



Alliance for Tompotika Conservation
Aliansi Konservasi Tompotika

ALTO Update, June 2022

How We're Connected: Forests, Palm Oil, and You

Editor's note: *How We're Connected* is ALTO's occasional series about the connections between conservation and local communities in Tompotika with the outside world, particularly members of the Global Consumer Class. This is the first of a two-part series about Palm Oil, by ALTO's Senior Science Advisor Galen Priest, PhD.

Part One: The Palm Oil Conundrum

Tropical rainforests are critical for life on Earth. As the "lungs of the planet," they stabilize the global climate by absorbing carbon dioxide, produce oxygen, clean the air and water, and maintain a healthy water cycle. They are also the planet's most biologically diverse terrestrial ecosystem, hosting about half of all the world's species. On a local level, tropical rainforests prevent flooding, offer soil stability and landslide protection, and provide medicine and other products that sustain local communities.

Indonesia is home to the world's third largest tropical rainforest and is the single most biodiverse country in the world. But, as a result of global demand for palm oil, tropical forests in Indonesia, Malaysia, and elsewhere are rapidly being clear-cut, burned, and replaced with oil palm plantations. Currently there are at least 16 million hectares (61,800 square miles) of oil palm plantations in Indonesia, an area larger than the U.S. state of Georgia, or roughly the size of South Korea. In Indonesia alone, 3.1 million hectares (12,000 square miles) of rainforest were destroyed, cleared, and converted to palm oil between 2001 and 2019, and it is estimated that approximately 20% of the total palm oil land is located in illegal areas such as protected forests. While rates of deforestation for palm oil have been slowing in the last decade in Indonesia, the conversion of rainforest to oil palm is ongoing. Many experts are concerned that a recent uptick in palm oil prices paired with signs from the Indonesian government mean rates of conversion may be set to increase.



Lowland areas which are especially precious as wild habitat and agricultural land for farmers are especially vulnerable to conversion for oil palm. This land in Tompotika has been cleared for oil palm planting (left) but was once rich Tompotika tropical rainforest (right). Photos: Kevin Schafer.

Palm oil is extracted from fruits and seeds (kernels) of several palm species, most commonly the African Oil Palm (*Elaeis guineensis*) which has been used as a source of vegetable oil for millennia. In 2021, global palm oil production exceeded that of any other vegetable oil, with 75 million metric tons produced, 68% of which came from Indonesia. Last year, the U.S. accounted for just 2% of global palm oil consumption (1.6 million metric tons), yet this is an astonishing 4.8 kilograms (10.6 lbs) of palm oil consumed for every person in the United States in a single year. Globally, 68% of palm oil is consumed in the form of food products, 27% is used in industrial applications and consumer products such as soaps, detergents, and cosmetics, and the remaining 5% is used for biofuel. It is estimated that around half of all packaged goods in grocery stores contain palm oil in some form. It is now ubiquitous in our food and consumer products, but how, and why, has palm oil become so entrenched in our everyday lives?



In the 1990's health professionals and consumers became increasingly concerned about the health problems caused by consuming trans fatty acids ("trans fats"),

Palm oil is extracted from the fruits and kernels (seeds) of the Oil Palm *Elaeis guineensis*. Photos: T.K. Naliaka (left), Arodi (right).

found mostly in partially hydrogenated vegetable oils. Food manufacturers thus sought a healthier, equally shelf-stable, and cheap alternative to sell to consumers. From a health and commercial perspective, palm oil is an ideal substitute. It is free of trans fats, semi-solid at room temperature, resistant to oxidation and spoiling, odorless and nearly tasteless when purified, and can withstand high cooking temperatures. Palm oil is also cheap and efficient to grow. One hectare of oil palm produces 2.84 metric tons of oil per year, four times the amount of oil per unit of land that can be produced from any other common vegetable oil crop. While palm oil was already being used to some extent in food products, in the late 1990's and early 2000's food manufacturers rapidly replaced unhealthy hydrogenated vegetable oils with palm oil. With demand for palm oil on the rise, developing countries where palm oil is produced saw an opportunity for economic growth. The palm oil boom was on, and Indonesia's expansion of oil palm production made it the largest global producer by 2006.

While palm oil has many desirable qualities for use in food and consumer goods, the problem lies in where and how it is produced. More and more tropical forests, so critical for life on earth, are being destroyed for oil palm plantations. Oil palm grows only in a narrow band of climate along the equator, in areas formerly occupied by the world's tropical rainforests as well as some of the economically poorest human communities. Not only is oil palm replacing the rainforests that stabilize global climate and host much of the world's biodiversity, but fires set to clear land for plantations are releasing hundreds of millions of tons of carbon dioxide from forest and peat carbon sinks, further accelerating global climate change. While a few native species can forage on oil palms and persist in plantations, from a biodiversity standpoint, monocultures of oil palm constitute what some call a "green desert" relative to the productive and diverse rainforests they replace. Shrinking habitat is having drastic impacts on Indonesia's megafauna such as Orangutans, Sumatran Tigers, Pygmy Elephants, Javan and Sumatran Rhinos, and Sulawesi's own Maleo bird. In fact, it is estimated that palm expansion could impact 54% of all threatened mammal species and 64% of all threatened birds worldwide.

The expansion of palm oil is also disastrous for the people who live where it is grown. Despite bringing billions of dollars into Indonesia, for the most part the expansion of palm oil does not benefit the people living in poor rural populations where it is grown. Rampant corruption means that palm oil money is consolidated in the hands of corrupt government officials and wealthy families. Permits for land previously leased to farmers by village authorities, which provided income and food for the rural population, are given to shell companies created under the names of family members and friends of government officials. These shell companies then sell the leases to oil palm conglomerates, grabbing the land away from rural farmers to enrich the shell company owners. Villages and smallholders are powerless as the state-issued palm plantation permits trump all previous land use agreements. In some instances, farmers have no knowledge that their land rights have been sold out from under them until bulldozers and armed security guards arrive to level their crops and homes.



Rainforests are often illegally clear-cut to make way for palm oil plantations throughout Indonesia (left). Farms and forests which once supported rural people and wildlife are turned to palm oil estates. For formerly self-sufficient farmers turned plantation laborers, the wages are low and the work is back-breaking (right). Photos: AD Partners (left), Hursutimbul (right).

Farmers and local people who do own land may be offered compensation by palm oil companies to buy their land. But agreements are often brokered using deceptive tactics, including promises to share profits or to set aside portions of the established palm plantation for the original owners to farm themselves. More often than not, such promises go unfulfilled, and local people simply lose their land. Some who lose their self-sufficiency and livelihoods may go to work on the palm oil estates as day laborers, but the wages are low, with higher-paying jobs in the palm estates going to more specialized outsiders. Those in poor rural communities who choose not to work for the palm plantations have little alternative but to clear additional land (often illegally) in order to reestablish subsistence farms or their own small palm oil plantation.

So, what can YOU do about the palm oil conundrum? Worldwide, oil palm is here to stay: switching to a different vegetable oil would likely require even more land and cause more environmental destruction. On the grand scale, as with most environmental problems, controlling worldwide human population will help. Individual consumers, however, can commit to using only truly sustainable, conflict-free palm oil (more on this in Part Two), reducing or completely avoiding consumption of conventionally-produced palm oil. Though sometimes a bit of a challenge, the key here is heightened attention to label-reading and a healthier lifestyle.

Palm oil is estimated to be in half of all packaged goods at our grocery stores. Yet, if you look at the products in your home or at the store you won't always see the words 'palm oil' among the ingredients. This is because palm oil may be labelled generically, as "vegetable oil," or, more commonly, it is refined into derivatives. These derivatives account for about 60% of all palm oil consumed, and go under hundreds of different names. To complicate matters further for the responsible consumer, some of these derivatives can be sourced from any of the common vegetable oils, though palm oil is the dominant vegetable oil on the market, making it the most likely source. Common palm oil derivatives include any substance that includes the words "palm" or "kernel" such as Palmolein, Etyl Palmitate, and Sodium Kernelate; and most products using the root words -stear-, -laur-, and -glyc-. A few examples include Stearate, Sodium Laureth/Lauryl Sulfate, and Glycerin/Glycerol. Such additives are ubiquitous on store shelves;

for virtually all products that include these ingredients, however, so-called "natural" or alternative products are available that avoid the palm oil ingredients. Read the labels.

And here's the good news: the consumer changes we can make to solve the oil palm conundrum are the same changes in our consumption habits that we already know will support healthier bodies and a more just economy. Reducing your personal palm oil consumption can be seen as yet another reason to make those win-win changes: cut back on all pre-packaged and processed foods. Buy more fresh and locally-produced food. Consume more fresh fruits and vegetables. These actions are not only healthier for you and more environmentally friendly in general, but they will also drastically reduce the amount of palm oil you consume. Also, carefully reading the labels and monitoring your use of soaps, shampoos, and detergents is another way to reduce your personal palm oil consumption while simultaneously reducing a critical source of pollution in aquatic habitats. For those of us in the Global Consumer Class, whenever possible, we should try to simply use less, and avoid waste. By being aware and reducing our consumption we can help curb the rate of palm oil expansion, reducing the rate of tropical deforestation.

In Part Two of this series, next month, we will look at palm oil sustainability certification schemes, other efforts to rein in environmental and human abuses in the palm oil industry, and how consumer pressure from people just like you has already helped enormously, and can make a big difference going forward.

Alliance for Tompotika Conservation

21416 – 86th Ave. SW
Vashon, WA 98070
206-463-7720
info@tompotika.org