

The history of
environmental impact
assessment
environmental
sciences essay



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Environmental impact assessment (EIA) has widely become an important and relatively successful tool to assess and evaluate the environmental consequences of development proposals before commitments are made (Wood, 2003; Glasson et al, 2005). Over three decades following its introduction in the United States of America after the enactment of the US National Environmental Policy Act (NEPA, 1970) in response to the public demand for environmental protection, it has been adopted in over hundred countries making the process been institutionalized (Bartlett, 1997; Glasson et al., 2005; Jay et al, 2007). Its adoption has helped improve the decision making process by evaluating, predicting, mitigating the biophysical, economic, social and health impacts of proposed projects and development presented in Environmental Impact Statement (EIS) (Sadler, 1996). Although EIA systems and processes may differ in various countries and jurisdictions, the principles are aimed at solving many common problems which are firmly within the EIA laws, policies and guidelines in any country and jurisdiction (Sadler 1996; Wood, 2003, Jay et al., 2007). According to the Oxford dictionary, the term `effectiveness' refers to the adequacy of a purpose accomplishing what it was intended. The origination of the debate on EIA effectiveness in North America has led to different views on how to appraise and measure the effectiveness of an EIA system and way of improving its performance (Wood, 2003: Gibson, 2002). The major and common question is if EIA has actually fulfilled the purposes, which it was set up for which is majorly to aid decision making. This essay aims to appraise how effective the

EIA process is with particular reference to the Canada by generally considering the different EIA systems in the country. This essay begins by giving an overview of the various points of view that has emanated since the origination of the debate. Secondly by reviewing the history of EIA in Canada, its weaknesses and measuring the performance of the Canadian EIA process. Finally, propose ways on how to make the EIA process more effective in the future by addressing the observed weaknesses. The effectiveness of Environmental Impact Assessment is a subjective issue that has raised various viewpoints. Caldwell (1989); Wood (2003) argued that EIA process is effective if the practices and procedures are firmly within and it relates to the laws and policy and laws of the country or jurisdiction. Doyle and Sadler (1996) are of the view that an EIA process is effective if it meets its set objectives. Sadler (1994; 1996); Cashmore et al. (2004) further argued that EIA can be said to be effective if it incorporates stakeholders and public involvement in the planning and decision making processes making it more participatory. Several studies have proposed several measurement standards and guidelines (for example Cashmore et al., 2004; Glasson et al., 2005) suggest that EIA performance can be measured based on the purposes for which it was set, such as if it has influenced decision making most importantly by presenting environmental statements which have a clearly stated and well defined environmental consequences of the development before approval. Also if it has improved the quality of project environmental statements and project design by providing stated frameworks and guidelines which developers must adhere to (Doyle and Sadler, 1996). If it has provided a tool for achieving sustainable development to eliminating or mitigating impacts in planning stages and not just to aid

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decision making (Cashmore et al., 2004). The early identification of significant adverse effects and ways of protecting the environment from such effects with good follow up and monitoring practices to ensure commitments and guidelines are met (Doyle and Sadler, 1996; Sadler, 1996) In Canada the EIA system is unique with several jurisdictions divided between the federal, all ten provinces and both territories levels, all with different co-existing EIA systems (Salder, 1996; Glasson et al., 2005; Wood, 2003; Doyle and Sadler 1996; Sadar and Stolte, 1994) making it a bit complex compared to the United Kingdom, which has one formal EIA system. Environmental Impact assessment in Canada started informally with the establishment of the Federal Environmental Assessment review Office (FEARO) in 1983; it has evolved tremendously in Canada for example; from weak projects such as the Wreck Cove hydroelectric project in 1977 following the federal EIA guidelines (FEARO 1977) to the commendable Voisey's Bay Mine and Mill project (Gibson, 2002). The FEARO was replaced by the Canadian Environmental Assessment Agency (CEAA) which oversees the EA process (Woods, 2003). The Canadian EA system has been widely recognised through the introduction of Environmental Assessment and Review process (EARP) in 1973 and the enactment of the Canadian Environmental Act in 1992 by the CEAA replacing the FEARO 1977 (Gibson 2002; Wood, 2003; Sadar and Stolte, 1994). On July 6, 2012, the Canadian Environmental Assessment Act, 2012 (CEAA, 2012) came into effect, by re-writing the original act. It states that " proposed projects within Canada and its federal lands be considered and conducted in a careful and precautionary manner to prevent significant adverse environmental effects outside the jurisdiction in which projects are carried out" (CEAC, 2012, pp. 6). Second generation EIA <https://assignbuster.com/the-history-of-environmental-impact-assessment-environmental-sciences-essay/>

systems such as Alberta, British Columbia and Ontario began to emerge as effect after reforms were made are to their after laws and processes from lessons from processes in previous times the enactment of the CEAA. (Doyle and Sadler, 1996) In Canada, EIA is still evolving and it is fast becoming a democratic process. One of the major aims of the act is to make better decision and sustainable development through public and stakeholders involvement through review panels and public hearings of proposed projects, electronic project registry system. Wood (2003) argued that despite this, public involvement is at a minimal level especially and only in the decision stage. In comparison with the UK, public participation is more actively promoted where statutory bodies and public contributions are considered before decisions are taken. Several measures for evaluating the performance of EIA have been proposed both in the 1990's and recently, but Gibson (1993)'s effectiveness measures of Canadian and Ontario's EIA systems were adopted to measure the effectiveness of the Canadian EIA process in a general context of analysed Canada and Ontario's EIA systems. He proposed that an effective EIA should: Firstly, the environmental impact assessment for projects should have clear goals and purposes and should as such be set firmly within the law, policies, frameworks and procedures. Some Canadian jurisdictions have made effort in the area especially Alberta, British Columbia, Ontario and Canada EIA systems, this second generation EIA systems have been strengthened after undergoing several reforms (Doyle and Sadler, 1996). Wood (2003); Sadler (1996) argue that it fails in the area because of the complexity and ambiguous nature of the different EIA processes unique to the different jurisdictions. This lack of cohesion amongst systems has made the EIA highly costly and also time consuming for

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developers resulting from the overlapping nature of the systems. EIA should not focus only on scoping of environmental impacts but also health, social and economic impacts and should be aimed at promoting and achieving sustainability at all levels. Generally, most jurisdictions only focus on the environmental/ecological impacts while some incorporate the socio-economic effects that could arise from projects and the cumulative large scale effects that can affect sustainability leading to environmental damage. Cashmore et al. (2004) recommends that all should be considered and geared toward sustainable development and not to aid decision making. The Canadian EIA process has been able to fulfil the criterion to a certain level, by ensuring that all environmental impacts be identified and stated in environmental statements for example Alberta considered these cumulative effects before approving the West Castle development. Unlike the UK, there is obligation binding developers to carry out scoping of impacts in the environmental statements before application submissions (Wood, 2003). Jay et al. (2007) stated that the evaluation of forty environmental statements, only twenty-five percent discussed scoping with the local planning authority and two-third voluntarily did scoping of the impacts before application submission, this was also affirmed by Weston (2000). Furthermore, he proposed that EIA and decision making must be just, open and should promote public involvement and participation of stakeholders. This is one of the set goals of the Canadian Environmental Assessment Act by taking into account public concerns and has been greatly achieved with provisions put in place to address the adverse issues of certain development proposal poses on individuals and communities. This level of public participation is through public registration of all documents in the public registry. (Wood, <https://assignbuster.com/the-history-of-environmental-impact-assessment-environmental-sciences-essay/>)

2003) argued that the level of public participation is through three man public review of ES and did not involve the participation of the public. He further suggested that the proposals granted within the set standards given and are carried out within the guidelines and duly monitored and that the management measures are effective and taken. Recently in Canada, projects are been approved based on the conditions that monitoring and management procedures are put in place during different phases of projects. Doyle and Sadler (1996) affirmed that monitoring and follow-up process is promising in Canada with different jurisdiction making provisions to validate proposed mitigation measures. After ten EIS reviews, Lawrence (1997) argued that there was the need for improvement on the monitoring measures used and the factors to be monitored be clealy stated with clear baselines set. In addition, if decision making has improved and been influenced; this is considered as the most important aim of EIA (Jay et al., 2007; Glasson et al., 2005). It has to be based on the best ways of implementing projects by evaluating the alternatives proposed and the purpose of the project. From recent studies, it was found out that screening and scoping were done later on in the planning process; this can either lead to the late approval of projects or decision makers not reviewing statements thoroughly before making decisions, This makes the process very strenuous for developers. EIA is said to be sound when development projects with adverse effects are rejected, helped to reduce adverse effects and ultimately led to environmental protection (Sadler, 1996). There are still uncertainties about if EIA fulfils its purpose for aiding decision making with most view leaning towards the fact that it merely scratching the surface (Jay et al, 2007, Wood 2003; Cashmore et al., 2004). Moreover, it is said to be effective <https://assignbuster.com/the-history-of-environmental-impact-assessment-environmental-sciences-essay/>

if EIA requirements, policies are strict and clear. Procedures and planning processes must be in line with the guidelines and revoke proposals that have adverse environmental effects and sustainability implications within and outside the legislating jurisdictions. Projects are approved if it has no significant environmental impact but can also be called to public hearing if the impacts are not clearly stated and understood. For example the Voisey Bay Mine and Mill project was referred to a public hearing because its economic and environmental impact were not clearly stated, with approval three years after proposal (Gibson, 2002). Lastly, it should include a platform for linking lessons learnt from EIA practices to regulation and new proposed project; EIA should be dynamic by responding to change in methodologies, practices and demands to public and stakeholders. Canadian EIA system is actively reviewing its policies and EIA process and making changes to its policies from lessons learnt from weak projects and also due to public consultation. This is obvious in policy reforms of jurisdictions such as Ontario, Alberta, British Columbia and Canada, fostering of the EIA process will need constant feedback mechanism on adjustments of policies and laws from the modification and improvement of processes (Doyle and Sadler, 1996). This is weak in Canada compared to the UK where information on trends and new practices are provided to make the practice better. Despite all the appraisals given above, there is still room for improvement for Canadian practices and processes when compared with the UK EIA process. The lack of co-ordination in EIA research in Canada ever seen the demise of the Canadian Environmental Assessment Research Council in 1992 which was the umbrella body for EIA research has led to the slow advancement rate in EIA theories and practices compared to Canada won accolades for been a leader in EIA

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research (Wood, 2003). Lawrence (1997) noted the lack of general inadequacy of the quality of Environmental Impact Statements submitted majorly focusing on identifying the various environmental impacts with no baseline for measuring impacts. He suggested that a baseline for measuring impacts be defined and communicated across all levels (Beanlands and Duinker, 1983). Wood (2003) echoed that ES were treated lightly with the purpose of project not clearly stated; this due to lack of a uniform and systematic EIA system resulting in the poor design of ES. He also observed the lack of strategic environmental assessment which is needed in development planning to achieve sustainable development. Certain issues in the Canadian EIA process need to be addressed in order to strengthen its processes and procedures. A National EIA centre which will promote capacity building in EIA practice should be established to promote and facilitate the exchange of information on new researches in EIA processes and practices (Jay et al., 2007). Canada can draw from UK@s system which has an Institute for Environmental Assessment which provides professional accreditation and trends and information in EIA (Doyle and Sadler, 1996). EIA needs to be reviewed and promoted as an important instrument for sustainability development, a threshold should be set for measuring sustainable development, and standards should all be established and be integrated into the laws, practices and guidelines (Sadler, 1996; Glasson et al., 2005; Lawrence, 1997). Environmental Impact Assessment can be made better by developing strategies to delve into green industry like in the UK (Doyle and Sadler, 1996). Issues concerning the scientific methods and uncertainties used during the EIA process should be addressed and a common ground for acceptable scientific methods be defined and communicated to clarify the <https://assignbuster.com/the-history-of-environmental-impact-assessment-environmental-sciences-essay/>

current state of confusion in Environmental Impact Assessment processes (Beanlands and Duinker, 1983). A uniform approach for measuring and assessing impacts on environment should be adopted to ensure the quality of the process. A forum should be created so as to discuss and foster solutions and better ways of conducting EIA between the decision makers, administrators, developers and reviewers, this will help resolve issue with the poor quality of Environmental Statements and help developers have a better idea of what the statutory bodies are looking for in terms of reducing adverse environmental impacts (Beanlands and Duinker, 1983). EIA in Canada is still growing and evolving. Experiences from past practices and process can be used to improve and develop its methodologies and processes, practices for new projects, especially for its follow up and monitoring mechanisms (Sadar and Stoke, 1994; Doyle and Sadler, 1996). Canadian EIA process can be applauded in terms of the interactive approach adopted to include public participation in its Act. This has helped in creating confidence and enhanced partnership between the public and private sectors, and stakeholders. It formed the basis for the design of the Netherlands and New Zealand's EIA systems (Glasson et al., 2005; Wood, 2003). The Environmental Impact Assessment process and its results are now been used to evaluate environmental and social impacts of big projects. This is now been adapted to small projects leading to strategic environmental assessment of policies to encourage sustainable development. Some of the EIA practices and approaches in Canada can be adopted by other countries such as the active participation and commitment of the government to the environment and active involvement of the public and stakeholders' participation in decision making process (Wood, 2003; Sadler 1996; Doyle

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and Sadler, 1996, Sadar and Stoke, 1994). In summary, EIA process within the EIA systems across all jurisdictions and countries should have a clear and common purpose geared towards making better decisions in the future, it is believed that this can be achieved through a single EIA report, thereby making sure that EIA is carried out in a more comprehensive and serious manner (Cashmore et al., 2004, Glasson et al., 2005). This can also be achieved if more attention is given to proffering ways whereby decision making is not an means to an end but it been active creating a well detailed EIA process tagged as best practice. Measures should be put in place for capacity building by providing practitioners with current trends in EIA, seminars and training workshop should be encouraged thus improving the EIA process and practices, this is tagged as good practice (Wood, 2003; Jay et al., 2007). Good follow-up and monitoring practice should be encouraged which is generally lacking across all jurisdictions and countries (Arts et al., 2001). For example in the UK, there is no comprehensive record of all approved ES, which makes it hard to monitor and measure if projects do not have any adverse effect during the operational stage (Wood, 2003). Finally public contribution and participation should be encourage not only in the pre-decision stages but also during the post-decision stages such as monitoring, follow-up and auditing (Arts et al., 2001; Sadler, 1996). In conclusion, after over thirty-five years of been institutionalized and accepted widely as a important tool in over hundred countries, there is a strong debate on whether EIA has fulfilled the purposes for which it was initially set up after the refinement of most EIA systems (Cashmore et al., 2004; Jay et al., 2007) most especially in the area of decision making (Wood, 2003).

Amongst practitioners, there has been great dissatisfaction not in the area of <https://assignbuster.com/the-history-of-environmental-impact-assessment-environmental-sciences-essay/>

aiding to clearly identify the environmental consequences of projects and to mitigate these consequences but in using it as an instrument for encouraging and incorporating sustainable development in the entire planning process with good follow up practices in ensuring that standards are met and the encouragement of public participation in decision making (Wood, 2003; Jay et al., 2007). When all these issues are addressed and implemented to aid better decision making which is paramount, then EIA can be said to be more effective. Nevertheless, EIA has fared well over the years with the refinement and development of several EIA systems thereby shifting most systems from a Mark I to a Mark II and later on to Mark III systems (Wood, 2003; Sadler, 1996).