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BIODIVERSITY OFFSET POLICY: A SUSTAINABLE CONSERVATION OPPORTUNITY

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ABSTRACT

The ultimate goal of biodiversity offset is to avoid net loss and preferably net gain from species composition side, habitat structure, ecosystem function, community use, and cultural values related with biodiversity. The idea of biodiversity offset has created controversy for some conservation societies because there is concern that the use of this scheme may encourage governments to continue to allow projects that have a serious impact on biodiversity as long as the project offers compensation. This scheme could also allow the company to leave significant impacts on the project area as long as it holds conservation activities elsewhere. Therefore, the application of biodiversity offsets must strictly adhere to the mitigation hierarchy that places biodiversity offsets as the last resort after all possible efforts have been made to avoid and minimize the impact of the development project and restore biodiversity in the project area.

KEY WORDS: Biodiversity offset, Conservation, sustainable development

INTRODUCTION

Biodiversity offset gains increased popularity nowadays even though it is still considered controversial as a conservation method. Its popularity lies in the potential to achieve two goals simultaneously, namely the conservation of biodiversity and economic development. Meanwhile, the controversy is caused by the ecological losses incurred to obtain benefits that are still uncertain (Sullivan S. and M.Hannis, 2016).

Sonter, et al. (2016) state that principles of implementing biodiversity offset are:

1. No net loss. Biodiversity offsets should be designed and implemented to achieve measurable conservation results in project areas that are expected to result in no net loss condition or even gaining net returns for biodiversity.
2. Additional conservation outcomes. Biodiversity offsets must achieve conservation results above or even exceeding the results that might occur if the biodiversity offset is not implemented. The design and implementation should avoid harmful displacement for biodiversity to other locations (Buschke F.T, 2017).
3. Obeying the mitigation hierarchy. Biodiversity offset is a commitment to compensate for the serious impacts on identified biodiversity following appropriate measures to avoid, minimize, and rehabilitate project sites in accordance with the mitigation hierarchy.
4. Limiting what can be offset. There are situations where residual impacts cannot be fully compensated through biodiversity offsets because the affected biodiversity is irreplaceable and highly vulnerable.
5. Landscape context. Biodiversity offsets should be designed and implemented in the context of achieving measurable conservation results with consideration of biological, social, and cultural values of biodiversity and supporting ecosystem approaches.
6. Stakeholder participation. In areas affected by the project and by biodiversity offsets, effective participation of stakeholders should be ensured in the decision-making process, including in terms of evaluation, selection, design, implementation, and monitoring (Chaudhary A, L. Roman Carrasco and Thomas Kastner, 2017).
7. Equity. Biodiversity offset should be designed and implemented in a fair manner, meaning stakeholders

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must share rights and obligations, risks and rewards associated with the project and biodiversity offsets in a fair and balanced manner with respect to the laws and customs. Special consideration must be given to respect the rights of indigenous peoples and local communities that have been recognized nationally and internationally.

8. Long-term results. The design and implementation of biodiversity offsets should be based on an adaptive management approach, monitoring, and evaluation, with the objective of securing biodiversity results during project impact or, ideally, forever.
9. Transparency. The design and implementation of biodiversity offsets and communication of the results to the public must be implemented in a transparent and timely manner.
10. Science and traditional knowledge. The design and implementation of biodiversity offset should use information derived from a quality science, including proper consideration of traditional knowledge (Maseyk. FJF, LP Barea, RTT Stephens, HP Possingham, G Dutson, and M Maron, 2016).

DISCUSSION

Habibullah et al. (2016) explain that the application of biodiversity offset must strictly adhere to the mitigation hierarchy that places biodiversity offset as the last resort after all possible efforts have been made to avoid and minimize the impact of development projects and restore biodiversity in the project area. The mitigation hierarchy principle is developed by business and biodiversity offset program (BBOP) into several aspects, including:

1. Avoidance, which is the effort to avoid the initial impact of development projects, such as extensive and comprehensive consideration in the placement of infrastructure elements. This is essential to avoid the negative impact on certain components of biodiversity.
2. Minimalization, which is the effort to reduce the duration, intensity and/or the extent of the impact (including direct, indirect, and cumulative impacts) that are inevitable, as long as practicable.
3. Rehabilitation/restoration), which is the effort to rehabilitate degraded ecosystems or to restore an open ecosystem, which is the impact that cannot be avoided and/or minimized.
4. Offset, which is the effort to compensate for any significant residual, unavoidable, minimized, and/or rehabilitated/improved repercussions to achieve no net loss or net gain for biodiversity (Maseyk. FJF, Barea LP, Stephens RTT, HP Possingham, G Dutson, and M Maron, 2016).

One of the implementations of the policy is the "Biodiversity Offset and Gordon gas field, Australia**"** (Sonter L.J , N. Tomsett, dan D.Wu, M.Maron, 2016).

Data from WWF (2009) show that Gordon Joint Venture, which consists of Chevron, Shell, and ExxonMobil corporations, has been approved to carry out gas processing on Barrow Island, even though Barrow Island is a class A conservation area with significant conservation value, which is located on the northwest coast of Western Australia. The Gordon gas field is located approximately 80 nautical miles off the west coast of Western Australia, and along with other gas fields is estimated to have 40 trillion cubic feet of natural gas. With a wealth of biodiversity, this area is home to Australia's rare species, including turtles and mammals that are extinct on the mainland.

To replace the biodiversity impact, the joint venture agreed to invest $43 million over 30 years to finance initiatives conserving the populations of turtles and other rare species on the island. Under the agreement, the conservation initiative will be managed by an Executive Committee established by the government and company representatives. Activities to be undertaken include surveying, monitoring, and research on turtle populations. Mitigation of turtle losses is done by reducing disruption to feeding ground and breeding grounds, and conducting outreach activities to support the protection of turtles.

If the monitoring shows that these activities have no positive impact on turtles, the joint venture agreed to fund further activities. Additional funds will reach $5 million. Gordon Joint venture also agreed to fund other conservation activities on the island, including a reintroduction program for endangered species for 12 years and the elimination of non-native species. Total investment to develop Gordon gas field is expected to be more than $21 billion, although some media reported that total investment reaches $35 billion. Stock investments are being considered. As the gas field operates, the profit generated is likely to be several billion dollars per year. In this context, an offset commitment of $2 million per year is considered relatively low.

CONCLUSION

From the previous description and explanation, it can be concluded that the mitigation hierarchy shows that biodiversity offset should not be the first step, but the last step in the biodiversity mitigation process that is the impact of the development project. Strictly regulated implementation is essential to make a sustainable ecosystem.

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