Miracle Product or Climate Disaster: Why is Palm Oil Seen as a Driver for Development and for Deforestation?

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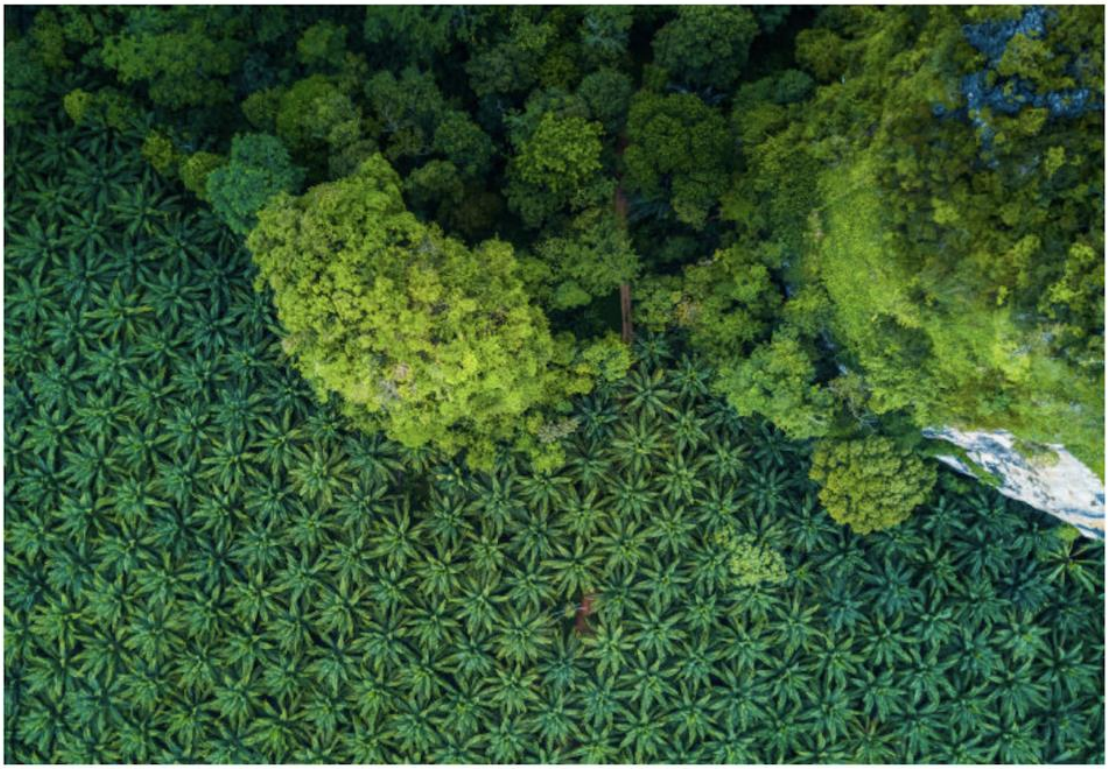

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Abstract

EU policies such as the revised Renewable Energy Directive II are steering the union toward sustainable and deforestation-free imports of palm oil by 2030; policy decisions outside their influence will negatively impact palm oil-producing countries. This thesis investigates the coexistence of paradoxical dominant discourses regarding palm oil in the context of European Union policy initiatives. The thesis builds upon a discourse analysis carried out by Hinkes, who identifies two dominant discourses: 1) palm oil is an instrument for economic development, and 2) palm oil is a driver of deforestation. This thesis carries out a two-part analysis of the two discourses; we deploy modernization and ecological modernization theory to relevant literature in the field and the Sustainable Development Goals to understand how Sustainable Development Goals and their reliance upon economic growth interact with the implementation of climate mitigation policies globally. First, this study finds that the two dominant discourses coexist because the EU and Indonesia prioritize development and sustainability differently following different stages of development. Second, the potential for palm oil to be a sustainable vegetable oil is perceived differently in the EU and Indonesia. Finally, the thesis finds disagreements between the EU and Indonesia regarding the imposed standards on the palm oil industry.

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List of abbreviations

ASEAN	Association of Southeast Asian Nations
EMT	Ecological Modernization Theory
EU	European Union
GCF	Green Climate Fund
HCS	High Carbon Stock
ILUC	Indirect Land Use Change
NDC	Nationally Determined Contribution
NGO	Non Governmental Organization
NYDF	New York Declaration on Forests
ODA	Official Development Assistance
REDII	Renewable Energy Directive
RSPO	Roundtable for Sustainable Palm Oil
SDG	Sustainable Development Goal
UN	United Nations
UNTAD	United Nations Conference on Trade and Development
UNFCCC	United Nations Framework Convention for Climate Change
WTO	World Trade Organization
WWF	World Wildlife Fund

1. Introduction

As the concerns about global warming are increasing year by year, more climate mitigation actions are seeing the light of day. International institutions create policies to monitor and legislate resource consumption. An example is the energy sector; the policy acts to transition from fossil fuels to greener alternatives. A landmark policy coming from the European Union (EU), the Renewable Energy Directive II (REDII), intends to do just this, as it will require 40% of all energy sources in the EU to come from sustainable sources. One of the industries most affected by the REDII is the Indonesian palm oil industry. Palm oil is one of the most traded crops globally, and palm oil is in over 50% of all supermarket products (WWF, n.d.). Additionally, palm oil is one of the largest biofuel sources in the EU. However, concerns about deforestation and unsustainable production methods have ultimately led the EU to phase out palm oil-based biofuel.

This thesis focuses on how different, paradoxical discourses coexist concerning palm oil. On the one hand, palm oil is seen as a miracle product used extensively in consumer products and biofuels around the globe. Still, it has also sprung an entire industry that contributes significantly to the economic development of the largest palm oil-producing countries. On the other hand, palm oil production is also seen as one of the main drivers of deforestation of tropical rainforests, contributing to the loss of biodiversity and the emission of carbon stored in these forests. These two opposing discourses can be summarized as; palm oil as a driver for development and palm oil as a driver of deforestation.

2. Methodology

This thesis is situated in qualitative research; we, therefore, make use of qualitative research methods. To investigate the paradoxical nature of dominating discourses within the field of palm oil, we use the EU's partial ban on palm oil imports as a case study to come to an answer to the research question. The advantage of using a single case study is that it allows us to develop a more holistic discussion surrounding a specific topic. In the case of palm oil, we

can come to a more in-depth understanding of the complexity and an answer applicable specifically to the case. The benefits of single case studies are not only of an empirical nature, the practicality of single studies concerning the time needed to gather and review data, especially considering the time constraints coming from this being a thesis. However, there are also limitations to using a single case study analysis that reduces the external validity as the results are less easily generalizable and applicable to different cases (Willis, 2014, p. 2). Through this analysis, we will not be able to present a universal truth about how climate mitigation policy interacts with development policy. Instead, we will offer a detailed discussion surrounding specific discourses that dominate palm oil discussions (Willis, 2014, p. 4).

Literature review

We will do so by providing a literature review regarding theories in the field of international development, modernization theory, and palm oil. We have conducted the literature review by first searching for papers in the Aalborg University library database and google scholar by searching for keywords such as but not limited to; Sustainable Development Goals (SDGs), EU climate goals and targets, Palm oil, Renewable Energy Directive II, indirect land usage change (ILUC). We have used no specific selection criteria for the papers that have come up in our initial searches. We conducted an exploratory literature search into the scholarships relating to palm oil. Furthermore, we have opted for the snowballing method to identify the critical literature within the field of palm oil and SDGs to answer our research question. The snowballing approach will complement our choices of framework and scope for the taxonomy of the literature review, which we will expand upon later on. (Jalali & Wohlin, 2012, p. 29). The snowballing approach we have opted for is applied to literature strands to expand and explore the arguments and original perceptions that have led the research to where it stands currently. Due to the evolving nature of palm oil, we have chosen to snowball to backtrack the arguments and logic of both the discourses concerning development and deforestation policy. Like any other methodology, the snowballing method has its strengths and weaknesses. Due to the complex nature and different perceptions of palm oil, we would argue the strength of snowballing is that the literature is not reactionary, as it stands on the shoulders of previous research and literature. A weakness would be if the snowballing is not

applied extensively, we could end up with a rather one-sided presentation of the current and relevant literature, not portraying the paradoxical nature of palm oil discussions (Streeton, Cooke & Campbell, 2004, p. 39-40).

Interviews

In this thesis, we have conducted one expert interview with a professional knowledgeable and experienced with policymaking and the SDGs. In addition, the interviewee has extensive experience with the establishment of the SDGs and international collaborative efforts to combat climate change. We have selected this interviewee because they can add additional insights next to the data gained from the literature review, allowing us to gain insights from both the side of the SDGs and European policy.

In conducting the interview, we have made use of a semi-structured interview. Using the semi-structured interview has allowed us to have a red thread throughout the interview while engaging upon insights raised during the interview. Unfortunately, due to ongoing constraints stemming from COVID-19 at the time of writing, the interview was conducted online.

Analysis

The analysis will combine the insights from the background information on the case, theory, and the interview. We will divide the analysis into two sections, highlighting one aspect of the identified paradox in palm oil. The paradox is inspired by the insights gained in the literature review, particularly from Cordula Hinkes' discourses on palm oil sustainability, which will be elaborated further in the literature review. Hinkes' analysis reveals that the two dominating discourses on palm oil are that it is both seen as a driver of deforestation and as a driver for development.

In the analysis, we will continue with the two dominating discourses, as outlined by Hinkes. However, Hinkes also identifies a third discourse in the field of palm oil. We have chosen to exclude the third discourse as it shares many similarities with the deforestation discourse. The main takeaway in the third discourse is the belief that by stricter clauses for certification, both development and environmental issues could be resolved. (Hinkes, 2020, p. 7674).

Furthermore, we have decided to move forward with the two discourses because, in the presentation of the driver of development, Hinkes argues that this stance directly opposes the

two others. (Ibid.). This means that including the third discourse would effectively repeat many of the same arguments as in the deforestation discourse as the *two positions … both (more or less) criticize unsustainable palm oil production (Ibid.).*

Therefore, the two discourses we continue with are where palm oil is perceived as a driver of development and deforestation. This presents a paradox as palm oil production contributes to the deforestation of tropical forests around the globe. At the same time, the palm oil industry has been of great value to economic development in the producing countries. International institutions, organizations, and governments fight for both sides of the dominating discourses. Policy decisions such as the REDII are combating deforestation, while others, such as the SDGs, are stimulating the economic growth forthcoming from the palm oil industry. Therefore we see an imbalance in the prioritization and the perception of the problem between stakeholders of the western world and those of the palm oil-producing countries.

The first part of the analysis will focus on the discourse that views palm oil as a driver of development. In this part, we will analyze how and why palm oil production is crucial to the development of Indonesia and what the future holds for development stemming from the palm oil industry. Furthermore, this part of the analysis will investigate if sustainable development is achievable simultaneously with climate mitigation.

The second part of the analysis will center around the discourse that palm oil is a symbol of deforestation. Similarly, we will analyze how and why palm oil has become inexplicably linked to deforestation and if there is a future for sustainable palm oil. Additionally, we will analyze how global governance influences deforestation in Indonesia. It is crucial to understand the existing power structures and power relations that can influence policy-making and perceptions to answer the research question. However, due to the extensive nature of power relations, we have chosen not to further develop a discussion around this; instead, we will acknowledge the power relations implicitly through our analysis.

The final point that is important to clarify in this methodology section is applying the word discourse. As we have drawn the two dominant discourses from the discourse analysis by Hinkes, it is important to outline what the application of the word in her publication entails. Outlining Hinkes' application of the word is done to apply a vocabulary consistent with her article to maintain the original sentiment of the discourses. In her article Hinkes establishes her discursive framework as the following:

> *According to discursive institutionalism, discourses are formed by ideas, structure, and context, and they require agency and interaction. They have the power to induce institutional or policy change, provided that institutional barriers can be overcome. Discourse analysis helps to understand how certain storylines on environmental problems are institutionalized in policies … approaches to discourse … aim at understanding how competing discourses struggle for power and hegemony and thereby shape politics* (Hinkes, 2020, p. 7666).

The end of this quote illustrates that discourses can co-exist, but in the sense that not more than one should be dominant as they struggle for power and hegemony, to be the dominant discourse that shapes policy.

The discourse approach chosen by Hinkes is by Maarten Hajer, which is referred to as the Argumentative discourse-analysis approach. This approach is specifically developed to investigate discourses related to environmental policies (Hinkes, 2020, p. 7665). The primary purpose of Hajer's approach is to examine how *environmental policies emerge in response to environmental problems that are perceived and framed by different actors* (Hinkes, 2020, p. 7666). Hajer's use of emblems, as shown in the matrix by Hinkes, is representative of emblems are issues repeatedly utilized to represent a category of environmental problems (Ibid.).

Summed up, when we apply the word discourse, it represents ideas, structure, and context intended to influence environmental policymaking. And the use of emblems as representations of the discourses is done as we find they represent the environmental issues more accurately than the "main positions"-statements.

The purpose of this study is not to investigate the direct economic loss following the implementation of the REDII for Indonesia; we can only rely on reactions from the governments and organizations for this. This thesis is also not a study to analyze Indonesia's ability to diversify its economy, nor will we examine the specific contributions of different biofuels to climate change. Instead, this is a study to understand how the two dominating discourses surrounding palm oil can coexist. The research question for this thesis is, therefore:

Why is palm oil paradoxically seen as both a driver for economic development and deforestation at the same time?

The following sections will continue as follows; first, we will introduce the case of the European import restrictions on palm oil and its impact on Indonesia. Next, we will provide background information on the European Union's climate goals and how they will achieve them, the SDGs, and other international stakeholders that influence the case. This will be followed by an overview of palm oil and why it has become a controversial crop. After that, we will present an overview of our secondary data in the form of the current scholarship regarding palm oil, the SDGs, and conflicting international goals. A description of our primary data, the interview, will follow. Finally, we will present the analysis of the research question, and we will elaborate on the analysis in the discussion.

3. The case

Palm oil is one of the world's most traded commodities, but it has also become one of the most controversial. The primary reason for the increasingly negative perception of palm oil is its association with deforestation (Vergura et al., 2019, p. 2031). Palm oil is one of the leading causes of deforestation of Indonesian rainforests, which leads to a loss of biodiversity and an increase in greenhouse gas emissions. The European Union, concerned about the negative impacts of palm oil cultivation, has recently implemented a revised version of the REDII. The consequences of the REDII are seemingly dire for the Indonesian palm oil industry, as the EU aims to phase out imports of palm oil dedicated to biofuels by 2030. This is a significant step by the EU as almost 50% of palm oil imports to the EU are dedicated to biofuel (Malaysian Palm Council, 2018, p. 2). Reactions from the Indonesian authorities were that the EU was declaring a trade war against Indonesia (Suroyo & Nangoy, 2019), and interest groups labeled the regulation as an unfounded attack on palm oil and as making use of 'crop apartheid' (Sandler Clarke, 2019).

The REDII and its intention to withdraw palm oil-based biofuels from use in the EU is the starting point for this research. The following sections will highlight key policies and commitments that influence the case and provide background information on palm oil.

Background on policies and commitments affecting deforestation

In this section, we will briefly introduce the most important policies and commitments that influence the palm oil sector and that aim at improving the sustainability of the palm oil sector. This section will end with a description of the REDII, as this is the main policy subject in this case study.

Global commitments

Over the last decade, there have been several relevant policy implementations pertinent to the discourses of palm oil, both globally and imposed by the EU. We are in the following section going to expand upon three central global commitments relevant to the development of the European Union. The *New York Declaration on Forests* (NYDF), the Sustainable Development Goals (SDGs), and the Paris Agreements.

New York Declaration on Forests - NYDF

Adopted in 2014, the NYDF is the major reference point for global forest action. (NYDF, n.d. A)

First, we have the New York Declaration on Forests; this declaration was conceived at the UN Climate Summit in 2014. The overall purpose of the NYDF is to eradicate deforestation by the year 2030. The NYDF is made up of ten goals. Several of these ten goals can directly be linked to palm oil. While the first two goals directly target deforestation, *Goal 1: End Natural forest loss by 2030, and goal 2: eliminate deforestation from agricultural commodities (well before 2030).* Other goals revolve around economic incitements, such as *goal 8: provide finance for action, goal 9: Reward results by countries and jurisdictions.* Finally, other goals are tailored toward being incorporated into other commitments, and sustainability frameworks, such as the SDGs, will be expanded upon in the following section. *Goal 6: Anchor forests in the SDGs Goal 7: Reduce emissions in accordance with global climate agreement.* The NYDF is endorsed by more than 50 countries, 50 of the world's largest companies, and is, as previously mentioned, interrelated to the SDGs. (NYDF, n.d. B)

Sustainable Development Goals

The Sustainable Development Goals are the blueprint for achieving a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace, and justice. (UN, n.d. A)

Following the NYDF, we have the Sustainable Development Goals, adopted on September 25th, 2015. The adoption of the SDGs arrived as a replacement for the millennium goals, which ran from 2000 to 2015. The SDGs are 17 Goals essentially created to serve as a call for action by all countries. The objective is to promote prosperity simultaneously with protecting the environment (UN). The 17 goals come with 169 targets, measured by 232 indicators. Several SDGs directly influence the palm oil industry; this includes goal 12: *Responsible production and consumption* and goal 13: *climate action* being the main two. Other goals such as 15: *life on land.* Goal 7: Affordable and clean energy, Goal 8: Decent work and Economic growth, Goal 1: No poverty, and goal 2: Zero hunger can also influence the palm oil industry based on its potential to create jobs and deliver energy. While the NYDF has in the region of 50 committed nation-states, the SDGs have been adopted by 193 nations, committing to all 17 goals and 169 targets, making it one of the most powerful global sustainability frameworks (UN, 2015).

The Paris Climate Agreements

While the former two commitments we have presented are global sustainability standards, the Paris agreement is a legally binding UN treaty under the United Nations Framework Convention for Climate Change (UNFCCC). The overall purpose of the Paris Agreement is to limit global warming from increasing any more than 2 degrees Celsius. The Paris Agreement sets out through five-year cycles where countries develop "nationally determined contributions" (NDCs). In the NDCs, countries articulate efforts to incorporate over the 5-year cycle to reduce greenhouse gas emissions. Once the 5-year cycle is up, the countries develop increasingly ambitious plans for the next five years. (UNFCCC, n.d.). Equally to the SDGs, the Paris agreements have 193 signees committed to reducing greenhouse gas emissions (UN, n.d. B). The relevance of the Paris Agreement to the field of palm oil is that Indonesia's NDCs have committed to using green energy and replacing their fossil fuels with increased palm oil production (Nangoy & Jensen, 2018). The Paris Agreement can motivate the EU palm oil importing countries to look for more sustainable options to reduce emissions.

European Policy

The Renewable Energy Directive II aims to out phase palm oil as a biofuel entirely by 2030. Therefore, it is a policy that has significant implications for palm oil-producing nations, of which Indonesia is the largest. Therefore, this policy and the discourses surrounding said policy are the starting point for this research.

The Renewable Energy Directive in question for this thesis is a revised version of the previously adopted Renewable Energy Directive, hence the distinction of II. The REDII was revised to align better with the European Commission's Green Deal initiative, and it increased the initial ambitions of the Renewable Energy Directive. The REDII sets out to ensure 'that renewable energy fully contributes to achieving a higher EU climate ambition for 2030, in line with the 2030 Climate Target Plan' (European Commission, n.d.). The original formulation of the Renewable Energy Directive required 20% of the EU's energy consumption to come from sustainable sources by 2020. The REDII will increase these targets to 40% by 2030.

The REDII also sets distinctions for which biofuels will still be considered sustainable in the future. It does so by making use of the ILUC framework. ILUC provides a framework to identify the risk of crop cultivation expanding into forest areas, meaning that the REDII has implemented an approach to include deforestation in the sustainability assessment of vegetable oils. Furthermore, crops identified as a high ILUC risk - a high risk of expansion into forest areas - will be barred from being imported to the European Union by 2030 (European Commission Science Hub, n.d.). As it stands, palm oil is the only crop considered a high ILUC risk and, therefore, the only crop that would face an import ban in 2030 for imports dedicated to biofuels.

Background information on Palm oil

Palm oil has become one of the most commercial and profitable crops. As a result, it has undergone a significant expansion in production area - particularly in Indonesia and Malaysia

- and consumption - particularly in the European Union (Pacheco et al., 2017, p.2). This expansion has been necessary to support the consumption of palm oil. However, the conditions under which the land use dedicated to palm oil have happened, and the social and physical working environment in which the crops are grown have become increasingly controversial. This section will develop the discussion surrounding the rise of palm oil as one of the world's most traded commodities, palm oil production, and explain why palm oil is more and more scrutinized in today's society.

History

The oil palm as a crop found its origins in Western Africa. However, it was initially brought to the Asian Pacific region as a decorative feature by the Dutch in the mid-nineteenth century. After introducing the oil palm to Indonesia, the British brought it to Malaysia and the Germans to Papua (Cramb & Curry, 2012, p. 223). The crop thrived in the areas where it was brought to as it grows best in the weather conditions associated with the equator; warm temperatures, enough sunshine, and rain spread out evenly throughout the year (Corley & Tinker, 2016, p. 56). These conditions allow the crop to grow fast and provide high yields per hectare. The oil palm provides six to ten times more yield per hectare than similar crops such as rapeseed and sunflower.

The oil palm is a crop that produces plant oil for which the applications are ‘seemingly endless.’ Palm oil can be used widely because of its neutral taste, physical qualities, and high yield per crop. This allows palm oil to be used as, for example, a cooking oil, as a production for consumer products such as toothpaste, and as a biofuel (Corley & Tinker, 2016, p. 29). Palm oil and its derivatives are so widely consumed that they can be found in over 50% of all products in supermarkets (WWF, ND.). As such, palm oil has become the essential product in the vegetable oils market, and the expansion of its production has made an increasingly large group of people dependent on the palm oil trade.

Currently, the global production of palm oil amounts to +- 75 million metric tonnes, of which Indonesia and Malaysia produce roughly 85% (Tullis, 2019). Indonesia is the largest producer of the two countries, producing over 35 million metric tonnes, corresponding to almost 50% of the world’s palm oil supply. As such, the Indonesian palm oil industry is not

only of global importance but of vital importance to Indonesia. In 2020 two million Indonesians were employed directly in the palm oil sector, with many more indirectly associated with the palm oil sector. Corporate and state-owned palm oil plantations are capable of the highest yields, and the largest operations, but smallholders own 40% of plantations; small scale, independent farmers are exceptionally vulnerable actors in the palm oil value chain due to lack of access to quality seeds, financing, et. (UNDP, n.d.).

As Indonesia is the largest exporter of palm oil, the industry is not only a significant contributor to its economy but also to its strategy to achieve sustainable economic growth and rural development (LSE, 2020). The country is aware of its exposure to the controversial crop and has been incentivizing the development of sustainability measures in palm oil production. Most notably, Indonesia has banned the expansion of palm oil plantations into uncultivated areas under the 'palm oil moratorium.' The moratorium was lifted in 2021 and has been replaced with sustainability requirements, but a ban on land use expansion is no longer in place(Suroyo & Christina, 2021a).

Controversies

Palm oil has quickly become the most traded vegetable oil globally, and the demand has grown rapidly over the past decades. To keep up with the growth in demand, farmers have had to increase their output. As previously mentioned, the oil palm grows best in equatorial regions with consistent rainfall throughout the year. In other words, rainforests. Farmers looking to increase their land suitable for palm oil production have deforested large areas of rainforests in Indonesia and Malaysia. The expansion of palm oil land use is the single biggest driver of deforestation and loss of biodiversity in the ASEAN region (Pacheco et al., 2017, p. 25). Next to deforestation, palm oil plantations are often associated with 'slavery-like conditions' for workers, child labor, and other human rights violations (Sayer et al., 2012, p. 117).

Researchers' conservative estimates show that palm oil production has been responsible for losing 11% of the Indonesian forest area over the last two decades (Gaveau et al., 2022, p. 7). This is a dramatic loss in habitat for animal species unique to Indonesian rainforests, such as

orangutans, elephants, and rhinos (WWF, n.d.). Reducing the loss of biodiversity is an important cause, but the issue of Indonesian deforestation extends to the global fight against climate change; palm oil production directly reduces high carbon stock forests. Following the High Carbon Stock methodology, which is portrayed in figure 1 (High Carbon Stock Approach Steering Group, 2015), the area where palm oil can be produced is limited to high carbon stock forest areas as palm oil can only be grown in equatorial regions, which corresponds to the area where high carbon stock forests are present. Although the amount of carbon stored in forests varies by vegetation type, the High Carbon Stock methodology provides a framework to break down types of forests into six classes of carbon stock. The highest carbon stock is a high-density forest, and the lowest carbon stock is open land (High Carbon Stock Approach Steering Group, 2015). The High Carbon Stock methodology helps governments, NGOs, and farmers identify which areas of land have the highest conservation priority and where the expansion of plantations is not destructive to the environment. Deforestation of high carbon stock classified forests releases carbon dioxide into the atmosphere and is one of the most significant influences on climate change. Deforestation currently contributes to +- 10% of annual global greenhouse gas emissions (Baccini et al., 2012); as such, halting deforestation of high carbon stock forests presents an opportunity to protect endangered species of animals and halt climate change.

Public awareness of palm oil's harmful effect on its environment – for both flora and fauna – has increased in the past years. NGOs such as Greenpeace, WWF, and the RSPO have been pushing for more sustainability and social responsibility in the production and consumption of palm oil through marketing campaigns and lobbying policymakers (Vergura et al., 2019, p. 2032). This increase in public awareness is that consumers in the EU have developed a preference for ‘sustainable’ palm oil (Sayer et al., 2012, p. 118). The most prominent way to ensure palm oil sustainability is through certification schemes, of which RSPO provides the largest and most recognized certification scheme.

4. Secondary data - Literature review

A review of prior, relevant literature is an essential feature of any academic project. An effective review creates a firm foundation for advancing knowledge. It facilitates theory development, closes areas where a plethora of research exists, and uncovers areas where research is needed. (Webster & Watson, 2002, p. 8)

The purpose of this literature review is twofold; first, to give an insight into the data collection process, and second, to present an overview of existing literature in the field of palm oil. As we have established, there exist vastly different discourses that perceive palm oil as very different from each other, as there are different actors and different interests involved. Due to this complexity, it is essential to grasp the subject at hand holistically as *"a researcher cannot perform significant research without first understanding the literature in the field"* (Randolph, 2009, p. 1). First, we will present how we have conducted the literature review following Cooper's Taxonomy of Literature Reviews (Randolph, 2009, p. 3-4), after which we will give an overview of current literature concerning palm oil in the scope of the two discourses outlined in the publication by Cordula Hinkes, to which we have structured this thesis.

Taxonomy of the literature review.

We will use H.M. Cooper's Taxonomy of Literature Reviews (Randolph, 2009, p. 3-4) to present reflections on the chosen scope and literature and structure this review. In the taxonomy, there are six characteristics: focus, goal perspective, coverage, organization, and audience. (Randolph, 2009, p. 3). As for *focus,* our literature review is intended to have the main focus on *Research Outcomes* with a sub-focus on *Practices or applications.* The outcome focus is chosen to conclude the findings and arguments from the literature, while the application focus is chosen to analyze the application of findings from the authors and how they interpret said findings (Ibid.). This review aims to *generalize* and *identify central issues* regarding *the goal* characteristic. This means that we want to make an effort toward categorizing the themes, issues, and findings into more clear general understandings of the concepts in the existing literature in the field (Ibid.). In terms of *perspective,* we strive for a neutral perspective, acknowledging literature origins and biases. In this review, the *Coverage* characteristic is particularly important, as we have chosen to approach the data collection as a *representative sample.* The reasoning behind the decision is that an *exhaustive* approach would be time-consuming beyond our capacity due to the subject's complexity. Furthermore, an exhaustive approach would be too expansive in its line of arguments leaving it hard to hone in on the critical issues. (Randolph, 2009, p. 4). As mentioned in the goal section, for

organization, we will categorize the findings by *concepts* (Ibid.). Finally, Randolph argues the Audience characteristic is not relevant in a dissertation or thesis (ibid.).

Adding (bio)fuel to the fire: discourses on palm oil sustainability in the context of European policy development

As we have based the structure of this thesis upon the work carried out by German Dr. of Agricultural Sciences Cordula Hinkes, we find this article a great place to start the literature review. First, the article was published in 2020 in *Environment, Development, and Sustainability,* which is a journal that sets out to cover the *complex interactions between development and environment, its purpose is to seek ways and means for achieving sustainability in all human activities aimed at such development* (Springer, n.d.). Secondly, Hinkes included it in the dissertation to obtain her doctoral degree (Hinkes, 2021).

In this publication, Hinkes sets out to understand the discourses of palm oil in relation to European policy. The objective of this article is to better the understanding of what she labels as discursive struggles within the field of palm oil. The way Hinkes goes about this is by conducting an *argumentative discourse-analytical approach.* (Hinkes, 2020, p. 7661) Hinkes starts by establishing the case as to why the discourse analysis is relevant by arguing that the ongoing political debates concerning palm oil serve as an interesting object of study. This is because policies aimed at promoting sustainable development might come with trade-offs for other aspects of development. (Hinkes, 2020, p. 7662) The scope of this article is, as mentioned, European policy development; Hinkes emphasizes this through a timeline over the last decade of policies and commitments made by the EU that directly influence the palm oil sector, including the Paris Agreement and SDGs, amongst others. To conduct the discourse analysis, Hinkes does a literature review, looking specifically for *Palm Oil* Combined with*"discourse," "dispute," "controversial", "narrative," and "storyline"* on Google Scholar to identify relevant publications, leaving her with over 30 studies of interest (Hinkes, 2020, p. 7666). Hinkes proceeds to sort the discourses identified in these studies into stances and concepts. Since the scope of European Policy, she arranges the discourses in relation to events or pieces of policy, such as the Renewable Energy Directive II and the reactions to said events (Hinkes, 2020, p. 7668). The conceptualizations and arranging of

discourses leave Hinkes with three dominating discourses as to which she creates a matrix to highlight the coalitions, storylines, and emblems with those being *palm oil as emblem for deforestation, certification as emblem for sustainability,* and *palm oil as emblem for "green neo-colonialism"* (Hinkes, 2020, p. 7672-7675). (See figure 2)

We have incorporated this matrix as the structure for our thesis. It is two of the identified dominating discourses within the field of palm oil that we have chosen to investigate the coexistence of in this thesis, namely the emblem of deforestation and the emblem for *"green neo-colonialism,"* we have, however, chosen to work with the "driver of development" storyline instead of *"neo-colonialism,"* as we felt it would take the thesis in a less coherent direction. Besides using the matrix developed by Hinkes in the publication, we find the article equally useful as a literature review and a discourse analysis have been conducted. It aligns with what we mentioned in the taxonomy of the literature review that we want to generalize and conceptualize the literature.

With the structure of the thesis being decided to rely on the two discourses by Hinkes, the objective of the literature review became to find and identify studies and theories legitimizing the two discourses and their co-existence.

Through our literature review, we began looking in two directions:
1) looking for concepts tying the discourses of development and deforestation together
2) looking for concepts that would argue against the co-existence of the discourses.
The reasons for this are we wanted to cover the discourses holistically and understand how to so different discourses exist.

One of the concepts mentioned in Hinkes' literature review was the SDGs; they were of interest because they interact with the core concepts of development and deforestation.

We started looking into the SDGs to investigate their potential to aid in understanding how palm oil aids development and combats deforestation simultaneously. We are by no means the first to explore this, as several scholars have set out to understand climate action and the other SDGs. One of the scholars to investigate this is German development economist Gabriele Koehler, who, in her publication Assessing *the SDGs from the standpoint of eco-*

social policy: using the SDGs subversively, sets out to investigate the SDGs potential to be transformative, and whether or not the nature of the SDGs, promotes climate "justice" over economic rationales (Koehler, 2016, p. 149). The article was published in 2016 in the *Journal of International and Comparative Social Policy,* which is a journal that sets out to *enhance and develop theoretical, empirical, and methodological insights and knowledge in the field and a greater understanding of different welfare systems and policy actors operating nationally and internationally* (Cambridge, n.d.). Koehler sets out to investigate the transformative potential of the SDGs by applying the scope of both critical theories and sufficiency economics. The first point of Koehler's article is the intended universal nature of the SDGs, which should mean that the dichotomy of "global north" and "global south" should be cast aside. The second point argues that the most prominent change from the millennium development goals to the SDGs is the "marrying" environmental goals with economic and social development goals (Koehler, 2016, p. 149). Returning to linking climate action to development, Koehler argues that while the ambitions of combining the two are there, there is no immediate plan to achieve set goals while solving poverty and hunger while caring for nature simultaneously. Koehler elaborates that this is due to the SDGs being reliant on economic growth, which is a problem for two reasons. First, economic growth is not guaranteed to provide formal employment. In some instances, economic growth is jobless growth, meaning the growth does not equal jobs and poverty alleviation. Secondly, the SDGs state that "developing countries'" economies should grow at least 7 percent, which is not sustainable as "sustained growth on a finite planet is the essence of un-sustainability" (Koehler, 2016, p. 152). Put differently, relating this to the two discourses, palm oil cannot both solve the issue of deforestation and drive the development, as the earth is finite, meaning that palm will eventually reach a plateau of development potential as it will run out of space to grow on.

Koehler goes on to further critique the previously mentioned notion of universality and abolishment of "north" and "south" as she highlights that risks associated with climate mitigation policies, such as increased prices of food and energy, are distributed unevenly and are far greater to developing nations (Koehler, 2016, p. 153). Another article published in the same journal as Koehler's article comes from the late Bob Deacon, who, in his article *Assessing the SDGs from the point of view of global social governance,* as the title implies, sets out to investigate the contribution of the SDGs makes to improving global social governance. While Deacon does not directly discuss subjects as closely related to the scope

of our thesis's two discourses, he does discuss points we find of value to topics of discussion later on. Deacon does, like Koehler, address the dichotomy of "global north" vs. "global south" and the universality of the SDGs. Deacon raises criticism similar to Koehler's, namely the unequal nature of imposing global policies. Deacon highlights this by pointing toward historical opposition from the "global south" whenever global policies have been implemented, with the "global south" arguing that the standards and requirements posed favor the "global north" and cater more to stronger economies (Deacon, 2016a, p. 4). Once more, Deacon echoes Koehler in saying that the problem with the SDGs is that there is no clear plan as to how the goals will eradicate poverty by 2030 while also reaching climate goals (Deacon, 2016a, p.6). Finally, Deacon argues that the "global north" has committed to aid the global south in achieving standards set by global policy: *We are strongly committed to implementing [the SDGs] outcomes to ensure that no-one is left behind in our efforts to eradicate poverty and build an inclusive and sustainable future for all'* (Deacon, 2016a, p.11). *Richer countries have a historical and moral obligation to provide global public finance, such as ODA, to fund or co-fund global public goods and implement national-level policy measures that promote sustainable and inclusive development* (Deacon, 2016a, p. 10).

Many of the arguments we found in the two articles could be rooted in modernization theory. This made us turn our attention towards theoretical papers, expanding upon the key elements of modernization theory to relate to the discourses.

> *Modernization theory refers to a body of theory that became prominent in the 1950s and 1960s in relation to understanding issues of economic and social development and in creating policies that would assist economic and social transitions in poorer countries.* (Gwynne, 2009, p. 164).

If we take the main criticisms of Deacon and Koehler about the SDGs, many of these criticisms are equally raised to modernization theory. Although modernization theories have received a lot of scrutinies, mainly for being fixed in their views upon the problematization of developed vs. underdeveloped, as well as traditional vs. modern, this is also criticized by scholars labeling the theory as Eurocentric with a lack of understanding for the "global south perspective" (Gwynne, 2009, p. 164). Put differently, modernization theory perceives development as a one-size-fits-all, which is how the two scholars argue that the SDG framework is misperceived universalness. While there are similarities in the criticism raised

by Deacon and Koehler of the SDG and the historical criticism of modernization theory, both scholars use the vocabulary associated with modernization theory.
The use of words such as developing nations and the concepts of the perceived unfairness of the imposed standards to the "less developed" countries, the "north vs. south" are all something that can be placed into the model of the five stages of development by Rostow. Rostow's five stages of growth, from the 1960s: *the stages of economic growth. A non-communist manifesto* is an idea that the west has been successful in *developing itself* and that the rest of the world remains underdeveloped and should model their growth and development after the successes of the west while striving for a capitalistic state with liberal democracy (Jacobs, 2020). Criticisms of this model are *that Rostow also assumes that all countries have a desire to develop in the same way, with the end goal of high mass consumption, disregarding the diversity of priorities that each society holds and different measures of development* (Jacobs, 2020). Furthermore, *Rostow assumes that all countries have an equal chance to develop, without regard to population size, natural resources, or location* (Ibid.). Other criticisms are that while the model is a one-size-fits-all, all countries do not develop linearly, and some skip steps altogether. (Ibid.). This once more aligns itself with the critique of the universal nature of the SDGs. And the opposition to global standards by the "global south."

Summed up, even though modernization theory is heavily critiqued, we find a use case for it in the analysis, as the literature in the field dealing with the SDGs and the interaction between climate action and development bases arguments upon notions from the modernization school of thought. Modernization theory, more specifically Rostow's growth model, can be applied to understand why different discourses exist, with the argument of nations being in various stages of development.

As previously mentioned, this literature review aimed to cover the subject holistically, which means we did not settle with the arguments raised by Deacon and Koehler and saw the interaction between climate action and development as a universally bad thing. However, we did come across articles highlighting the positive nature of said interaction. One of these articles is *Connecting climate action with other Sustainable Development Goals,* published in 2019 in *Nature stability.* A journal that publishes articles to understand *how to ensure the*

well-being of current and future generations within the limits of the natural world is the overarching goal of sustainability research (Nature Sustainability, n.d.).
The authors of this article set out to cover what they have found to be a research gap, the connections and disconnections between climate action and the SDGs. (Nerini et al. 2019, p. 674). The article's authors have the following two working questions to identify the said connections and disconnections: *(A) Can the achievement of the Target be affected by climate change? and (B) Is there published evidence of synergies or trade-offs between the target and climate action?* (ibid.).
They look for direct "evidence" of synergies and trade-offs because scholars perceive the relationship between SDGs and Climate action to be axiomatic, without substantiated data to back it up. Therefore, the article,e serves as a study set out to gather said evidence or data (ibid.). The result of this study is that they find that climate change influences all 17 SDGs, and Climate action to prevent Climate change equally does so. The authors proceed to make a matrix where they sort the data into whether the influence of climate action upon the SDGs is synergetic or a trade-off on a scale of 1 to 3 (See figure 2) (Nerini et al. 2019. P. 675-676). The conclusion to the said matrix is that some trade-offs sound similar to the expressed concerns of Koehler, that the less developed nations are at greater risks of the implementation of climate mitigation, as energy-exporting countries could lose their livelihoods, creating more poverty in the process. However, the study's overall conclusion is that there are four times more synergies than trade-offs, meaning that climate mitigation, more often than not, goes hand in hand with the achievements of the SDGs. (Nerini et al., 2019, p. 676). In relation to the discourses, energy-exporting nations, such as Indonesia, which is associated with deforestation, are at risk of losing their exports and, therefore, development. Put differently, while climate action and the SDGs experience four times more synergies, the few trade-offs would argue against the co-existence of the two discourses.

While the literature review has seen the SDGs used to both are for and against the co-existence of the two discourses, we have covered other articles not revolving around the SDGs to investigate this co-existence further. One of these articles is by German ecology economist Joachim Spangenberg. The article *The world we see shapes the world we create: how the underlying worldviews lead to different recommendations from environmental and ecological economics – the green economy example* sets out to demonstrate *different worldviews in economics can explain much of the different readings of and attitudes towards the 'green economy.'*

(Spangenberg, 2016, p. 127). Spangenberg argues that sustainable development debates over the last decade have been replaced with discussions concerning the 'green economy' (Spangenberg, 2016, p. 128). However, Spangenberg does argue that while the 'buzz word' has changed, the mechanisms remain relatively unchanged, besides the fact that environmental economics has been integrated into standard economic thinking (ibid.). This shift, according to Spangenberg, happened as *Nature and its components were recognised as valuable and scarce and thus considered to be economic goods. This led to the extension of the neoclassical definition of 'the economy' to 'internalise' the formerly external environment* (Spangenberg, 2016, p. 129). *The value of nature as a production factor was acknowledged by conceptually integrating the environment as 'natural capital' into the economic system and the production functions* (Ibid.). With this new scope of incorporating nature as a capital, Spangenberg argues that a new world view formed, which he refers to as the ecological economics worldview, instead of earlier neoclassical environmental economics worldviews. (Ibid.). Spangenberg explains the difference between the worldviews as such:

> *The worldviews of ecological and environmental economics are essentially mutually exclusive and support diverging strategies. For instance, environmental economics scholars consider economic growth as a chance if not a necessity for any environmentally benign development, while ecological economists consider economic growth as a problem rather than an opportunity. Even with shared ambitions – like safeguarding the environment – the two worldviews, and in particular their ontologies, lead to diverging and often mutually exclusive policy recommendations.* (Spangenberg, 2016, p. 135).

Relating these two economic worldviews to the two discourses would mean that depending on which of the two worldviews one would subscribe to would determine the feasibility of co-existing discourses, as they prioritize deforestation and development differently.
Another thing we find interesting in the article by Spangenberg is the notion of pricing nature he uses to argue that in the environmental worldview, the degradation of nature is to be perceived as a market failure, which is something Hinkes also outlines in her matrix in the deforestation discourse (Spangenberg, 2016, p. 136). Spangenberg furthers the argument by saying that with this logic and worldview, *legitimate intervention into the market mechanism from an environmental economics perspective, correcting a market failure which would otherwise lead to less-than-optimal allocation of resources* (Ibid.). Put differently, and relating it to the two discourses, the EU imposing policy and sustainability standards would

be considered legitimate intervention into the Indonesian palm oil industry if the aim was to address the unstainable use of resources.

While we found the previous articles rooted in modernization theory in their line of arguments, Spangenberg seems to draw more from Ecological Modernization Theory, also called (EMT). One of the prominent figures within the school of EMT is Arthur P.J Mol. Mol argues that the most significant contribution of (EMT) is providing theoretical frameworks to interpret how society and policy interact with environmental concerns. (Mol et al., 2014, p. 4-5). Mol further argues that EMT has provided a basis for bringing modernization theories together to analyze environmental data and policy. This conceptual move brings several development schools together under one common denominator and makes room for the environment in general social theories. (Ibid.). One of the innovations EMT has brought with it is political modernization. Political modernization refers to the renovation and reinvention of state environmental policies and politics to make environmental reform better adapted to the new conditions of late-modern societies (Mol et al., 2014, p. 19-20). Mol credits political modernization for bringing economic concepts to the realm of EMT through the incorporation of market dynamics, market actors & market-based instruments; these concepts range from eco-taxes, eco-labeling, and corporate social responsibilities with an emphasis on green consumerism (Mol et al., 2014, p. 18-19).

The arguments put forth by Mol, by large, echo the points Spangenberg articulates in his worldview ideology, which means we now have both modernization theory and EMT as theoretical frameworks to interpret the co-existence of the two discourses. In addition, however, we have to acknowledge that EMT has been subjected to criticism since its inception, just like its predecessor. And a lot of the criticism of modernization theory is echoed in EMT; this means it has been labeled Eurocentric, politically naïve, one-sided regarding consumption, and technologically optimistic. However, according to Mol, EMTs' criticism over time has been addressed accordingly. An example of this is that the criticism of the theory for being Eurocentric has initiated many studies globally to increase the scope of conceptions of the theory’s application (Mol et al., 2014, p. 23-24).

5. Primary data - Interview

To increase our knowledge beyond the literature review, we have attempted to conduct interviews with experts in the field of palm oil, European policy, and related areas that are of interest to this topic. Our goal was to conduct interviews with experts from different fields relating to this topic for us to construct a holistic depiction of the case at hand by including diverse perspectives. Therefore, we have contacted 17 potential interviewees with experience at the European Commission, European Parliament, United Nations, RSPO, Solidaridad, WWF, and Greenpeace. Unfortunately, of these 17, only one interview was able to materialize. Therefore, we have interviewed Christian Friis-Bach, former Under-Secretary-General of the United Nations and Danish minister of development. His professional experience has led him to be highly involved in creating the SDGs and being highly involved in creating the Paris climate agreement.

We have been able to conduct one interview, which is a limitation of this research paper. Unlike our ambitions, we have been unable to connect with policymakers of the European Union, REDII, ILUC, and experts in sustainability efforts in palm oil. As such, we are unable to include these perspectives in the analysis. However, the single interview provides new insights. The section below will highlight these new insights.

Interview - Christian Friis-Bach

On whether the UN took into account any discrepancies between countries' interests following the implementation of the SDGs:

The sustainable development goals were based on a somewhat naive idea that sustainable development, everybody will benefit. (03:09-3:16)

There was, of course, a notion that too aggressive climate goals could impact the economic progress of individual countries and, and of course, underneath all of this, there were a lot of tensions and, and a lot of discussions. So I fully recognize the tensions that you describe, and they will become even more visible in the future. (04:46-05:14)

On compensation mechanisms for countries that climate mitigation efforts will negatively impact:

The Green Climate Fund and the loss and damage mechanisms under the climate agreements are not substantially developed and funded. In order to compensate those countries that obviously, will see loss and damage, because of the actions we take towards climate. So, the lack of scaled up significant and binding financial mechanisms as it has been discussed under the sustainable development goals and in the climate agreement, and the lack of the scaled up substantial and binding financial mechanisms will of course, create a lot of tensions in the implementation of the framework. If Indonesia would claim that now, the issuing of the climate goals in the EU will damage the combatting of poverty and creation of jobs in Indonesia, they should have access to financing in order to make a proper transition from a production system as they see today, to a more sustainable production system. (08:20-09:48)

There's no mechanism to say, well, the EU is implementing a directive that will directly harm the Sustainable Development Goal implementation in Indonesia, whatever, there's no such mechanism in place. Of course, internally in the EU, this discussion has been there for 40 years, at least I have followed it for almost 40 years at least. Is there a coherence mechanism that makes sure that we can handle damage following policies internally and externally in the EU? Is there a coherence mechanism where you make sure that we have development policy here, and we have trade policy there? Can we make sure that one does not harm the other? And the short answer to that is no, there is no legal binding mechanism for coherence in the EU policy when it comes to development, our climate and our SDGs (14:13-16:40).

We needed it in the climate framework. And we need these automatic scaled up financial mechanisms in all international frameworks, because in any international agreement, there will always be losers and winners. If you change policies internationally. It will affect prices, it will affect production, there will be losers and winners. Financial mechanisms will be the biggest challenge in the coming decade. (29:20-29:54)

These mechanisms need to be there globally as well. So when there's a policy, there's a compensation mechanism, financial compensation and investment mechanism associated with global frameworks. But we have we we think, you know, we have this notion

development aid is charity, and it's something we give out of, you know, because we think people should we pity those who are poor, and we want to assist them, but it should be sold in a very different way in the future. It should be linked to global agreements, that should be financial binding agreements. (31:17-31:52)

On accountability and responsibility for negatively impacted countries:

There were a lot of discussions following the Paris agreement and the goals on what you call the post-2015 Accountability Framework. That is, how can we ensure that there's more accountability into the framework of the Sustainable Development Goals. (11:26-11:43)

So the only thing you have in the SDG framework is follow-up and review. That's all you have. Follow up and review. It's the weakest possible accountability framework you can have. There's no global organization that can actually keep countries accountable. (13:38-13:51)

6. Analysis

As outlined previously, in this thesis, we have investigated the paradox of palm oil discourses; How the palm oil industry can be seen as both a driver of development and a symbol of deforestation. As mentioned in the methodology section, the starting point of this analysis will be taken from the two discourses dominating the field of palm oil in the matrix created by Cordula Hinkes in her publication adding *(bio)fuel to the fire: discourses on palm oil sustainability in the context of European policy development*. This analysis will be inspired by the matrix structure, as it will investigate the co-existence of two strongly opposing discourses. The analysis will be conducted in two parts, covering the two discourses respectively, to analyze how both can be interpreted in relation to sustainable development and climate mitigation policy. As we identified in the literature review, the policymaking concerning deforestation and development is perceived differently globally, for the EU, it is seen as a step in the right direction of the green economy, whereas it in Indonesia has been labeled a trade war, crop apartheid, and neo-colonialism amongst other things (Hinkes, 2020, p. 7673).

The discourses - Development

This first part of the analysis will be centered around the discourse of palm oil as a driver of development. The analysis will be guided by working questions, which we will answer with perspectives from scholars and theoretical perspectives. First, the working questions will cover why the EU and Indonesia perceive the REDII differently. Secondly, it will cover economic growth and its role in driving development. Finally, we will ask about the feasibility of simultaneously achieving environmental and development goals.

Development according to worldviews.

A short explanation of the different perceptions regarding the relevant policy could be that both the EU and Indonesia are looking out for their immediate, personal interests. There are, however, more extensive discussions to be had. One of these discussions is as mentioned in the literature review raised by Joachim Spangenberg in his publication: *The world we see shapes the world we create: how the underlying worldviews lead to different recommendations from environmental and ecological economics – the green economy exampl*e. Spangenberg sets out to illustrate how different worldviews influence how green economics policy is perceived. Concerning the scope of the development vs. climate action, how that debate is perceived is, according to Spangenberg, dependent on worldviews (Spangenberg, 2016, p. 129). Just like we have two dominating discourses in the field of palm oil, there are two dominant global worldviews related to development economics. These are neoclassical environmental economics and ecological economics (Ibid.). While these share a lot of similar characteristics regarding exchanging goods, labor, and funds, ecological economics has an added scope of resources, resource consumption, and conservation in the equation; on top of that, ecological economics has environmental limitations to economic activities (Ibid.).

How do worldviews influence perceptions of development?

When following the logic of Spangenberg's economic worldviews in relation to palm oil, an argument could be made that Indonesia and the EU view climate mitigation differently because of the difference in their worldviews. Consequently, the argument would then be that

the EU subscribes to environmental economics and therefore have environmental limitations to economic activities. Concerning the Indonesian palm oil sector, this would mean that even though palm oil is the cheapest and most efficient crop for biodiesel, the EU would have to factor in deforestation and sustainability in their cost-benefit analysis of policymaking. Whereas if Indonesia subscribes to neoclassical economics, the main focus would be economic growth, and we could argue further that the interest in making the industry more sustainable would come from increasing demands for sustainable palm oil. Put differently, Indonesian interests following neoclassical economic assumptions would lead to profit maximization through sustainability by adhering to external demands.

However, there are some criticisms or faults to be raised in this worldview ideology. Spangenberg paints the picture of subscribing to a specific worldview as being quite "either-or" and that this is not necessarily able to provide a complete picture. It would be incorrect to say that the palm oil industry, or Indonesia, has not made efforts and attempts to make the outlook of palm oil production more sustainable. Whether it has been through creating a national certification scheme, creating the deforestation moratorium, or calling for no more permits for palm oil production area expansions as a response to the REDII, efforts have been made. These efforts could be used to raise the question of whether these attempts are made because Indonesia is interested in the green economics for their future development, or if it is the deforestation agenda of the "global north" and worldviews that are forcing its way and forcing the hand of the "global south" to adhere to its ecological economics and sustainability standards.

This is a question we would have liked to ask some of the interest organizations we reached out to, which unfortunately did not materialize; we can, however, find articles critiquing the policy developments following the end of Indonesia's moratorium on palm oil, which from 2018 to 2021 saw the Indonesian government bar any new permits from being granted to start new palm oil plantations as well as existing plantations to expand. As the moratorium ended in 2021, it has been followed up by a policy that implements new sustainability restrictions for palm oil farms and maintains that no new permits will be granted to open new plantations. However, the freeze upon granting existing palm oil plantations new licenses to expand their land use has been lifted (Suroyo & Christina, 2021a). The main critique against this policy from NGOs such as Forest People and Sawit Watch is that the moratorium should be permanent, as upwards of 21 million hectares of forest is now at risk following the

implementation of the new policy. (Christina & Nangoy, 2021) Additional critique is that the policy is legislatively weak and carries weak enforceability. In combination with the still increasing global demand for palm oil, the new policy will likely cause further degradation of the Indonesian rainforest. (Suroyo & Christina, 2021b, Vantage market, 2022). This "new" policy stance could, while still acknowledging the weakness in Spangenberg's worldviews, provide insight into Indonesia's motivations. While the policy brings restrictions, such as "no new palm oil permits will be given," there are options for expanding within the already existing ones, this fact wouldn't point towards either neoclassical or ecological economics unanimously, but it speaks to the idea that there are considerations concerning forest preservation. We do, however, identify this as an implicit acknowledgment of the desire to keep the palm oil industry growing. Through the lens of ecological economics, this would seem like one step forward and two steps backward, in the sense that the policy in its outlook wants to continue the deforestation ban for new palm oil plantations but at the same time allows for more economic growth within the existing ones, contingent on *environmental limitations*.

The main takeaway for us regarding applying Spangenberg to understand the different perceptions of climate mitigation policies is that it cannot be used to form a strong enough argument that is able to stand on its own. This is due to the highlighted weaknesses of an "either-or" scenario. At the same time, we can not dismiss its applicability as it has provided reflections regarding Indonesia's motivations for applying a greener economic scope to the palm oil industry. We would argue that the sustainability initiatives that Indonesia has put in place, such as the moratorium and national certification schemes, demonstrate that the country is willing to adopt more environmentally friendly approaches, with the right financial incentives that still allow palm oil to be the driver of development. One of the similarities in this ideology is the notion that all development depends on economic growth, which we will explore next.

Economic growth as the driver of development

It is not only Spangenberg who addresses the need for economic growth. The scholars mentioned in our literature review argue sustainable development relies heavily on economic growth during our literature review. In addition, said scholars point to the SDGs as the

framework of development, and to achieve success in fulfilling the SDGs, there needs to be constant economic growth. (Koehler, 2016, p. 152: Deacon, 2016, p. 7: Hinkes, 2020, p. 7675).

If we approach this from a theoretical perspective, we could, with modernization theory, apply Rostow's five stages of growth to the context of palm oil. Before initiating the analysis with Rostow's model, it is important to acknowledge that Rostow and his model have been heavily criticized, as we did in the literature review. Despite its limitations, we still find it helpful to apply the case of palm oil to demonstrate how the subject matter can be understood and interpreted with development and modernization theory due to Rostow's prominence within the field. Despite the many critiques of Rostow's model, it is still one of the most widely cited development theories and is a primary example of the intersection of geography, economics, and politics. (Jacobs, 2020)

With Rostow's five stages, we can argue that Indonesia views the export of palm oil as a contributor to going from the take-off to the drive to maturity stage of growth. We say this because one of the main differences between the third take-off stage and the fourth drive to maturity stage is the duration and longevity of the economic growth. While Rostow mainly characterizes the take-off stage as emphasizing a short period of intensive development, the drive to maturity is the more extended period that allows for living standards to rise and technological advancements to take place, growing the national economy. The metric here is that time is considered relative, and there is no textbook answer to what defines a short period or a more extended period. Still, with Rostow's model, we would argue that the last 30 years of increasing demand for palm oil could be seen as a short intensive take-off period. And the RED II out-phasing of palm oil in biofuel could be argued to be what keeps palm oil and Indonesia from transitioning into the drive to maturity stage. It is important to note that within the fourth stage, diversification of the economy takes place; we mainly use the argument of the time, and continuous growth, as we have not found any indications or expressed desires that Indonesia would want to move away from growing palm oil.

If we stay with Rostow's ideology that every developing nation should strive to reach growth stage five (Jacobs, 2020), along with our established argument that Indonesia is now stuck in growth stage three, one could then ask how do Indonesia then transition into stage four? Stage four, as mentioned, calls for technological advancement, and if palm oil is the driver of

development and growth, the question then becomes; is it possible to advance and transition palm oil? As we covered in the previous section, efforts have been made to transition into a greener industry without technological advancement. However, the mechanisms used have instead been pressing climate mitigation policies from the EU. As a result, the palm oil industry has to align itself with the European standards to be a low-ILUC prospect in the future. Bob Deacon argues that historically we have seen that when the global north tries to impose international policy and standards, such as the SDGs, or metrics for sustainability, it has often been met with the reaction: '*your standards, not ours*' and '*where is the northern money to pay for them*' (Deacon, 2016a, p. 4). Deacon elaborates that this notion of just adhering, and transitioning to European standards and requirements, does not come around easily (Deacon, 2016a, p. 3). This argument is backed up once more by Rostow's model of development and aligns itself with the thinking that all countries should desire to reach the fifth stage of development, the high-mass consumption. Still, it also implicates that the "global south" does not aspire for the fixed notion of development or perceive development as linear as Rostow's model would, with the argument that if the "global north" wants to set development standards for the entire world, they should also be the ones paying for the implementation of said standards, as the "global south" holds no ownership over these. The wording "where is the northern money to pay for them" highlights a transactional relationship, rather than a true collaboration, with mutual interests of imposing global standards.

Is the "global north" obligated to invest in the development of Indonesia to combat deforestation?

If we are to interpret this, then for it to be a driver of *sustainable* development, it would depend on financial commitments from the global north. The notion that the global north should financially commit to the global south when creating international policy, in this case, Indonesia, is something we heard echoed on more than one occasion in our interview with former UN Under-Secretary-General Christian Friis Bach:

> Of course, you can transition this industry into something that can address both goals, you know, that I'm sure there are ways to, if not produce Climate Neutral palm oil and to climate compensate in the production in the way that we can address both climate goals and development goals. But there will be a cost to it.

> And the EU should obviously invest heavily in this if they wish to pursue a policy where they ban palm oil, because of climate policy, I would say they have an obligation to step into this to develop with Indonesia which offers Sustainable Palm Oil production. (Friis Bach, C. 2022 April 21st 25:58-26:42)
>
> The most important thing to if the EU wants to address this incoherence in policies in terms of development and climate goals, specifically on the issue of palm oil, this should be a huge effort to help Indonesia to transition its industry into a more sustainable production system with less climate impact. (Friis Bach, C. 2022 April 21st 24:46-25:16)

While Friis Bach argued that it was in the interest of the EU to invest and help Indonesia with this transition, he also clarified that this would solely be a voluntary process. It must be voluntary because there is both a lack of global funding for development aid and an absence of a mechanism forcing the EU to compensate Indonesia if the RED II is damaging the country's exports (Friis Bach, C. 2022, April 21st). While there might not be a regulatory framework or mechanism forcing the EU to compensate and or invest in Indonesia, we would still argue that there should be a vested interest through their membership in the UN and commitment to the SDGs to aid Indonesia. Goal number 17 calls to Revitalize the global partnership for sustainable development (UN, n.d. C).

Especially with Goal 8.A *Increase Aid for Trade support for developing countries, in particular, least developed countries, including through the Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries* (Unstats, n.d.)

With this goal and the SDGs in general, we would argue that the UN member countries have committed to contributing to helping Indonesia transition, in this case, the palm oil industry into a sustainable industry that can drive development.

If we stay with the argument that the SDG framework serves as the incentive for the UN to invest in the transition of palm oil, the financial mechanisms should already be in place for these investments. For example, the UN Conference on Trade and Development (UNTAD) has estimated that the achieving the SDGs in all countries simultaneously would require investments of 5 to 7 Trillion USD annually; the UNTAD, however, also notes that this program is severely underfunded and not prioritized enough in the national economies (UNDP, n.d.). Similarly, there is also the Green Climate Fund (GCF), established by 194 sovereign governments party to the UN Framework Convention on Climate Change

(UNFCCC), whose purpose is to respond to climate change by investing in low-emission climate-resilient development. (GCF, n.d.) However, according to Friis Bach, the GCF is also falling behind on its contribution targets. (Friis Bach, C. 2022 April 21st)

With both UNs institutions lacking the required funding, the palm oil sector would have to look elsewhere to secure the necessary funding to make palm oil sufficiently sustainable. It is, however, not only the UN institutions that play a role in the achievement of the SDGs; private actors in the shape of companies and large cooperation face increasingly more strict supply chain management requirements, with the SDGs acting as a guideline for their Corporate Social Responsibility plans (CSR, 2018). As mentioned in our literature review, several studies have set out to examine how corporate investments in sustainability certification schemes affect the livelihood of smallholder farmers. The results of these studies are inconclusive; some studies see vast improvements in SDGs, such as no poverty and no hunger and a more substantial financial backing when going to banks to be afforded loans (Hidayat, Glasbergen & Offermans, 2015, p. 41). At the same time, some studies remain more critical of their findings due to the dependency on outside factors such as multinational corporations (Meemken, 2020). However, these external factors are not perceived as bad, as they contribute to the climate-oriented SDGs. One of the studies mentioned in our literature review is a study concerning the livelihoods of independent and certified smallholder farmers in Indonesia. One of the aims of the said study was to investigate if the livelihoods of the smallholder farmers in Indonesia improved through certification. The farmers were asked if they saw any improvements in the surrounding environment after being certified:

> To reduce land and water degradation, we have already applied many activities. We do not apply fertilizer in the dry season and do not wash fertilizer containers in the river to protect animate creatures in the river. In essence, RSPO teaches us to protect our nature...
>
> Effects on the environmental quality can be seen if we look at our plantation, which is greener now because we keep weed in our plantation to cover soil and reduce erosion due to surface runoff (rainfall), although it looks messy. (Hidayat, Glasbergen & Offermans, 2015, p. 37)

Both quotes come from smallholder farmers, one included in a certification scheme by a multinational company and the other who is independent but has received help from the WWF to interact with the RSPO about certification standards (Ibid.). As mentioned in the methodology, we have reached out to both WWF and RSPO to learn about their stance on the future of smallholder efforts and sustainable palm oil, but to no avail. We still, however, argue that the testimonials mentioned above, coupled with the lack of financial backing for development aid by the UN, external partners, and the private sector, play a vital role in transitioning to sustainable palm oil by providing resources and technological advancements, which once more aligns itself with Rostow's fourth stage of growth. (Jacobs, 2020)

In summary, if we understand the discourse that palm oil is a driver for development through modernization theory, we should understand Indonesia's strong reactions and opposition to the EU's climate mitigation policies in their development being halted. The country's economic growth depends on the continued export of palm oil, leaving them with the option to either diversify their exports or find new buyers for their palm oil. Modernization theory, as it is criticized for in earlier sections, provides us with the notion that the development of the "global south" is still very much dependent on the "global north," whether from buying their exports or through development aid. Since the development aid is underfunded, the role and responsibility of the development have, in recent times, transitioned to being placed upon private actors, such as NGOs and multinational corporations.

Can environmental goals be achieved simultaneously with sustainable development in the global south?

We ask whether or not palm oil can be a driver of development to understand if development and climate action can interact or if different prioritization of said goals is the reason; we have two co-existing juxtaposed discourses. As previously mentioned, this is a question that several scholars before us have set out to answer; it is still a field that, according to Nerini, lacks extensive "evidence" (Nerini et al., 2019, p. 674). Nerini et al. pointed out that most scholars reference the relationship between the SDGs and action as axiomatic (Nerini et al., 2019, p. 674). In the publication, Nerini et al. explore so-called synergies and trade-offs in the relationship between climate action and the SDGs. The article finds that climate action is influencing all the SDGs. The report further explores whether these influences are trade-offs or synergies. Once more, we will return to goal 8.A that calls for the *Increase Aid for Trade support for developing countries, in particular, least developed countries, including through*

the Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries (Unstats, n.d.); here we see in the appendix that the target is classified as counteracting climate action (Figure 3). The argument why the climate action is counteracting the achievement of other SDGs is that the lesser developed nations rely on carbon-intensive exports. Therefore, a ban on exports such as energy or biofuel could affect the other SDGs. The implications lie in the fact that the reason less well of economies rely on extensive carbon industries for jobs, just as much as they rely upon them for economic growth; put differently, the bans on carbon-intensive exports could create regressive income effects. (Koehler, 2016, p. 153). Furthermore, an argument is that climate actions against said carbon-intensive industries could increase the prices of other goods, such as food, transportation, and energy, as they are taking up land used to cultivate these products, thereby counteracting other SDGs, once more through poverty (Nerini et al. 2019, p. 676).

These arguments back the notion that the palm oil industry is a driver for development as it provides economic growth, reduces poverty and hunger, and implicates the right to decent work goal by providing jobs to more than 2.5 million people in Indonesia (Mongabay 2020). However, Nerini et al. state that the matrix created to weigh up synergies and tradeoffs found four times more synergies than trade-offs when incorporating climate action into the SDGs. This means that overall there should be a more considerable upside to the implementation of climate action or that implementing climate mitigation efforts would aid in achieving other SDGs. These findings can be interpreted in two ways; one is that the aid the EU would give Indonesia in transitioning palm oil into a greener outlook would be mutually beneficial. A sustainable palm oil industry could positively influence SDGs such as responsible production and consumption, sustainable cities and communities, and, as we saw earlier, providing clean water. The advancements in the field could create jobs alleviating poverty. Simultaneously the EU could potentially avoid having to ban the import of palm oil biofuel, as improvements in the palm oil industry would allow palm oil to be classified as low-ILUC and viable to use as biofuel once more. The other way we can look at it is said in our interview with Christian Friis Bach: "*In any international agreement, there will always be losers and winners If you change policies internationally. It will affect prices, it will affect production, there will be losers and winners."* Friis Bach, C. 2022 April 21st). Drawing upon this quote and the fact that synergies outweigh trade-offs, climate action is four times more beneficial to the SDGs. The apparent losers from climate mitigation would be the palm oil-producing countries. As we established previously, the less developed economies rely on these exports for economic

growth and development, and implementing these mitigation standards would require extensive resources. At the same time, their resources would depreciate due to smaller demand for palm oil in the future. Friis Bach's notion of winners and losers in the implementation of policy questions the universality of the statement made by Nerini that there would be four times as many synergetic relationships between climate mitigation and development as there would be trade-offs. Nerini's statement could be criticized similarly to modernization theory for being eurocentric, in the sense that the number of benefits depends on the country or continent's ability to impose climate mitigation without losing its main exports in the process.

Other scholars take a more general approach to the SDGs to examine them. One of these scholars is Gabriele Koehler, who, in her publication *Assessing the SDGs from the standpoint of eco-social policy: using the SDGs subversively*, through critical theory, criticizes the SDGs and their potential for realization. One of Koehler's arguments is that ideologically sustainable development and caring about the environment cannot go hand in hand, as development depends on economic growth, and developing nations are highly reliant on finite resources (Koehler, 2016, p. 152). Bob Deacon refers to this as "sustained growth on a finite planet is the essence of un-sustainability" (Deacon, 2016b, p. 207).
If we are to relate this to palm oil, the argument is that while palm oil is renewable, the land it is grown upon or the ever-expanding area needed to cultivate oil palm is not. This entails that if one were to defend the argument that palm oil is a driver for development, one could simply not claim it is sustainable. In this scenario, palm oil can be seen as a driver for development if any climate action ambitions are discarded. Similar to Nerini, Koehler also uses the agricultural industry to criticize the SDGs as she argues that poorer or developing nations are more vulnerable to climate mitigation policies. She does so by using the opposite argument to Nerini et al. (2019, p. 676), as Koehler mentions how the cultivation of biofuels and the land used to cultivate it takes away feed cropland, which in turn drives up food prices and increases poverty (Koehler, 2016, p. 153). These arguments highlight the complexity of palm oil issues, with scholars arguing both for and against palm oil's ability to address the SDGs.

To answer that question that serves as the title for this section, "*Can environmental goals be achieved simultaneously with sustainable development in the global south*?" It depends on how and who you ask; through this section, we have identified answers pointing towards yes,

they can, but with many contingencies, such as dependence on external factors, like adhering to the external demands, such as sustainability requirements. At the same time, we have also identified answers pointing towards a no. The development and climate goals cannot be achieved simultaneously as there is a trade-off between growth or caring for the climate, depending on which one prioritizes. We have found that aid provided to the transition of the palm oil industry could be mutually beneficial, as sustainable advancements in the industry could allow for the EU to once more import palm oil as biofuel while having the potential to influence several SDGs in the process positively. However, we have found evidence that it does not matter since we live on a planet with a finite number of resources.

Ultimately these opinions all matter when we seek an understanding of this discourse put forth by Hinkes, how one can perceive palm oil as a driver of development. We argue that there are several explanations, whether worldviews or modernization theory versus EMT. First, it depends on palm oil's technological optimism and sustainable development potential. Whether it can yield more or take up less space also depends on a future where the EU lifts its ban, or Indonesia finds new customers who want it in its current state. As things stand, the demand for palm oil is increasing despite the implementation of REDII; this is due to the variety of uses of palm oil in consumer products, which accounts for roughly 50% of palm oil imports to the EU. If consumer behavior stays, the same, palm oil could provide economic growth to drive sustainable or deforestation-free development.

The discourses - Deforestation

The following section will analyze the other side of the paradox; Palm oil as a symbol of deforestation. Through the literature and theory review, interviews, and case information, we find that two main points highlight and can explain the deforestation discourse surrounding palm oil. First, palm oil as sustainable vegetable oil, and second, the global governance regarding the combatting of deforestation.

Palm oil as a sustainable vegetable oil

The production of palm oil contributes to the deforestation of tropical forests in Indonesia. This is a given that is undisputed and acknowledged by international actors and governments, including Indonesia itself. At the same time, palm oil is seemingly a miracle product that has

endless applications for consumers all across the globe. However, in recent years the public perception toward palm oil has shifted from an opportunity to be increasingly problematic due to its contribution to the deforestation of tropical forests. As a reaction to this shift in perception, palm oil has become increasingly subjected to more regulations to increase palm oil sustainability. In the following section, We will analyze the possibilities of sustainable palm oil and what the future of sustainable palm oil could entail.

One of the main reasons palm oil is such a profitable crop is the high yields per crop and the possibility of extracting oil from the fruits and the kernels of the oil palm. As a result, the oil palm is much more efficient in land use than its alternatives, such as sunflower and rapeseed oil. Palm oil accounts for 35% of the world's vegetable oil supply, but it only does so on 10% of the land; as a result, alternatives to palm oil would require six to ten times more land (WWF, n.d.). Consequently, many large corporate buyers of palm oil have not yet transitioned to alternatives to palm oil. In its sustainability report, Unilever's second-largest buyer of palm oil directly addresses this and argues that it is better to stay connected to - and improve the palm oil sector than to shift land use problems elsewhere (Unilever, n.d.). As such, palm oil is the preferred crop for the private sector due to its diverse applications and high yields per crop compared to alternatives. Despite these two factors, the EU has implemented the REDII with the ILUC procedure, reducing +- 50% of palm oil imports to the European Union. This raises questions about the scientific basis for the classification of palm oil as a high ILUC risk crop; if alternatives require more land use, why is palm oil being phased out, and why are crops with similar deforestation connotations such as soy able to continue under the RED with business as usual?

Why is palm oil the only crop to be banned under the implementation of the REDII?

The ILUC classification has been critiqued heavily for not including soy. Spangenberg's notion of viewing deforestation as a market failure, which we elaborated on in the literature review, could, similarly to palm oil, be carried over to the soy production of South America, which is a significant contributor to the deforestation of the Amazon rainforest. However, in its crop assessments, the EU did not find the high carbon stock land conversion above the threshold and therefore did not see a need for action or intervention (Cerulogy, 2020). Nevertheless, the EU does have other regulations – the green taxonomy and the upcoming deforestation and forest degradation act – that place restrictions on the imports of six products

that have a significant adverse environmental impact (European Commission, n.d. b). These products are soy, coffee, cocoa, rubber, wood, and palm oil. In the future, the importers of these products to the EU will need to prove that the specific crops have not contributed to deforestation, but the EU does not place an import ban by a particular year as it does with palm oil intended for biofuels (Ibid.). The six products are all products that contribute to deforestation, similarly to Indonesian palm oil, but they will still be able to be imported to the European Union if they meet the conditions that are set under the taxonomy and the deforestation and forest degradation act. On the other hand, The EU will ban ILUC classified palm oil from being imported by 2030 with no assurances that palm oil can lose its ILUC classification if the sustainability levels improve (Transport and Environment, 2019).

The prospect of palm oil not being able to lose its ILUC status could be perceived as problematic, as significant strides have been made in increasing the sustainability of palm oil. Over the past decade, Indonesia has listened to pressures to limit deforestation. As previously mentioned, Indonesia's response to this pressure was implementing a palm oil 'moratorium,' which ran from 2018 to 2021. The moratorium dictated that existing palm oil plantations are not legally able to expand into previously uncultivated areas, therefore effectively halting the land-use expansion of the palm oil sector. However, illegal deforestation still occurs, and it is estimated that 20% of the land used for palm oil plantations has been illegally expanded (Greenpeace, 2021). Additionally, private sector and NGO initiatives have triggered technological innovations that can safeguard and verify the sustainability of palm oil production. This is done predominantly through satellite monitoring, where agencies can view in real-time whether the palm oil plantation originates from deforested land or if the plantation is expanding into high carbon stock forests (Beckline et al., 2017, p. 36). Additionally, some companies have implemented blockchain technology into the palm oil supply chain (Lim et al., 2020, p. 8). To make use of the blockchain technology work, the palm oil kernels and fruits are tagged and subsequently scanned at each point in the palm oil value chain; the scanned data is uploaded to a blockchain. Functioning as a secure, encrypted database, the blockchain technology allows for complete traceability and transparency of palm oil. So far, satellite monitoring and blockchain technology are only employed by the largest importers of palm oil. Still, it has allowed the largest buyers to come close to full traceability throughout the supply chain and verifiability of contributions to deforestation (Unilever, n.d.). These technological innovations allow the importers to create a more sustainable palm oil supply chain and ensure their ability to continue imports to the EU once

the upcoming transparency, traceability, and anti-deforestation measures follow the taxonomy and the deforestation and forest degradation act. However, under the current conditions set by the ILUC classification, palm oil destined for biofuel will not be able to be imported to the EU regardless of technological innovations that allow the palm oil production process to be more sustainable. The notion that the private sector has made advancements towards achieving sustainable "enough" palm oil for their value chains could further problematize the absence of a framework in the ILUC that allows palm oil to serve as the basis for biofuel in the future.

While the classification of palm oil as a high-risk ILUC crop is easily criticized, it is equally justifiable. We can explain this by considering the carbon stock classification of forests. Palm oil can only grow in areas around the equator with consistent rainfall; this is the same area where the world's rainforests are situated. As it happens, the rainforests of Indonesia are ancient, dense, and biodiverse. These factors mean it is classified as the highest density forest, allowing the highest carbon stock intake of all forest types. Expanding plantations into open lands or scrublands causes less environmental damage as these types of land holds far less carbon stock. As a result, the rainforests of Indonesia – high-density forests – have the highest priority for preservation, following the High Carbon Stock approach as shown in figure 1. The main alternatives to palm oil do not need to be grown in high carbon stock forests but can be grown in the open lands of Europe. As alternatives to palm oil are less efficient, they use more land but have the potential to do less damage to the environment as they do not need to expand their land use into high-density forests. Therefore, transitioning from palm oil to alternative vegetable oils presents a delicate trade-off between less - but more damaging land use and more - but less damaging land use.

Drawing upon EMT and Spangenberg (2016) and the inclusion of the environment into the economic equation, one could view the current situation regarding the unsustainable deforestation of high density, high carbon stock forests as a form of market failure. Under the current conditions, the market equilibrium is skewed towards environmental damage instead of an optimal outcome. Extending this logic to neoclassical economic assumptions, government intervention is warranted in the event of market failure (Harvey & Hubbard, 2012, p. 105). In this light, the implementation of the REDII and the ILUC classification system can be seen as a government intervention against the unsustainable deforestation practices of palm oil production. The addition of environmental degradation into neoclassical

economic assumptions could explain the EU's motivation to ban palm oil imports related to biofuel. This logic can be applied to explain the rationale for the REDII, and it can also be used to explain the coexistence of the two dominant discourses. Following Koehler (2016), economic development and environmental conservation efforts are mutually exclusive. A developing country must cause damage to the environment to achieve economic growth and development before being in a position to address the environmental degradation it has caused. Therefore, according to modernization theory, seeing the different stages of development of Indonesia and the EU influences their perceptions. Indonesia, therefore, considers palm oil as merely a means to develop, and the EU subscribes to the discourse that palm oil is a leading cause of deforestation.

Global governance in the Indonesian palm oil sector

From the information and knowledge gained, deforestation is a global concern. It impacts the climate worldwide and the people closest to its immediate natural and social environment. Because of the global nature of the problem, states have committed to combat deforestation through international agreements and policy decisions. The most relevant commitments to the case of the Indonesian palm oil ban are the Renewable Energy Directive, the European Union itself, and the SDGs. Other institutions that have a deciding influence over deforestation are the Paris climate agreement, NYDF, and numerous other transnational agreements and collaborative efforts. The agreements do not apply exclusively to states and extend to actors in the private sector and NGOs. Therefore, the global effort to halt deforestation is an international interdisciplinary effort where all parties are expected to contribute.

The production of palm oil has quadrupled over the last decades (Tullis, 2019) due to the increase in demand for palm oil. Companies in the private sector have increasingly incorporated palm oil in their products, such as condiments, care, sanitation products, and cooking oil. The diverse applicability of palm oil has caused a rapid increase in its demand; production has therefore gone up to match the growth in the market. The tropical forests of the Amazon, Malaysia, and Indonesia have fallen victim to this development. One of the questions that follow from this is whether the responsibility for deforestation should lie with the private sector since they demand more and more production from Indonesia. The largest buyers of palm oil (AAK, Unilever, Proctor, and Gamble, etc.) have all made commitments

to source RSPO certified palm oil only and to gain 100% traceability of palm oil throughout the entire supply chain and are the leading investors in technological advancements that allow for a more sustainable palm oil supply chain. However, these efforts may not be sufficient to overcome the deforestation caused by palm oil cultivation; for this to happen, the environment must be priced high enough to discourage environmental degradation.

What is the price of environmental degradation?

The environment is, by default, a part of the economic system. Nature and the services it brings to the world are turned into products and tradable goods. However, nature has thus far never had a fair price in this economic system; in fact, there was never a price for the environment at all, which has led to the situation of the current market failure (Spangenberg, 2016, p. 128). The undervalued environment (both in a literal and metaphorical sense) has caused the exploitation of the high-density forests of Indonesia and the market failure that has followed excessive deforestation. Therefore, one way to prevent future exploitation of Indonesian forests could be to place a price on the environment. Mechanisms must be put in place to increase the cost of environmental degradation to the point where the market equilibrium comes to a sustainable, optimal outcome.

Christian Friis-Bach, our interviewee, hinted at such mechanisms. Specifically, 'coherence' mechanisms allow international institutions to aid countries towards sustainable development. He points towards the current UN's Green Climate Fund and the Loss and Damage frameworks as a start in the right direction, but as currently being underdeveloped and underfunded. The Green Climate Fund is the world's largest fund dedicated to combatting climate change (GCF, n.d.), and the Loss and Damage Mechanism is the primary mechanism in the Paris Agreements to avert and address loss and damage coming from climate change (UNFCCC, n.d.). Even though these funds and mechanisms are of severe importance and scale, Friis-Bach notes that they are not substantiated so that they can put a fair price on the cost of environmental degradation. Furthermore, they view the general lack of scaled-up, financially binding mechanisms as the most significant hurdle in combatting climate change and implementing the SDGs.

A further point that is brought up regards who must pay the price for the fair inclusion of environmental degradation. Should it be the EU for implementing a damaging policy on

Indonesia's economy? Or must it be Indonesia, as this is where deforestation is happening? Alternatively, should the private sector and the end consumers of palm oil ultimately have to pay a fair price for the environment? For example, suppose the ILUC classification is justified following the previously highlighted high carbon stock approach and seen as a necessary intervention to overcome excessive deforestation. In that case, the EU could argue that it is within its right to proceed with the policy as they wish. At the same time, Friis-Bach highlights that if the policy of the EU hurts the Indonesian economy, they should be rightfully compensated for this.

> But there will be a cost to it. And the EU should obviously invest heavily in this if they wish to pursue a policy where they ban palm oil; because of climate policy, I would say they have an obligation to step into this to the development with Indonesia. (Friis Bach, C. 2022 April 21st 26:19-26:38).

To answer whether the responsibility for a fair price lies with Indonesia, we once more apply the quote by Deacon (Deacon, 2016a, p. 4) 'their standards' and not 'our standards' 'where is the northern money to pay for them' to argue that Indonesia would not be willing to pay for this price as well. Perhaps the private sector and end consumers should pay this price in the form of a direct price increase for palm oil-based biofuel. This could have the additional effect of a decrease in demand, and a subsequent reduction in supply, thus ultimately achieving the goal of reduced deforestation.

Furthermore, it is unclear what a 'fair price' for environmental damage is. What price is fair? And to whom is it fair? As previously noted, Christian Friis Bach states that there will always be winners and losers in these scenarios of international collaborations and agreements. If we go by our earlier established arguments from Koehler that environmental degradation is necessary for less developed nations, then one could argue that the price of nature would be a fair price to pay for development. Once more, we return to the interview with Friis Bach, who suggested that if policies could not achieve a climate-neutral palm oil, a suitable medium or, in this case, price, would be to "climate compensate in the production in the way that we can address both climate goals and development goals." (Friis Bach, C. 2022 April 21s). On the other hand, with EMT, we could argue that the reason and justification for the introduction of REDII are that the EU finds themselves in a state of post-growth, where they have realized that the price of nature is too high a price to pay for the cheapest and most efficient biofuel.

This argument would assume that the EU has done its due diligence and found no possible solutions to achieve sustainable palm oil, making the natural costs a fair price.

This translates to the case of the Indonesian palm oil industry as well. The Indonesian palm oil sector will be negatively impacted by the partial import ban to the EU, impacting Indonesian efforts to create jobs and combat poverty. Friis-Bach states that if this is the case, Indonesia must receive proper and adequate financing to ensure a transition towards more sustainable means of production. At the same time, one can deem the economic development stemming from the unsustainable production of palm oil as necessary for Indonesia to transition towards a more sustainable means of production following EMT. Following the value-added model will be a catalyst for increased levels of economic development (Gereffi, 2005, p. 172). However, are EMT and the value-added model mutually exclusive in this case, i.e., at what point will economic development make way for environmental preservation efforts?

Christian Friis-Bach again points to scale up and financially binding mechanisms for this. For example, countries that suffer economic damages from climate change mitigation policies from other countries must be compensated fairly; on the other hand, countries that initiate these damages must also be held accountable for this. Currently, no accountability framework is embedded in the SDGs or the Paris Agreements.

In the past, countries could use the WTO trade dispute settlement systems when they believed to be unfairly impacted by a country's trade policy. For example, in the case of Indonesian palm oil, Indonesia would attempt to prove the adverse economic effects of the European Union’s policy. If the WTO rules in favor of Indonesia, the European Union would have to either alter its policy to decrease the harm it does to the Indonesian economy, it would have to pay compensation, or, if it were to ignore the first two, face countermeasures from Indonesia. However, currently, the WTO trade dispute rules permit trade restrictions to an extent to combat climate change (WTO, n.d.). This means that this system would not work for current challenges to establish a mechanism where countries are fairly compensated for their economic loss. Furthermore, if it were possible in today’s world, the non-binding aspect of either changing the policy or paying compensation would lead to the EU ignoring the ruling and allowing Indonesia to place countermeasures. However, due to the power

difference between the EU and Indonesia, this is probably not a threat that would make the EU change its decision.

In conclusion, palm oil currently contributes to severe exploitation and deforestation of the rainforests of Indonesia. However, alternatives to palm oil require far more land use than palm oil, and private sector importers of palm oil describe this as the reason to have not transitioned to alternatives yet. In addition, private sector inputs have led to significant steps toward making the palm oil production process more sustainable. Despite these efforts, they are effectively deemed irrelevant by the ILUC as there is no current possibility for palm oil to reverse its ILUC. These findings could contest the discourse to which they belong; as stated by Hinkes in her matrix, the main position in the deforestation emblem is that there is no sustainable palm oil *yet.* Yet being the keyword as we would argue that it leaves the door open for palm oil to be sustainable, while the ILUC-framework does not. Furthermore, this part of the analysis has found that in some aspects, deforestation should be seen as a necessity to allow development in the global south (Koehler, 2016, p. 153). This, coupled with the fact that the UN institutions designated to help fund a transition towards sustainability or diversified export are underfunded, has left the burden of growth to the private sector, willing to continue using palm oil. This legitimizes the discourse that palm oil does come with deforestation; how detrimental that is to the future of palm oil is still up for debate.

7. Discussion

The restrictions placed on the palm oil sector and the following impacts on deforestation and development are incredibly complex. By continuing on the work by Hinkes, we have limited ourselves to the coexistence of two paradoxical discourses surrounding palm oil. On one side, palm oil is a driver of development; on the other side, palm oil contributes to deforestation. Therefore, we cannot produce claims about the economic impact of the EU regulation or about the achievement of the EU's climate targets following the ban of palm oil-based biofuels. In the following section, we will connect the two different discourses and answer how they can coexist and what connection they have.

The connection between the dominant discourses

Following the dominant discourses, palm oil can be a driver of development, and it certainly is. However, it can only act as a driver of development - not sustainable development. Palm oil will take evermore land, and land being a finite resource, will not be able to sustain growth in the longer term. Different countries in different stages of development dictate other priorities and worldviews. For Indonesia, economic development is its primary goal in the palm oil sector. Scholars like Gabriele Koehler argue that deforestation is necessary for economic growth, justifying Indonesia's stance toward environmental degradation. However, we also found that Indonesia, if incentivized properly, is willing to make efforts towards a greener outlook for palm oil production. We established that the west's pricing of nature, related to its climate and energy targets, clashes with Indonesia's desire to cultivate its economic development through the palm oil sector at the cost of high-density forests.

The geographical constraints of palm oil production dictate that land-use expansion will always come to the highest cost for the highest density forests. However, this does not mean that alternatives to palm oil such as rapeseed and sunflower oil are by definition more sustainable. On the contrary, alternatives to palm oil are far less efficient as they require much more land, but unlike palm oil, they will not need expansion into high-density forests but open scrublands. We cannot make a conclusive claim about the environmental impact of switching to alternatives to palm oil as we cannot make an accurate analysis. However, we can see that switching from palm oil to more land use intensive vegetable oil presents trade-offs that must be weighed accordingly.

As shown above, the two discourses of palm oil are paradoxical. They contradict each other, as the development of palm oil will come from - and cause deforestation, and a limit to deforestation will limit the development of the palm oil industry. Therefore, the discourses are not only paradoxical, but they are also highly connected. In a more general sense, the perception of deforestation and environmental degradation resulting from palm oil cultivation is the main connection between the two discourses. The development discourse allows for economic growth at the cost of environmental degradation. In the deforestation discourse, palm oil is perceived as problematic for that exact reason; environmental degradation. This means that palm oil is perceived as a problem and a solution. However, the problem of deforestation is not solved by the solution - development. In this scenario, the palm oil sector

will continue to be expanded in the quest for higher economic development, leading to more deforestation. For this cycle to be broken, the price for environmental degradation must be included in the economic trade-off for the production and consumption of palm oil. Therefore, deforestation should come at a higher cost than producing sustainable, deforestation-free palm oil.

The two discourses are connected by their perception of palm oil; furthermore, we also argue a second link between the two discourses is that they are dependent on each other. Deforestation has come as a consequence of development, as development has caused land use expansions for the production of more palm oil. This is circular as it is paradoxical. One follows the other, and at the same time, one contradicts the other; development follows deforestation, leading to more development, and without deforestation, the development will be reduced. The interdependence of the discourses can be extended to the trade relations between the EU and Indonesia. The EU has created the demand for palm oil and is now putting efforts to reduce its production and exportation capacity to the EU significantly. Throughout the development of Indonesia, Indonesia has been dependent on external inputs to realize its development goals. The development that palm oil has brought with it has come from the aforementioned European demand. This further implies that the relations between the "global north" and "global south" heavily influence the relationship and link between discourses.

In Hinkes' matrix for the dominant discourses of palm oil, she has divided the actors involved in palm oil into the respective discourses; European governments in the deforestation discourse and Indonesian governments in the development one. Through the analysis, we have found that the actors play a role in more than one discourse, as the relations and interlinkages between the actors play a part in shaping and maintaining the two discourses. This is shown by the European Union's role in establishing these discourses. On the one hand, European demand has driven the expansion of the palm oil sector, allowing for economic development in Indonesia, while the current policy standpoints of the EU are focussed on combating deforestation. Similarly, we have found that private sector initiatives are a driving force behind sustainability initiatives in the palm oil supply chain, while the private sector continues to buy and therefore demand uncertified and deforestation-associated palm oil. Finally, the Indonesian authorities are involved in both discourses as well, as the Indonesian government recognizes the need to change the unsustainable production methods of palm oil

to ways where high-density forests are not removed and forests are not exploited. This is clear in Indonesian initiatives such as the palm oil moratorium. However, at the same time, the Indonesian government recognizes the driving forces of development following the growth of the palm oil sector. The focus on development over sustainability is evident in replacing the moratorium with weak and unenforceable sustainability guidelines that again allow for the expansion of palm oil plantations. Furthermore, the Indonesian 'green economy transition plan' views the growth of the palm oil sector as a driver for the sustainable transition of Indonesia.

In sum, the two discourses are connected by how they view palm oil, their dependence on each other, and the actors that shape them. In the following section, we will develop a discussion surrounding the future of the discourses.

The future of the dominant discourses

As previously stated, for the palm oil industry to still be a driver of development while overcoming the issue of deforestation, we argue that a 'fair' price must be paid for environmental degradation. Initiatives such as the Indonesian palm oil moratorium and private sector-supported technological advancements are moving the economic equation of palm oil production in this direction. Moreover, international institutions and national governments are also putting their efforts into combating deforestation. Landmark agreements such as the Paris climate agreements are being worked towards, but achieving these climate goals will inevitably come at a cost for countries reliant on 'unsustainable' production, such as Indonesia. Where the burden lies for this cost is currently unclear and not substantially formulated in the agreements. Our interviewee and one of the co-writers of the SDGs and the Paris agreements - Christian Friis Bach - along with scholars in the field (Deacon, 2016a, p. 10; Nerini, 2020, p.678; Dow et al., 2013, p. 386), believe that countries that are negatively impacted in the transition towards a sustainable economy should be rightfully compensated, not only to recover losses but also as an investment in their sustainable growth. Furthermore, such mechanisms would require large, binding financial arrangements of an unprecedented scale. The prospects of international cooperative efforts to aid countries in a sustainable transition, paired with the technological advancements in the palm oil supply chain, we ask ourselves: If compensation mechanisms for countries are

implemented and technological advances allow for a deforestation-free palm oil sector, what will happen to the two dominating discourses?

1) Will the deforestation discourse cease to exist?

2) Will palm oil forever be connected to unsustainable deforestation due to its history with deforestation and its everlasting proximity to High Carbon Stock (HCS) forests?

3) Following technological advancements and coherence mechanisms, will the price of palm oil increase to the point where demand will fall - reducing the risk of deforestation?

The scope of our research means that we cannot answer these questions conclusively. It is important to acknowledge that the scope of this thesis has been centered around discourses related to biofuel and not the consumer consumption of palm oil products. At the same time, sustainability in the palm oil sector is not at a stage yet where we can speak of palm oil being deforestation-free. European consumer demands for sustainable products and import restrictions on deforestation-associated products have led the most prominent private sector actors to shift their supply chains so that they will still be able to sell their products in the EU in the future. But, as palm oil supply chains are not deforestation-free, and other regions besides the EU have different demands, there could always be a market for 'unsustainable' palm oil in, for example, India and China.

Geographical influences on dominant discourses

The scope of this research has fallen within the context of EU policy implications. However, we acknowledge that differences in worldviews and different stages of development are essential factors for shaping dominant discourses regarding palm oil beyond the context of the EU. The consumer markets of the European Union have been the biggest driver of the increase in Indonesian palm oil production. However, in recent years other countries have established themselves as major sales markets for Indonesian palm oil, and these new markets bring with them different worldviews regarding the problems of the expansion of palm oil plantations into high-density forests. A possible consequence of different views regarding

palm oil is the presence or absence of sustainability requirements that different countries maintain. The EU's REDII and other upcoming EU regulations provide the strictest sustainability requirements for palm oil, whereas China and India are the predominant uncertified and deforestation-associated palm oil markets. The different views and conditions of the EU, China, and India, points in the direction that India and China subscribe to other geographically dominating discourses regarding palm oil than those found in the context of the EU. According to Rostow's model of development, China and India, both still developing nations could be in a precursor stage where they will start to factor in the environment, transitioning from traditional to ecological modernization. The following environmental 'awakening' of these countries will undoubtedly affect the Indonesian palm oil industry, especially considering the combined size of their consumer markets.

The discourses of deforestation and development are only applicable in the relationship between the EU and palm oil-producing countries, as they are reactionary to EU policy developments. Moreover, as the current supply of sustainable palm oil is barely sufficient for the EU, Indian and Chinese consumers are purchasing uncertified palm oil en masse. (WWF, 2021) We, therefore, argue that if we were to examine the dominant discourses regarding palm oil in China or India, we would find that different dominant discourses are established.

8. Conclusion

In this thesis, we have investigated the coexistence of paradoxical dominating discourses in relation to palm oil and EU policy initiatives to answer the research question:

Why is palm oil paradoxically perceived as both a symbol of deforestation and a driver of development?

Ultimately, we find multiple answers to how the two opposing discourses coexist and interact in answer to our research question. Through the lens of Critical modernization scholars such

as Deacon and Koehler, we have found that development cannot be perceived as a linear, one-size-fits-all phenomenon. Furthermore, with the same scholars, we have found that development and climate mitigation should be two mutually exclusive concepts, as we live on a planet with finite resources and space. With that in mind, we conclude that Indonesia prioritizes development while the EU prioritizes climate mitigation and that both of these prioritizations have implications for palm oil. Further, we found that Spangenberg's notion of worldviews and the pricing of environmental degradation are viewed differently in the two discourses. Currently, Indonesia views environmental degradation as a fair price for economic development, whereas the EU intends to increase this price to the point where palm oil imports will be severely restricted. We have established that the EU policy is rooted in ecological economics, whereas the Indonesian stance on development and environmental degradation stems from neoclassical environmental economic worldviews. As a result, the EU and Indonesia value nature differently. The palm oil industry is undergoing a sustainable transition, incentivized by policies and consumer demands for traceability and sustainability in supply chains. However, it is unclear if these sustainable initiatives will be able to remove the high ILUC risk classification from palm oil. Finally, we have also found an argument that the EU sees deforestation as a market failure to justify a political intervention. If the palm oil industry is allowed to continue its growth, it will inevitably reach a point where it cannot sustain itself anymore, a phenomenon referred to in EMT as post-growth, whereas Indonesia labels the intervention in the Indonesian market a trade war.

In conclusion, the discourses in the case of the REDII implementation and its effect on the Indonesian palm oil industry coexist for three main reasons; 1) The first is that the discourses co-exist because the subscribers prioritize development and sustainability differently due to different worldviews and stages of development. 2) The discourses also coexist because there are different perceptions on the potential of palm oil to be either a means for development or sustainable vegetable oil. 3) Finally, the discourses co-exist because the EU and Indonesia disagree on the standards imposed on the palm oil industry. The notion of "your standards, not ours" turns the debates about out-phasing palm oil into a transactional relationship rather than a mutually beneficial collaboration that aligns with the spirit of SDG and Paris agreement commitments. Put differently, Indonesia seeks compensation if they are to change its development path to cover the cost of unrealized economic growth.

Reflections on the analysis

The analysis has drawn upon the discourse analysis that Hinkes has previously carried out, and we have worked from the two dominant discourses in her matrix. The structuring led to us analyzing the two discourses separately, intending to compare and discuss the findings. But as we have now established, while the two discourses represent vastly different objectives and worldviews, they are also connected and interlinked through the actors involved in both discourses. Even though we have conducted the two analyses separately, we have found that the same theories and concepts are applicable in both discourses and can explain why these two discourses with such opposing views coexist. Ultimately, we believe that answering our research question would have provided an outcome not dissimilar to what we have found with our current methodology instead of an analysis of the coexisting discourses in one analysis.

One concept we could have placed more emphasis on in the analysis is the criticism of the "loopholes" in the ILUC-framework that allow smallholders to be exempt from the most burdening deforestation demands in the cultivation of palm oil. This could have provided us with different insights as the EU's stance on palm oil and deforestation would have been closer to the discourse that sees palm oil as a driver of development. By allowing the smallholders a "business as usual" scenario, the EU does not interfere as severely in Indonesian progress towards their SDGs, such as poverty alleviation, hunger reduction, and the right to fair work, as it does with the implementation of the REDII. To include the smallholders as a point in our analysis could have contributed a nuance to the strictness of deforestation discourse, as the EU compromises its zero-deforestation stance. However, through our literature review, we established that the smallholder motivation for cultivating palm oil is that it is the most profitable crop, and a complete ban could have resulted in them moving on to an equally harmful crop. Yet, due to the interviews with European policymakers and members of advocacy groups not materializing and a limited scope of this research, we have been unable to explore this topic further.

Appendix

Figure 1: High Carbon Stock Forests Breakdown
Source: HCS Approach Steering Group, Eds. (2015)

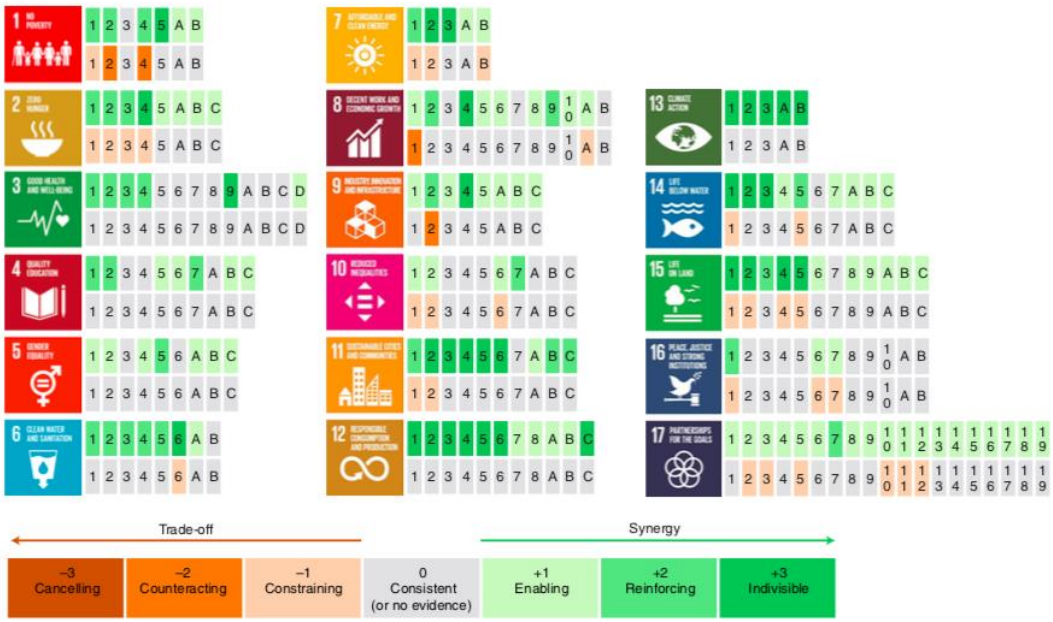

Figure 2: Synergies and trade-offs between climate action and the SDGs.
Source: Nerini et al. 2019, p. 676

Table 1 Discourses on palm oil sustainability related to European policy development

Main position	There is no sustainable palm oil available on the market yet	Certified sustainable palm oil is the solution	Palm oil is the most sustainable alternative available
Discourse coalition	Environmental and civil society organizations (e.g., Greenpeace); private sector organizations boycotting palm oil; European agricultural industry; European policy institutions	RSPO actors: palm oil industry, consumer goods industry, some NGOs (e.g., WWF); members of the European Parliament	Governments of palm oil-producing countries (Indonesia, Malaysia); industrial palm oil producers
Main storylines	Palm oil is a "forest-risk" or "high ILUC-risk" commodity	Palm oil is the most efficient vegetable oil	Palm oil is the most efficient vegetable oil
	Palm oil plantations produce "conflict palm oil"	Palm oil boycotts lead to leakage effects	Palm oil as a "driver of development"
	"Food vs. fuel" trade-offs need to be avoided	Palm oil is a versatile "flex crop"	Palm oil delivers "green energy"
	Certification provides "loopholes" or contributes to "greenwashing"	Certification guarantees sustainability	Certification threatens smallholder livelihoods
	Policies are needed to remediate market failure	Policies should make certification mandatory	European policy interventions are "crop apartheid"
Emblems	Palm oil as emblem for deforestation	Certification as emblem for sustainability	Palm oil as emblem for "green neo-colonialism"

Table 1: Discourses on palm oil sustainability related to European policy development. Source: Hinkes, 2020, p. 7673

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