

Food for thought

Palm oil is found in more than 50% of the products in most supermarkets. **Liz Sheffield** examines the effects its production has on forests and their inhabitants



AWHELI/ADOBE STOCK PHOTO

During June you may have seen the video that went viral — ‘orangutan filmed trying to fight off digger destroying its jungle home’. The video added to the growing realisation that products used in our daily lives can have devastating effects on habitats thousands of kilometres away. Now *Iceland* is campaigning for an ‘orangutan friendly Christmas’ but has been denied permission to screen the advert for the campaign, sending the advert viral on social media. *Iceland* has banned palm oil from its products from the end of 2018 — but is this approach really the answer to saving the orangutan and its habitat?

How do we get palm oil?

Palm oil has been extracted from the fruits of palm trees and used in cooking for at least 5000 years. The Industrial Revolution boosted its use as a lubricant, and the last century saw its increasing use as the basis of cleaning products, cosmetics, foodstuffs from cake to pizza, and biofuel. Demand has soared, and production has kept pace — but not via sustainable harvesting of existing trees. All over Africa and Asia,

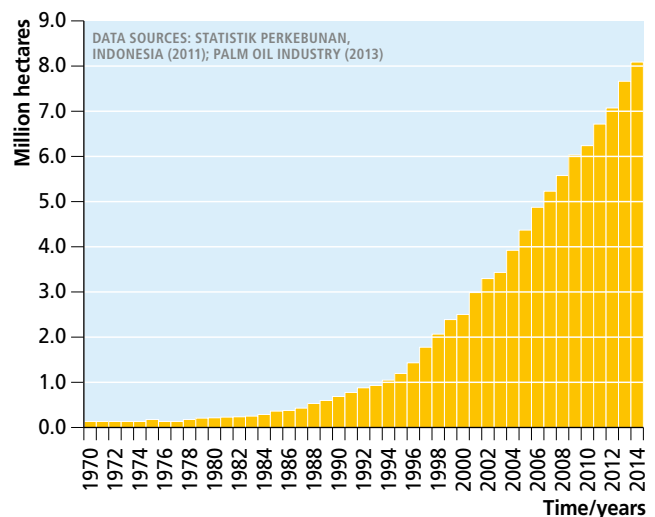


Figure 1 Indonesia's historical oil palm area

forests have been cleared, peat burned, and oil palm trees planted to keep up with demand. Indonesia is now the top producer — output increased by over 400% between 1994 and 2004, to over 8.66 million metric tonnes — thanks to an exponential increase in plantations (see Figure 1).

These plantations have replaced natural forest but

are monocultures — vast tracts of a single species — unsuitable habitat for primates and extremely low in biodiversity. The orangutan population in Borneo was estimated to have halved in just 16 years (1994–2015) and the species is now listed as critically endangered. The greatest losses are in regions where the forest has been cut down or peat burned to make way for plantations. Additional animals are killed by hunters who venture into the forest (for bushmeat and to obtain youngsters for the pet trade), and by farm workers when the apes encroach on agricultural land.

What is being done?

One approach, being used in Indonesia, is a moratorium on new licences to grow oil palms. Unfortunately, however, corruption in relation to issuance of licences is rife, illegal forest clearance continues, and 'evidence' that this measure is working does not stand up to scientific scrutiny. An alternative approach is to promote the use of sustainable oil palm harvesting. In 2004, the World Wide Fund for Nature set up the Roundtable on Sustainable Palm Oil (RSPO), with industry partners and socio-environmental organisations. Unfortunately, however, recent research concluded that 'No significant difference was found between certified and non-certified plantations for any of the sustainability metrics...' and that 'RSPO principles and criteria are in need of substantial improvement and rigorous enforcement'. Lastly, as advocated by *Iceland*, is encouragement for consumers to boycott products containing palm oil. While this might look like the best solution, this approach would currently have its own environmental consequences, as oil palms are the world's most efficient oil-producing plants (see Figure 2).

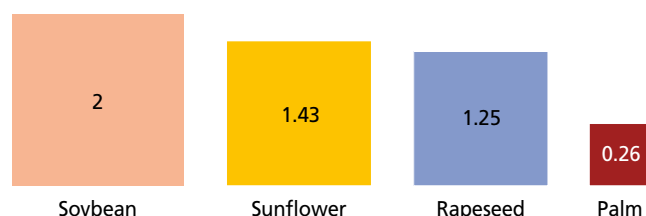


Figure 2 Area of land (hectares) required to produce 1 tonne of different oils

Research into alternatives to conventional oil production might offer a ray of hope. For example, one yeast is capable of yielding oil on an industrial scale. *Metschnikowia pulcherrima* is highly adaptable, growing well on a huge variety of substrates, including food and agricultural waste, in open tanks (which could be stationed on waste ground or in urban settings which would not sacrifice agricultural land). Here's hoping research of this type bears fruit soon!

Activities

- 1 Celebrities and the UK environment minister have praised *Iceland's* advert, and many members of the public are urging other supermarkets to ban oil palm-containing products. Debate the issues raised with your family and friends.
- 2 Look at the media currently providing messages about palm oil (e.g. www.youtube.com/watch?v=pc3z8gepDUg) and come up with your own rap, or blog to suggest what people could do to minimise the environmental impact of the products they use.

Further reading

'Despite government claims, orangutan populations have not increased', *ScienceDaily News*, 5 November 2018: <https://tinyurl.com/ybf3ym6y>

'"Sustainable palm oil" may not be so sustainable after all', ABC News Australia:

<https://tinyurl.com/yd3558st>

'People, palm oil, pulp and planet: four perspectives on Indonesia's fire-stricken peatlands', *The Conversation*, 10 August 2017:

<https://tinyurl.com/yaps7qp2>

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