

Biodiversity and the Degradation of the Natural World

Cases for the Student- lead Session

Case 1: Low-Emissions Oil Palm Development in Berau District, East Kalimantan

Background

Palm oil production has increased considerably in the last decade, with Indonesia and Malaysia accounting for 80% of the global production. This has brought huge economic benefits to the two countries, lifting from poverty more than 3 million people in Indonesia alone. But with increased demand for palm oil production, there is an increase in the level of carbon emissions, mainly from extreme deforestation and peat decomposition. These practices have severely impacted the ecology and biodiversity of the area. Under these circumstances, there is an urgent need for a framework to develop sustainable palm oil practices.

Moving Forward

Project 'low emissions oil palm development' (LEOPALD) integrates business, government, communities, and other stakeholders to work together to develop approaches, tools, policy frameworks and incentives for the sustainable production of palm oil. As many communities rely on the income from palm oil production, it is integral to continue to acknowledge their value as a productive member in society while shifting to more sustainable methods.

In this context we ask

- Who gains in the economic and social sphere in LEOPALD? How can successes be shared equally among the different groups? Does it have to be equal?
- As we mentioned, palm oil is also used to produce biodiesel. What role do you see biofuels similar to palm oil play as we are transitioning to a carbon free society? Should they be considered as a "carbon neutral" energy source as they are today in EU's climate reports? To what extent are palm oil and other biofuels renewable?
- *"It is consumed daily by billions of people but palm oil is "disastrous" for wildlife such as orangutans and tigers, according to an authoritative new report. However, the analysis warns that alternatives are likely to drive biodiversity losses elsewhere, rather than halt them"* . This quote is taken from a recent article in The Guardian. As the quote suggests, the report that the article is discussing shows that while palm oil is "disastrous" to biodiversity in the areas where it's farmed, other crops like soy, corn and rapeseed require up to nine times as much land. How can we prioritize in situations like these? For whose sake are we saving species?

- “The two *policies* do not only aim to save the forests but also to *encourage* the growers to prioritise productivity improvements rather than area expansion”. This is a quote from the article about the palm oil agreement. To what extent can we rely on *policies* and *encouragement* to ensure sustainable palm oil production and environmental issues in general?
- Who has the most influence on the decision making processes in LEOPALD? Why do you think the German government wanted to invest in an initiative like this? Do you think more government groups should be involved?

Sources to read for case 1

- <https://www.giz.de/en/worldwide/68074.html>
- <https://www.orangutan.org.uk/downloads/Palm%20Oil%20Development%20and%20Biodiversity%20Conservation.pdf>

Optional reading

- <https://www.theguardian.com/environment/2018/jun/26/palm-oil-disastrous-for-wildlife-but-here-to-stay-experts-warn>

Case 2: Diving into Sustainable Marine Protected Area Management in the Philippines

Background

Although they cover less than 0,1 percent of the earth's surface, coral reefs are the most biodiverse marine ecosystems in the world. They are also among the most threatened ecosystems. Coral reefs all around the world face threats from many different scales. Global threats like warmer waters combined with more direct threats like water pollution, overfishing, coastal development and mass tourism severely compromise the reefs' potential to grow, reproduce and thrive. The latest IPCC report stated that a 2°C raise of global temperature would mean that corals would no longer be able to grow back, meaning the end of living coral reefs. The coral reefs of the Philippines are among the richest and most diverse in the world. Unfortunately, they are suffering from all the above stated threats.

Moving forward

The reefs around the Philippines are not just under threat but also drastically undervalued. Having coral reefs with high biodiversity is for several reasons a great economic asset, but they are not treated that way today. The Philippines have a relatively high amount of marine protected areas (MPAs), but they are not functioning as they should, and very few reefs can be considered as protected. Decentralizing the governance of MPA's has proven an effective method to slow down biodiversity loss, but a lack of financial and technical capacity possessed by the communities often restrict the effectiveness. Therefore, developing and implementing effective financing mechanisms is key. A potential financing source for the marine protected areas in the Philippines discussed in the article is having higher and more fees for tourists and divers visiting the coastal areas. This would not only enable community-managed MPAs to reach their full potential, but also reduce imbalances in wealth between different social groups.

In this context we ask

- If this initiative works as intended, it's clearly beneficial for the reefs surrounding the Philippines, the people living in the area and in the long run the divers. What are the potential risks of this initiative and the funding being dependent on the number of dive permits sold?
- The author proposes crowdfunding as an alternative way of funding the MPA's. Do you think that crowdfunding apps/services such as *Patreon* can be good platforms to encourage people to donate to smaller environmental initiatives? Are there any potential issues with crowdfunding being the major source of income for a project/initiative? This case highlights a very interesting paradox regarding the issues of climate change today. We understand that air travel contributes a lot to carbon emissions, which means that people who care and are willing to pay to preserve

nature's beauty can't take part in it without severely damaging the climate. How can we get people to care about nature they can never see? Is there realistically a future where we can travel as frequently as we do today without harming the environment?

- The author uses a traditional cost-benefit analysis* to calculate the economic value of the reefs. Are there any problems with applying this model to environmental matters? What could be the possible benefits from using an economy-focused model like the CBA?

*A cost-benefit analysis is a way of calculating and comparing the benefits and costs of a course of action in a given situation. The goal of CBA is to determine which option returns the optimal ratio of benefits to costs. It is often used in corporations to determine whether an investment shall be made or not.

- As the author points out, most existing MPA's are operated on state level, while the initiative that the author proposes would be community-based. She refers to research showing that under the right circumstances, MPA's operated on community-level could function better than on a state level. What could be the benefits and issues with the different options? Which option is preferred?

Sources to read for case 2

- <https://www.thesolutionsjournal.com/article/diving-sustainable-marine-protected-area-management-philippines/>