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***The Indonesia's pulp sector has achieved an 85% reduction of deforestation since 2011, but remains dependent on carbon-intensive peatland plantations***

**New Trase data shows Indonesia's substantial success in reducing deforestation rates in the pulp sector is undermined by the impact of developing pulpwood plantations on peatlands – associated with greenhouse gas emissions, fire risk and haze. The data shines a light on the complexity of addressing environmental risks; detailing 170,000 hectares deforested in pulpwood concessions between 2015-2019, despite the zero-deforestation commitments established by leading producers in 2013-2015.**

23/2/2020 - In recent decades, Indonesian wood pulp production has been associated with extensive social and environmental problems. Much of this has been driven by the clearing of over two million hectares of forest for wood fibre plantations to supply the country's pulp mills. Many of these plantations are located on drained peatlands.

Pulp related deforestation in Indonesia reached its peak in 2011, when 150,000 hectares (ha) were cleared. But following the adoption of zero-deforestation commitments (ZDCs) by leading producers, the sector achieved an 85% reduction in deforestation through 2019. This success has generated much optimism, showing the potential for what can be achieved with concerted efforts to drive down deforestation rates.

The story behind this significant progress is one of the findings of Trase's [new Indonesia wood pulp supply chain map](#), available at [trase.earth](https://trase.earth). Trase is a groundbreaking data-driven initiative, which provides data at scale, free-of-charge, mapping supply chains for key commodities from entire countries and regions.

The map of Indonesian pulp exports is the only commodity assessed by Trase to date in which 100% of exports are covered by ZDCs. The dataset was developed by the Trase team in collaboration with Indonesian non-governmental organisation Auriga, U.S.-based nonprofit Woods & Wayside International, and the Conservation Economics Lab at the University of California, Santa Barbara.

Toby Gardner, Director of Trase, said: *"We can now track pulp exports back to the specific plantations that contributed most of the pulpwood. This gives us the unique ability to link deforestation and peat fires to specific exports of pulp, and its final destination. This unprecedented level of transparency provides a tool for improved management of Indonesia's pulp sector in the future, including by identifying the supply chains most connected to remaining deforestation hotspots."*

Robert Heilmayr, Assistant Professor, University of California, Santa Barbara added: *"Trase's new dataset highlights tensions in the pulp industry's environmental record. Although the sector has made significant progress towards reducing deforestation, pulp exports maintain a large environmental footprint due to past clearing and continued production on drained peatlands."*

Today's Indonesian pulp exports include a great deal of wood fibre grown on plantations established during the most recent boom of pulp-driven deforestation in 2004-2012.

## Economic and environmental powerbrokers

Indonesia's wood pulp industry plays a significant role in the country's economy. In 2018, producers exported over US\$7 billion in goods and provided thousands of jobs. China is by far the most significant importer of Indonesian pulp, much of which is then re-exported, and the trend is for increasing levels of trade.

Indonesia's six active pulp mills are controlled by just three corporate groups – Sinar Mas and its primary subsidiary Asia Pulp & Paper (APP), Royal Golden Eagle and its primary subsidiary Asia Pacific Resources International Ltd (APRIL), and Marubeni. The first two groups accounted for 95% of Indonesia's pulp exports in 2015-2019.

The growing significance of Indonesia's pulp trade, and the subsequent influence of these two companies on both the economy and the environment, makes the need for transparent data like that on Trase.earth more necessary than ever.

## Fire in pulpwood plantations and concerns over peatland impacts

The development of pulpwood plantations on drained peatlands was a major cause of Indonesia's catastrophic fires during 2015 and 2019. In 2019, nearly 100,000 hectares burned inside the wood fibre concessions that supply Indonesia's pulp mills; in the 2015 fire and haze crisis 342,000 hectares of pulpwood were alight. The Trase platform provides innovative tools for analyzing the impacts of fires within specific pulpwood plantation concessions.

Globally peatlands are the largest natural terrestrial carbon store. The Indonesian peat swamp forest fires in 2015 emitted nearly 16 million tonnes of CO<sub>2</sub> a day, reportedly more than the daily emissions from the entire US economy.<sup>1</sup> Damage to peatlands also results in biodiversity loss, and further damage to vital ecosystem services like regulating water flows.

Although Sinar Mas and Royal Golden Eagle Groups have made corporate commitments to manage peatlands in a responsible manner and to have no new development on peatlands in their supply chains, Trase data shows that both companies continue to source from plantations established on drained peat. To date, neither company has committed to phase-out their existing plantations on peatlands.

Timer Manurung, Executive Director of Auriga highlighted: *"Indonesia's pulp sector must balance continued growth against its commitments to end deforestation, reduce its dependence upon peatlands, and resolve conflicts with local communities. As the Indonesian government continues to allocate new plantation concessions in Kalimantan and Papua, the pulp sector needs to demonstrate its commitment to sustainability, including by strengthening the credibility of protections for High Conservation Value and High Carbon Stock Forests, and phasing out plantations on peatlands. Transparent data on supply chains are vital to ensure the continued improvement of this sector."*

Christopher Barr, Executive Director of Woods & Wayside International, added: *"Indonesian producers have built some of the world's largest pulp mills, and these multi-billion dollar facilities place enormous pressures on the landscapes in which they are situated. Producers' heavy reliance on peatlands for wood supply is a key driver of catastrophic fire risk, especially as climate change is creating longer and more*

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<sup>1</sup> <https://www.iucn.org/resources/issues-briefs/peatlands-and-climate-change>



*frequent droughts. As the industry has expanded, this reliance on peatlands has locked in the sector's sizeable carbon footprint for the long term."*

Urgent protection of peatlands is crucial if Indonesia is to meet its obligations under the 2015 UN Paris Climate Agreement. The unprecedented level of detailed data transparency now available on the Trase platform provides a new tool to tackle this challenge.

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Notes:

TRASE is a partnership between the Stockholm Environment Institute (SEI) and Global Canopy. The initiative uses publicly available data to map the links between consumer countries via trading companies to the places of production in unprecedented detail. Trase provides data at scale, free-of-charge, comprehensively mapping supply chains for key commodities from entire countries and regions. By 2021, Trase aims to map the trade of over 70% of total production in major forest risk commodities, catalysing a transformation in supply chain sustainability.

AURIGA or Auriga Nusantara Foundation is a non-governmental organization engaged in efforts to preserve natural resources and the environment to improve the quality of human life. To achieve our goals, we continue to conduct investigative research, encourage policy changes to better manage natural resources and the environment, and advocate through legal connections.

WOODS & WAYSIDE INTERNATIONAL is a non-profit organization that conducts scientific research, policy analysis, education, and strategic communications to support more accountable decision-making processes related to forests, especially in Indonesia, Brazil, and the United States.

CONSERVATION ECONOMICS LAB is part of the Environmental Studies Program at the University of California, Santa Barbara. The Conservation Economics Lab explores the way communities around the world use and conserve natural resources, combining econometric methods of causal inference with the data revolution made possible through advances in Earth observation.

For further insights on the Indonesian pulp sector, you can access:

[Supply chain map](#)

[Methods and data sources](#)

