

SUSTAINABLE PALM OIL

Fighting Deforestation in Indonesia



**A proposal for the United Nations Development Program
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INTRODUCTION

A two-part strategy to fight deforestation in Indonesia by reducing palm oil consumption and production: an application targeted at shoppers worldwide that allows them to scan products by using a barcode, and a website where Indonesian citizens can report illegal palm oil plantations to local NGOs or the UNDP.

PART I: FRAMING THE PROBLEM

Country: Indonesia

Issue: Deforestation caused by illegal logging and palm plantations

Rationale:

Indonesia is the world's third-largest emitter of greenhouse gases, which are one of the main causes of climate change (Measey, 2010). This has been largely linked to deforestation activities carried out to make room for palm oil plantations. Deforestation also damages the quality of land since trees are essential to maintaining water cycles by transferring water vapor to and from the atmosphere (National Geographic, 2014). The reduction of forests results in acute temperature changes and eventual harm to plants, animals, and indigenous people living in the forest. Besides contributing to greenhouse gas emissions, Indonesia is experiencing the effects of climate change in the form of droughts, heat waves, floods, and tsunamis (Measey, 2010).

Indonesia's forests cover approximately 52 percent of the land, 40 percent of which lie in protected areas. However, deforestation in Indonesia is on the rise as logging takes place to make way for palm plantations (Illegal Logging Portal, 2014). A single hectare of Indonesian peat land rainforest releases up to 6,000 tons of CO₂ when it is cut down. Palm oil plantations already cover 9 million hectares of land -- the same size as the U.S. state of Maine (Rainforest Rescue, 2014) -- and palm oil retrieved by these means is mostly unsustainable and requires the clearing of forests for new plantations.

There is no sustained media coverage in Indonesia of the environmental implications of deforestation. Little attention is paid in Western media to the implications of using products with unsustainable palm oil and most consumers are not aware of the effect of unsustainable palm oil on the environment. Recently the penetration of social media and other online media in Indonesia has surpassed newspapers and radio and the Internet has become the "second most widely-viewed medium" (Redwing, 2012).

PART II: THE SOLUTION

Our solution:

We will tackle this problem through two media: a mobile application targeting the global community, and a website for the Indonesian population. We will reduce the demand for unsustainable palm oil, which is found in many foods and cosmetics in the around the world, by empowering consumers to shop responsibly and by educating them about deforestation. The app will allow shoppers to use a barcode scanner to identify whether a product uses sustainable palm oil. We will collect barcode information from various existing databases such as the Barcode Registry or Open Product Data. By referring a product to its mother company, we can find out whether this company adopts sustainable palm oil practices and provide results accordingly. The results appear in the form of a traffic light signal, where red signifies lack of sustainability and

green signifies sustainability. Sustainable alternatives are suggested in the app, and data is recorded when users switch to products using sustainable palm oil. Users are then invited to post their activity on social media, mainly Facebook and Twitter, in an attempt to mobilize online communities and shame companies that rely on unsustainable palm oil. This will change consumer habits and in turn pressure companies to switch to sustainable alternatives.

At the local level, the Indonesian Rainforest Watchers site will allow citizens to anonymously report and post pictures of illegal palm oil plantations as well as general illegal logging practices. The website includes a mapping section on which users can locate the spot of illegal logging, and another section in which users can add comments and/or details about their findings. Posts can be made anonymously and are visible to all visitors to the website. Since bribery and governmental corruption have made way for illegal logging (Eco-Business, 2014), this website provides citizens with a platform to communicate and act. By providing anonymous public data on illegal logging operations, the app will enable citizens to hold the government accountable and aid existing active communities by providing up-to-date information on illegal logging and palm plantations.

Implementation:

Since the use of unsustainable palm oil is globally dispersed, we will partner with UNDP offices and NGOs such as the World Wide Fund for Nature, Greenpeace, Conservation International and the Environmental Investigation Agency to spread the word on their respective online platforms and share our palm oil shopping app. Countries such as India, the United States and Turkey can be targeted due to their high levels of palm oil consumption (Indonesia's Palm Oil Outlook 2013). We will hire a group of experts to test our application before it is introduced to the public. Responses to the app will be monitored and measured by the number of 'shares' on social media sites. People will be encouraged to contact the app developers through email and Facebook to offer feedback and suggestions. Once the application is implemented we will document the adoption of our app and website to measure the impact on shopping habits of consumers.

For the Rainforest Watchers site, we will work with NGOs and the UNDP for the initial launch. Then we will then expand the reach of our site through the use of social media and other partner organizations in Indonesia. Our site will also be available on mobile phones and Indonesian citizens will be able to text locations of illegal palm oil plantations to our website. Indonesia has 278 million mobile phone subscribers and around 65 million active Facebook users and generates 15 tweets per second (Vulcan Post 2014), so interventions using these media will not only empower citizens to monitor corporations, but also raise awareness and start a conversation about deforestation in Indonesia.

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Visualizations:

1- Mobile Application



Website

INDONESIAN RAINFORESTS WATCHERS

SPEAK UP, REPORT AND TAKE ACTION

THIS LAND IS OUR LAND

Indonesia

About us **Learn more** **Report here** **Active communities**

Indonesian Rainforests
Illegal logging
Palm plantations

REPORT ILLEGAL LOGGING HERE

Location

Date

Approximate Size

Additional Information

Insert Attachment

Submit

APPENDICES

1. In-depth country profile

Located in Southeastern Asia, the Republic of Indonesia spreads along 1,904,569 square km with Timor-Leste, Malaysia and Papua New Guinea around its borders. It is made up of 17,508 islands, 6000 of which are inhabited. It is the world's largest country comprised solely of islands. As for natural resources, Indonesia has petroleum, tin natural gas, timber, bauxite, copper, fertile soils, coal, gold and silver. It has a tropical, hot and humid climate that turns moderate towards the highlands. As for natural disasters, Indonesia is subject to occasional floods, severe droughts, tsunamis, earthquakes, volcanoes and forest fires.

The official language in Indonesia is Bahasa Indonesia; however, other languages exist such as English, Dutch and other local dialects. The country is composed mainly of Muslims 87.2%, 7% Christians, 2.9% Roman Catholics, 1.7% Hindu and 1.3% other. Indonesia's population is 253,609,643 while the greatest ratio ranging between 25 to 54 years old. The capital of Indonesia is Jakarta; the country follows a civil law system on the Roman-Dutch model influenced by customary law.

The economy is divided into three main sectors: agriculture, industry and services. Its agricultural products are palm oil, rubber, poultry, beef, forest products, shrimp, cocoa, coffee, medicinal herbs and others. Its industries are comprised mainly of petroleum and natural gas, textiles, automotive, electrical appliances, apparel, footwear, mining and others.

Indonesia has a combination of broadcast and online media with a dozen national television networks of public and private broadcasters. There are 1.344 million internet hosts with 20 million internet users (World Fact Book). Indonesia's government controls many aspects of the media what gets shown on television and what people hear on the

2. Media landscape

The Media Landscape of Indonesia – \$10 Billion Market according to Redwing Indonesia, television is the dominant source of media in Indonesia. 97% of the population (approximately 240 million people) watch television each month (Redwing, 2012). Television plays an important role in reaching large audiences from various segments of the country. The country consists of 11 national stations, 10 privately owned channels, one public channel and 350 local stations (Redwing, 2012). Within recent years, the penetration of social media and online digital strategies has surpassed newspapers and radio. The Internet has become the “second most widely-viewed medium” (Redwing, 2012). The expansion of multiple media avenues has affected the changing consumer market and promoting technology-driven utilization.

Telecommunication in Indonesia:

Because Indonesia is made up of so many small islands, their infrastructure relies heavily on satellites and telecommunication. Mobile phone use in Indonesia is the 3rd largest in Asia with over 278 million phone subscribers throughout the country. In recent years, as the middle class has continued to rise in Indonesia, smartphones have become increasingly popular. It has been

projected that by 2015, 40% percent of all handsets in Indonesia will be smartphones, as it currently stand 24% of all phone users have a smartphone. Between 2012 and 2013, the percentage of the population who owned smartphones doubled from 12% to 24% and the country has developed a huge data market with over 15 million data users in 2012, and that number continues to grow. 54% of the total mobile users are between the ages of 20-29. “A second significant category by global standards is mobile ads, which grew by 100% in 2012. With an estimated 200 billion ad impressions delivered in 2012, Indonesia was the second largest market for mobile ads in the world, beaten only by the US.”

The top 10 accessed mobile sites:

1. Facebook.com (Social Media: 200 million currently accessing Facebook through their mobile phones)
2. Google.com (Search Engine)
3. Detik.com (Search Engine)
4. Youtube.com (Search Engine)
5. Twitter.com (Social Media)
6. Wapdam.com (Download)
7. Yahoo.com (Search Engine)
8. Wikipedia.org (Social Media)
9. Kaskus.com (Social Media)
10. 4shared.com (Download)

Social Media in Indonesia:

Indonesia is starting to become one of the most active countries concerning social media. It is the fourth largest market for Facebook (47 million users) and fifth for Twitter (35million users), which in recent years has started to rise because Twitter it more prevalent for younger audiences. “During their growth spurt periods, each service put on 25 million users in the space of 18 months. Indonesia has the fourth largest population in the world so they have the capabilities to have huge numbers on social media. Our climate change group also has a very good chance of reaching the population of Indonesia because social media is so active and popularly used.

“One of the unsung success stories in social media in Indonesia is mig33, recently lauded as the 7th fastest-growing social platform in the world. Mig33 is a mobile social network where users can chat, play games and buy virtual goods for their friends. Initially targeted at feature phones, it has been a big hit in Indonesia, where it has 40 million users” (Redwing, 2012).

3. Background research on issue:

In its most recent assessments, the Intergovernmental Panel on Climate Change suggested that about 97 % of scientists agree that climate change is driven mainly by human activities. Atmospheric concentration of greenhouse gases (carbon dioxide, methane and nitrous oxide), for example, has increased since 1750 due to human activities. Increase in CO₂, particularly, has led to ocean acidification as the ocean absorbs about 30% of emitted carbon dioxide.

Indonesia is one of the biggest emitters of these greenhouse gases. Studies have directly linked Indonesia’s emission of greenhouse gases to the deforestation activities carried out in the country. Indonesia, like most countries in the South East Asia region, is expected to experience tremendous effects of climate change (IPCC, 2013).

World Health Organization estimates that the warming and precipitation trends due to man-made climate change of the past 30 years claimed over 150, 000 lives (WHO, 2008). In 2000, out of 154, 000 deaths, 77 000 resided in the South East Asia region. In Indonesia, droughts, heat waves, and floods as a result of climate change have been reported. The Jakarta flood in January 2007, for example, affected 80 districts and displaced between 420, 000 and 440,000 people.

The global demand for palm oil has led to excessive deforestation in the Indonesian rainforests. Fitzherbert et al (2008) distinguishes several ways in which oil palm expansion could contribute to deforestation. To begin with, palm oil plantations represent the primary motive for clearance of intact forests. Moreover, palm plantations are replacing forests that have been damaged by previous logging or fire practices. Finally, generating road access to previously inaccessible forest or displacing other crops into forests have contributed to the issue of deforestation.

For the first time, deforestation levels in Indonesia have surpassed those of Brazil (BBC 2014). A study published in the journal Nature Climate Change shows that Indonesia has lost about 60, 000 square km of virgin forest between 2000 and 2012. In 2012 alone, Indonesia lost 8,400 square km of its primary forest (Vidal 2014). Consequently, there is increasing greenhouse gas emissions and loss of biodiversity. At the moment, Indonesia ranks behind China and the United States in its greenhouse gas emissions. The BBC (2014) also reports massive forest fires in Indonesia in 2013 to clear lands. These caused heavy smog over Malaysia and Singapore leading to a rise in health as well as economic concerns. The World Bank (2010 cited by Measey 2010) estimates that air pollution alone has cost the Indonesian economy approximately \$400 million per year.

During a visit in February 2014, the US Secretary of State John Kerry asked Indonesia to take steps in combating climate change. In line with scientific predictions, he argued that an increase in sea temperature could affect the country's fishing industry, rising sea level, on the other hand, may put much of Jakarta, the capital, under water (Gordon and Daveport, 2014). Other countries have also recognised the important role that Indonesia can play in reducing climate change. Norway, for example, has pledged a billion dollars if Indonesia can prove its seriousness regarding stopping deforestation. Reducing deforestation in Indonesia would therefore help reverse the current trend of climate change with a significant reduction in greenhouse gas emissions.

4. Related or similar initiatives, successes/challenges

Applications

In relation to our mobile application that allows shoppers all over the world to scan barcodes of products in order to check whether they contain unsustainable palm oil, there are two apps we discovered that we felt held several similarities.

The first is an application and website named 'Codecheck' (see Resources) which enables users to scan the barcodes of over 17 million products. When scanned, the application/website gives you in-depth information about the ingredients, nutritional information and other guidance about the product. This also includes information about whether it contains palm oil and background information about its link to deforestation. It also offers alternative products, and grades each ingredient in the product using a traffic-light rating system.

The app is a fantastic one-stop shop for a huge database of products, and allows users to shop ‘environmentally consciously’. However, the app is only available in German, so obviously there is a huge language barrier. In addition, the application does not address palm oil sustainability; it simply advises against the product/offers an alternative if palm oil is an ingredient. As the palm oil business employs thousands of people in the country, and we do not want to take job opportunities away, and for that reason we did not feel it would be appropriate to oppose palm oil completely. Our app will also be available in several different languages, making it easier for the global community to use.

Another app that we found held similarities to our own was a ‘Palm Oil Shopping Guide’ (see Resources), created by Cheyenne Mountain Zoo which is based in Colorado Springs. The app allows users to search a database of products that contain palm oil by either typing in the name of a product, or searching for it alphabetically. When selected, the app tells the user whether the product is ‘orangutan friendly’ according to whether or not is a member of the Roundtable on Sustainable Palm Oil (RSPO). It provides basic information about the product aside from this, for example the product ID and RSPO Member Company Name. This makes it easier for the user to concentrate on the product’s containment of palm oil.

It also has other pages such as ‘Speak Up’ which provides tips on how to tell more people about palm oil, watch a video about palm oil and their affect on orangutans, learn more about palm oil and donate to the cause. The app is laid out similar to how we would imagine our application to look.

However, the application does not facilitate a barcode scanning system which makes checking products for palm oil a lot harder for the user/consumer, which in reality will most probably put them off using the app on a regular basis. Another downfall of the application is that although it gives the user tips for spreading the word about palm oil, it does not give the option to do this via social media, which our application does.

Databases

The Rainforest Foundation and WWF are just two charities/NGOs that host palm oil product databases (see Resources). The Rainforest Foundation break the products down into categories e.g. skincare, makeup, chocolate and each product is given an ‘ethical score’ and a grade using the traffic light system. WWF, since 2009, have produced a ‘Palm Oil Buyers Score Card’ which assesses 130 companies in their effort to use sustainable palm oil (as certified by the Roundtable on Sustainable Palm Oil). It matches each company to a set of criteria, for example are they a RSPO member, are they committed to Certified Sustainable Palm Oil (CSPO), and if they have a

Greenhouse Gases (GHG) Sourcing Policy.

The databases are a useful reference for the type that we would implement in our application. WWF provide a more thorough assessment of the companies, which means that the consumer can rely on the products being thoroughly sustainable according to several different criteria, rather than just being assessed on being a member of the RSPO (who don’t rule deforestation out completely in their policies).

Our app takes these databases a step further- by making them easier to access, and makes finding information about palm oil content faster. However, as we plan to join up with NGOs, we could utilise their databases amongst our own.

Website

We took inspiration from the ‘Harass Map’ based in Egypt (<http://harassmap.org/>) for our ‘Indonesian Rainforest Watchers’ website. Although obviously based on a completely different subject, sexual harassment, its structure and reporting system is how we would imagine our website to work.

On the website, citizens can anonymously report details of harassment, through an online form or via SMS. These reports then appear on a Google Map of Egypt. If certain ‘harassment hotspots’ become apparent, ‘HarassMaps’ send out volunteers to these particular areas, who work with the local community to raise awareness of the problem.

Our website, Indonesian Rainforest Watchers would follow the same process. Indonesian citizens would identify illegal palm oil plantations and other incidents of illegal logging, and then report them through the website. This will then alert local community groups and NGOs to take action on these instances and at the same time would raise awareness in the government.

HarassMap appears easy to use, and has several different tabs on the website which provides information about how to use the website, as well as resources on sexual harassment.

5. Detailed elements of proposal:

Developing our application and creating the website will be our primary costs. Testing the app and marketing it will be another expense. Another cost is gathering data on our application to see if its working or not our group will have to pay people to conduct these tests. Marketing our idea and application will require money as well. One of our main goals with the marketing aspect is to drive traffic to our Indonesian Rainforests Watchers website. We want to make people aware that this website exists so that they can play a part in reducing deforestation in Indonesia. Also by driving traffic to our website consumers worldwide will want to download our Shop Green app. If people download our application they are playing a part in ending deforestation in Indonesia. Some marketing tactics will be free because people will share their results on various social media websites like Twitter and Facebook. Social media provides a free platform for our ideas to flourish without costing us money.

One of the best forms of advertising is by word of mouth social media amplifies this effect. It also raises awareness without using traditional media tactics. We will launch the application once the website is fully functioning. Our reasoning behind this is because on the website users will have the option to download our Shop Green app. Once people start downloading the app we will be able to implement change within the country itself.

6. List of resources

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