142 F. Supp. 2d at 1235 -36,* the Court relied on the Ninth Circuit ruling an EIS lacking analysis of "a viable but unexamined alternative renders an environmental impact statement inadequate." The court, in *City of Angoon v.Hodel 803 F.2d 1016, 1021 9th Cir.1986,* held "A narrow statement of purpose and need allows an agency to consider only the alternatives that would accomplish that purpose and need, along with the required 'no-action' alternative."

The "no-action" alternative serves as a useful benchmark that help decision-makers under the environmental effects of the action alternatives. The Department of Energy

(DOE) in its Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements states: "For proposed changes to an ongoing activity, "no action" can mean continuing with the present course of action with no changes. It can also mean discontinuing the present course of action by phasing-out operations in the near future. Pragmatically, it was concluded by some that there could exist two forms of the no-action alternative, a) the continue alternative where there is no change to the current activity and the b) discontinue alternative which is the alternative of terminating ongoing programs or activities.

The other view on the no-action alternative is that it is neither the continue alternative nor the discontinue alternative, but a set of "minimum actions required for safe and secure management of resources.' Most often the 'discontinue' alternative does not stand a chance on a cost-benefit analysis with more environmental damage than the 'continue' alternative. The no-action alternative is significant when assessing environmental and social impacts of large-scale mega infrastructure projects in developing nations, where rehabilitation of displaced communities is more cumbersome, stifled by limited on-the-ground solutions. The absence of 'no-action' alternative merely establishes the fact that the project proponent has promoted his commercial interests over environmental protection.

The World Bank's Operational Directive OD 4.01 on environmental assessment calls for, *inter alia,* systematic comparison of the proposed investment design, site, technology, and operational alternatives in terms of their potential environmental impact. The bank in its EA Sourcebook update states "The "no-action" or "no-project" alternative should routinely be included in analysis of alternatives in EA. This involves projecting what is likely to occur if proposed investment projects are not undertaken. In evaluating the no-action alternative, it is important to take into account all probable public and private actions which are likely to occur in the absence of the project."

The breadth of the alternatives to be considered can certainly affect the desirability of the proposed action. The Ninth Circuit's discussion on alternatives analysis which stands:

"To be adequate, an environmental impact statement must consider every reasonable alternative....,,,An EIS is rendered inadequate by the existence of a viable but unexamined alternative..... furthermore, even if an alternative requires "legislative action", this fact "does not automatically justify excluding it from an EIS..... Thus, the range of alternatives considered must be sufficient to permit a reasoned choice. The Court did not require agencies to explore an unreasonably broad range of alternatives. Rather, the range "need not extend beyond those alternatives reasonably related to the purposes of the project."

When critical elements of the purpose and need statement of the project are not met, at least to some minimum level, it leads to a "no-build" situation. Presently, there are no incentives for pursuing "non-structural" or "no-build" solutions. Despite non-structural alternatives that are environmentally sound and cost-effective, they are not taken into consideration because preliminary construction and preparatory work is already underway, and investments made prior to obtaining the final approval to the project based on EIA.

Absence of alternatives in an EIA report merely reinforces business methods and processes that have long been rejected by the public and assessing authorities. Under NEPA, alternatives provide for energy and biodiversity conservation, optimal utilisation of natural resources through principles of resource efficiency and energy efficiency. The

decision-making process should be based on access to maximum and scientifically accurate information that is diverse in presenting alternatives, including the 'no-action' alternative that serve the greater good of the society and are seemingly larger than the project itself.

The European Parliament set in motion steps to harmonize EIA standards by amending its Directive 2011/92/EU through Directive 2014/52/EU that, *inter alia,*

"harmonized the principles for the environmental impact assessment of projects by introducing minimum requirements, with regard to the type of projects subject to assessment,.....

EU developed a Green Infrastructure Strategy and was adopted in the year 2013. Green Infrastructure (GI) is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation, climate mitigation and adaptation through natural solutions or green solutions. GI aims at promoting investments in green infrastructure.

5. EIA in the Indian context

Statute represents "the will of the nation, expressed by the legislature expounded by Courts of Justice." The environmental legislation deems the state to protect its natural resources by implementing statutory provisions that aids in economic and social benefits and with highest regard for public welfare. It requires evaluation of better, feasible environmental options and effective solutions by working with nature, rather than against it, preserve ecosystem services by restoring natural flows instead of building dams across rivers, restoration of wetlands and building natural reservoirs.

India depends on hydro power for its energy needs. Dam-building is an energy and emissions-intensive process that can result in adverse environmental impacts detrimental to the nation. The activity involves land clearing and deforestation, flooding, GHG emissions from reservoirs and decaying biomass from flooded land, adverse changes to hydrological structure of a region, degraded quality of water, negative implications that arise from downstream activities including power generation, which collectively presents negative climatic effects. Research claims that reservoir emissions in the form of methane in tropical climates could be very high. These factors cannot be considered if the provision for alternatives assessment and analysis is not implemented in its truest form.

The EIA process in India does not specify the alternative assessment of 'no-action' and restricts itself to alternatives proposed by the proponent of the project and those that may be offered by other third parties. Businesses are not interested in assessing alternatives after having obtained the approval to execute the project. Presently, EIA practice in India is weak and, in many cases, a mere cut and paste job that churns out reports by the hour to gain approval for projects and for certain project proponents. The domestic legislation is bereft of sustainable development goals and insufficient to address climate change impacts.

The EIA provision in India is a 'subordinate legislation' under the Environment Protection Act, 1986 and is devoid of measures to tackle transboundary impacts of major infrastructure projects. The alternative assessment analysis is restricted to technology and

site. The absence of no-action option is glaring as is the requirement to provide non-structural or green solutions for projects that have major impacts. EIA reports on construction of mega-dams across international rivers flowing through India do not discuss alternatives, and in most cases completely excluding them in their EIA reports.
Most often details relating to the size of the area that may be submerged due to flooding, accurate list of flora and fauna threatened, methane emissions by biomass decay are either not represented or misrepresented to promote the project. Rigorous assessment of social and environmental impacts consumes a lot of resources and is most often compromised for the commercial and economic interests of a nation.
A lot has been discussed by many researchers and scholars on the sustainability of large mega-dams across the Amazon, the Congo, or the Mekong. A recent example is the Pancheshwar Dam contemplated by India and Nepal on the Mahakali river, known as Sarada river in India, along the international boundary between the two countries. It has been stated that a transboundary impact assessment, as mandated under international law, has not been conducted. India's Expert Appraisal Committee on River Valley and Hydroelectric Projects, has set aside this requirement citing reasons of delay. The EIA legislation of India does not analyse the cumulative impacts of a project, downstream impacts and procedurally lacks transparency when it concerns public participation and development of alternatives. The types of alternatives for large-scale infrastructure projects shall include alternatives on functionality, siting of the projects, size, design and materials, time schedule for preliminary preparation, construction, commissioning and operation and options for decommissioning, mitigation and finally the prospects for a no-action alternative.
It is important to invest in research and development of innovative technologies that can substitute hydropower generation, for e.g., the "instream turbine technology" that can produce steady base power. New small turbine technologies have been developed to harness base power and are low on maintenance, ecologically safe. Smart Hydropower has commercialized instream turbines worldwide with an aim to reduce negative impacts of large hydropower dams. These options are viable alternatives for hydropower projects in developing nations that promote a 'no-action' alternative. India as a leader among developing nations needs to improve its impact assessment procedure to prevent transboundary damage.
The Environment Protection Agency (EPA) of the USA is considering the adoption of a 'sustainability assessment and management' process that would follow all the classic steps in the existing impact assessment process with an emphasis on, inter alia, analysis of alternative options that includes an integrated evaluation of the social, environmental, and economic consequences and evaluate the long-term consequences of alternatives in addition to more immediate ones. The National Resources Council released a report titled 'Green Book, 2011 to be used by the EPA to implement sustainability by setting sustainability objectives, goals, indicators and metrics as basis for the evaluation and monitoring of the agency's progress towards sustainable development.

6. Conclusions

Alternatives assessment, essentially, converts environmental policies into solutions-based policies that are holistic and integrated, designed to prevent environmental risks at the very source. Compliance of the provision avoids risk shifting, establishing far-reaching long-term environmental goals by adopting safer and cleaner forms of production systems and product range. New alternatives, invariably reject problematic activities forcing authorities to look for greener and environment-friendly options to meet the demands of economic development.

Scholars have called for substantial changes in domestic legislation and policy to institutionalize alternatives assessment, removing obstacles to its implementation. Policies and procedures should be devised in a way to ensure that the process of assessing alternatives results in its absolute implementation. Alternatives assessment should not only include already existing alternatives, it should open up avenues for generating better alternatives that are scientifically advanced, encapsulating concepts of energy efficiency, resource efficiency while accounting for natural capital.

A paradigm shift in the discourse on alternative analysis is essential at a time when there is inadequate compliance of the provision domestically and internationally. Alternatives are a form of avoidance or a state of "no action" where an impact can be totally avoided preserving a resource in its natural state of existence. A bare perusal of some of the environmental impact statements prepared for major infrastructure projects in India reveals that this aspect has been completely ignored amounting to negligence on the part of the state, which is the trustee for all reserves of natural resources, expected to protect it on behalf of its citizens.

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