

# Rainforest deforestation in Papua, Indonesia

Sentinel-1 CSAR IW acquired on 09 November 2014 from 09:02:15 to 09:02:44 UTC

Sentinel-2 MSI acquired on 07 March 2017 at 01:07:21 UTC

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Sentinel-2 MSI acquired on 20 February 2018 at 01:07:21 UTC

Sentinel-1 CSAR IW acquired on 22 April 2018 from 09:02:48 to 09:03:13 UTC

Author(s): Sentinel Vision team, VisioTerra, France - [svp@visioterra.fr](mailto:svp@visioterra.fr)

Keyword(s): land, forestry, rainforest, deforestation, climate change, illegal logging, peatland, agriculture, Papua, Indonesia



[2D Layerstack](#)

Fig. 1 - S1 (22.04.2018) - vv,vh,ndi(vh,vv) colour composite - South-east of the West Papua region, next to Papua New Guinea.

[2D view](#)

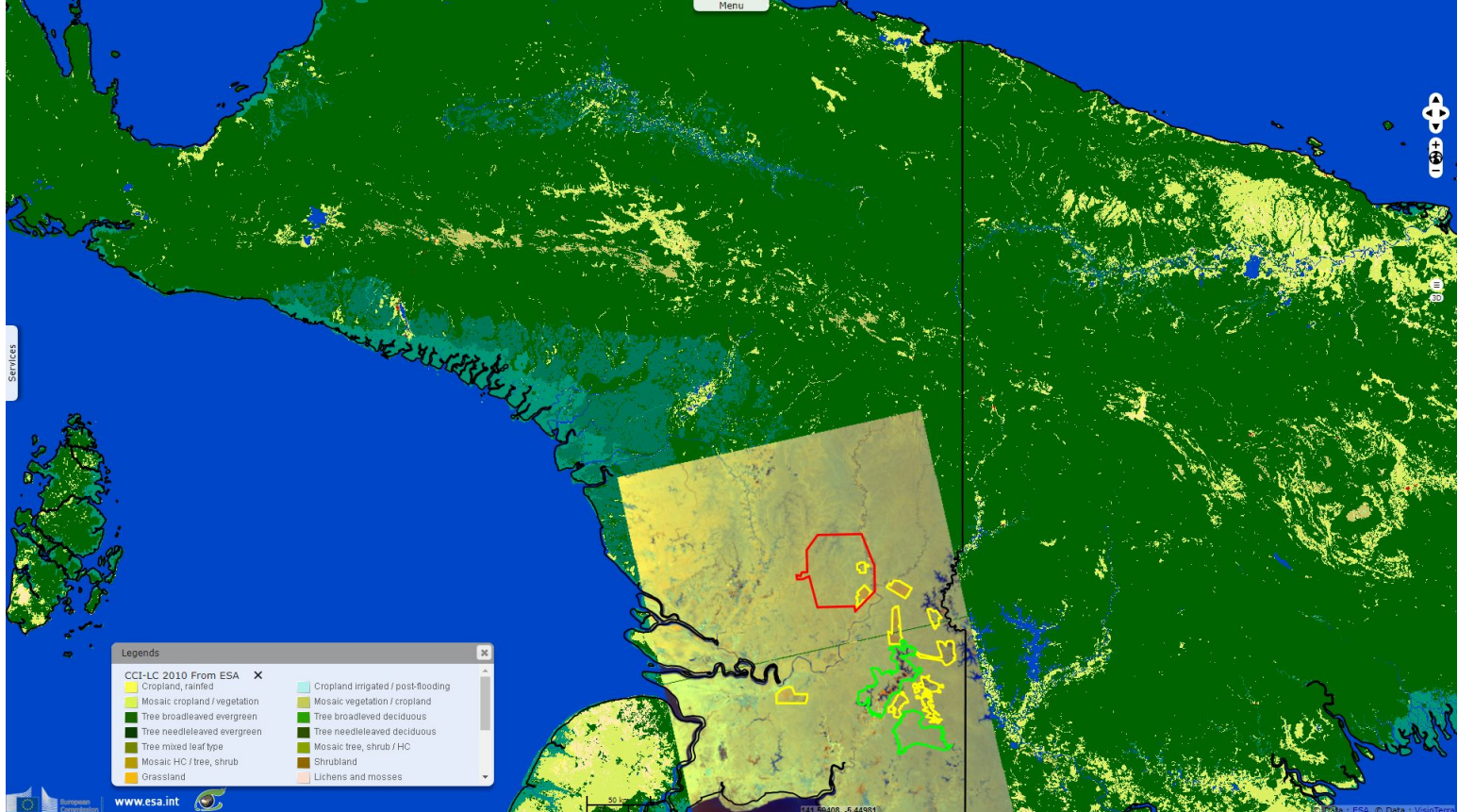
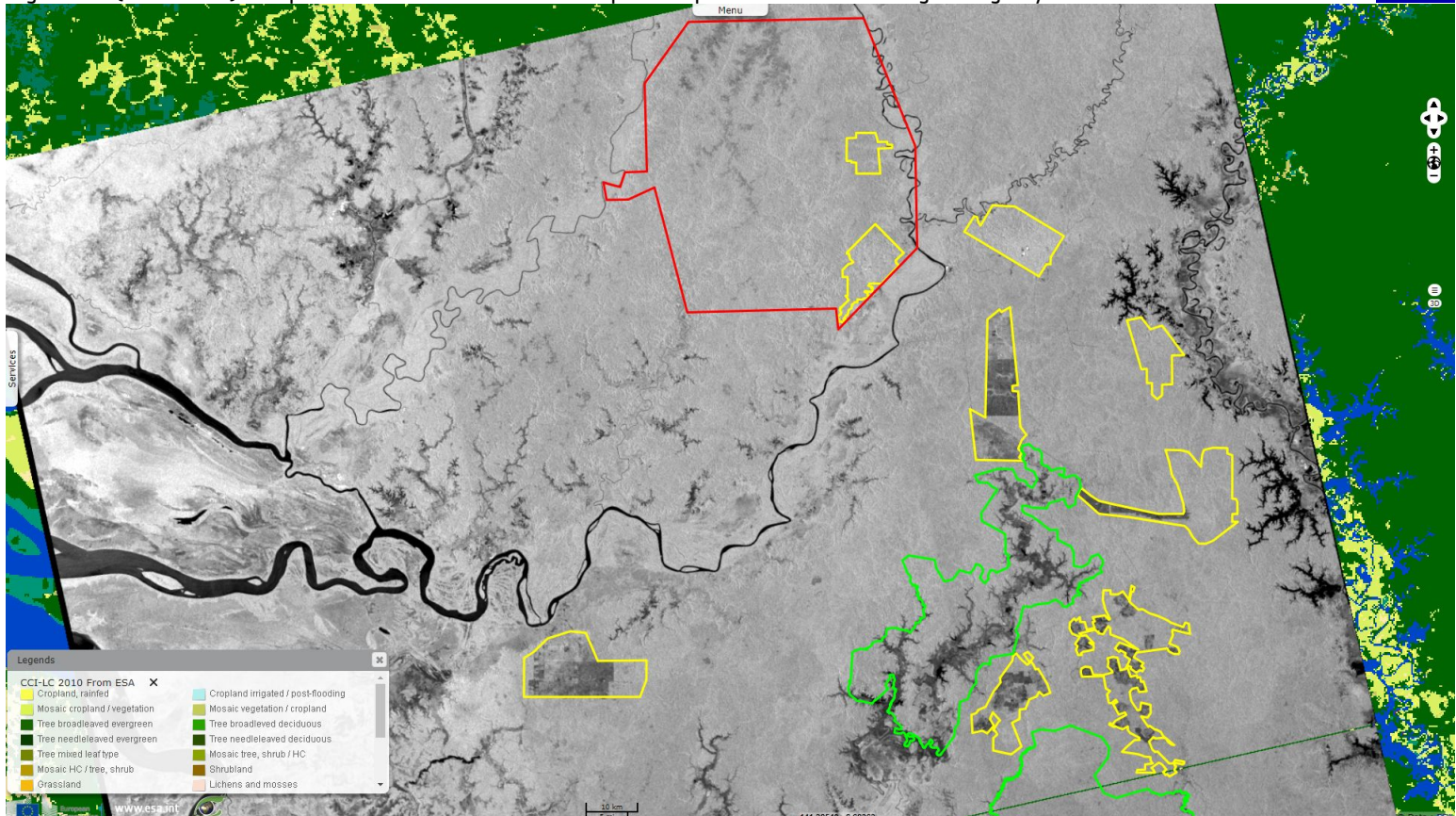


Fig. 2 - S1 (09.11.2014) - vv polarisation - Zoom in on several palm oil plantations in Boven Digoel Regency.

[2D view](#)



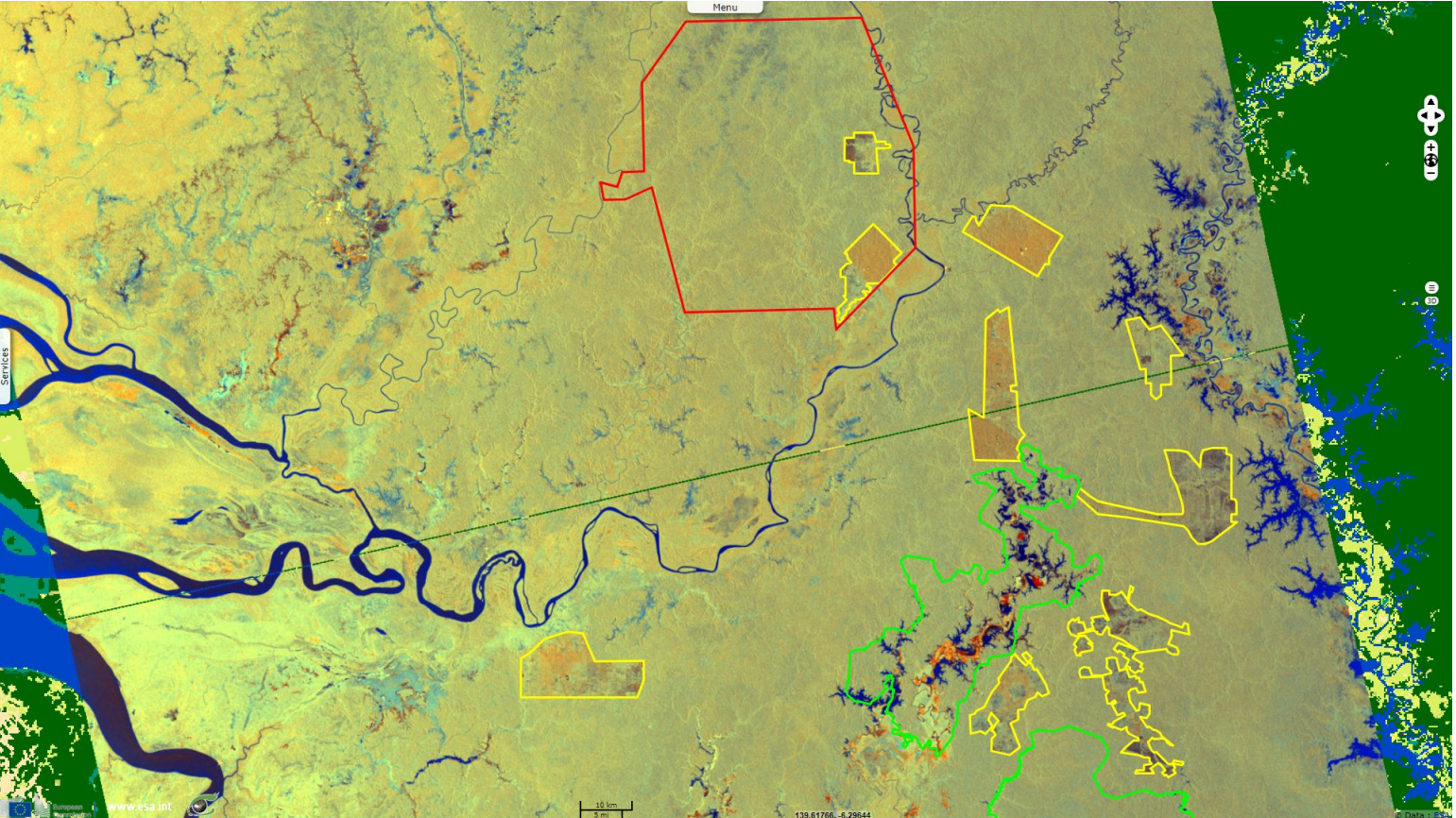
In the above figures, the approximative area of the exploitation permits is shown in red, green locates natural reserves while palm oil exploitations and encased in yellow.

In the article *New deforestation revealed as Indonesian minister arrives in EU to defend palm oil industry* released the 27.04.2018, Greenpeace International [disclosed](#): "A palm oil supplier to Mars, Nestlé, PepsiCo and Unilever is destroying rainforests in the Indonesian-ruled Papua region, a new investigation by Greenpeace International has revealed. Satellite analysis suggests that around 4000ha of rainforest were cleared in PT Megakarya Jaya Raya concession between May 2015 and April 2017 – an area almost half the size of Paris. The findings come as a delegation from the Indonesian government arrived in Europe last week to defend the palm oil industry, in response to moves by European Parliament to discourage the use of palm oil in biofuels on environmental grounds, Greenpeace International reports."

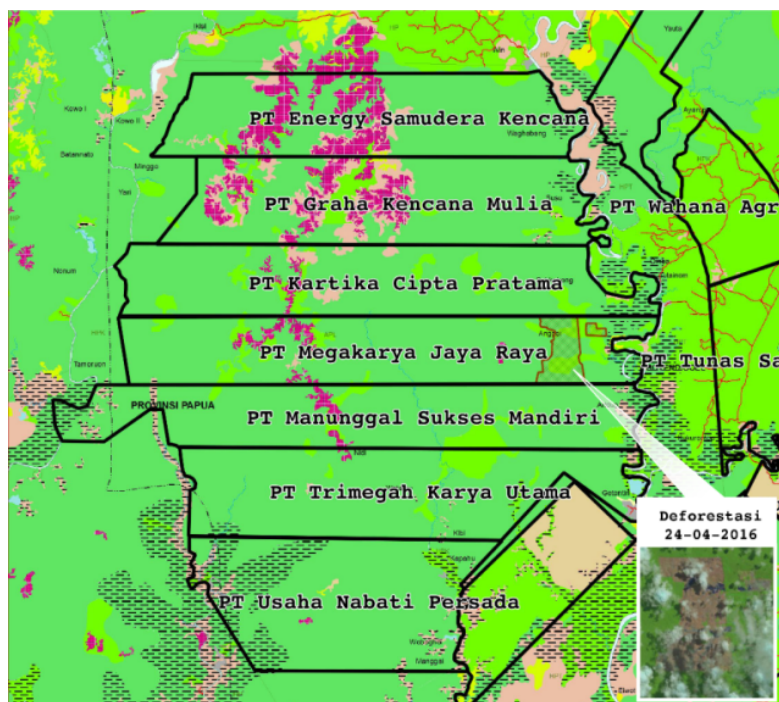
Luhut Panjaitan, the Coordinating Minister for Maritime Affairs of Indonesia, is visiting several European cities, including Brussels and Berlin. 'After destroying much of the rainforests of Sumatra and Kalimantan, the palm oil industry is now pushing into new frontiers like Papua', said Richard George, forests campaigner at Greenpeace UK. 'If the Indonesian government wants to defend this industry, the best thing it can do is to force it to clean up its act, not threaten to start a trade war.' said Richard George, forests campaigner at Greenpeace UK."

Fig. 3 - S1 (22.04.2018) - vv,vh,ndi(vh,vv) colour composite - Zoom in on several palm oil plantations in Boven Digoel Regency.

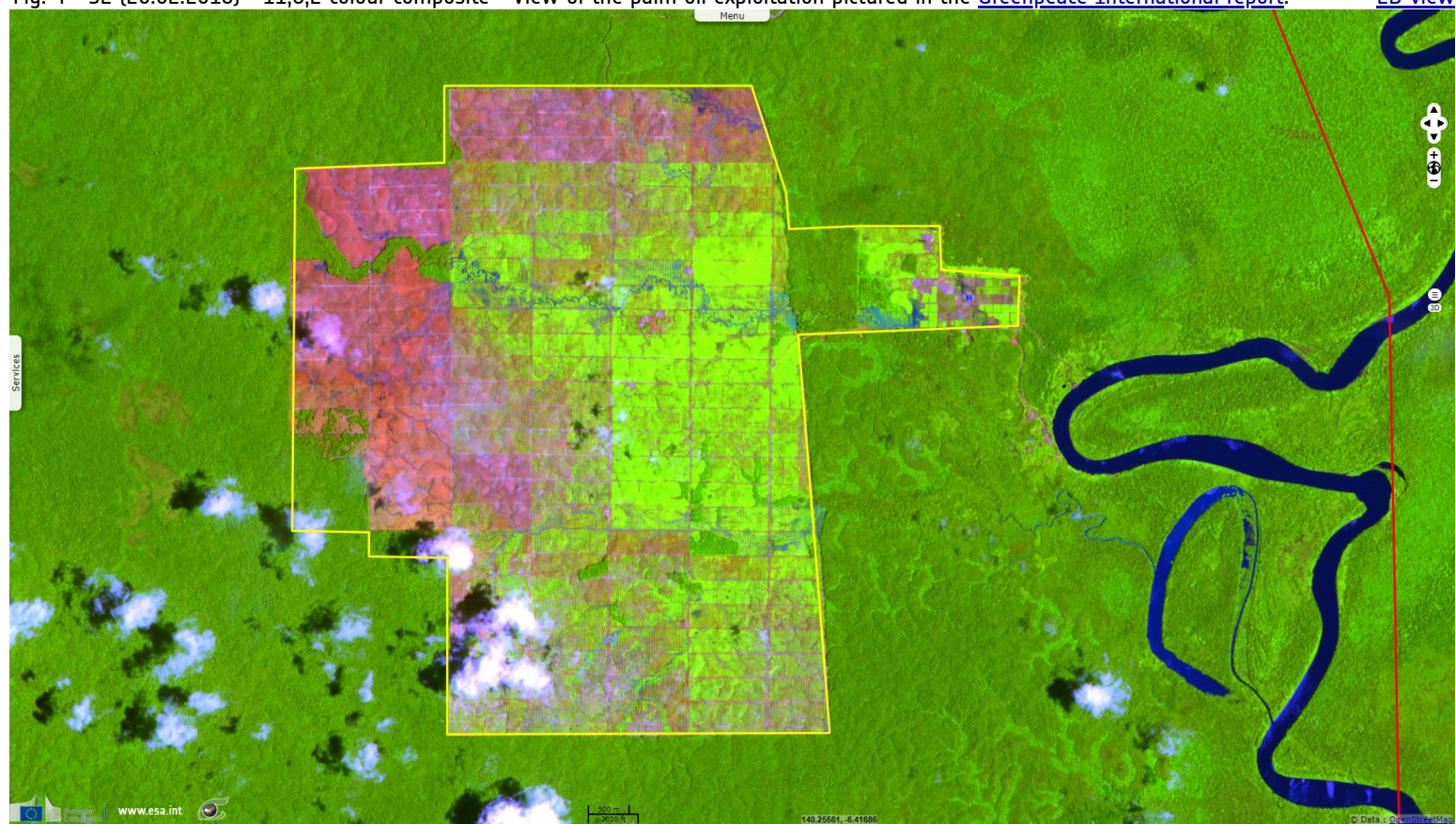
[2D view](#)



According to Awasi MIFEE for [westpapuamedia.info](#): "the Boven Digoel Regency Head, Yusak Yaluwo, issued the initial location permits in July 2010, three months after being arrested on unrelated corruption charges." " He was officially removed from his post in May 2013, but wasn't formally replaced by his deputy until June 2014."



Some of the permits allocated in Boven Digoel Regency - source: Awasi MIFEE for [westpapuamedia.info](#)

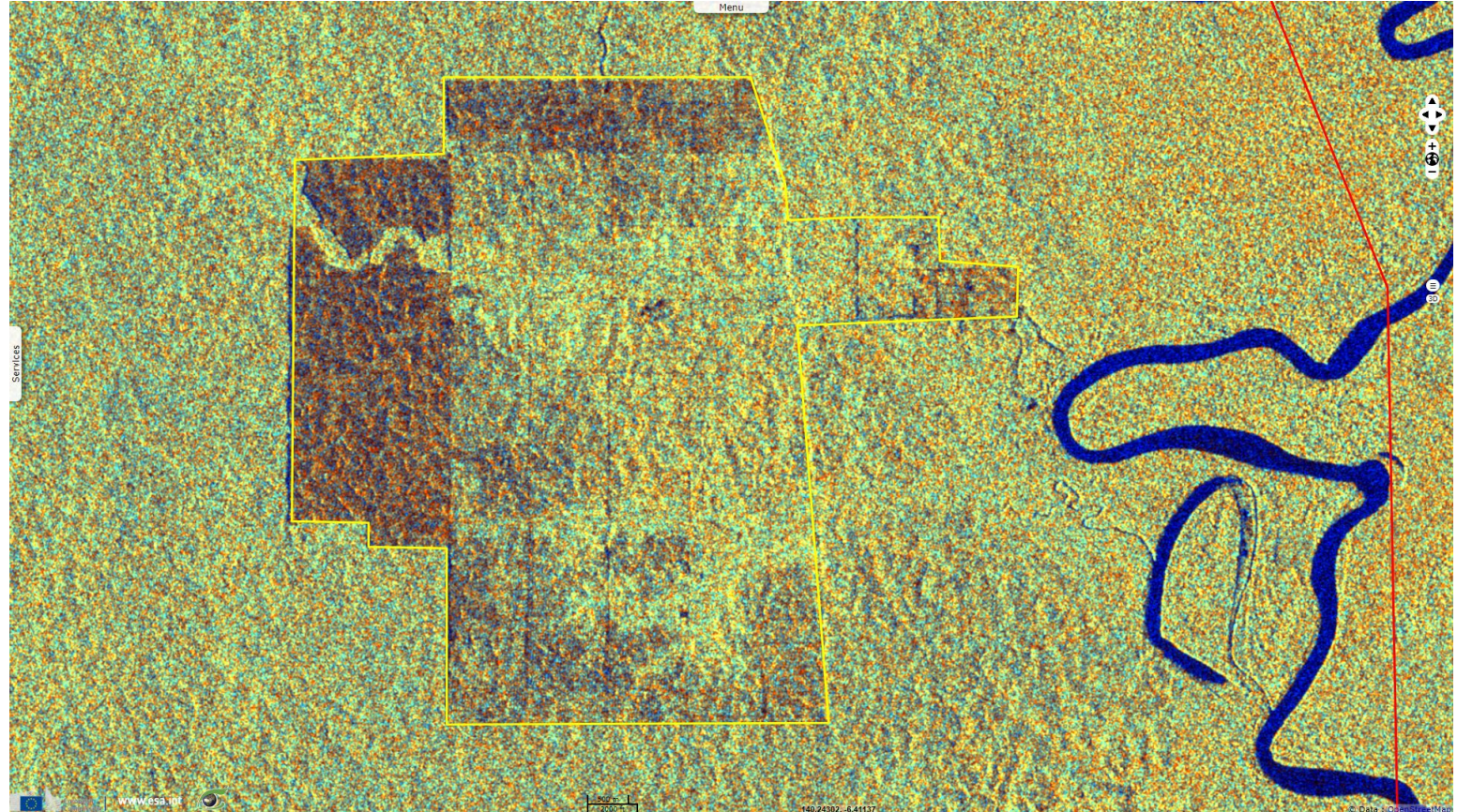


Greenpeace International [added](#): "Although PT MJR is not yet producing palm oil, two other HSA subsidiary companies – Arma Group and Pacific Oils & Fats – supplied palm oil to Mars, Nestlé, PepsiCo and Unilever, according to supply chain information released by the brands earlier this year. Each of these consumer companies has published a 'no deforestation, no peat, no exploitation' policy that should prohibit sourcing from rainforest destroyers. 'Brands have been talking about cleaning up their palm oil for over a decade. Companies like Unilever and Nestlé claim to be industry leaders,' said Richard George. 'So why are they still buying from forest destroyers like the HSA group? What are their customers supposed to think? What will it take to get them to act?'"



Logging & oil palm plantation in PT Megakarya Jaya Raya concession - source: Ilet Ifansasti for [Greenpeace](#)

Fig. 5 - S1 (22.04.2018) - vv,vh,ndi(vh,vv) composite - View of the palm oil exploitation pictured in the [Greenpeace International report](#). [2D animation](#)



In his article for World Resources Institute (WRI) "*Drivers of Deforestation in Indonesia, Inside and Outside Concessions Areas*", Arief Wijaya wrote: "*Deforestation in Indonesia is an old tale. While various studies suggested that oil palm plantations are obvious culprits of deforestation, others attempt to show otherwise. Recent media reports in Indonesia cited a study suggesting that oil palm does not drive deforestation since the plantations were not converted from forests - which is somewhat misleading. Critics fault pending legislation on palm oil as overly lenient on big companies and a potential threat to forest sustainability.*"

This article reports "*data from Global Forest Watch shows that 55% of forest loss occurs inside legal concession areas, where removing trees is allowed to some extent, but 45% of forest loss took place outside legal concession areas. Inside Concessions, nearly 1.6 million hectares and 1.5 million hectares of primary forests – an area larger than Switzerland - were converted to oil palm and wood fiber plantations respectively*" while the article estimates forest loss outside concessions around 3.6 million hectares since 2000.

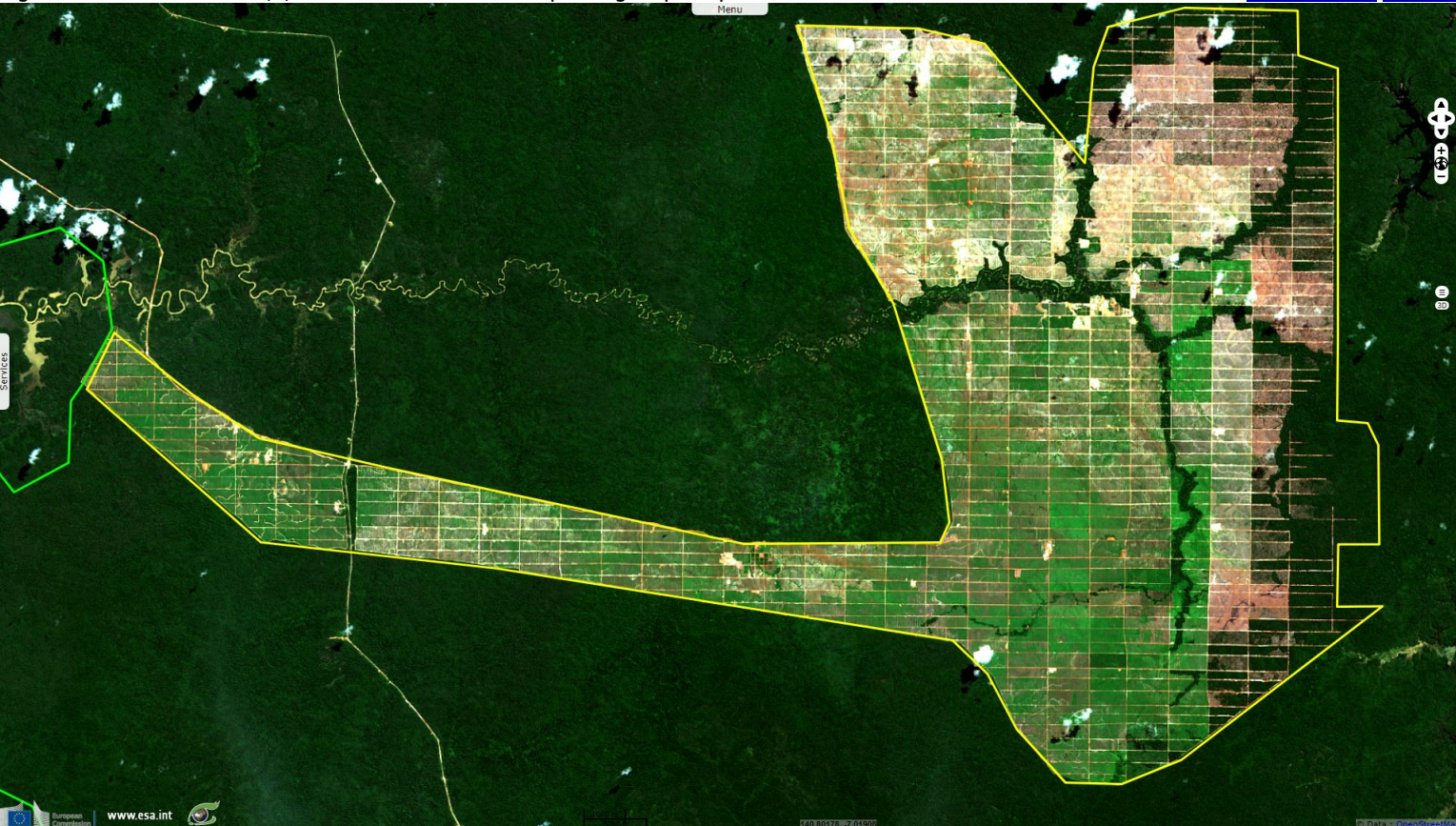
Fig. 6 - S2 (24.12.2017) - 11,8,2 colour composite - Quick growth of multiple oil palm plantations around villages. [2D animation](#) [2D view](#)



Arief Wijaya makes the [following assumption](#): "*Much of this loss might come from those licensed concession holders who cultivate more area than the permit allows, or from excessive timber harvesting that leads to deforestation. The forest loss may also be driven by the vast network of small*

oil palm plantations operated by smallholder farmers who produce nearly 40% of Indonesia's stock. Lack of data or official records about these farmers suggests that they operate outside of established concessions. Recent analysis also shows that forest loss outside the concessions was largely due to conversion of forested land to oil palm plantations."

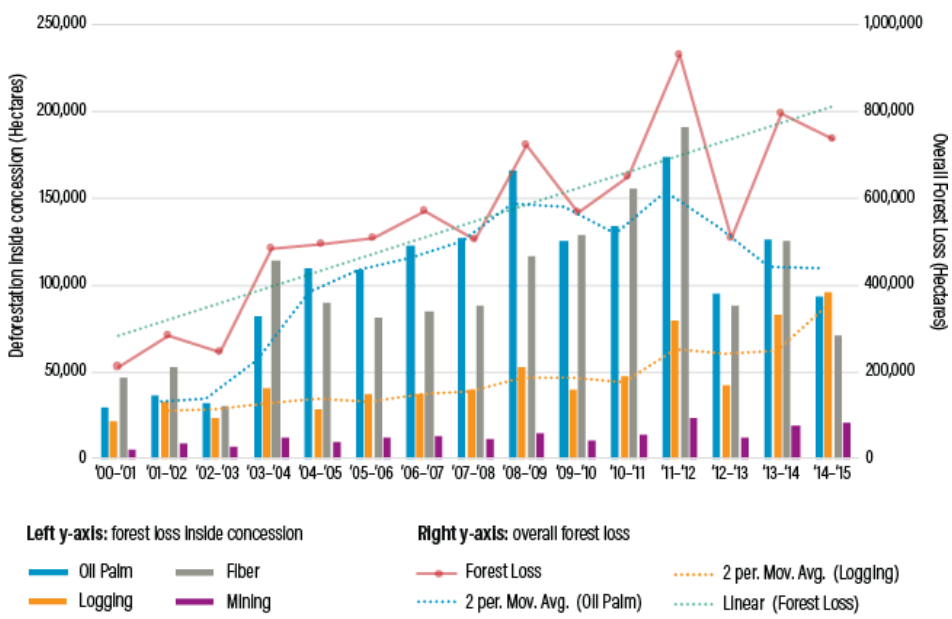
Fig. 7 - S2 (03.05.2017) - 4,3,2 natural colour - A fast expanding oil palm production area that now exceeds 230km<sup>2</sup>. [2D animation](#) [2D view](#)



In his article "Palm oil versus paradise in Papua", Nils Zimmermann [reminds the stakes](#): "Most of Indonesia's other islands, like Sulawesi, Kalimantan and Sumatra, have already been largely deforested. But on West Papua, 80% of the natural forest is still intact. And for loggers and oil palm plantation corporations, these territories are the commercial frontier, where land not yet 'in production' is up for grabs. More than 27.6 million hectares of a total of 34.6 million hectares of forest in West Papua have been designated as 'production forest' - that is, slated for logging or conversion to palm oil plantations."

It isn't enough for individual corporate buyers of palm oil to claim they won't buy palm oil from freshly deforested areas, because their supply-chain monitoring is too lax: 'We urgently need a transparent, systematic approach, as well as further action by government and prosecutors.' said Deborah Lapidus, a campaigner with [Mighty Earth](#), a new global environmental campaign launched by the Washington-based Center for International Policy with partners in Korea and Indonesia."

### Forest Change in Indonesia by Concessions Type



Weight of the main divers of deforestation in Indonesia - source: Arief Wijaya for [World Resources Institute](#)

Fig. 8 - S2 (03.05.2017) - 4,3,2 natural colour - A fast-developing network a roads & small clearings near a plantation. [2D animation](#) [2D view](#) [2D view](#)



Finally, the WRI article [offers](#) several approaches to combine local economic development and sustainability: "First, government agencies could provide most of the sustainability components required by RSPO and ISPO certification, thus lowering costs for farmers. For instance, the country's agricultural agency could provide trainings on best farming practices, the regional office of the labor department could offer health and safety trainings, and the environmental agency could conduct sustainability trainings."

"Enforcing moratorium and expanding the scope of the moratorium to include secondary natural forests that are still high in carbon stocks and biodiversity would be critical not only to prevent forest loss outside concessions but also to prevent substantial carbon emissions from being released.

Finally, given previous studies that suggest that companies often cultivate more area than they should have, strengthened law enforcement to prevent or drastically reduce illegal logging and trade as well as improved monitoring of companies' annual implementation plan (RKT) are critical to tackle forest loss and reduce carbon emissions."

*The views expressed herein can in no way be taken to reflect the official opinion of the European Space Agency or the European Union.*

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