Market-based conservation: labelling palm oil products as wildlife-friendly
Anna Zulkifli and Kalyana Sundram

Abstract
The future of palm oil as a primary vegetable oil is promising as global demand for food increases. Consequently, it is foreseen that the conflict between agriculture and conservation will intensify. Consumers and environmentalist particularly in the West are concerned about the environmental impacts of oil palm cultivation, particularly its suggested role in deforestation, climate change and biodiversity loss. In order to continue promoting palm oil, particularly to the concerned Western consumers, an alternative approach is suggested – by linking market incentives with conservation. This paper focuses on tapping into one such method of creating a premium market for the wildlife-friendly eco-labelled products using flagship species such as the orang-utan or tiger. Consumers’ willingness to pay for wildlife-friendly palm oil products provides for industry involvement of conservation and sustainability. The challenges and opportunities of implementing such eco-labels on palm oil products are discussed.

1. Introduction
One of the biggest risks to food security is the ability to feed an ever-growing world population1. The United Nations (UN) has estimated that world population will reach 9.6 billion by 2050, 90% of which is from developing countries2. This growth, combined with economic development and dietary changes would result in increased food demand. Palm oil therefore plays an important role in meeting global food demand, being the most efficient oil crop in terms of yield and land utilization.

Despite the advantages of palm oil and its contributions to the economic growth of producer countries, the industry receives harsh criticisms particularly for its suggested role in deforestation, climate change and biodiversity loss3. Various environmental non-governmental organisations (ENGOs) and activists sustain anti-palm oil campaigns urging consumers to boycott palm oil. All, if not most of these campaigns make claims that are often misleading and exaggerated, a practice called blackwashing4. One of their most prominent blackwashing campaigns is related to orang-utan (Pongo spp.) extinction, with its famous claim that “… orang-utans are predicted to become extinct as early as 2011”, put forward by the Rainforest Action Network, pushing the blame on the palm oil industry.

Key words
conservation, eco-label, palm oil, wildlife, CSPO

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The palm oil and orang-utan conflict has seen extension into product-labels as an effort to curtail use of palm oil in various formulations. In order to restrict consumption particularly in Western countries, the anti-palm oil campaigners have started lobbying for regulations advocating greater transparency in vegetable oil labelling whereas other commodity ingredients are spared such demands. It was considered a success, at least in European countries when from December 2014, the European Union (EU) Food Information for Consumers Regulation 1169/2011 (EU FIC)\(^5\), came into effect. This requires listing of vegetable oils to be specified on labels as part of the ingredients list. Palm oil producers and advocates also supported the move. Yet, another challenge emerged in the form of the discriminatory "No Palm Oil" labelling especially in France and Belgium, which is considered illegal under the new FIC regulation.

The market for certified sustainable palm oil (CSPO) in Europe, currently estimated at 50% of total production, appears geared to grow as more companies have made commitments to source sustainable palm oil. In order to continue promoting sustainable palm oil particularly to the concerned Western consumers, an alternative approach is suggested – by linking market incentives towards conservation\(^6\), which provides an opportunity for consumers to contribute to nature conservation by supporting products or processes with wildlife-friendly and sustainable practices. One of these market-based conservation instrument is the certification scheme, also known as eco-labelling.

This paper focuses on tapping into ways of creating a premium market for eco-labelled products – through the use of flagship species.

2. The basic concept of eco-labelling

Eco-labelling, a form of market-based conservation instrument, is gaining popularity within the food and non-food sectors and signifies growing environmental and social concerns. Eco-labels provide a niche market for producers who meet the criteria of having environmental friendly and sustainable practices throughout their production chain. First introduced by Germany in 1977 with its Blue Angel label, it was then endorsed in 1992 at the Rio Summit to encourage more sustainable consumption patterns though the purchase of products that are resource and energy efficient. The number of businesses with eco-labels has rapidly increased. There are currently 463 eco-labels, 148 of which are food products\(^7\). The International Organization for Standardization (ISO) classifies eco-labels into three types within the ISO 14020 series: type I (ISO 14024:1999), type II (ISO 14021:1999) and type III (ISO/TR 14025:2006). Type I, also known as environmental labelling (i.e. eco-labels), is a voluntary, multiple-criteria based, third party program that awards a license for the use of environmental labels on products that meet the predetermined set of criteria (e.g. Green Seal, Energy Star). Type II include self-declared environmental claims, made mostly by producers or any party which will likely benefit from the claims (e.g. made from recyclable material, GMO free). Type III provides quantifiable environmental information based on life cycle assessment (i.e. carbon footprint, water usage, energy efficiency) that is similar to the nutrition facts label on packaged food (e.g. Earthsure®, EcoLeaf).

In addition to these three types of eco-labels, another category of labels exist similar to the ISO Type 1: a single-issue label (as opposed to multiple issue labels of Type I) awarded by a third party, based on best practices\(^8\). Sometimes known as Type IV labels (environmental impact labels) or value-based labels\(^9\), they are not regulated by ISO and focus on the environmental (e.g. dolphin safe), social (e.g. fair trade, no child labour) or ethical (e.g. No Animal Testing) characteristic of a product\(^10\). Well known examples of Type IV labels include the Forest Stewardship Council (FSC), FairTrade, Rainforest Alliances and Roundtable on Sustainable Palm Oil (RSPO).

In the case of value-based environmental labels, businesses that promote wildlife-friendly practices can be categorized according to their potential contribution to conservation, which are supportive, persuasive and protective\(^11\) (Table 1).
Table 1: Categories of eco-label, their definitions and examples

<table>
<thead>
<tr>
<th>Categories of eco-label</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive</td>
<td>Products that donate proceeds from sales to conservation organizations</td>
<td>Endangered Species Chocolate, Guylian chocolate</td>
</tr>
<tr>
<td>Persuasive</td>
<td>Products which certify manufacturing, collection or producer practices under the assumption that wildlife will benefit</td>
<td>Dolphin safe tuna, Forest Stewardship Council (FSC), Bird Friendly Coffee</td>
</tr>
<tr>
<td>Protective</td>
<td>Products that are proved to protect wildlife or their ecosystem</td>
<td>Marine Stewardship Council (MSC)</td>
</tr>
</tbody>
</table>

3. Flagship species: using iconic, charismatic wildlife to promote eco-friendly products

Flagship species are popular conservation tools though there is no single accepted definition. Verissimo et al.\textsuperscript{12} reviewed the various definitions of flagship species and proposed with a new definition, in which “a species is used as the focus of a broader conservation marketing campaign based on its possession of one or more traits that appeal to the target audience.” Most of the time the use of flagship species concept overlaps with that of other surrogate schemes such as indicator, keystone and umbrella species. This concept is preferred over other ecosystem based conservation tools because the messages conveyed using flags are simple and appealing to the public – save the species by saving the habitat. Choices of flags are often limited to large charismatic mammals such as panda, tigers and primates.

The use of flags in conservation are limitless - from the emblem of conservation organizations (e.g. WWF using panda in their logo), to generating funds for conservation and research activities, to being the focus of controversial issues influencing policy outcomes.\textsuperscript{13, 14} In the case of anti-palm oil campaigns, for example, orang-utans are targeted as flagship species to elicit public sympathy and support. The western ENGOs’ publicity on the plight of orang-utans has helped to increase public pressure on the palm oil industry to stop deforestation and adopt sustainable practices.

On the other end of the spectrum, since orang-utan has been used for the anti-palm oil campaigns, they can also be used to promote businesses that adopt best practices – by using them as the face of eco-label products in which proceeds from these purchases can be channelled towards the species conservation. The idea of using wildlife to encourage consumers in supporting environmentally friendly practices is not novel. One of the earliest and best examples is the ‘dolphin safe’ label. It was initiated in 1990 in response to public outrage over the killing of dolphins caused by the harvest of yellowfin tuna, *Thunnus albacares*, in the Eastern Tropical Pacific Ocean (ETP), which extends from southern Baja California to northern Peru. The label was introduced in the USA with the main aim of limiting the use of purse seine or other fishing methods that involve the deliberate circling and capture of dolphins. Although the main issue is the association of dolphins with yellowfin tuna, exclusively to the ETP, it was later adopted by most tuna companies around the world.

4. Is there a market for wildlife-friendly palm products?

There are currently two wildlife-friendly labels in the market, both using orang-utan as flagship species. Carotino (Australia) established their own orang-utan friendly label (Figure 1A) to be used for their branded...
cooking oil. Their products are sourced from RSPO certified sustainable plantations in Peninsular Malaysia, which is not an orang-utan habitat. Cheyenne Mountain Zoo in Colorado, United States created the orang-utan friendly label (Figure 1B) and encourages companies that use CSPO to utilize their logo.

One pilot study on the market potential of a tiger-friendly margarine made with palm oil found that consumers are willing to pay a premium price for alternatives that are said to have less environmental impact. Using the Sumatran tiger, *Panthera tigris sumatrae*, as their flagship species, Bateman et al. examined the choice of consumers in the United Kingdom and their willingness to pay when presented with two products of differing quality, each with three levels of labelling information, principally on the monetary contribution towards conservation activities (supportive eco-label; see Table 2).

**Figure 1:** Orang-utan friendly palm oil labels by (A) Carotino (Australia) Pte. Ltd. And (B) Cheyenne Mountain Zoo

**Table 2: The level of marketing information contained in the tiger-friendly margarine**

<table>
<thead>
<tr>
<th>Marketing levels</th>
<th>Description on the product label</th>
</tr>
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<tbody>
<tr>
<td>Low</td>
<td>If you purchase the tiger-friendly margarine, some of the money you will spend will go towards protecting tigers in Sumatra. Specifically, it will protect the land where the tigers hunt.</td>
</tr>
<tr>
<td>Medium</td>
<td>If you purchase the tiger-friendly margarine, some of the money you will spend will go towards protecting tigers in Sumatra. Specifically, it will protect the land where the tigers hunt. In 1978 there were roughly 1,000 tigers. Due to hunting and destruction of the jungle there are now only around 500 left.</td>
</tr>
<tr>
<td>High</td>
<td>Same as medium. Included coloured images of tiger adults and cubs</td>
</tr>
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</table>
Results showed that the information contained in its label could influence the purchase of products by paying a premium of 15 to 56 percent, provided that certification (in this case, RSPO) is reliable. The uptake of CSPO could therefore be increased with the proper marketing strategies (by marketing the products as either supportive, persuasive or protective eco-label), using flagship species such as orang-utan or Asian elephant, *Elephas maximus*, as examples.

5. Challenges & opportunities

The bourgeoning number of certification schemes and standards is a step forward in achieving the goals of encouraging a sustainable consumption pattern, set at the Rio Earth Summit. More corporations are jumping on the eco-label bandwagon, to capture the so-called premium markets and gain consumer loyalty. The increasing number of eco-labels, tackling a wide range of issues could have adverse consequences. The weakness and challenges associated with the growing number of eco-labels have been extensively covered in the literature. One particular issue of interest is the effectiveness of eco-labels in addressing biodiversity and conservation concerns.

5.1. Implementations of wildlife-friendly palm based products: Integration within CSPO or a new label on its own?

Certification schemes in the palm oil industry are currently limited to RSPO, the International Sustainability and Carbon Certification (ISCC) and national standards such as the Indonesian Sustainable Palm Oil (ISPO) and Malaysian Sustainable Palm Oil (MSPO). RSPO for example addresses certain issues on biodiversity under Principle 5 of the RSPO Principles and Criteria, particularly on High Conservation Value (HCV) habitats and the conservation and management of rare, threatened or endangered (RTE) species. Therefore, it could be assumed to be a persuasive label. In order to gain recognition as a protection label, the issues of biodiversity conservation in RSPO certified plantations needs to be covered extensively and most importantly the outcomes must be communicated effectively to the end user. Particularly in the case of using the wildlife-friendly label, producers must be able to provide evidence that their flagship species (e.g. tigers) are able to survive and reproduce. MSPO for example, being a national standard, may in fact be better placed for this purpose by creating a government mandated pact with the local wildlife protection and enforcement authorities.

To be able to effectively market wildlife-friendly palm based products, producers must be able to gain the trust of the end consumers. With the level of criticism, the palm oil industry receives, producers interested to tap into the wildlife-friendly label have to increase their label credibility and transparency to live up to their claims or risk being accused of greenwashing. Incorporating the wildlife-friendly label into CSPO is possible, though not feasible, as it would require major changes in rebranding the label. RSPO itself has its own issues and criticisms particularly with the smallholders and its huge cost of certification, which are yet to be addressed effectively by RSPO.

The alternative approach is to create a product-specific eco-label. The idea is to distinguish themselves from other labels in the market. Many companies that market products that are branded as supportive eco-labels have already adopted this type of marketing strategy by collaborating with an ENGO as part of their corporate social responsibility (CSR). In this case, it is a win-win situation for all parties (the producer, ENGO and consumers), benefitting from the price premium. The consumers would indirectly get involved in conservation efforts with their purchase. The ENGO would get the funding they require to conduct conservation activities and provide producers the critical data needed to verify that the habitat does indeed benefit from wildlife-friendly practices. Smallholders are most likely to benefit from the product-specific eco-labelling scheme as the economic benefits can be passed down to the smallholders. The burden of certification costs can be shared among the producers, growers and does not require a huge cost since it specifically address biodiversity impacts.
5.2. Making it work

In order for the wildlife-friendly label to become mainstream, a series of critical steps are proposed which are 1) meeting, not trying to create, a receptive market; 2) pushing, not just setting, an industry standard; and 3) creating an attractive value proposition for producers. In the case of the palm oil industry, the market potential for ecolabels already exists given the increasing number of sustainability pledges and commitments from major corporations, which is expected to push higher demand for CSPO. The subsequent step of pushing for the standard and creating preposition for producers are continuous works in progress. For example, RSPO and MSPO are committed to continuous improvement in key areas of activity, and have taken various measures in reaching out to the smallholders.

To encourage the producers to participate, they have to be convinced that there are ways to maximize profit while at the same time maintain biodiversity. A recent study by Bateman et al. found that profits from the premium grade palm oil more than covered the cost of conserving land. As much as 6,000 ha of wildlife habitat can be conserved within a 32,000 ha of plantation when a price premium of 15 percent is imposed. This analysis is however subject to actual "proof-of-concept" evaluation at the ground (plantation) level before its credibility can be ascertained.

The key to making the label work lies within the partnership between producer/label and environment and consumer advocacy groups or NGOs. The case of Zoo Victoria for "Don’t Palm Us Off" campaign is one example of a marketing campaign using orang-utan as flagship species, with the main aim of changing consumer behaviour towards sustainable consumption of palm oil. Although Zoo Victoria was criticised for running a political campaign which is based on unsubstantiated facts, the campaign nevertheless made a huge impact on consumer purchasing habits.

5.3. Effectiveness of eco-labels: Can these products contribute to biodiversity conservation as they claimed to be?

In general, there is no standardized method of quantifying the conservation effectiveness of eco-labels. A review by the United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC) on the biodiversity requirements of 12 agricultural certification programs showed that all 12 programs addressed habitat protection; 9 specified criteria for priority conservation areas; 10 prohibited land clearing of sensitive ecosystems; 8 included protection or management plans for threatened species and 7 addressed the issue of invasive species. Tscharntke et al. suggested effectiveness to be measured either directly (through proof of outcome) or indirectly (through proof of concept). Milder et al. proposed a systematic approach for evaluating and monitoring of the conservation impacts which is based on a set of hypotheses and research questions requiring collaborative efforts from conservation academics, producers and the certification community.

Despite the rising popularity of eco-labelling schemes, their effectiveness as a conservation tool is yet to be fully understood, as it requires extensive research. As such, the current state of knowledge about the performance of eco-labels in addressing biodiversity impacts is limited. Unless there is quantifiable evidence to demonstrate environmental benefits, the credibility of eco-labelling schemes will be lost as they continue to receive negative criticism and scepticism from the consumers. Despite the limited knowledge, there have been few documented successes and this shows that the proper utilization of eco-labels could contribute to biodiversity conservation and thus creates market opportunities.

Coffee is one of the first internationally traded commodities with sustainability standards. Notable certified coffee includes organic, Rainforest Alliance, FairTrade, Bird Friendly and UtzKapeh. These certification schemes address various issues ranging from social and economic impacts (e.g. FairTrade) to biodiversity (e.g. Bird Friendly, Rainforest Alliance) to best agricultural practices (e.g. organic, UtzKapeh). The Bird Friendly coffee is one case of eco-label with a clear ecological mission using migratory birds as flagships. The Smithsonian Migratory Bird Center (SMBC) established it for Latin American as well as a small number of African estates to encourage the production of shade grown coffee, with a set of standards aimed at protecting the habitat of migratory birds. To be certified, the

To be certified, the
planted to rules related to the protection and maintenance of native plants and buffer zones, the extent of shade cover and soil management. Research conducted on the benefits of Bird Friendly coffee demonstrated that certified estates provide better habitat for birds than non-certified farms\textsuperscript{34}.

Seafood certification programs, which aim to reduce the pressure of overfishing, first emerged as a result of public calls for boycott of canned tuna. The ‘dolphin safe’ label and the Marine Stewardship Council (MSC) are some of the popular certification schemes. The implementation and ecological benefits of both labels are often a subject of controversy\textsuperscript{35, 36}, however, the success of MSC is considered to be significant. Research by Philips et al.\textsuperscript{37} and Ward\textsuperscript{36} showed that MSC program has not been able to demonstrate positive outcomes in terms of its ecological benefits within the first few years of implementation. However, recent assessment by Gutiérrez et al.\textsuperscript{38} provided the much needed evidence - that MSC certified fisheries reported an increase in stocks by 46\% (as compared to 9\% increase by uncertified fisheries) over the past 10 years.

On the other hand, the dolphin-tuna issue, although somewhat only effective in addressing the tuna industry in the ETP region, is otherwise considered a successful marketing strategy. In the case of the UK, the ‘dolphin safe’ label is more a preventive measure and also a marketing gimmick by the canned tuna producers to maintain market share\textsuperscript{39}. This is because canned tunas sold in the UK do not contain yellowfin tuna but instead include skipjack tuna. The label has also expanded globally to include Malaysia. The label not only failed to effectively address the dolphin by catch issue, but also failed to protect other threatened species such as sharks and turtles due to the addition of fish aggregation devices (FADs)\textsuperscript{38}.

6. Conclusion

The conflict between agriculture and nature conservation will continue to take place as demand for food increases. Consumer demand for sustainable palm oil has pushed more corporations, food producers and major retailers to make commitments to eliminate deforestation from its supply chain and responsibly source palm oil. Tapping into market-based conservation could be the way forward, encouraging consumers to support producers that adopt wildlife-friendly practices by purchasing eco-label products. This paper shows the potential in marketing palm based products as wildlife-friendly by utilizing charismatic species that may appeal to the target audience. The success of the label would depend on verifying its claims of being wildlife-friendly and communicating the claims to consumers, thus building loyalty towards brands.

References


