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SALIENT NEEDS, SILENT SOLUTIONS: NOVEL INTERVENTIONS IN ENVIRONMENTAL IMPACT ASSESSMENT FOR BUSINESS DEVELOPMENT

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ABSTRACT

Environmental Impact Assessment (EIA) is a process used by businesses towards sustainable development, which helps ensure that natural resources are used efficiently, while minimising environmental and social damage.[1] With a strong focus on green technology, or the use of zero-non-renewable resources to produce goods and services, businesses become committed to producing an output that has a higher sustainability factor and an overall lower carbon footprint. Environmental consideration in business practices itself is not a new concept, but has been gaining importance in recent years due to the global climate crisis. Not only has this resulted in more environmentally conscious consumers, but also in companies redesigning their products and manufacturing processes to make them greener and more sustainable.[2] Not doing so would have several implications for companies, from losing business due to lack of sustainable business practices, to being unable to obtain licences and permits and find themselves in conflict with neighbourhood residents and environmental groups. Early consideration of environmental issues in the production and development processes will enable firms to mitigate adverse effects, protect their reputation, and promote sustainable growth in the long term. Taking these factors into consideration, this paper will explore the use of green technology and sustainability solutions in EIAs in business, and will outline ethical considerations and implications for the future of EIA.

[1] Treweek, J. (1996). Ecology and Environmental Impact Assessment. *Journal of Applied Ecology*, *33*(2), 191–199. https://doi.org/10.2307/2404742

[2] Chen, Y.-S., & Chang, C.-H. (2013). The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity. *Journal of Business Ethics*, *116*(1), 107–119. http://www.jstor.org/stable/42001907

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Introduction

The importance of EIAs within businesses has increased at a global scale, due to the recognition of the ways in which climate change will impact business growth and development in the near future.[3] EIA serves as a tool to foresee the environmental consequences of human business activities, including small-scale and large-scale projects.[4] Businesses risk the devaluation of assets due to regulation changes, and the loss of other physical assets to natural disasters when they don't take sustainability into account when devising their business strategy. This has encouraged companies to introduce and create new technologies, services and business models that are more aligned towards sustainable development and protecting the environment, so as to minimise the negative impact of climate change.[5] Taking these risks into account, especially in today's rapidly changing economic environment, the importance of running regular EIAs becomes important. This can help firms identify problem areas in the sustainability front far before their impact is felt within the business. For example, if in an assessment, it is seen that a particular material that is used in the production of a product has dwindling supplies, the business can adopt a strategy which prioritises an alternative material in production, so as to not harm the remaining supply of the first material. In this way, the business is not only taking sustainability into account, but is ensuring no loss of profit due to the continuation of production, just with a substitute material. What about the costs of this substitution? Though research has shown that EIAs can inflate costs within the business, it ultimately evens out due to a reduction of costs in other areas.[6] Initial investments into things like energy and reduction of paper usage yields higher long-term return on investment due to an overall net saving on items and sources of energy that were costlier and worse for the environment. Furthermore, investing in things such as efficiency in the production process would ultimately turn a higher profit due to increased levels of productivity.[7]

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[3] Ibid.

[4] Treweek, J. (1996). Ecology and Environmental Impact Assessment. *Journal of Applied Ecology*, *33*(2), 191–199. https://doi.org/10.2307/2404742

[5] MORI, N., & CHIBA, Y. (2017). *Impact of climate change –transforming business behaviour in favour of sustainable development*. Institute for Global Environmental Strategies. http://www.jstor.org/stable/resrep02904

[6] Chuang, S.-P., & Huang, S.-J. (2018). The Effect of Environmental Corporate Social Responsibility on Environmental Performance and Business Competitiveness: The Mediation of Green Information Technology Capital. *Journal of Business Ethics*, *150*(4), 991–1009. http://www.jstor.org/stable/45022612

[7] Ibid.

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With the creation of medium to long-term strategies that tackle meeting the business' sustainability goals, corporations display a shift in focus from solely profit-making to reducing carbon footprint and managing climate-related risks. These strategies are implemented via Environmental Corporate Social Responsibility (ECSR), which is a mechanism that keeps a business accountable for their sustainability efforts.[8] ECSR has also been proven to be a source of corporate competitiveness.[9] With businesses competing with each other to be more sustainable than the last, ECSR comes as an important motivator to get corporations to focus more on sustainability aside from profit accumulation.

A good example of the benefits of implementing greener production strategies and sustainable business methods can be seen in the discussion held at the Gauteng Climate Innovation Centre in South Africa. A Climate Innovation Centre (CIC) is a part of global efforts to recognise the benefits of, and discuss the development of technologies that aid in climate-compatible development.[10] Having such discussions, as well as a movement towards green economies is vital, especially in developing countries and the Global South due to the detachment from both global resource pools, and a lack of support and funding towards innovation. The establishment of CICs across the Global South, and specifically in Sub-Saharan Africa has been strategic- with aims to reduce the impact of human business activities on climate change in areas which are the most severely affected by climate change. The Gauteng Climate Innovation Centre serves as a focal point for Africa's efforts towards building a greener economy. It is composed of 62 cleantech enterprises led by the best entrepreneurs in their field from several sectors, including agro-processing, green building, energy, transport, water, and waste.[11] As of now, however, due to Africa's historical dependence on coal-based energy, the main focus of the CIC is renewable energy. This dependence on coal-powered stations has led to modern innovations within renewable technology, creating a shift towards the usage of retrofittable plugs, hydraulic hybrid transmission systems for the automotive sector, and solar PV equipment. The CIC also takes interest in the promotion and uplifting of smaller, more local businesses that focus on clean and

[8] Chen, Y.-S., & Chang, C.-H. (2013). The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity. *Journal of Business Ethics*, *116*(1), 107–119. http://www.jstor.org/stable/42001907

[9] See Chuang, S.-P., & Huang, S.-J. (2018).

[10] GONSALVES, M., & ROGERSON, J. M. (2019). Business incubators and green technology: The Gauteng Climate Innovation Centre, South Africa. *Urbani Izziv*, *30*, 212–224. https://www.jstor.org/stable/26690833

[11] Ibid.

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renewable energy, ensuring that they do not get crushed by global competition in their field, ultimately creating local employment, promoting sustainability at a base level, and allowing a local economy to thrive in a sustainable, green-centric way.

Another case study we can examine is the Mining development in Dullstroom, Mpumalanga, South Africa. This is where the South African government initiated an effort to redefine the state's environmental regulatory functions and improve citizens' participation in such matters.[12] This initiative followed more recourse EIA assessment as well as improving the quality of EIA in all matters in order to improve decision-making around sustainable development. With a strong focus on mining activities, the government sought to strengthen environmental regulations around mines. The mining industry in the region was famous for exploiting labourers and creating substantial detrimental impacts on the environment through mining pollution. To this day, the pollution continues to impact the environment and has severely impacted local economic structures such as tourism and agriculture.[13] In looking at the ways in which EIA was surveyed and carried out in this region, it was found that there were multiple areas in which the EIA could have been better implemented and established. The assessments were found to be impractical and were seen to have had no substantial impact on the improvement of the environmental degradation and the quality of life of those working in and those living around the mines.[14] On conducting this review, the government took action, and began to focus on improving the EIA, with the aim of improving upon problem areas and creating a lower overall negative impact of mining on the ecosystem, biodiversity, and people in the area.

On seeing what EIA is and how it is implemented, and in the case of Mpumalanga, how it can be used only in name, it is possible to come up with methods of creating an assessment that is holistic and impactful. There is substantial research into Impact Assessments across disciplines, ranging from Sociology to Public Health, and therefore, it has become possible to have an understanding of the factors that make up an effective assessment. They must take into account the nature of the business, as well as of the community surrounding it. EIAs are only impactful to the extent that they allow the business to reduce their negative impact on the local environment, create opportunity within the microcosm of the locality, and provide support towards sustainability both in production practices, and recognition of minority groups who may be

[12] Leonard, L. (2017). Examining Environmental Impact Assessments and Participation: The Case of Mining Development in Dullstroom, Mpumalanga, South Africa. *Journal of Environmental Assessment Policy and Management*, *19*(1), 1–25. https://www.jstor.org/stable/90012835

[13] Ibid.

[14] Ibid.

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provided employment.[15] In this way EIAs allow not only a positive environmental impact, but also a more social one that allows for the business to create and uphold a positive reputation in the eyes of the community surrounding them.

Conclusion

Overall, the impact assessment and its field of research and practice is not at all a transitional discipline. With implications both within research and in practical methodology, EIA mechanisms have slowly begun to be recognised for their importance, both within and outside the business. With climate change becoming a massive factor in how businesses approach sustainability, it is becoming increasingly clear that in today's business environment, no corporation can survive the risks of neglecting to perform routine EIAs. The academic side of EIA is also just as important, with researchers coming from a variety of backgrounds and disciplines. In the future it may be beneficial to create more recognition for the research done in this field so as to have an easier pipeline for positive findings to reach businesses so they can be implemented promptly.[16] Funding into said research may also help facilitate better, more up-to-date strategies in EIA. In conclusion, EIA is a very important part of the business ecosystem, with benefits towards winning social approval, minimising risks emerging from climate change, and boosting sustainability and green business practices. It is safe to say that EIA development is a field for higher interest, especially due to the looming threat of climate change, which is something businesses must identify and react to in due course.

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[16] Ibid.

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