



Ecosystem Services and Business: Unilever and Palm Oil

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According to World Bank estimates, between 1985 and 1997 alone, 60% of the lowland rainforest of Kalimantan and Sumatra was destroyed.
Forest Watch Indonesia/Global Forest Watch, 2002

The United Nations Environment Program (UNEP) estimates that 98% of Indonesia's lowland forest may be destroyed by 2022.
Nellemann et al, 2007



Abstract

Unilever, one of the world's leading consumer goods companies, is considered to be one of the most committed firms when it comes to environmental and social responsibility. In November 2010, Unilever launched an ambitious program to address sustainability. Referred to as the Sustainable Living Plan, the program set a target of doubling the company's revenues while halving its environmental impact by 2020. As Unilever's business depends on agriculture products and crops, it has introduced a number of initiatives to tackle ecosystem and social challenges related to farming and forest management since 1998, including the establishment of the Sustainable Agricultural Programme for its suppliers.

Today, palm oil is the most important vegetable oil both in terms of production and market trading. Unilever buys about the 4% of the palm oil produced every year. The company uses palm oil in a number of different products. Palm oil has an extremely complex environmental and social

footprint: it is produced only in equatorial regions (Indonesia and Malaysia produce 85% of palm oil), and palm oil plantations are established at the expense of the rainforest. Farmers and producers set fire to sections of the rainforest to plant palm oil trees, which results in the destruction of local vegetation, the release of significant amounts of greenhouse gases, and a notable loss of biodiversity. Consequently, Unilever (and other multinational companies, such as Nestlé) have been targeted by environmental interest groups like Greenpeace and WWF in their campaigns to highlight the environmental impact of the global increase in demand for palm oil.

In 2004, Unilever took a leading role in the establishment of the Roundtable on Sustainable Palm Oil (RSPO), an independent multi-stakeholder organization aimed at setting a common standard and developing a certification process for sustainable palm oil production, while guaranteeing the transparency and traceability of the supply chain. Moreover, in 2008, the Anglo-Dutch company introduced an ambitious plan to source 100% certified sustainable palm oil by 2015. However, despite Unilever's programs, demand for palm oil demand is soaring and rainforest deforestation continues. Moreover, recent scandals related to the RSPO certification process have raised serious doubts about the effectiveness of the organization and its ability to guarantee sustainability in the palm oil supply chain.

1. Unilever

Unilever is one of the world's leading consumer goods companies, with revenue of €51.32 billion (2012), net income of €4.480 billion (2012), and 173,000 employees (2012). The Anglo-Dutch multinational has sales in more than 180 countries and operations in more than 100 countries, and it maintains more than 300 production facilities. The company is ranked 139 in the Fortune Global 500. It has a wide portfolio of products, with 400 brand names spanning 14 categories, including home, personal care, cleaning agents, beverages and food products. Several of these brands, including Axe, Dove, Sunsilk, Surf, Flora, Knorr, Lux, Rexona, Magnum, Calippo, Ben&Jerry's, and Lipton, produce more than €1 billion in revenue annually. Every day, more than two billion consumers use Unilever products.

Figure 1: Unilever's main brands



Source: <http://www.unilever.com/>

Unilever's largest international competitors are Nestlé, P&G, L'Oreal, Danone, and Colgate. The company also faces competition in local markets.

2. Unilever and sustainability

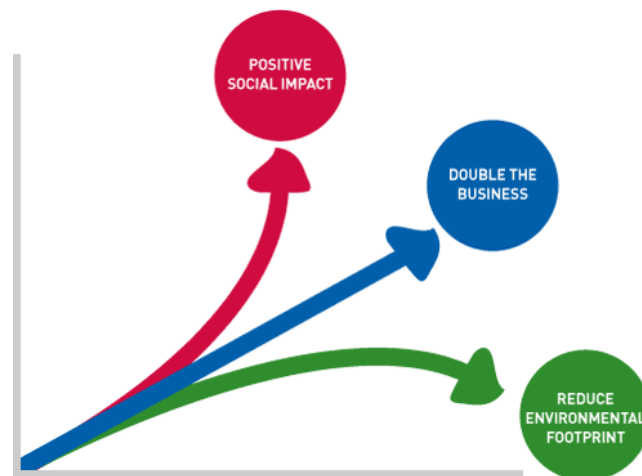
Unilever's corporate vision—"Helping people to look good, feel good and get more out of life"—highlights its aim of creating a better future every day. The company has focused its business on understanding twenty-first-century consumers and their lives, but its values are rooted in an extensive history that touches three centuries.

Unilever was formed in 1930 after the merger of two big companies: Lever Brothers of the UK and Margarin Unie of the Netherlands. However, the inspiration for the business arose much earlier when, in the 1890s, William Hesketh Lever, founder of Lever Bros, came up with an idea for a new soap: Sunlight Soap. This revolutionary product was the first example of what would later become Unilever's Corporate Mission: "To add Vitality to life. To meet everyday needs for nutrition, hygiene and personal care with brands that help people look good, feel good and get more out of life."

Since the late nineteenth century, Unilever has been one of the most responsible companies of its time. It has launched several projects focused on improving its employees' lives, the nutrition in foods, and hygiene and personal care. It has also launched products with positive social impacts.

In 2009, Unilever initiated another significant shift towards sustainability, launching what it called the "Compass Strategy." This strategy is a long-term plan aiming at doubling the size of the business, while reducing its environmental footprint and increasing its positive social impact.

Figure 2 – Unilever's Compass Strategy and business model



Source: http://www.unilever.com/investorrelations/annual_reports/AnnualReportandAccounts2012/our-compass-strategy-and-business-model.aspx

This transformation was promoted by Unilever's CEO, Paul Polman, in a breakthrough interview with the *Harvard Business Review* entitled "Captain Planet" (2012). Polman stated:

"We thought about some of the megatrends in the world, like the shift east in terms of population growth and the growing demand for the world's resources. And we said, "Why don't we develop a business model aimed at contributing to society and the environment instead of taking from them?" ... Not many companies have yet taken it on. But I believe it's

the only viable vision. One that builds on Unilever's long-term heritage and achievement, while supporting a responsible future." (HBR, 2012: 112)

The Compass Strategy is captured in Unilever *Sustainable Living Plan*, a document that was issued in November 2010. The Plan sets three major goals for the company to reach by 2020:

- Help more than a billion people take action to improve their health and well-being;
- Halve the environmental footprint of Unilever's products (production and use) across the value chain; and
- Source 100% of agricultural raw materials sustainably and enhance the livelihoods of hundreds of thousands of people across the company's value chain.

These three goals are underpinned by seven commitments in specific areas of sustainability: health and hygiene, nutrition, greenhouse gases, water, waste, sustainable sourcing, and livelihood. They are also supported by approximately 50 targets that span from social to environmental and economic areas across the value chain.

Figure 3 – Unilever's Sustainable Living Plan: Goals and commitments



Source: www.unilever.com

The company tackles these challenges by partnering with a number of organizations, including the World Food Programme, the Rainforest Alliance, Greenpeace, and the WWF. The results are demonstrated by the awards and top rankings the company has received over the years (see Table 1).

Table 1 – Unilever's main sustainability awards and rankings

Sustainability Awards or Ranking	Unilever results
Dow Jones Sustainability Index	In 2012, Unilever was recognized as the top-scoring company in the "Food Producing" sector for the fourteenth consecutive year. In the same year, it was also named the leader in the "Food and Beverage" super-sector.
FTSE4Good	Unilever has been included in the FTSE4Good Index Series since the index was introduced in 2001. In 2012, Unilever won the first FTSE4Good Sir Mervyn Pedelty Award for companies that integrate environmental and social performance into their business strategies.
Carbon Disclosure Project	In 2012, the Carbon Disclosure Project recognized Unilever's climate-change disclosure and carbon performance for the eighth consecutive year. The company scored 84 out of 100 on Disclosure, which represents an increase of five points from 2011, and it entered performance band A
Forest Footprint Disclosure Project	Unilever was named a joint sector leader for the second consecutive year in 2012. The company started disclosing its forest footprint in 2009.
WWF and Palm Oil	In 2011, Unilever scored eight out of nine points in the second WWF Palm Oil

	Buyers' Scorecard, which assesses the palm oil buying practices of 132 European, Australian, and Japanese companies.
GlobeScan/SustainAbility	In the 2013 survey, Unilever maintained its top ranking among sustainability leaders for the third consecutive year.

Source: <http://www.unilever.com/sustainable-living/ourapproach/awards/index.aspx>

On the one hand, this innovative plan relies on the belief that sustainability, equity, and economic growth are not in conflict. Sustainability drives growth in developing and emerging countries, and in the growing market of socially responsible consumers. Unilever states that: “By focusing on sustainable living needs, we can build brands with a significant purpose. By reducing waste, we create efficiencies and reduce costs, which help to improve our margins. And we have found that once we start looking at product development, sourcing and manufacturing through a sustainability lens, it opens up great opportunities for innovation” (<http://www.unilever.com>). On the other hand, Unilever’s ambitious commitment to sustainability creates major challenges because a large part of the company’s environmental and social impacts arise from areas outside the company’s boundaries where it has limited control. These areas include the sourcing of raw materials, consumer utilization of products, and product disposal.

3. Palm Oil: Uses and markets

Palm oil is a vegetable oil extracted from the fruit of the African palm oil tree (*Elaeis guineensis*). Palm oil plantations are located in tropic regions with equatorial conditions. A palm tree becomes productive between its second and fifth years of growth, depending on the ecological conditions, and reaches maturity four to six years later. Palm oil is derived from the mesocarp, the reddish pulp of the fruit of the oil palms, while palm-kernel oil is extracted from the kernel (see Exhibit 1). Palm oil production must be realized as close to the harvest site as possible (<http://www.unctad.info/en/Infocomm/AACP-Products/Palm-oil/>).

Palm oil is one of the most important vegetable oils in the global consumer goods industry and it is the most traded oil in the world. In terms of production, it is second only to soybean oil. In 2011, palm oil production reached 48.98 million tons, and palm oil plantations covered an area of 13.41 million hectares (see Exhibits 2 and 3). Indonesia and Malaysia alone handle more than 85% of the global production, but plantations are also located in Colombia, Australia, and Africa.

Palm oil is by far the most versatile oil: after refining, it possesses the characteristics needed for food and non-food uses. It is cholesterol free and it is viewed as a good substitute for hydrogenated oils. Furthermore, it is odorless and tasteless, which facilitates its use in food production.

Additional features that favor the significant growth in palm oil production relate to productivity and potential sustainability. First, palm oil has a high photosynthetic rate, which enables palm oil plantations to produce eight to ten times more oil per hectare per year than other oil seeds (e.g., rapeseed or soybean). Second, palm oil crops have an output-to-input energy ratio of 9:1, which can be compared to 3:1 for other oilseed crops (Basiron, 2007); they emit eight to ten times more oxygen (O₂); and they absorb up to ten times more CO₂ per hectare per year than other crops in similar regions. Finally, palm oil requires less fertilizer per unit of output than any other crop (Basiron, 2007).

About 80% of palm oil production is used in food applications, such as: frying and cooking oils and fats; shortenings used to make bread, cakes, creams, and sweets; vanaspati, which is utilized in some countries as a substitute for butter in cooking; margarines and spreads; and imitation dairy products, such as filled milk, ice-cream powders, and cream fillings. The remaining 20% is used in non-food applications, which can basically be divided into two categories: (1) products using the oil directly, such as soaps, plastics, or palm-based diesel substitutes; and (2) products produced with

oils processed in oleo-chemicals, such as body oils, lotions, candles, shampoos, cleaning products, rubber, and skincare products.

4. Unilever and palm oil

Unilever uses palm oil in many of its products. As a company manager (previously coordinator for R&D for the Dove master brand) stated during a recent interview:

“Palm oil is mostly used in food products, such as margarines, salad dressing or ice creams, and, to a lesser extent, it is used for Home and Personal Care products. Palm oil derivatives are also used. These are chemicals derived from modified palm oil, which are used in shampoos, shower gels, home detergents and so on”.

Therefore, palm oil is an essential component in Unilever’s processes and it is fundamental to customer satisfaction. In fact, the company employs this oil and its derivatives in the production of some of its major brands, such as Heartbrand, Knorr, Blue Brand, Dove, Axe, Rexona, Cif, and Sunlight, which influences the perceived quality of its goods. To meet the demand for these products, Unilever buys around 1.6 million tons of palm oil and its derivatives, which represents roughly 4% of the world’s supply. This amount is destined to soar, as the company’s strategy aims at doubling sales in sectors such as personal care, home care, and food.

However, palm oil is not only important to Unilever because of its versatile characteristics or the extensive use the company makes of it. In reality, Unilever is highly dependent on palm oil because there are no effective substitutes for this vegetable oil. A Unilever manager illustrated this point more precisely:

“There are several chemicals that we could use in our products, but Palm Oil derivatives are preferred for a number of reasons: they work very well, they are at large supply, they are attractively priced and, compared to the alternatives, they represent the most sustainable material that we can find”.

For example, palm oil is used in home products as a detergent component. For this function, it could be substituted with mineral-oil based components or coconut oil, but with some drawbacks. Mineral-oil-based components are chemicals derived from crude oil, which makes them even less sustainable than palm oil, while coconut-oil-based detergents are more expensive and coconut oil is in much shorter supply. Therefore, even though *“Unilever, with its R&D programs is always looking for alternatives to commodities feed-stock that may have a better price, a better sustainability, a better performance or a more clean profile,”* (comment by a Unilever manager) a relevant alternative to palm oil does not exist.

5. Palm Oil cultivation and production: Severe harm to the environment

Given the soaring demand for palm-oil-based products (including biofuels), palm oil cultivation grows by 6-10% annually. In addition, the land used for plantations has increased by about 43% since the 1960s.¹ These data would generally not be too worrying, but palm oil cultivation can have serious impacts on the environment.

The main issue concerns the way in which new plantations are established. Frequently, palm oil producers deforest by setting fire to local vegetation, which results in very high emissions of CO₂. As Claire Champion, Greenpeace’s activist, explains:

¹ In recent years, the increase in palm-oil demand has been driven by markets in the Asia-Pacific region, triggered by growing populations, changing consumption patterns, and growing disposable income among urban and rural dwellers.

“Forests not only in Borneo, but also in Malaysia and Papua New Guinea ... present a peculiarity: they grow on peat soil. Peatland forests have distinct characteristics: They are formed by different substrates of decayed organic vegetation matter and covered by water, with a stratum of vegetation on top ... and the organic substance contains very high concentrations of carbon ... when these forests are converted into plantations, farmers get rid of the residual biomass through fire, although this practice is prohibited by the law, emitting into the atmosphere enormous quantity of CO₂”,

Specifically, studies show that the production of one ton of palm oil through a new plantation leads to emissions of between 15 and 70 tons of CO₂ over a lifecycle of 25 years as a result of deforestation, peat decomposition, and fires used for land clearance. In Indonesia alone, it is estimated that emissions due to degraded peatlands account for about 1.8 Gt of GHG emissions per year, which represents 4% of global GHG emissions. These emissions come from less than 0.1% of the world's land surface. These data are particularly alarming when analyzed together with data on growth in palm oil cultivation and production.

More precise data on these issues were distributed in the WWF Indonesia Technical Report, which was published in February 2008. The report referred specifically to the Riau region in Sumatra, Indonesia (WWF, 2007). In the 25 years preceding the report, Riau lost more than four million hectares of forest. Approximately 29% of this amount was due to the removal of forest for palm oil plantations. Moreover, more than 72,000 illegal fires were set in the area between 1990 and 2007, which emitted 3.66 Gt of CO₂ (average of 0.22 Gt per year). This was equal to 58% of Australia's total CO₂ annual emissions during the same period.

The increase in CO₂ emissions is a key concern because it is connected to another global problem: climate change. Indeed, the growing concentration of greenhouse gases has produced a rise in the Earth's average surface temperature. Higher temperatures may, in turn, lead to changes in precipitation patterns, storm severity, and sea level—events commonly associated with climate change.

From an ecological point of view, “oil palm monocultures might form impervious barriers to species' migration and result in greater susceptibility to plant diseases. Conversion of natural forests increases habitat fragmentation and biodiversity loss” (Danielsen et al., 2009). In accordance with this suggestion, Champion states that:

“The peatland forest shows a really high biodiversity level. The “Paradise Forest”, although it is not as vast and extended as Amazonia's or Democratic Republic of Congo's, presents a higher degree of biodiversity: it's just 1.3% of global land, but it contains about 11% of vegetable species at the global level”.

Moreover, the rainforests are home to numerous endangered species (IUCN Red list), such as the Sumatran tiger (*Panthera tigris sumatrae*), the Sumatran orangutan (*Pongo abelii*), and the Bornean orangutan (*Pongo pygmaeus*) (see Exhibit 3). Deforestation deprives these species of their natural habitats and food, and exposes them to human cruelty. Hungry and seeking survival, orangutans often eat and destroy young oil palms, which leads producers to kill them to protect their crops.

Some figures help highlight the gravity of the situation. According to WWF Indonesia, the population of Sumatran elephants declined by up 84% from 1984 to 2007 due to habitat fragmentation. In the same period, the Sumatran tiger population fell from 640 to less than 400. In

addition, the Center for Orangutan Protection announced that at least 1,500 orangutans were killed by plantation workers in 2006 (WWF, 2008).

These problems are compounded by pesticide contamination from palm oil cultivation, the soil erosion and resulting sedimentation in rivers arising from the destruction of peatland forests, and pollution from the fires used to clear the ground. In fact, Greenpeace supporters use the words “Eco-bomb Indonesia” when talking about palm oil plantations in Borneo.

The seriousness of these effects and the fact that Unilever is the largest single buyer of palm oil led Greenpeace International to publish a report entitled *How Unilever palm oil suppliers are burning up Borneo* (Greenpeace, 2008) in April 2008. The report provides evidence of how Unilever’s suppliers are driving species extinction in Borneo, and fueling climate change through their activities and practices. As. Champion states:

“In 2007, we conducted quite an aggressive campaign against Unilever, with a joint action nearby three of its headquarters: Rome, London and Rotterdam. ... We published also a “crime file”, proving that the majority of Unilever suppliers were setting fire to forests, degrading peatlands and killing orangutans. We got an immediate feedback from Unilever ... which is now supporting our solution to this issue: a moratorium on forest conversion into palm oil plantations”.

6. Unilever and sustainable agriculture

Unilever relies on more than palm oil. The company buys a variety of agricultural products: half of its raw materials come from farms and forests, and crops represent two-thirds of the raw materials it uses. Unilever’s shares of world crops are: 12% of black tea, 7% of tomatoes, 5% of peas, 5% of sunflowers, 4% of spinach and, as already mentioned, 4% of palm oil (Unilever, 2012).

As it is highly dependent on agriculture and in acknowledgement of the importance of environmental issues, Unilever established a *Sustainable Agricultural Programme* and developed *Good Agricultural Practice Guidelines* for several agricultural inputs in 1998. These guidelines were founded on 11 indicators, including soil fertility, pest management, biodiversity, soil loss, and animal welfare. For the past ten years Unilever has measured actual data against these indicators in order to track its impact, monitor its suppliers, and develop new sustainable practices and share them within its supply chain. In 2010, the Anglo-Dutch company introduced another tool for dealing with suppliers and farmers—*The Unilever Sustainable Agriculture Code*. This sustainable sourcing program relies on suppliers’ compliance with the Code, and favors self-assessment or the adoption of external certification standards.

Sustainability in agriculture is a core element of the 2012 Sustainable Living Plan:

“There is a clear business case for Unilever to source its raw materials sustainably. By taking a long-term view we can ensure security of supply, reduce costs and protect scarce resources. This long-term approach can also create a win-win for farmers. (...) By sharing information about where products come from, we are also meeting emerging consumer needs. Lipton tea and Magnum ice cream’s Rainforest Alliance certification and the new Knorr soup labelling on sustainably grown tomatoes are leading the way”. (Unilever, 2012: 41)

Unilever has acknowledged the importance of palm oil for its business for many years. In early 2000, the company’s impact on palm oil production was even greater than it is today. At that time, Unilever accounted for 6-8% of the market. In the report *Palm Oil: A Sustainable Future*, which was issued in 2002, Unilever wrote:

“Two aspects of sustainable palm oil agriculture need to be addressed: the management of existing plantations and the establishment of new ones, including land conversions. Unilever actively works to be in line with sustainable best practice throughout its palm oil plantations, including improving the productivity of existing plantations. Wherever yields can be improved, this reduces the demand for land conversions. Sustainable best practice also minimises adverse effects and maximises positive contributions to the environment.” (Unilever, 2002: 7)

Moreover, the company added:

“One issue that is raised in the context of palm oil is the need to have a balanced trade-off between agricultural development and the protection of rain forests and natural habitats. This is because many of the industry’s palm oil plantations have been established without due consideration being given to rain forests and natural habitats and by using unsustainable clearance techniques.” (Unilever, 2002: 7)

The plan for sustainable agriculture and the pressure from leading environmental NGOs, such as Greenpeace, guided the development of several initiatives to address the challenges of palm oil cultivation. In this regard, Unilever took the lead in trying to promote a change in the industry. In 2004, Unilever became one of the founders of the Roundtable on Sustainable Palm Oil (RSPO). In 2007, RSPO launched a certification program for palm oil. Today, apart from its commitment to and work with the RSPO, Unilever conducts independent audits of its suppliers to ensure that they are respecting RSPO’s criteria for sustainable palm oil.

Box 1 - The Roundtable for Sustainable Palm Oil (RSPO)

The RSPO is an independent organization established in April 2004 that aims to promote the growth and use of sustainable palm oil products by setting credible global standards and engaging with a wide range of stakeholders. The WWF, Unilever, and Migros were among the founding members.

The RSPO was established under Article 60 of the Swiss Civil Code and has a governance structure that brings together stakeholders from seven sectors of the palm oil industry. These stakeholders cover the entire supply chain: oil-palm producers, palm oil processors or traders, consumer goods manufacturers, retailers, banks and investors, environmental or nature conservation NGOs, and social or development NGOs.

The *vision* of the RSPO is transform markets to make sustainable palm oil the norm, while its *mission* is:

- “To advance the production, procurement, finance and use of sustainable palm oil products;
- To develop, implement, verify, assure and periodically review credible global standards for the entire supply chain of sustainable palm oil;
- To monitor and evaluate the economic, environmental and social impacts of the uptake of sustainable palm oil in the market;
- To engage and commit all stakeholders throughout the supply chain, including governments and consumers” (http://www.rspo.org/en/vision_and_mission).

Growers wishing to be RSPO certified must implement eight principles, ranging from commitment to transparency to environmental protection and compliance with laws and regulations, and comply with 39 criteria as well as specific indicators and guidance. The principles and criteria were adopted in November 2005 and released for general use in November 2007 (a new version should be published in 2013). More detailed information on the RSPO principles is provided in Exhibit 5.

As of the end of 2012, about 14% of global palm oil production was certified by the RSPO.

In May 2008, Patrick Cescau, who was Unilever's CEO, stated: "As one of the largest consumers of palm oil, we have a duty to act responsibly towards the areas of the world where this commodity is grown and processed." (Unilever, 2008: 1) That same year, Unilever announced an ambitious plan to use only Certified Sustainable Palm Oil (CSPO) by 2015. This bold move was accompanied by other initiatives to:

- Support Greenpeace's call for an immediate moratorium on deforestation in Indonesia for the purpose of palm oil production;
- Collaborate closely with Greenpeace, the WWF, and other NGOs to promote change within the industry and to educate farmers on the benefits of sustainable practices; and
- To manage its plantations. For example, plantation managers in Ghana are now encouraged to revert those areas in which cultivation is uneconomical because of poor soil, low yields, or difficulties in collecting fruit back to forest. In addition, the company has introduced strategies to put palm oil waste to profitable use. The processing of palm oil creates solid waste (fiber and empty fruit bunches) and effluent that contain potentially valuable nutrients, such as nitrogen and phosphorous. This effluent is not discharged into water sources, but it is used to fertilize the fields. Empty fruit bunches, which are also rich in nutrients, are spread under the palms to improve soil structure and suppress weeds.

All of these actions represent a good start, which made it possible for Unilever to buy the first RSPO-certified palm oil in October 2008. As one of Unilever's managers explained:

"There are two main issues to solve to make sustainable palm oil available for use. The first is having plantations themselves certified as sustainable, the second is helping to assure that what you are buying is coming from one of those plantations. This issue is all about setting up the right tracking mechanisms".

In fact, only a small proportion Unilever's palm oil sourcing comes from its own estate or contract farming. The largest part comes from the commodity market or from a widespread network of suppliers, where the firm's influence is limited. Unilever cannot win the fight for sustainability alone—the creation of a sustainable supply chain will require determined effort by governments, NGOs, industries, and a range of other interested parties.

7. Greenpeace: A call for an immediate moratorium

In April 2008, Greenpeace published a report entitled *How Unilever palm oil suppliers are burning up Borneo*. The report suggested that the expansion of palm oil plantations was fueling climate change, and driving the extinction of orangutans and other endangered species. As Champion stated, Greenpeace decided to attack Unilever first because:

"It chairs the RSPO, an association that collects all major companies in the palm oil market, both purchasers and producers ... and which appears to Greenpeace eyes just an activity of green-washing. Moreover, Unilever uses around 1.5 million tons of palm oil per year, around 4% of the world's production, therefore becoming a firm with a clear and declared responsibility towards sustainable production of palm oil".

Together with this campaign, Greenpeace presented its own solution to this thorny problem, highlighting the fact that a global effort is needed to halt forest destruction. The organization proposed a three-step program (Greenpeace, 2008):

1. *Stop the problem: Zero deforestation.* Greenpeace called for an immediate moratorium on further deforestation and degradation of rain forests and peatland;

2. *Start the solution: Climate protection.* Greenpeace stressed the necessity of primary protection of the remaining peatland forests in order to preserve biodiversity and stop CO₂ emissions; and
3. *Improve the solution: Cut ongoing emissions.* The final suggested step focused on the rehabilitation of degraded peatland through the restoration of natural and native flora.

Within this framework, Greenpeace asked Unilever to:

- Support zero deforestation by engaging in the moratorium; and
- Cease its relationships with suppliers involved in deforestation and forest degradation.

After listening to these requests, Unilever provided Greenpeace with an immediate response. In a speech delivered in London on May 1, 2008, CEO Patrick Cescau indicated his support for Greenpeace's solution, declaring that Unilever would work to guarantee a complete halt to the destruction of Indonesia's rainforest and peatlands for the purpose of palm oil production. In this regard, Champion of Greenpeace said *"together with us, Unilever has tried to make more aware of these environmental problems also other multinational firms and producers, which are now engaging in the moratorium too."*

Unfortunately, even these solutions have some limits. In particular, even if Unilever and other major companies support a stop to rainforest and peatland destruction, Malaysian and Indonesian producers must understand the importance of the moratorium if it is to work. This is because the multinational corporations typically do not own the plantations and they have little control over what suppliers actually do.

In Greenpeace's view, determined resolutions are needed to address this problem. As Champion explains: *"multinational companies [such] as Unilever should give more tangible and drastic signs of their positions, for example cutting some contracts with those Indonesian companies that are still not respecting the moratorium."* Such actions would create a strong incentive for suppliers to adopt green management practices and become more sustainable. However, this road is not completely feasible for firms like Unilever—given the importance of palm oil in their production processes, they cannot simply stop buying it. They therefore prefer to take the slower road of cooperating with their suppliers.

8. Looking forward: An unsettled dispute

Unilever reached its target of purchasing 100% Certified Sustainable Palm Oil in 2012 (three years ahead of schedule). Of the palm oil it purchased in 2012, 97% was GreenPalm certified (independently assured by PwC), while the rest was purchased from certified, traceable sources (through a segregated supply). The company recognizes that this is just a starting point, and that it is not only fundamental to trace the palm oil utilized in manufacturing back to the plantation on which it was grown but also through certified mills, transport, and use. The new target established in the 2012 Sustainable Living Plan is to source all palm oil from *certified* and *traceable* sources by 2020.

In 2011, Unilever started sourcing certified and traceable palm oil for the European markets, where consumers are more sensitive to sustainability issues. This palm oil comes from RSPO Certified Suppliers. Moreover, the multinational has started investing directly in palm oil processing, building a €69 million plant to transform kernels in Indonesia. It is also considering joint-ventures to manufacture crude palm oil elsewhere. Once more, the goal is to make the supply chain traceable and transparent.

At the same time, deforestation through forest fires in countries like Indonesia and Malaysia is soaring. In addition, doubts regarding the ability of the RSPO to guarantee the sustainable production of palm oil have been raised by international NGOs. According to WRI, "Kalimantan

experienced more than 2 million hectares of forest cover loss from 2005 (the RSPO cut-off date for primary forest clearing) to 2010” (WRI, 2012). Greenpeace International recently released new evidence indicating that Duta Palma, an Indonesian palm oil producer and an RSPO members, is not only violating RSPO principles and criteria, but also the Indonesian government’s regulations regarding the protection of the rainforests (Sumargo, 2013). Such stories regarding Duta Palma are not new. According to Greenpeace the company “has a long and sad history of deforestation, community conflict, illegality, and non-compliance with RSPO regulations.” (Sumargo, 2013). Many palm oil traders have supplied Duta Palma’s dirty oil to international markets and multinational companies that claim that sustainable palm oil is used in their products.

According to several NGOs and environmental activists, the RSPO is no longer reliable. Its principles and criteria need to be strengthened, and the traceability of palm oil has to be redefined through new guidance and verification processes. Greenpeace stresses that: “Sustainability is more than word. It means real, credible action. Companies that sell products that contain palm oil can no longer hide behind the RSPO. They have to ensure that their products are deforestation free. We need action now” (Sumargo, 2013).

The dispute has yet to be resolved. In July 2013, the Guardian published a thought-provoking headline: “RSPO members implicated in air pollution crisis, says Greenpeace” (Davidson, 2013). Smoke from forest fires in Riau, Indonesia, is affecting Singapore and Malaysia, resulting in immense economic losses (reportedly up to \$9 billion). Several companies that are part of the industry-led organization created to promote sustainable palm oil seem to be implicated in the Indonesian fires. According to Bustar Maitar, Head of Greenpeace Indonesia, the RSPO “has failed to tackle its members' role in creating the conditions that led to such a disaster, nor has it held companies accountable for the impact of their operations” (Davidson, 2013).

The coming years will be critical for Unilever, for the credibility of its sustainable agriculture strategy, and for the RSPO. How will the rising demand for palm oil, a versatile but environmentally critical commodity, affect Unilever’s supply chain, reputation, and margins? How will these trends affect its dependence on extremely fragile and sensitive ecosystems, such the rainforests in Borneo and Sumatra? Which risks and opportunities are related to the soaring demand for palm oil? How does the future look for the RSPO? How can the RSPO effectively reduce the risks of losing the Indonesian and Malaysian rainforest? Which are the pros and cons of the RSPO?

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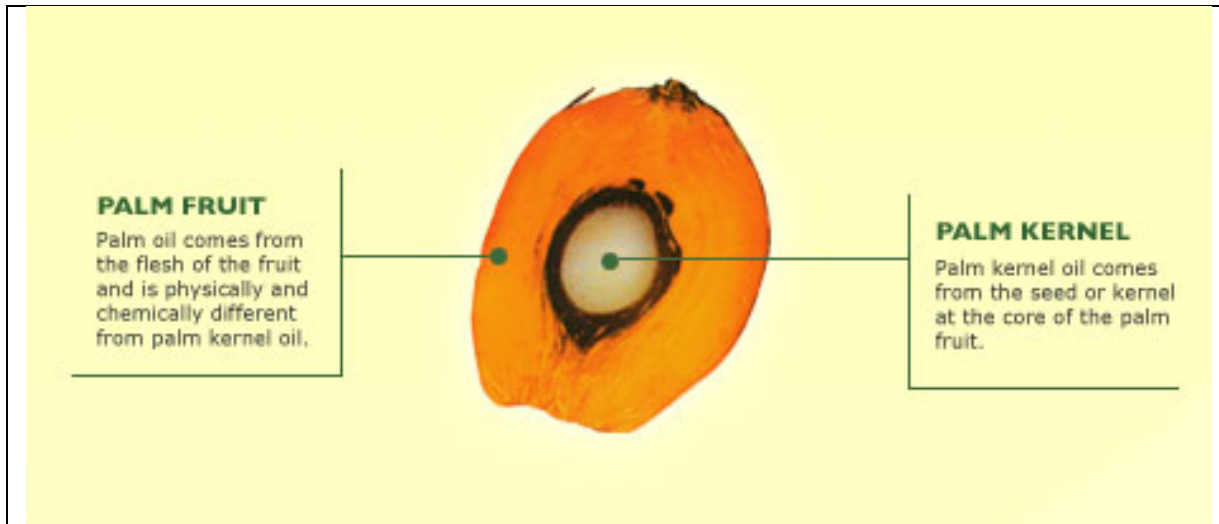
Websites

<http://www.unctad.info/en/Infocomm/AACP-Products/Palm-oil>
<http://www.fao.org/docrep/006/t0309e/t0309e01.htm>
<http://www.rspo.org/>

Exhibit 1: Palm oil fruit

The fruit of the oil palm consists of the following parts:

- Pulp: the pulp is yellow and it yields palm oil when crushed.
- Seed: inside the seed's shell is the kernel, which yields palm-kernel oil when crushed.



Source: <http://www.fao.org/docrep/006/t0309e/t0309e01.htm>

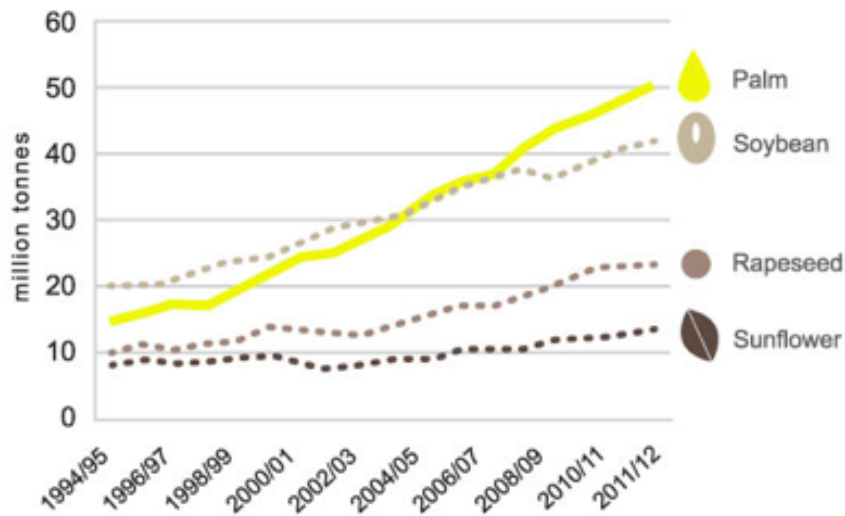
Exhibit 2: Palm oil, global production

Worldwide production of palm oil reached 48.98 million tons (Mt) in 2011 (Oil and World), covering an area of 13.41 million hectares. The two leading countries in palm oil production are Indonesia and Malaysia, with 23.9 Mt and 18 Mt, respectively.

Country	Production (Mt)				Yields(T/ha)				Land covered (M ha)			
	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Indonesia	19.40	21.00	22.20	23.90	3.90	3.91	3.87	3.92	4.98	5.37	5.74	6.09
Malaysia	17.73	17.57	16.99	18.00	4.55	4.38	4.11	4.26	3.90	4.01	4.13	4.23
C&S America	2.31	2.40	2.31	2.51	3.00	2.93	2.66	2.70	0.78	0.82	0.87	0.93
Other countries	4.13	4.30	4.35	4.31	2.24	2.17	2.09	2.12	1.84	1.98	2.08	2.16
World total	43.54	45.27	45.85	48.98	3.79	3.72	3.58	3.65	11.50	12.18	12.82	13.41

Source: <http://www.unctad.info/en/Infocomm/AACP-Products/Palm-oil/>

Exhibit 3: Global demand for vegetable oil



Source: http://www.rspo.org/en/who_is_rspo

Exhibit 4: Major species endangered by palm oil cultivation and production




Sumatran tiger (<i>Panthera tigris sumatrae</i>)	There are only 400 to 500 Sumatran tigers left in the wild.	
Sumatran orangutan (<i>Pongo abelii</i>)	There are around 7,300 Sumatran Orangutans occupying 20,552 km ² of forest.	
Bornean orangutan (<i>Pongo pygmaeus</i>) (IUCN Red list)	There are between 45,000-69,000 Bornean orangutans living in 86,000 km ² of forest on Borneo.	

Exhibit 5: Roundtable for Sustainable Palm Oil: Principles



8 PRINCIPLES

for growers to be RSPO certified



1 Commitment to transparency



5 Environmental responsibility and conservation of natural resources and biodiversity



2 Compliance with applicable laws and regulations



6 Responsible consideration of employees, and of individuals and communities affected by growers and mills



3 Commitment to long-term economic and financial viability



7 Responsible development of new plantings



4 Use of appropriate best practices by growers and millers



8 Commitment to continuous improvement in key areas of activity

Some of the global companies committed to
100% RSPO certified sustainable palm oil



Source: http://www.rspo.org/en/who_is_rspo

Key points for discussion

In order to prepare for the case discussion, we suggest that the students prepare to address the following key points, based on the methodology developed by WRI et al. in the report: *The corporate ecosystem services review: Guidelines for identifying business risks and opportunities arising from ecosystem change* (2008).

We propose a simplified version of the WRI methodology with the aim of supporting students in analyzing the relations between ecosystem services and Unilever with regard to palm oil production and consumption, and the organization of the palm oil supply chain. The approach is articulated in four steps:

- Evaluate Unilever's *dependence* and *impact* on ecosystem services with regard to palm oil and the palm oil supply chain;
- Explore trends in the use of palm oil and related ecosystem-services degradation, and drivers of that degradation;
- Identify the main *risks* and *opportunities* for Unilever; and
- Analyze the company's *strategies* for addressing this major environmental problem.

Additional questions can help in developing the discussion:

- How does the future look for the Roundtable for Sustainable Palm Oil (RSPO)?
- How can the RSPO effectively reduce the risks associated with losing the Indonesian and Malaysian rainforests?
- What are the pros and cons of the RSPO?