Cargill's Challenges Related to Deforestation

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Abstract: Cargill is the largest privately held firm in the United States. The company operates in five major market segments: food ingredients and bio-industrial; animal nutrition; protein and salt; agricultural supply chain; and metals and shipping. Cargill faces a number of significant challenges related to how its operations encourage deforestation globally. The purpose of this research is to identify the areas where Cargill is either directly or indirectly involved in deforestation globally. Cargill is actively involved in soy, cocoa and palm oil production which are all crops that cause farmers to clear cut native forests to plant these crops. This research highlights Cargill's checkered past in addressing these issues as well as provides some guidance as to how Cargill can improve its sustainability performance related to deforestation in the future.

Keywords: Cargill, deforestation, sustainability

1. Introduction

Headquartered in Wayzata, Minnesota, Cargill in the largest privately held firm in the United States with sales of over \$134 billion in 2021. They have been in business for over 150 years and currently have 155,000 employees who are employed in operations in 70 countries/regions.

Cargill has five major market segments which are: food ingredients and bio-industrial; animal nutrition; protein and salt; agricultural supply chain; and metals and shipping. Cargill's primary ambition is to be able to create the most sustainable food supply chains in the world. Cargill's value chain is based on three components. The first component is to provide strategic insights and guidance to its partners. These insights include data analytics, strategic advice, risk management and financial solutions. The second component is Cargill's ability to transform raw materials into finished goods. This transformation includes animal nutrition, food ingredients, animal protein branded foods, and bio-industrial compounds. The third component is Cargill's logistic ability to move products around the world through roads, rail, rivers and oceans. For farmers, Cargill provides feeds and other inputs and buys crops and livestock from them. For its customers, Cargill delivers finished goods in the food service, retail, consumer packaged goods and other industries.

Mighty Earth is a global NGO advocacy organization whose mission is to defend the planet by protecting the earth and trying to create a more stable climate. In July 2019, Mighty Earth released a report which concluded, in its opinion, that Cargill was considered the worst company in the world due to its unethical business practices, its environmental destruction and its obstruction tactics to impede progress related to environmental sustainability.

2. Cargill and Deforestation

The Amazon ecosystem is critical globally to keep carbon dioxide out of the atmosphere. The Amazon covers almost 60 percent of the land area in Brazil but this area had decreased by 20 percent from 1970 to 2019. Global Forests are critical for the survival of all living species. More than 1.6 billion people rely on the forests for food, water, fuel, medicines, traditional cultures and livelihoods. Forests are also critical in their ability to support up to 80 percent of terrestrial biodiversity. Forests are the easiest and most cost-effective way of managing carbon emissions. However, forests around the world are shrinking, on average, 13 million hectares annually due to conversion of land for the production of soy, palm oil, beef, and paper.

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In 2014, Cargill with 50 other multi-national firms endorsed the New York Declaration on Forests. The declaration was a promise established at a United Nations Climate Summit to eliminate deforestation due to the production of agricultural commodities such as soya beans, palm oil, paper and beef by 2020. Cargill is a major buyer of crops such as soya beans and corn, which results in farmers in many rural areas clearing land to increase their crop yields. Despite agreeing to the terms of the New York Declaration, Cargill continued to support the destruction of pristine land within the Amazon.

The impact of deforestation due to clearing land for commodities can be devastating. For example, it is estimated that 6,600 square kilometers of native vegetation was destroyed in Brazil from 2017-2018 due to land clearing. Brazil is one of the largest producers of soya beans globally with 123 million tons produced in 2019. Land clearing is also occurring at a rapid rate in Southeast Asia where farmland is created at the expense of natural vegetation to plant palm trees for palm oil

2.1 Cargill and Soy

It has been estimated that over one million square kilometers of land has been cleared of its natural vegetation to grow soy. Soy is one of the primary ingredients included in animal feed. Over 75 percent of the global production of sov is used for feeding livestock. The impact on the climate from deforestation to plant soy crops has been dramatic. Deforestation for soy production accelerates the impact on the earth's climate through the release of carbon dioxide, the destruction of wildfire habitat and the disruption of local ecosystems including reducing the amount of clean water available for the soil. In 2017, the NGO Mighty Earth reported that Cargill was one of the two largest customers buying soy from deforestation areas in Brazil and Bolivia. Cargill was also found to finance operations to clear the forest and financially support the building of silos and roads which further impacted the virgin forest growth. Cargill bought the soy and shipped it to customers in the United States, China and Europe to be used as feed for chickens, pigs and cows.

An additional negative impact of converting forests into soy and other crop fields occurs when indigenous peoples are forced off their traditional lands. Indigenous communities rely on the native forests for food, water, shelter, and their cultural survival. In addition, the planting of soy and other crops can have a dangerous impact on the health of the indigenous people. In areas where soy is grown where there were once native forests, indigenous peoples experience sharp increases in cancer, stillbirth rates, miscarriages, and other illnesses due to absorbing pesticides and herbicides in nearby areas where soy is grown. The pesticides sprayed from airplanes and the chemicals dispersed may only be a few hundred meters from the indigenous villages. The local rivers can become so polluted from pesticides that fish no longer can survive. The contamination of the river system impacts not only the health of the villagers if they eat the contaminated fish, but it also eliminates access to clean water as well as eliminates the livelihood of villagers who fish for a living.

In 2019, Cargill started to receive increased pressure from a number of its major customers including Unilever, Tesco, McDonalds, Carrefour, Kellogg's, Sainsbury's, Mars, Petcare, Ahold Delhaize, Dunkin Brands and Nestle to no longer buy soy from deforestation areas in South America. This external stakeholder pressure is an example of how stakeholder relationship are critical in developing and maintaining a viable environmental sustainability vision. This pressure also demonstrates that stakeholders do have the power and the leverage to make a difference in determining the strategic focus of the firm. The result of this pressure led to the Cargill South American Soy Action Plan.

2.2 Cargill South American Soy Action Plan

In February 2019, with the input from various stakeholders, Cargill published a plan to attempt to eliminate deforestation in the products it purchases from suppliers in South America. Cargill's plan recognizes that both farming and forests must co-exist. This co-existence aligns with Cargill's stated purpose to provide food in a safe, responsible and sustainable manner. Agriculture is critical in providing food security to billions of people while providing livelihoods to millions of people. However, forests are also critical in the environmental ecosystem since they can provide food, water, fuel, medicine and livelihoods for billions of people. Forests also help protect natural habitats and have a positive impact on the environment through re-generation and capturing carbon from the atmosphere.

There are four goals of Cargill's action plan. The first goal is to transform its South American supply chain so that it is deforestation free while also protecting native vegetation growing beyond the forests. The second goal is for Cargill to promote responsible production which yields positive results for both farmers and surrounding communities. The third goal is to ensure that the rights of workers, indigenous peoples and communities are respected and protected by Cargill's suppliers. The fourth goal is for Cargill to provide transparency is its reporting of key metrics, progress and grievances.

In September 2019, Cargill announced its commitment to protecting the Amazon region from illegal deforestation and the deliberate setting of fires. The commitment included working with stakeholders including local communities, farmers, governments, NGOS and its customers to preserve the forest ecosystem. Cargill emphasized its commitment by stating that it was complying with the Brazilian Soy Moratorium in the Amazon which was established in 2006. Cargill claims that it had not purchased soy from any Amazon farmland which had be deforested after July 2008. Cargill will not buy soy from any farmers who have cleared land in protected areas and Cargill has implemented control and monitoring systems to verify the compliance of the farmers.

2.3 Cargill and Cocoa

There are three firms, Olam, Barry Callebaut and Cargill, which control over 50 percent of the global trade in cocoa. Cocoa is the raw material used to make chocolate. Ghana and The Ivory Coast are the two largest areas of cocoa producers globally and the development of cocoa farms is the number one reason for deforestation in those countries. The deforestation has resulted in not only the loss of trees but also the natural habitats for wildlife including chimpanzees in these areas. In The Ivory Coast, due to deforestation and other factors, the population of elephants has declined from less than 400 from the original population of thousands.

By demanding low-cost cocoa, Cargill gives financial incentives for farmers to clear land for cocoa farms. The result is that by 2017, an estimated 30 percent of the cocoa produced in The Ivory Coast came from protected areas including national parks. From 2001 to 2014, Ghana lost 10 percent of its total tree coverage which was 7,000 square kilometers. Of those 7,000 square kilometers, it is estimated that one quarter of the deforestation was due to the planting of cocoa trees.

2.4 Cocoa & Forests Initiative

In 2017, Cargill among other chocolate and cocoa companies joined the Cocoa & Forests Initiative which focuses on the protection and restoration of forests in Ghana and the Ivory Coast. In its Cocoa & Forest Initiative report, Cargill acknowledges that the reforestation issue needs immediate attention. From 2002 to 2019, The Ivory Coast lost 25 percent of its humid primary forest and Ghana lost 8 percent. The initiative requires that cocoa beans can be traced through a barcode system creating a block chain verification process. Cargill's goal is to eliminate deforestation from its cocoa supply chain by 2030.

Yet, in 2020, Cargill reports that only 70 percent of the farms it directly buys cocoa from and only 43 percent of the third-party farms in The Ivory Coast have a GPS tracking system. In Ghana, the percentage of tracked cocoa is 76 percent for both direct and third party farms. Cargill also reported that only 43 percent of the cocoa beans purchased in the Ivory Coast and 76 percent of the cocoa beans purchased in Ghana are sustainable beans. Cargill defines sustainable beans as beans in which the production process has been certified by an organization such as Fairtrade, Rainforest Alliance or UTZ.

2.5 Cargill and Palm Oil

Palm oil is an edible vegetable oil that is derived from the fruit of the oil palm trees. The origin of oil palm trees is from Africa, but the trees were brought to Asia over 100 years ago as an ornamental tree crop. Malaysia and Indonesia make up 85 percent of the global market of palm oil. The demand for palm oil in enormous since it is estimated to be included in approximately 50 percent of all packaged food products globally as well as personal toiletries such as shampoo, toothpaste and lipstick. Palm oil is also used in animal feed and as a biofuel.

Palm oils properties makes it an extremely desirable ingredient in numerous food groups. It is a semi-solid at room temperature so products like margarine can easily be spread. Palm oil is resistant to oxidation which greatly

increases the shelf life of the product. The chemical composition of palm oil remains stable at high temperatures which makes it desirable for cooking and frying foods. It is also odorless and colorless, so it does not impact the taste or the smell of the product. Palm oil also produces larger yields than any other food based oil including soy, coconut, sunflower and rapeseed.

Cargill is one of the world's largest traders of palm oil. As is the case with soy and cocoa, Cargill imports and exports palm oil that has been cultivated on land that was clear-cut to plant palm trees.

2.6 Cargill's Policy on Sustainable Palm Oil

Cargill states in its policy that it is committed to deliver palm oil that is produced in accordance with its "No Deforestation, No Peat and No Exploration" practices. This commitment includes protecting high conservation areas including forests and peat lands, respecting the rights of indigenous people and being transparent with its reporting and policy compliance.

2.7 Roundtable on Sustainable Palm Oil (RSPO)

The Roundtable on Sustainable Palm Oil (RSPO) has established a certification process for sustainable palm oil. Palm Oil producers go through a stringent certification process based on the principles and criteria established by RSPO. The producers must be audited as part of the certification process, which includes a validation of the process used to collect and produce the palm oil.

In 2020, Cargill yielded 42 percent of its palm oil from Indonesia, 38 percent from Malaysia, 15 percent from Latin America and 5 percent from other countries. At the end of 2020, Cargill reported that only 17 percent of its overall palm oil volume was physically certified through the RSPO verification process.

It is from the checked history of Cargill's commitment to eliminate deforestation that Cargill presents it current environmental sustainability commitment.

3. Cargill's Overall Environmental Sustainability Commitment in 2021

3.1 Climate

Cargill's goals related to climate include reducing its absolute greenhouse gas emissions in its operations by 10 percent based on its 2017 baseline. By the end of fiscal year 2021, Cargill had only reduced its level of greenhouse gas emissions by 3.97 percent.

It also set of a goal to reduce the level of emissions from its extended supply chain by 30 percent per ton of product by 2030. By the end of fiscal year 2021, the level of emissions by suppliers had only decreased by 0.06 million metric tons of product.

The reduction of emissions will be based on adopting more innovative emission reduction technologies and investing in renewable energy. Cargill will also focus on partnering with customers and suppliers in the development of products which are created from more sustainable raw materials. Furthermore, Cargill will create incentives for farmers to implement sustainable practices such as more sustainable soil management. Sustainable soil management is critical since soil contains over three times more carbon than in the atmosphere. Soil management can also include having cattle graze on existing grasslands to prevent grasslands destruction and ensure the carbon remains in the soil.

3.2 Land and Water

Cargill's goals related to land and water include transforming its agricultural supply chains to be deforestation free by 2030 and to also achieve sustainable water management in all of its operations. Cargill will partner with farmers to protect forests and other important ecosystems as well as to promote regenerative agricultural practices. Cargill also supports the Paris Climate Agreement with the promotion of decarbonizing production in agriculture, manufacturing and energy.

4. The Disconnect Between Commitment and Implementation

The zero net 2030 deforestation goal, however, is a revision of the original commitment of having a net-zero deforestation in its supply chain by 2020. Cargill was one of over 400 firms that were part of the Consumer Goods Forum. The forum is a global based industry network which focuses on the creation and adoption of sustainability practices and standards globally. The declaration that was approved by the participating firms in December 2010 was that the firms pledged to mobilize their resources to help achieve zero net deforestation by 2020. The firms were also committed to develop specific, time bound and cost effective actions plans to develop sustainable methods related to the sourcing of palm oil, soya, beef, paper and board.

In fact, none of the partners in the Consumers Goods Forum achieved the goal of zero net deforestation by 2020. Other firms that failed to achieve the goal include Coca-Cola, Kellogg's, Walmart, Mars, Nestle and Carrefour. A fundamental challenge of all the firms is that it can be extremely difficult to trace the commodity back to the original sources. For example, Mars buys cocoa directly from farmers, but it also buy cocoa from Cargill and other B2B suppliers. Yet, Cargill continues to present commitments in which it may be difficult if not impossible to succeed. This does raise the question as to whether these commitments are done in good faith, or are they done knowing that Cargill will not achieve the goals and then just continue to extend the deadlines. An estimated 80 percent of the trees cut down annually in the tropics are cleared to grow cocoa, soybeans, palm oil and cattle.

5. Conclusions & Recommendations

In summary, Cargill faces a number of challenges related to its commitment to sustainability based on eliminating deforestation. Cargill continues to adjust its goals for the future based on its inability to obtain its sustainability objectives in a timely manner. It can be argued that deforestation is an extremely complex environmental issue with a number of variables, which may or may not be within the control of Cargill. However, as the global leader in soy, cocoa and palm oil, Cargill has the bargaining power to demand more accountability with the sellers of these commodities. Based on external stakeholder pressures from its customers, governments and NGOs, Cargill needs to be more proactive in its sustainability commitment to eliminate deforestation.

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