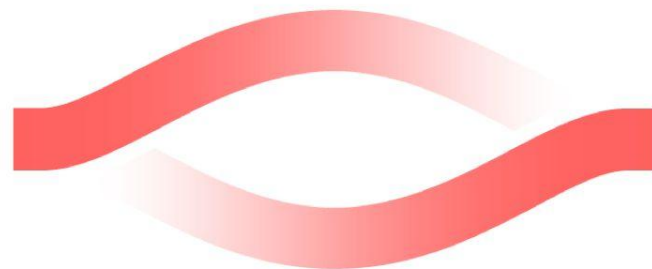


# Deforestation and Indonesia's palm oil sector: a data driven assessment of current status, risks and future opportunities

Menghindarkan sawit Indonesia  
dari deforestasi

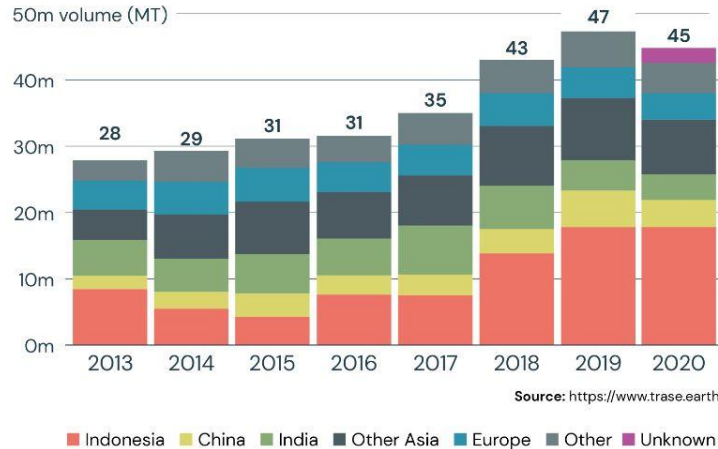
**Timer Manurung**  
Auriga Nusantara/TRASE



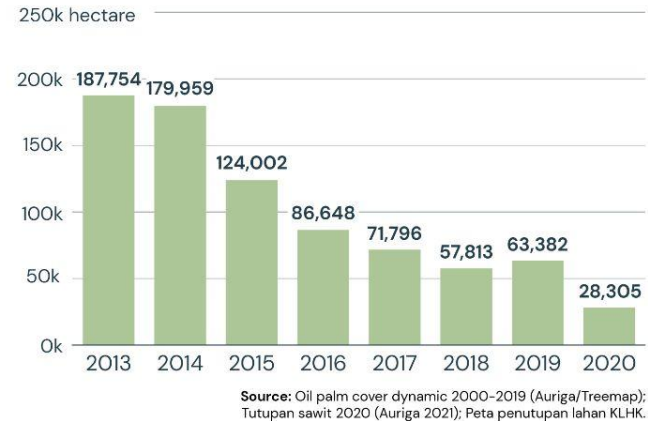
# What Trase data shows

Oil palm economic development without deforestation is possible  
Pembangunan ekonomi sawit dapat dilakukan tanpa deforestasi

## Volume-based oil palm market

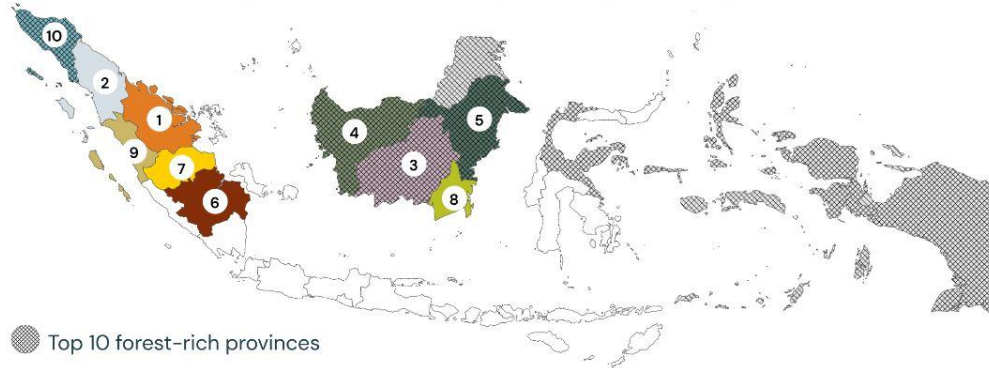


## Oil palm's deforestation

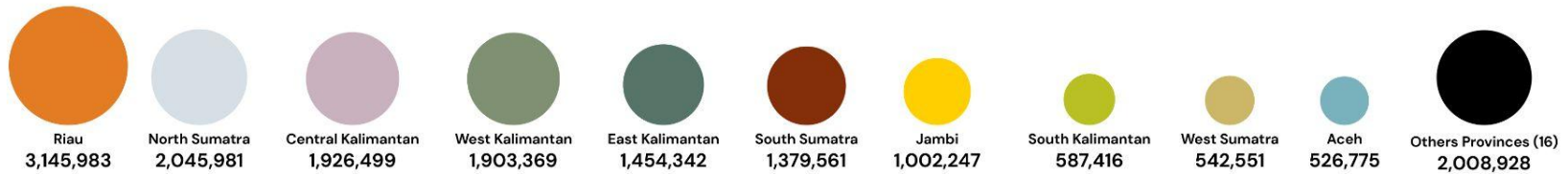


# Future risks (1)

Oil palm covers 16.5 Mha (Auriga 2021) yet forest-rich provinces in the east remain under threat.  
Provinsi-kaya-sawit tidak semuanya berada di provinsikaya-hutan, sehingga potensi deforestasi oleh perluasan sawit masih sangat mungkin.



Top 10 oil palm provinces Indonesia (hectares)



## Future risks (2)

Plantations in Kalimantan and east of country have not yet reached peak production age.

Tanaman sawit di Aceh, Kalimantan, dan Indonesia Timur sebagian besar berusia muda, di bawah usia puncak produksi. Artinya, pelonjakan produksi sawit akan terjadi pada tahun mendatang.

**Note:**

0–2yo: not producing yet

3–4yo: producing, but very little

5–12yo: medium productivity

13–20yo: peak production

21–25yo: post–peak decrease, towards replanting.

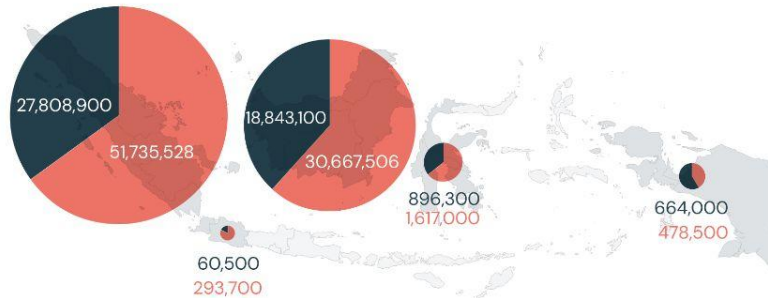
Forest-rich provinces	Current plantation age (year old)				
	0–2	3–4	5–12	13–20	21–25
Aceh	6,195	8,490	114,207	37,347	347,716
West Kalimantan	40,521	80,770	1,059,705	184,762	514,091
Central Kalimantan	53,861	67,909	795,386	553,448	424,112
East Kalimantan	71,818	78,802	811,824	203,639	258,758
North Kalimantan	12,514	13,900	164,558	57,174	17,961
Molucca	6	35	13,510	207	832
North Molucca	46	2,172	5,000	15	243
Papua	8,968	33,448	103,864	12,536	33,469
West Papua	11,046	11,979	34,708	4,568	18,222
Central Sulawesi	791	1,582	43,642	8,301	60,828
<b>Total</b>	<b>205,438</b>	<b>297,698</b>	<b>3,106,065</b>	<b>1,054,522</b>	<b>1,644,167</b>

Source: Oil palm cover dynamic 2000–2019 (Auriga/Treemap)

# Future risks (3a)

Overcapacity of mills in most provinces, while undercapacity in Papua.

Di semua provinsi, kecuali Papua dan Sulawesi Selatan, terjadi *overcapacity* pabrik. Tapi, ini tidak menjadi alasan memperluas kebun sawit. Sebaliknya di Papua, situasi itu semestinya tidak langsung direspon dengan pendirian pabrik-pabrik baru.

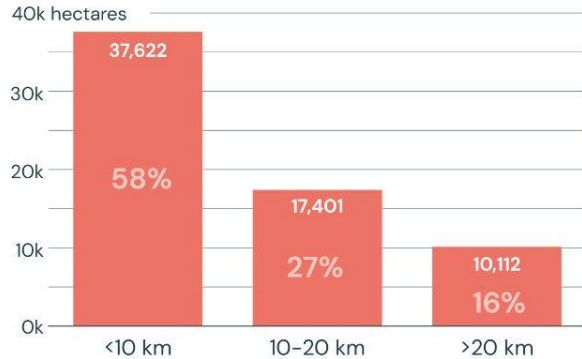


● Installed capacity (tons) ● Plantation production (tons)

Provinces	Mills	Installed capacity (tons)	Plantation production (tons)
Aceh	47	2,297,075	1,134,600
Bengkulu	32	2,178,000	1,063,400
Jambi	75	5,897,806	3,022,600
Bangka Belitung	18	1,658,250	843,000
Riau Islands	2	74,250	20,000
Lampung	19	1,435,500	384,900
Riau	223	16,303,950	9,984,300
West Sumatra	35	2,979,428	1,312,300
South Sumatra	84	7,297,007	4,267,000
North Sumatra	182	11,614,262	5,776,800
West Sulawesi	9	750,750	348,000
South Sulawesi	1	66,000	100,300
Central Sulawesi	6	602,250	371,700
Southeast Sulawesi	3	198,000	76,300
<b>Papua</b>	<b>3</b>	<b>346,500</b>	<b>557,600</b>
West Papua	4	132,000	106,400
West Kalimantan	98	7,486,059	5,471,400
South Kalimantan	40	3,030,843	1,561,100
Central Kalimantan	111	11,391,930	7,685,800
East Kalimantan	87	7,958,424	3,823,200
North Kalimantan	13	800,250	301,600
Banten	2	198,000	27,400
Jawa Barat	2	95,700	33,100

## Future risks (3b)

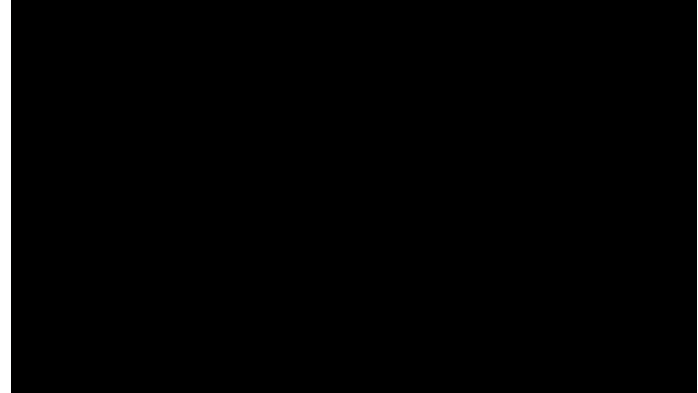
### Deforestation by distance to the mill in Aceh



84% deforestation by oil palm in Aceh are  $\leq$  20 km of the mills. The shorter the distance, the higher the deforestation.

Semakin dekat ke pabrik, deforestasi cenderung meningkat.

### Deforestation after mill establishment in Riau



Deforestation increase surrounding the mills area after its establishment.

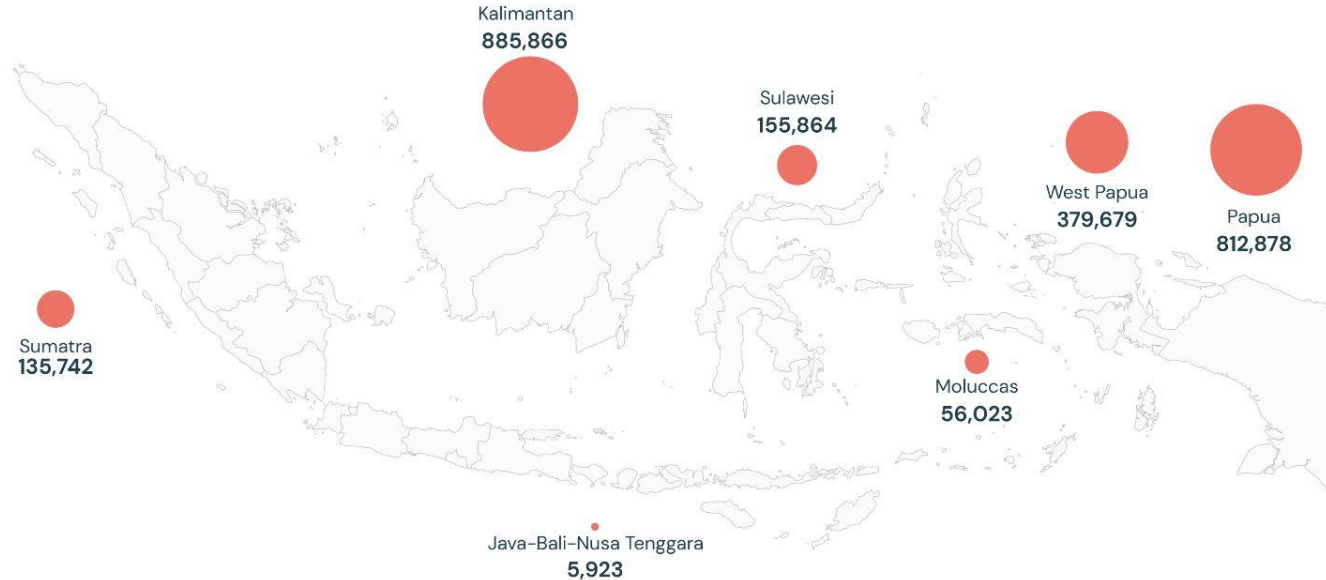
Deforestasi terjadi dan meningkat setelah pendirian pabrik.

# Policy recommendation

There are 2.4 Mha natural forest cover within current oil palm permit area. Incentive need to be provided to both local government and company that protect these forest (and disincentive to those who aren't).

Saat ini terdapat 2,4 juta hektare hutan alam di dalam izin sawit. Agar hutan ini tidak dihabisi untuk perluasan kebun sawit, insentif harus disediakan kepada perusahaan, pemerintah daerah, dan masyarakat lokal yang melindungi tutupan hutan tersebut. Sebaliknya, disinsentif kepada pendeforestasi.

Natural forest cover within oil palm permit area (hectares)



# Terima kasih

Thank you

Obrigado

Gracias

Tack

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