

## Ecolabels and palm oil

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### ABSTRACT

Ecolabels are labels on various products that educate the consumer about the source and production of the product and its ingredients. Although ecolabels have some negative aspects, history has shown that ecolabels can be a gateway to environmental recovery through education and buying sources from eco-friendly suppliers. The Roundtable of Sustainable Palm Oil has created an ecolabel for products containing sustainable palm oil in hopes of educating the consumer of the palm oil crisis. Sustainable palm oil is the key to saving the remaining orangutan habitat and the livelihoods of many people. Companies have several options for buying sustainable palm oil and two ecolabels for their products. It is up to the companies and consumers to save the remaining Indonesian and Malaysian rainforests.

Keywords: orangutans, palm oil, green business, Roundtable of Sustainable Palm Oil, ecolabels



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## WHAT IS AN ECOLABEL?

Ecolabels are slightly different from environmental labels. Ecolabels indicate a product that is committed to environmental guidelines through its design, production, operation, and maintenance. Environmental labels are not as strict. The guidelines for ecolabels are made and overseen by third party sources, such as a government entity, which helps the labeling process be an unbiased procedure. The participation in ecolabeling is entirely voluntary. Some examples of eco-labels are shown in Figure 1: Green Seal, Terra Cycle, USDA Organic, and C.A.F.E. Practices (UNOPS, 2009).



**Figure 1: Examples of Ecolabels**

Ecolabels are designed by government or independent groups or organizations, instead of each company creating their own ecolabel. A company can apply to an organization to use their ecolabel on their product. Before they are approved, the organization will have to certify the company's product according to the standards of the organization. This helps the certification process remains unbiased and provides a more honest product for the consumer. For example, the USDA Organic label (Figure 1) is given out by the United States Department of Agriculture. The USDA will thoroughly research each entity that requests to use their label. For a product to be certified as organic, it must meet certain requirements. These include produced without prohibited methods, such as genetic modification, production process is monitored by a USDA-certified agent, and includes or excludes products based on the National List of Allowed and Prohibited Substances (USDA, October 2012).

To ensure an organic crop or livestock, the USDA requires there to be a transition period for each farm to go through. No prohibited materials may be used during this transition, such as chemicals to prevent insect damage. After this period, the farm may use the USDA Organic label. From the beginning to end, the ecolabeling certification process is stringent and thorough (USDA, June 2012).

## THE DISADVANTAGES OF ECOLABELS

Ecolabels can have some negative aspects. Products that contain ecolabels tend to be more expensive than their counterparts. This is due to companies having to go through a lot of changes to create these eco-friendly products, including changing the supply chain and production process. The Coalition for Truth in Environmental Marketing Information, Inc. claim that ecolabels are not worth the extra costs. They said that ecolabels do not necessarily portray an environmentally friendly product, limit product progress, and limit international trade for local environmental hazards that aren't relevant worldwide. This Coalition claims that ecolabels restrict free trade by limiting imports that do not have the label on the product (Salzman, 1997).

The regulation of ecolabeling can be difficult just because of time and money, but also because there is no worldwide standard for putting an ecolabel on a product. This leaves holes for less, however labeled, environmentally friendly products to pop up on the market, leaving the consumer confused (UNOPS, 2009). There are unfortunately quite a few environmental labels that can be misleading. Any meat labeled “natural” is not supposed to have any artificial flavor and preservatives, and is not to have been processed. However this gives no information on how the animal was raised. Hormones could have been used, the animals could have been fed animal by-products, or the environment where the animal lived could have been bad. “Free range” on poultry is supposed to indicate the animal had outside access while raised. However there are no rules that specify the amount of time allocated outside. “Cage free” is used to show that the birds were never placed in cages. However the birds still could have been in over-crowded rooms and never have gone outdoors. The above environmental labels are regulated by the USDA and only guarantee one aspect of the product, not the whole life cycle of the product. (Misleading Labels, n.d.).

It is important for consumers to be able to trust any of the environmental labels on products. A study done by D, Souza, et. Al. (2006) wished to find the influence ecolabels had on consumers. Their findings indicated that 67.7% of consumers read the labels on products, but only 55.4% were satisfied with the information on the products. With those who were happy with the information on labels, 63.7 % thought the label was accurate and 45.5% found the labels to be understandable. Ecolabels can be a great educational resource for the public, but only if the label is one trusted, and easy to read. If the consumer does not trust the definition of the particular ecolabel, the consumer will no longer purchase the product and their trust will take a long time to gain back. Ecolabels need to be clear and upfront about the message it’s trying to convey.

## **THE ADVANTAGES OF ECOLABELS**

In comparison to the negative aspects of ecolabels, there are more benefits to placing ecolabels on products. Ecolabeling can be a great market tool to give a competitive edge to products. A study done on the comparison of the auctioning of foods labeled “genetically modified” versus foods without the label found that foods without the GM label did not sell as well (Huffman, 2003). With the growing desire for eco-friendly products, a company may experience an increase in sales on the products they place the label on. A study done by D-Souza, et al. (2006) found consumers were willing to spend more on products with environmental labels.

The following two studies suggest consumers are willing to pay a little extra to be informed about the products they are buying. Loureiro, M. L., et. Al. (2002) studied whether consumers would be willing to pay more for apples that were certified by The Food Alliance to have been grown in an environmentally friendly way. Although the prices were raised by only five cents per apple, these researchers found that women with kids, who also have concerns for the environment and food safety, were more likely to buy the apples with ecolabels.

Batte, M.T., et. Al. (2007) studied whether consumers were willing to pay more for processed, organic products that contained multiple ingredients. They surveyed consumers from seven grocery stores and of varying consumer groups. These researchers found that consumers were willing to pay extra for these organic foods. However the amount of consumers willing

varied widely from each group. Consumer group-specific marketing is suggested to try and increase the willingness of the targeted consumers.

Ecolabels are also a good educational tool for consumers. With environmental labels, consumers are educated about the production of the food, if there are any additives, or if it's a meat product, about the conditions in which the animal was raised (Teisl, 1998). If the ecolabel has a clear, concise message, consumers can also learn about the impact products may have on the environment (D'Souza, 2006).

As long as consumers are purchasing the products with the ecolabels, another benefit of these is that it will ultimately help the environment. For example, by only purchasing dolphin-safe tuna, other tuna canning companies were persuaded to revise their fishing methods to maintain a competitive edge on the market. Also, USDA Organic foods are farmed from lands that do not use genetic modification and come from natural ingredients (UNOPS, 2009).

### **A CASE STUDY: DOLPHIN SAFE TUNA**

The dolphin safe tuna label is an example of how consumers can band together to prevent and turn around an environmental disaster. The majority of canned tuna in the United States comes from yellow fin tuna that is caught in the Eastern Tropic Pacific Ocean. Fishermen would catch these fish by following dolphins to the school of yellow fin tuna. As the fishing net was cast out, the dolphins would often get caught up in the net and end up dying. It is estimated that about 100,000 dolphins were killed each year between 1960 and 1972 as a result of the tuna industry. The Marine Mammal Act was passed in 1972 to address this issue, but the dolphin population continued to decrease.

During the 1980s, public awareness grew about the decreasing dolphin population due to tuna fishing practices and as a result there were boycotts on canned tuna. In response, many tuna canning businesses only bought tuna from fishermen who practiced dolphin-safe fishing and created a label to put on the cans declaring no dolphins were killed while collecting the tuna (Figure 2). According to U.S. law, a product can only be labeled "dolphin safe" if no dolphin was killed while capturing the tuna (Teisl, 2002). The study done by Teisl, Roe, and Hicks (2002) showed that the presence of the ecolabel increased the purchase of canned tuna, while similar products were purchased less. The response to the ecolabel wasn't instantaneous, but was gradual overtime.



**Figure 2: U.S. Department of Commerce, Dolphin Safe Tuna Ecolabel**

The effect the dolphin safe tuna ecolabel had on consumers is the same reaction the Roundtable of Sustainable Palm Oil (RSPO) would like their Sustainable Palm Oil label to have. To raise awareness of the palm oil issue and how it's affecting orangutans, the RSPO has produced an ecolabel (Figure 3) for products that use sustainable palm oil. For palm oil to be labeled sustainable, the farmers must use the same land each year to grow the oil palm trees and

harvest the palm oil. The RSPO has a list of requirements the farmers must follow in order for them to be a member of the RSPO (RSPO Principles, n.d.).



**Figure 3: Ecolabel for Products Containing Sustainable Palm Oil.  
The Palm Oil Crisis**

Unfortunately, the rainforest may be without orangutans soon. The populations have plummeted over the last few decades and are estimated to be extinct by the year 2020 (MacKinnon, 2007). This is mainly due to habitat destruction. Many trees have been cut down to grow oil palm trees. These trees produce a highly valuable resource called palm oil. Palm oil is used in baked goods, make up, cleaning supplies, and many other grocery products (Perez, 1997).

The palm oil industry is a very important part of the Indonesian and Malaysian economy, so much so an oil palm leaf is printed on the Malaysian currency. Trying to destroy the entire industry isn't feasible and would have devastating effects on the lives of many people. Instead, conservation organizations are beseeching farmers to not tear down rainforests and to only use the land they already have. This is called sustainable farming. Sustainable farming is a viable solution for the conservation of orangutans: remaining orangutan habitat stays intact and the livelihoods of many people remain safe. (Lam, 2009).

### **WHO IS THE RSPO?**

The Roundtable of Sustainable Palm Oil is an organization dedicated to the environmental regulation of palm oil production and distribution. They have put a lot of effort in developing an ecolabel (Figure 2) for products that contain sustainable palm oil. In June of 2011, a sustainable palm oil label was created and approved for the use on products (RSPO Trademark, n.d.). Some products in the United States that carry this logo are various baked goods from Walmart, Carotino (cooking oil), and The Body Shop (soap) (RSPO Trademark, n.d.). Cheyenne Mountain Zoo also has a list of products that are supposed to contain sustainable palm oil, but does not display the RSPO logo (Cheyenne Mountain Zoo, 2013).

### **THE PALM OIL SUPPLY CHAIN**

Palm oil has a long process to go through before making it on the store shelf. Oil palm trees must be grown before the palm oil can be harvested from the trees. The palm oil must go through a refining process to make it useable to make products. The refined palm oil is then sold off to different companies to be produced into various products. The products are then sold at

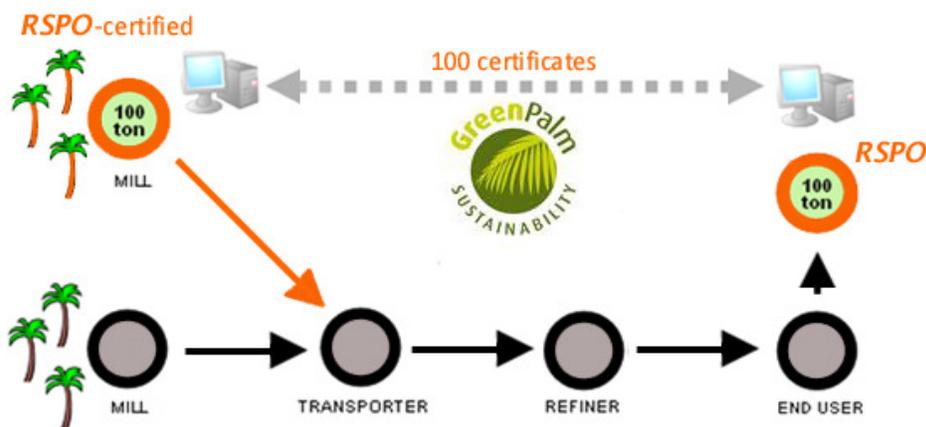
various retailers. There are four types of business that are involved with the palm oil supply chain: producers, traders, manufacturers, and retailers (RSPO: Step 1, n.d.).

Producers cultivate the land, plant oil palms, harvest the fruits, and make crude palm oil. The crude palm oil goes to the traders. The traders will buy and sell it, purify the palm oil, and then store or ship it to the manufacturers. Once the manufacturers receive the refined palm oil, they gather other ingredients to make their product, produce the merchandise, and send it off to the retailers. Retailers will then take the goods, place it on their shelves, and sell it to the consumers (RSPO: Step 1, n.d.).

Manufacturers are the part of the palm oil supply chain that is capable of placing the RSPO Sustainable Palm Oil ecolabel on their products. If a company is interested in including sustainable palm oil in their products, the RSPO has provided three ways for the manufacturers to participate. The three different ways are determined by how the companies would acquire the sustainable palm oil. The supply chains include segregated, mass balance, and book and claim. The three supply chains vary in the reliability of the purity of and the price of sustainable palm oil (RSPO: Step 2, n.d.).

The book and claim supply chain (Figure 4) is when RSPO-certified sustainable producers and unsustainable producers send their product to the same traders. The traders refine, sell, and ship these two palm oils together, and as a result the two may be mixed together (RSPO: Book, n.d.). This is the cheapest source of sustainable palm oil (RSPO: Step 2, n.d.). However because it's not known whether is pure sustainable palm oil, the manufacturer may not use the RSPO logo on their product. Instead they use the GreenPalm Logo, which is shown in Figure 4 (RSPO: Book, n.d.).

### Supply chain system: 'Book & Claim'

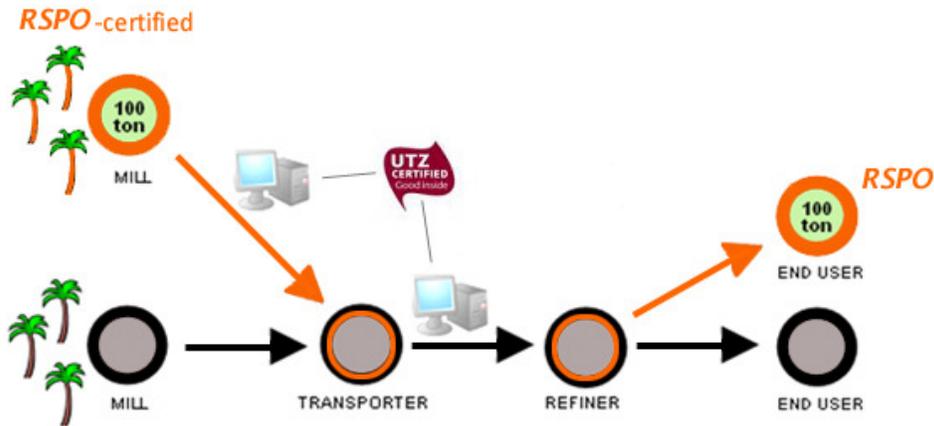


**Figure 4: The Book and Claim Supply Chain**

The next supply chain is called the mass balance (Figure 5). RSPO-certified and uncertified producers send their palm oil to the same trader. Although they try to maintain separation, the traders can only guarantee a 95% chance the palm oil is purely sustainable. While together, the palm oil is monitored to try and prevent mixture of the two, but it's not certain. If the manufacturer claims they sell sustainable palm oil, the amount they claim to sell has to be equal to or less than the amount they bought. The manufacturer may also use the RSPO logo, but

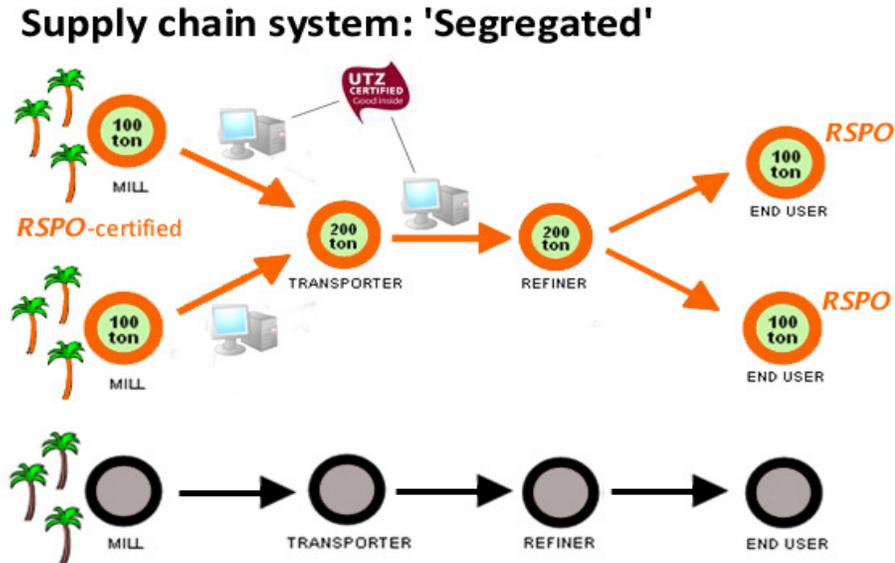
has to tag it as “mixed” (RSPO: Mass Balance, n.d.). This supply chain is more expensive than book and claim, but cheaper than the segregated supply chain (RSPO: Step 2, n.d.).

## Supply chain system: 'Mass Balance'



**Figure 5: The Mass Balance Supply Chain**

The segregated supply chain (Figure 6) is the most expensive source of palm oil, but also guarantees that the palm oil is in fact from an RSPO-certified producer and not mixed with palm oil from an unsustainable producer (RSPO: Step 2, n.d.). During the whole process: refinery, selling, and shipping, the sustainable palm oil is kept separate from the other palm oil. The whole process is closely monitored. The manufacturer can use the RSPO logo on their products and can completely guarantee their customers that the palm oil is sustainable (RSPO: Segregated, n.d.). Once decided which supply chain is best for their company, the manufacturer only needs to get certified through the RSPO or GreenPalm and then buy the palm oil through the chosen supply chain (RSPO: Step 3, n.d.).



**Figure 6: The Segregated Supply Chain**

## CONCLUSION

Ecolabels are flooding the market as the knowledge of the products consumers buy and concern for the environment increase. Ecolabels have both positive and negative aspects, but have been shown to increase the sales of environmentally friendly products. Prices of products have increased due to the extra labeling and costs of organic ingredients, but various consumer groups are willing to pay a little extra to help the environment.

The Roundtable of Sustainable Palm Oil has created an ecolabel for manufacturers to place on their products to tell the customer the product contains sustainable palm oil. Sustainable farming of palm oil is the best option to prevent further destruction of orangutan habitat. Unfortunately not too many products contain this label, but it is hoped with education that more manufacturers will aide in orangutan conservation by buying sustainable palm oil and labeling their product.

## LITERATURE CITED

- Batte, M.T., Hooker, N.H., Haab, T.C., and Beaverson, J. (2007). Putting their money where their mouths are: Consumer willingness to pay for multi-ingredient, processed organic food products. *Food Policy*. Volume 32, Issue 2, April 2007, Pages 145–159.
- Cheyenne Mountain Zoo. (2013). Palm Oil Shopping Guide. Cheyenne Mounain Zoo. Retrieved April 17, 2014, from <http://www.cmzoo.org/docs/palmOilShoppingGuide.pdf>
- D'Souza, Clare, Taghian, Mehdi and Lamb, Peter (2006), An empirical study on the influence of environmental labels on consumers, *Corporate communications: an international journal*, vol. 11, no. 2, pp. 162-173.
- "Food industry challenged to label palm oil" (2012, July).- The Business - ABC News (Australian Broadcasting Corporation). *ABC.net.au*. N.p., Web. 7 Dec. 2012. <<http://www.abc.net.au/news/2012-07-11/food-industry-challenged-to-label-palm-oil/4124980>>.

- Huffman, Wallace E., Jason F. Shogren, Matthew Rousu, and Abeyayehy Tegene (2003). "Consumer Willingness to Pay for Genetically Modified Food Labels in a Market with Diverse Information: Evidence from Experimental Auctions." *Journal of Agriculture and Resource Economics* 28.3: 481-502. Print.
- Lam, M. K., Tan, K. T., Lee, K. T., & Mohamed, A. R. (2009). Malaysian palm oil: surviving the food versus fuel dispute for a sustainable future. *Renewable and Sustainable Energy Reviews*, 13(6), 1456-1464.
- Loureiro, M. L., McCluskey, J. J. and Mittelhammer, R. C. (2002), Will Consumers Pay a Premium for Eco-labeled Apples?. *Journal of Consumer Affairs*, 36: 203–219. doi: 10.1111/j.1745-6606.2002.tb00430.x
- MacKinnon, I. (2007, March 3). Palm oil: the biofuel of the future driving an ecological disaster now | Environment | The Guardian . *Latest US news, world news, sport and comment from the Guardian | guardiannews.com | The Guardian* . Retrieved October 28, 2012, from <http://www.guardian.co.uk/environment/2007>
- Meat&Poultry. " Meat & Poultry | UK makes food labeling rule changes."(n.d.) *Meat & Poultry | MeatPoultry.com*. N.p., 7 Nov. 2012. Web. 6 Dec. 2012. <<http://www.meatpoultry.com/News/News%20Home/Global/2012/11/UK%20makes%20ofood%20labeling%20rule%20changes.aspx?cck=1>>.
- Misleading Labels – Food & Water Watch. (n.d.). Food and Water Watch. Retrieved December 7, 2012, from <http://www.foodandwaterwatch.org/food/cor-labels/misleading-labels/>
- Ottman, J. (1993), *Green Marketing: Challenges and Opportunities for the New Marketing Age*, McGraw-Hill, New York, NY,
- Pérez, R. (1997). African Oil Palm. *Feeding pigs in the tropics* (p. 4). Rome: Food and Agriculture Organization of the United Nations.
- RSPO. (n.d.). RSPO: How to begin. Step 1. Choose your role in the supply chain. Roundtable of Sustainable Palm Oil. Retrieved April 17, 2014, from <http://www.rspo.org/files/begin/howtobegin/index.html>
- RSPO. (n.d.). RSPO: How to begin. Step 2. Choose your supply chain system (Manufacturer).. RSPO: How to begin. Step 2. Choose your supply chain system (Manufacturer).. Retrieved April 17, 2014, from [http://www.rspo.org/files/begin/howtobegin/htb\\_2m.html](http://www.rspo.org/files/begin/howtobegin/htb_2m.html)
- RSPO. (n.d.). RSPO: How to begin. Step 3. Become an RSPO member (Manufacturer, Mass Balance). Roundtable of Sustainable Palm Oil. Retrieved April 17, 2014, from [http://www.rspo.org/files/begin/howtobegin/htb\\_3mm.html](http://www.rspo.org/files/begin/howtobegin/htb_3mm.html)
- RSPO. (n.d.). RSPO: Book & Claim. Roundtable of Sustainable Palm Oil. Retrieved April 17, 2014, from [http://www.rspo.org/files/begin/howtobegin/htb\\_bookandclaim.html](http://www.rspo.org/files/begin/howtobegin/htb_bookandclaim.html)
- RSPO. (n.d.). RSPO: Mass Balance. Roundtable of Sustainable Palm Oil. Retrieved April 17, 2014, from [http://www.rspo.org/files/begin/howtobegin/htb\\_massbalance.html](http://www.rspo.org/files/begin/howtobegin/htb_massbalance.html)
- RSPO. (n.d.). Principles & Criteria Certification FAQs - Roundtable on Sustainable Palm Oil. Principles & Criteria Certification FAQs - Roundtable on Sustainable Palm Oil. Retrieved April 16, 2014, from [http://www.rspo.org/en/principle\\_and\\_criteria\\_certification\\_faqs](http://www.rspo.org/en/principle_and_criteria_certification_faqs)
- RSPO. (n.d.). RSPO: Segregated. Roundtable of Sustainable Palm Oil. Retrieved April 17, 2014, from [http://www.rspo.org/files/begin/howtobegin/htb\\_seggregated.html](http://www.rspo.org/files/begin/howtobegin/htb_seggregated.html)
- RSPO. (n.d.). Trademark Consumer Guide – Roundtable on Sustainable Palm Oil. *RSPO – Roundtable on Sustainable Palm Oil*. Retrieved December 7, 2012, from [http://www.rspo.org/en/trademark\\_consumer](http://www.rspo.org/en/trademark_consumer)

- "RSPO Trademark Usage and Guidelines - Roundtable on Sustainable Palm Oil." (n.d.) *RSPO - Roundtable on Sustainable Palm Oil*. N.p., n.d. Web. 7 Dec. 2012.  
<[http://www.rspo.org/en/rspo\\_trademark\\_usage](http://www.rspo.org/en/rspo_trademark_usage)
- Salzman, Jason. (1997) "Informing the Green Consumer: The Debate Over the Use and Abuse of Environmental Labels." *Journal of Industrial Ecology* 1.2: 11-21. Print.
- Teisl, Mario F., and Brian Roe (1998). "The Economics of Labeling: An Overview of Issues for Health and Environmental Disclosure." *Agriculture and Resource Economics Review* 27: n. pag. *University of Minnesota*. Web. 5 Dec. 2012.
- Teisl, Mario F., Brian Roe, and Robert L. Hicks (2002). "Can Ecolabels Tune a Market? Evidence from Dolphin-Safe Labeling." *Journal of Environmental Economics and Management* 43: 339-359. Print.
- UNOPS. (2009). A Guide to Environmental Labels: for Procurement Practitioners of the United Nation System. *Green the Blue*. Retrieved December 7, 2012, from [https://www.ungm.org/Areas/Public/Downloads/Env\\_Labels\\_Guide.pdf](https://www.ungm.org/Areas/Public/Downloads/Env_Labels_Guide.pdf).
- USDA. (June 2012). What is Organic Certification? *United States Department of Agriculture*. Retrieved April 15, 2014, from <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3004346>
- USDA. (October 2012). Labeling Organic Products. *United States Department of Agriculture*. Retrieved April 15, 2014, from <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3004446>

