Flying planes with palm oil? Oil palm companies could be the ultimate winners from ICAO's "alternative fuel" plans

From 11th to 13th October, Mexico City will be hosting a High-Level "Conference on Aviation and Alternative Fuels" convened by the International Civil Aviation Organisation (ICAO). ICAO is a specialised UN organisation with a long record of representing the interests of the aviation industry, i.e. airlines and aircraft manufacturers.

Ahead of the conference, ICAO's Secretariat has published a proposed "Vision" which would see enormous amounts of agrofuels burned in planes in the future: 128 million tonnes a year by 2040 and 285 million tonnes by 2050 [1]. By comparison, around 82 million tonnes of agrofuels were used in total during 2016 [2].

The volumes proposed by the ICAO Secretariat appear wholly unrealistic: airlines are highly sensitive to fuel costs and it is very rare for any agrofuels to reach price parity with fossil fuels. Right now, the cheapest agrofuels for aviation cost almost three times as much as petroleum-based kerosene [3] – which is far more than agrofuels used for cars. ICAO's Secretariat is backing industry calls for subsidies, but there will be a limit to the amount of subsidies states are willing to pay or pass on to passengers. However, as explained below, much cheaper aviation agrofuels could soon come on the market, suitable for blends up to 15 per cent.

Nonetheless, the ICAO proposals could, if adopted, cause very serious harm, with the aviation industry and oil palm companies as the only winners:

1) ***It will legitimise airport expansions worldwide, which will mean more greenhouse gas emissions as well as more air and noise pollution***.

The aviation industry's – and ICAO's – interest in agrofuels stems from the quest for never-ending rapid growth. Greenhouse gas emissions from international aviation grew by 87 per cent from 1990 to 2014, faster than those of almost any other sector [4]. The industry expects the volume of air travel to almost double by 2035 [5]. Growth rates far exceed the potential for efficiency improvements, and there are no techno-fixes on the horizon which would allow planes to fly without burning liquid fuels. In order to deflect demands for genuine curbs to emissions and thereby growth, ICAO has endorsed the industry's concept of future "carbon neutral growth". This relies primarily on aviation carbon offsets – widely condemned by over 100 civil society groups last year [6] - and on agrofuels, which are falsely classified as "carbon neutral".

2) ***Any large-scale use of aviation agrofuels will have to rely on palm oil*.**

As a new report by Biofuelwatch [7] will show, the only type of agrofuels which are suitable for planes and which could be produced in substantial amounts without technical problems are ones made from Hydrotreated Vegetable Oil (HVO). Aviation fuels from sugar, wood, or algae are talked about but remain in the realm of science-fiction, even if tiny quantities have been produced at exorbitant costs. HVO relies on technology and infrastructure developed for oil refineries. During 2016, it accounted for

4 per cent of global agrofuel production, but grew more than ten times as fast as agrofuels overall [8]. At present, HVO fuels for planes are substantially more expensive than HVO diesel used in cars. However, companies expect that the cheaper HVO diesel will soon be approved for up to 15 per cent blends with petroleum-based jet fuel, which means that simply extending existing agrofuel subsidies to aviation could be enough to create a significant new market. Feedstock accounts for 60-80 per cent of the cost of HVO fuels, and palm oil is by far the cheapest, apart from waste cooking oil and animal fats, which are in scarce supply. Moreover, the actual refining process is cheaper for palm oil than for other vegetable oils.

As I wrote in WRM May's bulletin [9], HVO production has been responsible for the steep increase in palm oil use in EU agrofuels in recent years, so if airlines were to start using it on a large scale, too, palm oil use would inevitably grow further.

So far, airlines have avoided using palm oil on any of the limited number of flights with agrofuel blends, because they fear bad publicity. ICAO will certainly not come out publicly 'endorsing' palm oil. Yet, it is impossible to see how aviation agrofuels could be scaled up without using palm oil.

One option for getting palm oil into plane engines is being pursued by the largest HVO producer, Neste Oil: Neste controversially classifies a fraction of crude palm oil as a "residue" [10], and it refuses to disclose how much of its "78% wastes and residues" consist of such palm oil. At the same time, Indonesia and Malaysia have stepped up pressuring the EU not to "discriminate" against palm oil in agrofuels, using and threatening to use trade negotiations and agreements to protect their growing markets [11]. Once an aviation agrofuel market exists, similar pressures and tactics can be expected.

3) ***Even if a new market for aviation agrofuels remains small, the mere hype about it could trigger more land-grabbing for and investment in palm oil*.**

Hype about a future market can have just as severe impacts as actual demand. Thus, NGO ActionAid found that by May 2013, European investors had acquired 6 million hectares of land in sub-Saharan Africa for agrofuel production for the EU. Yet the EU has imported hardly any agrofuel feedstock from Africa. Land grabbing on such a vast scale was legitimised and incentivised by a mere "promise" of future demand.

Opposing the push for aviation agrofuels – both in ICAO and in different countries and regions – will thus be vital to prevent yet another market for palm oil emerging and fuelling plantation growth. At the same time, it is important for civil society not to inadvertently play into the hands of plantation companies by exaggerating the likely scale of such a future market and thus contributing to the hype about it.

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Biofuelwatch, http://www.biofuelwatch.net/

[1] Proposed ICAO Vision on Aviation Alternative Fuels, 2017, https://www.icao.int/Meetings/CAAF2/Documents/CAAF.2.WP.013.4.en.pdf

[2] BP Statistical Review of World Energy, June 2017, bp.com/content/dam/bp/en/corporate/pdf/energy-economics/statistical-review-2017/bp-statistical-review-of-world-energy-2017-renewable-energy.pdf

[3] Sub Group on Advanced Biofuels, European Commission, February 2017, platformduurzamebiobrandstoffen.nl/wp-content/uploads/2017/07/2017_SGAB_Cost-of-Biofuels.pdf

[4] National greenhouse gas inventory data for the period 1990-2014, UNFCCC, http://unfccc.int/resource/docs/2016/sbi/eng/19.pdf

[5] IATA Forecasts passenger demand to double over 20 years, October 2016, http://www.iata.org/pressroom/pr/Pages/2016-10-18-02.aspx

[6] International Civil Society Statement, September 2016, fern.org/sites/fern.org/files/Final_September.pdf

[7] Biofuelwatch's report on aviation biofuels will be available at biofuelwatch.org.uk/2017/aviation-biofuels from 6th October 2017

[8] Renewables 2017, Global Status Report, http://www.ren21.net/wp-content/uploads/2017/06/17-8399_GSR_2017_Full_Report_0621_Opt.pdf

[9] Manufactured Demand: The policy drivers behind the relentless growth of palm oil, WRM Bulletin 230, April-May 2017, wrm.org.uy/articles-from-the-wrm-bulletin/section1/manufactured-demand-the-policy-drivers-behind-the-relentless-growth-of-palm-oil/

[10] Palm Fatty Acid Distillate (PFAD) is the non-edible portion of crude palm oil, which would otherwise be used for soaps, cosmetics, etc.

[11] Palm oil for fighter jets, Euractiv, September 2017, euractiv.com/section/biofuels/news/palm-oil-for-fighter-jets-under-eu-attack-producers-seek-alternatives/