

# DATA & METHODS REPORT

## ACEH JURISDICTIONAL SUSTAINABILITY PROFILE

This form references data and methods used for the reporting of indicators of the jurisdictional sustainability profile of Aceh, Indonesia, in *The State of Jurisdictional Sustainability* published by Earth Innovation Institute and the Center for International Forestry Research, in 2018. Find more at the report website <https://earthinnovation.org/state-of-jurisdictional-sustainability> and <http://gcfimpact.org>.

**Indicator:** Deforestation

The deforestation extent shown in the map (1990-2015) and the annual deforestation series (1997-2016) correspond to gross deforestation areas derived from yearly reports and the land cover map produced by the Ministry of Environment and Forestry using the forest definition adopted by Indonesia in its national FREL. Full interactive map at <http://gcfimpact.org/maps>.

**Source:** Ministry of Environment and Forestry of Indonesia.

**Temporality:** The data shown in the plot includes yearly deforestation 1997-2016. The map presents the total deforestation during the period 1990-2015.

**Methods:** Since 1990, the Ministry of Forestry (MoF) of Indonesia has been conducting satellite monitoring of forest and deforestation in the country and producing annual reports on deforestation rates, which are used by the Indonesian Government to support public policy development and monitoring. The MoF map is based on the interpretation of Landsat satellite images (30 meters of spatial resolution with a minimum mapping unit of 6.25 hectares) and topographic data. The MoF quantifies gross and net deforestation discriminating by forest categories (protection forest, conservation forest, production forest and non-designated forest province land). We report gross deforestation and use the definition adopted by the Indonesian FREL where tree plantations are not considered in the assessment of forest cover and deforestation.

**URL:** <http://webgis.dephut.go.id>

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**Indicator:** Forest cover

The forest cover shown in the map corresponds to remaining forest in 2016 as mapped by the Ministry of Environment and Forestry (MoF) using the forest definition adopted by Indonesia in its national FREL. See full interactive map at <http://gcfimpact.org/maps>

**Source:** Ministry of Environment and Forestry of Indonesia.

**Temporality:** 2016.

**Methods:** The MoF map of forest cover is based on the interpretation of Landsat satellite images (30 meters of spatial resolution with a minimum mapping unit of 6.25 hectares) and topographic data. The map of the MoF distinguishes forest categories as: protection forest, conservation forest, production forest and non-designated forest land. Forest cover extent shown in the map is based on the definition adopted by the Indonesian FREL where tree plantations are not considered in the assessment of forest cover.

**URL:** <http://webgis.dephut.go.id>

**Indicator:** Provincial forest reference emission level

Forest Reference Levels are benchmarks for assessing a country's performance in implementing REDD+ activities. FRELs are voluntarily constructed and formally submitted to the UNFCCC (<https://redd.unfccc.int>). The Indonesian FREL/FRL is based on historical deforestation during the periods 1990-2012. The MoF of Indonesia is currently formulating a sub-national FREL. The reported FREL is constructed by the authors using the 1990-2012 average deforestation in the province.

**Source:** Ministry of Environment and Forestry of Indonesia.

**Temporality:** 1990-2012.

**Methods:** The jurisdictional FREL line shown in the plot is derived from the performance criteria defined for the country by the Indonesian government in its submitted FREL. The province FREL is constructed from the average of MoF-reported deforestation in the province during the period 1990-2012.

**URL:** <https://redd.unfccc.int/submissions.html?country=idn>

**Indicator:** Average annual emissions from deforestation (Million tons CO<sub>2</sub>e per year)

This indicator represents the average carbon dioxide (CO<sub>2</sub>e) emissions from deforestation activities considering the carbon pools defined by the Indonesian FREL submitted by the Ministry of Environment to the UNFCCC, namely: above-ground biomass, peat decomposition and forest degradation. Average emissions are calculated using activities during the period 2010-2015.

**Source:** The MoF of Indonesia is currently formulating a sub-national FREL. The authors retrieved deforestation area from Ministry of Environment and Forestry of Indonesia data. Carbon emission factors derived from the Indonesian FREL.

**Temporality:** Average of yearly emissions during the period 2010-2015.

**Methods:** Average emissions calculated by multiplying the spatially explicit deforestation reported by the MoF of Indonesia the average carbon density of each pool as defined in the Indonesian FREL. Reduction from carbon atomic weight to CO<sub>2</sub> equivalent emissions using a factor of 44:12.

**Indicator:** Drivers of deforestation

Identifies proximate drivers of deforestation and forest degradation in the jurisdiction. Proximate drivers are direct human actions (i.e. agriculture, mining, cattle ranching, land and resource uses). Natural causes such as floods, droughts and pests are also considered.

**Source:** Jurisdictional LED-R survey undertaken by CIFOR and Earth Innovation Institute in Governors' Climate and Forest Task Force member jurisdictions.

**Temporality:** Survey conducted in 2018.

**Methods:** LED-R Survey implemented in the province based on a questionnaire administered by a designated enumerator to an expert or group of experts in the state.

**Indicator:** Main economic activities

Indicates the main economic activities in the province based on economic output.

**Source:** Jurisdictional LED-R survey undertaken by CIFOR and Earth Innovation Institute in Governors' Climate and Forest Task Force Member Jurisdictions.

**Temporality:** Survey conducted in 2018

**Methods:** LED-R Survey implemented in the province based on a questionnaire administered by a designated enumerator to an expert or group of experts in the province.

**URL:** <http://sidata.kaltimprov.go.id>

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**Indicator:** Human development index

This index is a summary measure of average achievement in key dimensions of human development: life expectancy, education and income. Values close to 0 indicate lower human development while values close to 100 higher achievement across the 3 considered dimensions.

**Source:** Badan Pusat Statistik BPS-Statistics Indonesia.

**Temporality:** 2017

**Methods:** The human development index is obtained as the geometric mean of the three sub-indices of dimensions that comprise the index: life expectancy, education and income.

**URL:** <https://www.bps.go.id/site/pilihdata.html>

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**Indicator:** Gross domestic product (GDP)

The Gross domestic product (GDP) of the jurisdiction is an inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year, expressed in base-year prices, and is often referred to as constant price. The provincial GDP is derived from the statistics of provincial accounts maintained by BPS Statistics Indonesia. The profile reports the most recent GDP in dollars. The plot presents a series of annual GDP observations in local currency (Indonesian Rupiah).

**Source:** Sub -directorate of Regional Production Account Consolidation, Badan Pusat Statistik BPS-Statistics Indonesia.

**Temporality:** 2000-2016, Base year 2010.

**Methods:** Data obtained directly from Badan Pusat Statistik BPS-Statistics Indonesia.

**URL:** <https://www.bps.go.id/site/pilihdata.html>

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**Indicator:** GINI of income

The Gini coefficient is used as an indicator of equitable social systems. Values close to 0 indicate greater equality of income while values close to 1 greater inequality

**Source:** Badan Pusat Statistik BPS-Statistics Indonesia.

**Temporality:** 2017

**Methods:** Data obtained directly from Badan Pusat Statistik BPS-Statistics Indonesia.

**URL:** <https://www.bps.go.id/site/pilihdata.html>

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**Indicator:** Population

Indicates the estimated population in the province in 2018.

**Source:** Badan Pusat Statistik BPS-Statistics Indonesia.

**Temporality:** 2018.

**Methods:** The projection is based on the 2010 Demographic Census Badan Pusat Statistik BPS-Statistics Indonesia.

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**Indicator:** Rural and urban population

Proportion of population living in rural and urban areas.

**Source:** Badan Pusat Statistik BPS-Statistics Indonesia.

**Temporality:** 2015

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