Characteristics of Indonesian palm oil mills

Jason Jon Benedict*, Kimberly M. Carlson, Ramada Febrian, Robert Heilmayr

Dataset name:	IDN_PO_mills
Dataset size:	504.6 Kb
Column count:	11
Row count:	1,452
Updated date:	2025-07-07

Description:
This dataset details information about all palm oil mills known to operate in Indonesia. In addition to the geospatial location of mills, the data provide information about mill ownership, production capacity, and establishment year. These data were collected and are maintained by the Conservation Economics Lab (CEL) at the University of California Santa Barbara (UCSB) and Kimberly M. Carlson's Lab at New York University (NYU).

The dataset expands upon the Universal Mill List (UML) published in late 2019. The UML was developed as part of a joint effort by a consortium of partners at the World Resources Institute (WRI), Rainforest Alliance, Proforest, Daemeter, Trase, Earthworm Foundation, Auriga, CIFOR, Transitions, UCSB and the University of Hawai'i. Please see this link for more details on the UML.

Acknowledgements:
Fieldwork needed to collect these data was supported by NASA's New (Early Career) Investigator Program in Earth Science (NNX16AI20G). Digitization and data cleaning were made possible through collaborations with the Trase Initiative, led by Global Canopy and the Stockholm Environment Institute, and financially supported through grants from Norway's International Climate and Forest Initiative, the European Commission, the Gordon and Betty Moore Foundation and the David and Lucile Packard Foundation

* Corresponding author: jbenedict@es.ucsb.edu

Column Attributes:

1	**Column name:**	**trase_code**
	Column description:	Trase mill ID
	Source information:	Trase (trase.earth) company dictionary
	Data type:	Character
	Unique non-missing value count:	1,452
	Missing value count:	0

2	**Column name:**	**uml_id**
	Column description:	Universal Mill List (UML) ID
	Source information:	The Universal Mill List (UML) - https://www.rainforest-alliance.org/business/certification/the-universal-mill-list/
	Data type:	Character
	Unique non-missing value count:	1,348
	Missing value count:	103

3	**Column name:**	**group**
	Column description:	Mill company group affiliation
	Source information:	Trase (trase.earth) company dictionary
	Data type:	Character
	Unique non-missing value count:	218
	Missing value count:	0

4	**Column name:**	**company**
	Column description:	Mill company name
	Source information:	Trase (trase.earth) company dictionary
	Data type:	Character
	Unique non-missing value count:	1,198
	Missing value count:	0

* Corresponding author: jbenedict@es.ucsb.edu

5	**Column name:**	**mill_name**
	Column description:	Mill name
	Source information:	Trase (trase.earth) company dictionary
	Data type:	Character
	Unique non-missing value count:	1,426
	Missing value count:	0

6	**Column name:**	**latitude**
	Column description:	Latitude of mill - Decimal degrees in World Geodetic System 1984 (WGS84)
	Source information:	Conservation Economics Lab, University of California, Santa Barbara (UCSB)
	Data type:	Numeric
	Unique non-missing value count:	1,452
	Missing value count:	0

7	**Column name:**	**longitude**
	Column description:	Longitude of mill - Decimal degrees in World Geodetic System 1984 (WGS84)
	Source information:	Conservation Economics Lab, University of California, Santa Barbara (UCSB)
	Data type:	Numeric
	Unique non-missing value count:	1,452
	Missing value count:	0

8	**Column name:**	**cap**
	Column description:	Installed mill processing capacity in tonnes of FFB/hour. NA = Capacity data not known
	Source information:	Conservation Economics Lab, University of California, Santa Barbara (UCSB)
	Data type:	Numeric

* Corresponding author: jbenedict@es.ucsb.edu

	Unique non-missing value count:	27
	Missing value count:	44

Min	Mean	Median	Max	SD
3.00	47.48	45.00	120.00	19.57

9	**Column name:**	**active**
	Column description:	Status of mill
	Source information:	Conservation Economics Lab, University of California, Santa Barbara (UCSB)
	Data type:	Numeric
	Unique non-missing value count:	2
	Missing value count:	0
	Value labels:	1 = Operating
		0 = Mill no longer operating

10	**Column name:**	**earliest_yr_exist**
	Column description:	Earliest year mill known to exist
	Source information:	Conservation Economics Lab, University of California, Santa Barbara (UCSB)
	Data type:	Numeric
	Unique non-missing value count:	63
	Missing value count:	0

11	**Column name:**	**earliest_yr_exist_source**
	Column description:	Source of earliest year mill known to exist
	Source information:	Conservation Economics Lab, University of California, Santa Barbara (UCSB)
	Data type:	Numeric
	Unique non-missing value count:	7
	Missing value count:	0

* Corresponding author: jbenedict@es.ucsb.edu

Value labels:	1 = Establishment year based on dinas perkebunan record of establishment (e.g. Dinas Perkebunan Plantation Statistics report of establishment dates)
	2 = Establishment year based on other government record of establishment (e.g. Permit database)
	3 = Establishment year imputed based on Dinas Perkebunan Plantation Statistics reports (e.g. first year a mill appears in a Dinas Perkebunan Plantation Statistics report)
	4 = Establishment year based off secondary sources (e.g. website, corporate report, etc)
	5 = Earliest year mill found to exist based on photo-interpretation of high-resolution satellite imagery, manufacturing census data, traceability reports and other secondary sources (or combination of these sources)
	6 = Mill known to exist in 1999 (source: Taib, Gunatif (2000), Kajian Pengembangan Industri Crude Palm Oil Skala Kecil (Studi Kasus Pengembangan Industri Crude Palm Oil di Sumatera Barat), http://repository.ipb.ac.id/handle/123456789/5044)
	7 = Mill known to exist in 2004 (source: Golder Associates (2006). Appendix VIII: Summary of Renewable Potential in Indonesia POM, Retrieved October 10, 2018, http://www.adb.org/Documents/Reports/Consultant/46557-INO/36557-INO-TACR-AppendixVIII.pdf)

* Corresponding author: jbenedict@es.ucsb.edu