

Working paper

Terpercaya study

Terpercaya – Data collection report

March 2021

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1. Executive Summary

The multistakeholder Terpercaya initiative hosted by the Indonesian Ministry of Development Planning (BAPPENAS) and supported by the EU REDD Facility and Yayasan Inobu aims to evaluate the sustainability performance and progress of districts in Indonesia. In the first phase of the project, a set of 22 indicators were developed with inputs from various stakeholders. These indicators were designed to bridge Indonesian laws with the Sustainable Development Goals and supply chain certification schemes. During the project's second phase, the framework and indicators were further assessed and tested. Screening the availability of the data and collecting the available data at the national and subnational levels were central to these efforts. This report summarises the steps and methodology for data collection. It also provides updates on the Terpercaya indicators development that were carried out up until March 2021, especially the data collection process and changes made on the required data for indicator analysis. It further formulates recommendations on data collection, especially for the non-publicly accessible/available data.

Most of the data required to analyse the indicators is publicly available, yet often not in a digital format. Thus, digitisation of such data was often needed. For collecting available data that is not publicly accessible, data was requested via an official letter sent from Bappenas to the related institutions/agencies/ministries. Focus group discussions (FGDs) at pilot districts were necessary to collect unavailable or inexistent data (e.g., free, prior and informed consent (FPIC)-related data). Such FGDs involved representatives from district technical agencies, district planning agencies and experts who addressed data availability and found agreement upon revised methods or proxies to evaluate certain indicators.

The discussions and the experience with data collection thus far suggest that the Terpercaya Advisory Committee needs to discuss potential mechanisms that would provide the legal mandate for future data collection or submission process. Such a legal mandate shall be adhered to by the sub-national governments and will help secure the continuous existence of the Terpercaya platform.

The table below summarises the availability of data required by each indicator. Detailed information on each indicator can be found in the body of the document. In short, most of the data is available online. However, several pieces of information need to be collected at the provincial or district level.

Table of Indicators

Indicator	Name	Description	Data Needed	Availability (for district-level data within national databases)	Details (if available)	Link	Data Collection at Subnational Level
1	Protection of permanent forest	Forest area under protection (protected forest area + conservation forest area + forest under moratorium area) as a proportion of district total area	1. District-level spatial plan maps	The platform supposedly provides nationwide spatial plan data and information. However, at the moment, it is incomplete (covering 478 out of 514 districts).	Different timeframes, but valid for 20 years	District-level spatial plan maps	Latest version of spatial plan, data (shapefile) is requested to the District Planning Agency (Bappeda) and/or the District Land and Spatial Planning Agency
			2. Moratorium maps	Available	Last updated in 2019	Moratorium maps	
			3. Map of administrative boundaries	Available	Last updated in 2016, no changes in administrative boundaries since 2016	Map of administrative boundaries	
Performance 1	Actual protection of permanent forest	Forest cover (protected forest cover + conservation forest cover + forest cover area under moratorium) as a proportion of district total area	1. Satellite imagery	Available	Updated every week or two	Satellite Imagery	
			2. Moratorium maps	Available	Last updated in 2019	Moratorium maps	
			3. Map of administrative boundaries	Available	Last updated in 2016, no changes in administrative boundaries since 2016	Map of administrative boundaries	
2	Protection of areas that are	Total area in the spatial plan designated with	1. District-level spatial plan maps	Available	Different timeframes, but valid for 20 years	District-level spatial plan maps	Interviews with Bappeda and/or the District Land and Spatial

	important for ecological services	protection function as a proportion of the total area designated as essential ecosystem zone (KEE) within the district					Planning Agency using phone calls and questionnaires
			2. Moratorium maps	Available	Last updated in 2019	Moratorium maps	
			3. Map of administrative boundaries	Available	Last updated in 2016, no changes in administrative boundaries since 2016	Map of administrative boundaries	
3	Fire prevention	Change in district burnt area (hectares) compared to the previous year	1. Burnt Area	Available	Updated real time		Interviews with District Environmental Agency (Dinas Lingkungan Hidup) using phone calls and questionnaires
			3. Map of administrative boundaries	Available	Last updated in 2016, no changes in administrative boundaries since 2016	Map of administrative boundaries	
4	Protection of peatland area	Total protected peatland area (i.e., peatland within protected forest, conservation forest and under the moratorium) as a proportion of district total peatland area	1. District-level spatial plan maps	The platform supposedly provides nationwide spatial plan data and information. However, at the moment, it is incomplete (covering 478 out of 514 districts).	Different timeframes, but valid for 20 years	District-level spatial plan maps	Interviews with Bappeda and/or the District Land and Spatial Planning Agency using phone calls and questionnaires
			2. Moratorium maps	Available	Last updated in 2019	Moratorium maps	
			3. Map of administrative boundaries	Available	Last updated in 2016, no changes in administrative boundaries since 2016	Map of administrative boundaries	

			4. Peatland Hydrological Unit Maps	Available	Last updated in 2018	Hydrologically integrated peatland maps	Need to confirm the latest versions and check the Minister of Environment and Forestry Decree No. 246 of 2020 concerning the National Peatland Ecosystem Protection and Management Plan
5	Climate change mitigation	Emissions from annual deforestation as a proportion of the district Forest Reference Emission Level (FREL) set by the Ministry of Environment and Forestry	1. FREL	Not available	Published in 2015, results segregated at regional level	FREL	To calculate at the district level, the Terpercaya team uses the same methodology used by the FREL authors
6	Sustainable management of production forest	Production forest managed sustainably (i.e., having the Indonesian Sustainable Production Forest Management Certificate (PHPL) or the Forest Stewardship Council (FSC)) as a proportion of the total production	1. Map of forest area status	Available	Last updated in 2019		
			2. District-level spatial plan maps	Provided nationwide but partly available for all districts	Different timeframes, but valid for 20 years	District-level spatial plan maps	Interviews with Bappeda and/or the District Land and Spatial Planning Agency using phone calls and questionnaires
			3. Map of administrative boundaries	Available	Last updated in 2016, no changes in administrative boundaries since 2016	The map of administrative boundaries	

		forest area in the district					
7	Water and air pollution Control	The weighted sum (max. 100) of water quality and air quality indices released by the Ministry of Environment and Forestry	1. Water and Air quality index	Not available	Last updated in 2017. Only available at provincial level	IKLH	Interview with Dinas Lingkungan Hidup using questionnaires and phone call interviews
8	Integrated FPIC in the application process for plantation permits	The presence of a Standard Operating Procedure (SOP) to obtain FPIC from potentially affected communities	1. SOP/regulations ensuring the application of FPIC at district level	Not available			Interviews with Dinas Lingkungan Hidup and/or other district agencies on plantation affairs
9	Recognition for customary land/forest	Total customary land/forest area stipulated under SK Bupati/Perda (District Head's decree/Local Regulation) or designated in the district spatial plan as a proportion of the total proposed customary land per the indicative map published by	1. Regulations/decrees recognising indigenous people	Not available			Interviews with provincial-level or district-level agencies, as well as with civil society organisations, for example, the Customary Land Registration Agency (BRWA). For preliminary data collection, the team looks at the recognition only, and does not have the baseline information for this data.

		the Ministry of Environment and Forestry					
10	Conflict resolution	The number of conflicts or cases per district reported provincially/nationally.	1. Conflicts reported in province/national level	Available for certain years	Last updated in 2019		Interviews with provincial-level agencies or Ministry of Agriculture using questionnaires and phone call interview
11	Smallholder share	Total plantation area managed by smallholders as a proportion of the total district plantation area	1. Total hectares of oil palm plantation area and area managed by smallholders	Available	Last updated in 2018 at district level, no metadata	Tree Crop Estate Statistics	Interviews with Ministry of Agriculture and with district agencies on plantation affairs to obtain metadata
12	Proportion of Smallholder registration	The proportion of smallholders with cultivation registration certificates (STDB) in the district	1. Smallholders owning cultivation registration certificates (STDB)	Not available			Interviews with the Ministry of Agriculture and with district agency on plantation affairs
			2. Number of smallholders	Available	Last updated in 2018 at district level, no metadata	Tree Crop Estate Statistics	Interviews with the Ministry of Agriculture and with district agency on plantation affairs to obtain metadata
13	Smallholder productivity	The average yield of plantations managed by smallholders (tonnes/hectare) in the district.	1. Smallholders' productivity	Available	Last updated in 2018 at district level, no metadata	Tree Crop Estate Statistics	Interview with the Ministry of Agriculture and with district government on plantation affairs to obtain metadata

14	Number of smallholders' associations/groups	The number of smallholders' associations/groups per 1,000 smallholders	1. Number of smallholders affiliated in an association	Available	Updated in real time	Agricultural extension services information management system	Data was collected from the information system developed by the Agency for Agricultural Extension and Human Resources (BPPSDMP) within the Ministry of Agriculture. Additionally, to collect subnational level data, the team conducted interviews with staff of the Ministry of Agriculture and district agencies on plantation affairs
			2. Number of smallholders	Available	Last updated in 2018 at district level, no metadata	Tree Crop Estate Statistics	Interview with the Ministry of Agriculture and with district agency on plantation affairs to obtain metadata
15	Support for smallholders	The number of extension agents per 1,000 smallholders	1. Number of smallholders	Available	Last updated in 2018 at district level, no metadata	Agricultural Survey Results	Interview with the Ministry of Agriculture and with district agency on plantation affairs to obtain metadata
			2. Number of extension agents	Available	Updated real time	Agricultural extension services information management system	Interview with the Ministry of Agriculture and with district agency on plantation affairs to obtain metadata
16	Plantations (oil palm) with sustainability	Total area of certified oil palm plantations (ISPO + RSPO) as a proportion of the total district area	1. Indonesian Sustainable Palm Oil (ISPO)-certified plantation area (smallholders)	Available	No official government data, only data obtained from certification body is available		Interview with the Ministry of Agriculture and with district agency on plantation affairs to obtain metadata. The smallholders' data includes

	certifications	of oil palm plantations					plasma and independent smallholders.
			2. Roundtable on Sustainable Palm Oil (RSPO)-certified plantation area (smallholders)	Not available	No official government data, only data obtained from certification body is available	RSPO	Interview with the Ministry of Agriculture; with district agency on plantation affairs; and from RSPO website. But only data from RSPO website is completely available and used for analysis.
17	Poverty rate	Total number of people living below the poverty line as a proportion of total district population	1. Poverty Rate	Available	Updated annually	Central Bureau of Statistics	Publicly accessible from the Central Bureau of Statistics' website
18	Proportion of district budget allocated for sustainability	District budget allocated for environmental protection and management (i.e., allocated to the Environment Agency) as a proportion of the total annual district budget	1. Regional budget for environmental purposes	Available	District-level budget for environmental purposes. Last updated in 2019.	MoF	Interview with district-level government (including Bappeda, plantation and environmental affairs agencies)
19	Public information access	The presence of an Information Management and Documentation	1. District-level document appointing PPID Officer for the agency	Available	Last updated in 2020		PPID (Information and Documentation Management Officer) is an official managing public information and documentation in each of the

		Officer (PPID) in the district	responsible for agricultural affairs				public bodies (for example, provincial and district agencies, ministries, etc.). At the sub-national level, the team conducted interviews with the Ministry of Home Affairs and with district-level communication and information agency (Diskominfo)
20	Multistakeholder participation in district planning	The presence of an SOP for community participation in spatial, midterm, and annual planning development in the district	1. SOP/decreed regarding community participation in spatial planning and annual plan development	Not available			Interview with staff of the Ministry of Home Affairs and Bappeda using phone calls and questionnaires
21	Complaint-handling mechanism	The weighted sum (max. 100) of the scores given to a series of components registered for evaluation of the complaint-handling mechanism (i.e., the performance of district government in providing public	1. SOP/decreed about complaint – handling at district level	Not available			Interview with staff of the Ministry of Home Affairs and Bappeda using phone call and questionnaire

		services, public dissemination of information related to transparency, and the handling of conflicts related to agricultural development, such as land and labour-related conflicts)					
22	Sustainable land-use planning	The presence of sustainable land-use planning documents, such as environmental carrying capacity (DDDTLH) and environmental protection and management plan (RPPLH)	1. DDDTLH/RPPLH document	Available for several districts	Last updated in 2018	MoEF	Interview with District Environmental Agencies using phone calls and questionnaires

2. Introduction

The Terpercaya Initiative is a multistakeholder process for defining and measuring jurisdictional sustainability in relation to commodity production in Indonesia. The initiative is hosted by the Indonesian Ministry of Development Planning and supported by the EU REDD Facility and Yayasan Inobu. The first phase of the project, which took place from 2018 until mid-2019, focused on identifying the appropriate framework, priorities and instruments for measuring jurisdictional sustainability. Through a multistakeholder consultation process, which involved representatives of the government, the private sector and civil society organisations, 22 indicators for evaluating the performance of districts in Indonesia were defined. These indicators, designed to bridge Indonesian laws with the Sustainable Development Goals and supply chain certification schemes, were divided into four main pillars: environmental, social, economic and governance.

The second phase of the project, which started in November 2019, was designed to test and implement the framework and indicators developed in the first phase. Central to this effort were screening the availability of the data for each indicator and collecting the data at the national or subnational level. For the indicators to be useful, the data should be:

- Available: The data, either in digital or non-digital format, should be collected and stored in a central location at the national or subnational level.
- Accessible: The data should either be publicly accessible or accessible upon request from the host of the Terpercaya Initiative (BAPPENAS).
- Systematic: The data is collected regularly as part of mandated processes, either through laws or regulations, by the designated entity or agency at the subnational or national level.

Where the data does not meet these conditions, there may be a need to find an alternative indicator or means of verification, which can serve a similar function. Further, there may be a need to recommend the implementation of an official process to collect the required data systematically, complete with supporting regulations and budget.

The purposes of this report are: 1) to summarise the steps and methodology for Terpercaya indicator data collection; 2) to update the Terpercaya indicators following recommendations and suggestions from relevant stakeholders based on recent meetings and discussions; 3) to report on the data collection progress; and 4) to provide recommendations on the data collection process for data not publicly accessible/available. The rest of the report is structured as follows: Section 2 summarises data availability and collection for each indicator; and Section 3 briefly describes the 22 Terpercaya indicators, data requirement, and data management and analysis. The proposed steps for collecting data that are not publicly accessible/available are included in Section 2. Finally, Section 4 summarises the report.

3. Details on data collection and processing for each indicator

3.1. Indicator 1: Permanent forest protection

This indicator aims to measure the government's efforts in protecting conservation or protection forests. The conservation or protection forests defined here are areas that should be protected or conserved based on national regulations. The conservation or protection forests include protection and conservation forests within state forests (*Kawasan Hutan*) and the moratorium map covering areas inside or outside state forests (the latter is also known as *Areal Penggunaan Lain*). This indicator is measured by calculating the portion of conservation or protected area over a district's total area. Before the Omnibus/Job Creation Law was passed, subnational governments were required to ensure that 30% of the regions were designated as protected forest. With the adoption of the Omnibus/Job Creation Law, subnational governments are no longer subject to this obligation. Therefore, the most efficient means of measuring the protection of permanent forest is checking whether the regional spatial plan includes protection and conservation forests. Data required to assess this indicator is available in the national databases of relevant ministries. For example, spatial plan maps are available for download from the database of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency, and so forth. The following section describes the required data in more detail.

Data required to analyse the indicators are maps of: district-level spatial planning, moratorium and administrative boundaries. District-level spatial planning maps can be obtained from the official website of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency. Meanwhile, the moratorium maps are available online on the official website of the Ministry of Environment and Forestry (KLHK). The map of district-level administrative boundaries is available on Geospatial Information Agency's official website.

The latest district-level spatial plan maps are not yet available. Each spatial planning map is valid for 20 years, although revisions can be made in between. Moratorium maps are also available online in PDF (image) format. The data is updated biannually, and as of March 2020, the latest data published was that of December 2019. Since spatial planning and moratorium maps are available as images, there is a need to digitise them and further convert them into shapefiles (SHP files) before analysis. The map of the district level administrative boundary is available in SHP form published in 2016. The spatial plan at the provincial level, the moratorium maps and the district-level administrative boundary maps were overlaid to determine the proportion of protected forest areas at district level.

3.2. Performance Indicator 1: Permanent forest protection

The performance indicator of Indicator 1 aims to capture the actual situation in the areas that should be protected. It checks the actual land use on the ground in conservation or protected areas. Information or data required to assess the indicator is available in the national databases of relevant ministries.

The datasets needed for this performance indicator include satellite imagery, moratorium maps and the map of administrative boundaries. The satellite imagery can be obtained from the National Institute for Aeronautics and Space with permission. The moratorium maps are available online on the official website of the Ministry of Environment and Forestry (KLHK). The map of district-level administrative boundaries is available on the Geospatial Information Agency's official website.

As mentioned in section 3.1., the moratorium maps are available online and need to be digitised for data processing. As for the satellite imagery obtained from the National Institute for Aeronautics and Space, the imagery is updated every week or two. Specifically, the collected data include: 1) SPOT 6/7 mosaic satellite imagery; and 2) 15 km Landsat data for Indonesia. Similarly to spatial planning and moratorium maps, the satellite imagery needs to be digitised for data processing. These three maps are then overlaid to determine the actual proportion of forest cover areas at the district level.

3.3. Indicator 2: Protection of areas that are important for ecological services

This indicator aims to capture subnational initiatives in protecting areas that provide important ecological services. The indicator is assessed by calculating the percentage of total designated area with protection function in the spatial plan out of the total area of essential ecosystem zone (KEE) within the district. Ideally, the indicator will be based on the assessment of the High Conservation Value (HCV) of each district. However, only few districts have conducted such an assessment. Local governments have also demonstrated their commitment to protect ecologically important areas by issuing local regulations, such as by developing spatial plan regulations or relevant district regulations (*Peraturan Daerah*). The data that is required to assess the indicator is available in the national databases of relevant ministries.

The data needed for this indicator includes district-level spatial planning maps, KEE maps and the map of administrative boundaries. District-level spatial planning maps can be obtained from the official website of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency. However, at the time of writing, the district-level spatial plans were not available. Meanwhile, the moratorium maps and the KEE maps come from the Ministry of Environment and Forestry (KLHK). The map of district-level administrative boundaries is available on the Geospatial Information Agency's official website.

On the official website of the Land and Spatial Planning Agency, the latest district-level spatial planning maps are available in PDF (image) format. Each spatial planning map is valid for 20 years, although revisions can be made during that period. Therefore, slight differences in publication year for spatial-plan map across districts are likely not an issue.

The map of the district-level administrative boundary published in 2016 is in shapefiles format. There has been no update since 2016 because district-level administrative borders have not changed since then. All maps had to be digitised, including moratorium and spatial planning maps. As mentioned above, to analyse the indicator, the maps were overlaid.

3. 4. Indicator 3: Fire Prevention

This indicator measures the government's readiness in mitigating and handling fire hazards. This indicator is calculated in changes (in hectares) of burnt areas within a district annually. Information or data required to assess the indicator is available in the national database of the Ministry of Environment and Forestry.

The data needed for this indicator is the administrative boundaries map and the official annual map of burnt area from the Ministry of Environment and Forestry. The map of district-level administrative boundaries is available on the Geospatial Information Agency's official website. The Ministry of Environment and Forestry provides the burnt area shapefile data. The shapefile data is collected through Bappenas.

3.5. Indicator 4: Peatland protection

The indicator aims to identify subnational governments' commitments in protecting peatland areas by calculating the proportion of total peatland areas protected under three schemes/designations (peatland moratorium as well as protected forests and conservation forests under the spatial plan) with the total area of peatland in the district. Information or data required to assess the indicator is available in the national database of related ministries.

Data needed for this indicator is district-level spatial planning maps, moratorium maps, the map of the administrative boundaries and the maps of peat hydrological units (KHG). The district-level spatial plan maps can be obtained from the official website of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency. The moratorium maps are available online on the official website of the Ministry of Environment and Forestry. The map of the district-level administrative boundary is available on Geospatial Information Agency's official website. The peatland hydrological unit maps are available online on the official website of the Ministry of Environment and Forestry.

Like indicators 1 through 3, the latest district-level spatial plan maps are available on the official website of the Land and Spatial Planning Agency in PDF (image) form. The moratorium maps are also available online in PDF (image) form. The map of the district-level administrative boundary is available in an SHP form and was published in 2016. There was a slight issue with the availability of the peatland hydrological unit map. It is publicly accessible on the Ministry of Environment and Forestry's official website. However, the latest version was from 2015. There is a need to confirm with the Ministry of Environment and Forestry whether a new version of the map will be available online. All the maps above had to be digitised for data processing. The digitised maps were overlaid to determine the proportion of protected forest areas at district level.

3.6. Indicator 5: Climate change mitigation

The indicator aims to measure the progress (in percentage) among the subnational governments in reducing emissions from deforestation and forest degradation against the Forest References Emission Level (FREL) established by the Ministry of Environment and Forestry. Some information or data required to assess the indicator is available in the national database of relevant ministries. For example, to estimate deforestation, required data includes land cover maps that are available in the database of the Ministry of Environment and Forestry. However, information on the FREL at the district level is not available.

The FREL document for Indonesia, in the context of Decision 1/CP.16 para 70 of the United Nations Framework Convention on Climate Change (UNFCCC), is publicly available on the Ministry of Environment and Forestry and on the UNFCCC website. Yet, as mentioned earlier, the FREL is not available at the district level. Focus group discussions at national level are needed to find a common understanding and agreement on a methodology to downscale the FREL targets from the provincial to the district level. During such an FGD, the following questions can be used to guide discussions:

- What are the existing options for downscaling the FREL from province to district level?
- Has any district reported their GHG emissions level and contribution from each sector?

The answers to the above questions can lead to potential FREL downscaling methodology that may be applied by the district-level government to decide their FREL target. Prior to the FGD, there is a need to develop a model to calculate district-level FREL. The most feasible will be a model based on a methodology mirroring the provincial-level FREL. This model will then be presented as an option in the FGD.

3.7. Indicator 6: Sustainable management of production forest

This indicator aims to observe subnational governments' commitment in sustainably managing production forests (*Hutan Produksi* or HP) and limited production forests (*Hutan Produksi Terbatas* or HPT) that are designated for producing timber. It is measured by calculating the total certified production forest area compared to the total production forest area at the district level. To analyse the indicator, data on the district-level spatial plan, administrative boundaries and forest concession is needed. The required data to assess the indicator is available in the national databases of relevant ministries.

The district-level spatial planning maps can be obtained from the official website of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency. The map of the district-level administrative boundaries is available on the Geospatial Information Agency's official website. The map of actual forest concessions area is not publicly available. However, such a map can be proxied using an indicative map of production forest utilisation published online by the Ministry of Environment and Forestry.

On the official website of the Land and Spatial Planning Agency, the latest district-level spatial planning maps are available in PDF (image) format. The map of district-level administrative boundaries in SHP form was published in 2016. There has been no update since 2016 because district-level administrative borders have not changed since then. The indicative map of production forest utilisation is available in PDF (image) format and was last updated in 2020. The digitisation process is needed to analyse the indicator.

3.8. Indicator 7: Water and air pollution control

The indicator aims to measure the subnational government's performance in managing the quality of air and water resources. It measures the level of air and water pollution in a district against the health and safety standards. Air and water quality indices are available online and published by the Ministry of Environment and Forestry. The indices were last updated in 2017. Based on interviews we conducted at the pilot districts, data and information about the indices are unavailable at district level. The Ministry of Environment and Forestry does not have the data either. At present, the best alternative tool to measure this indicator is by aggregating water quality information found in the village potential statistics (*Potensi Desa* or PODES).

3.9. Indicator 8: Integrated Free, Prior and Informed Consent (FPIC) in the application process for plantation permits

This indicator aims to measure subnational governments' performance in reducing potential social conflicts caused by agricultural development. One important measure of conflict prevention is to ensure that lands cultivated for agricultural commodities were obtained respecting the Free, Prior and Informed Consent (FPIC) principles.

The proposed Indicator 8 is a process indicator represented by the existence of Standard Operating Procedures (SOP) at the district level that outline the steps to obtain FPIC from the communities. Therefore, the indicator can be characterised as:

$$\text{Equation 11: } FPIC_i \in \{0,1\}$$

Where $FPIC_i$ equals 1 if in district i a SOP for getting communities' consent exists as part of the plantation application permit, and 0 if otherwise.

Unfortunately, information of the existence of such SOP in each district is not readily available. It was also unclear whether any district in Indonesia has developed such SOP. There might be different mechanisms similar to the SOP that can be or have been applied by local governments. The team carried out FGDs in the pilot districts to investigate if there are existing mechanisms that can be used as proxies. The FGDs involved all relevant technical agencies and the planning agency to list and discuss local government regulations (Perda) or district head decrees (SK Bupati) that potentially contain and regulate SOP for FPIC at district level. The following questions were asked to guide the FGDs:

- Does the district government have a mechanism to consult local communities having claims over the lands prior to issuing licences?
- Is such a mechanism formalised by a local regulation? If so, what is the format? If not, how do you enforce it?

The challenge is then how to collect the data from all districts in the country on a regular basis. Options that may be considered include:

- Self-declaration by district governments fed into Terpercaya online platform
- Integration of the *FPIC* report as a part of district governments' annual accountability reports, LAKIP (Government Performance Accountability Report) to the Ministry of Home Affairs)

3.10. Indicator 9: Recognition of customary land/forest

The indicator aims to measure the performance of local governments in acknowledging/recognising customary land/forest. Local governments' efforts can be measured through their level of support to the Social Forestry initiative (which includes customary forestry) under KLHK and to the process of relinquishing customary lands from state forests. Under the current legal framework, the district head can issue a decree (SK Bupati) recognising indigenous peoples and their culture. Similar recognition can be given jointly by the district head and the regional assembly in the form of regional regulation (Perda).

Copies of such decrees or regulations may not be available online in some districts. Thus, FGDs involving relevant district-level agencies were conducted with the following objectives:

- Listing Perda/s or SK Bupati that regulate customary land or acknowledge/facilitate the existence of customary land or rights
- Mapping out relevant activities that have been done/will be conducted and corresponding annual budget that has been allocated in the relevant agency's workplan (Renja) in relation to the support for customary community recognition

During the FGDs, the following questions were used to guide the discussion:

- What is the current district-level government policy to support customary group and customary land/forest recognition in their district?
- Is there any specific procedure in place to receive proposals for recognition of customary land/forest?
- Is there a budget line for processing the request of customary land/forest recognition?
- How many proposals from the customary community for recognition of customary land/forest have been received? How many have been processed? What are the results?
- Does the district have indicative maps of customary land (Peta Indikasi Wilayah Adat) and a database of indigenous peoples (in Papua, this is called data on Papuan natives, in other places 'customary communities' or 'traditional societies')?

- Are there listed programmes (along with their institution-in-charge) aimed at empowering indigenous peoples?

Answers to such questions may demonstrate existing efforts by the district-level government in ensuring/supporting the recognition of customary land/forest in their district. The next challenge is how to collect the information on the progress of customary land/forest recognition from all districts in the country on a regular basis. Several options may be considered:

- Self-declaration from district governments fed into the Terpercaya online platform. District governments may declare annually how much customary land has been recognised in their respective districts (in hectares).
- Including reporting on customary land/forest recognition an output of the local government workplan that is budgeted officially (through APBD, under the Social Protection Purpose thematic).
- Checking the list of Perda/s or SK Bupati compiled by the Ministry of Home Affairs.

Based on the FGDs in the pilot districts, none of the districts has complete data or information on the customary land/forest within their jurisdictions. Therefore, to assess the indicator, it was suggested that the analysis be based on the percentage of the total customary land/forest (in hectares) that has been stipulated under SK Bupati/Perda or designated in the district spatial plan against the total customary land (in hectares) proposed, per the indicative map published by the Ministry of Environment and Forestry.

Using this approach, the needed data and information are the total number of hectares of stipulated customary land/forest and district spatial plan of each district and the indicative map of customary land from the Ministry of Environment and Forestry.

3.11. Indicator 10: Conflict resolution

This indicator measures the subnational government's performance in reducing and handling social conflicts related to agricultural development. It is measured by counting the total number of conflicts or cases per district reported nationally or provincially. Currently, data on registered conflicts exist at the Provincial Plantation Agency (Dinas Perkebunan). However, there is no integrated national database recording conflict registration. The only available relevant information is the SOP for conflict resolution that can only be found at district level.

The challenge would be to determine ways for all districts in country to report and publish their progress in handling conflict resolutions regularly. Some options may be considered:

- Self-declaration by district governments in the Terpercaya online platform. The district government may declare annually the total number of cases registered, processed and solved on the Terpercaya platform.
- District governments to report the data annually and publish them as part of the districts' official statistics. The reporting activity could be budgeted through the annual budget (APBD) under the Order and Peace Purpose thematic.

- Identification of regulations for handling conflicts at the provincial/district level (Perda, Pergub, Perbup).
- Developing reporting and updating mechanisms of relevant data from the district to the province (with clear format and frequency).
- Developing a data collection system (manual or online).

3.12. Indicator 11: Smallholder share

The indicator aims to measure the extent of smallholder involvement in the plantation sector at the district level. It is measured by calculating the proportion of total plantation area managed by smallholders out of the total plantation area at the district level. Data on smallholder plantation can be publicly obtained from the 'Tree Crop Estate Statistics of Indonesia,' published annually on the website of the Directorate General of Estate Crops of the Ministry of Agriculture. As of March 2020, the latest available dataset at the district level was from 2017. Unfortunately, the metadata¹, essential to ensure data reliability, is unavailable on the website or in the relevant published documents. Thus, Bappenas would need to send an official request letter to obtain the metadata from the Directorate General of Estate Crops.

Also, we found some inconsistencies between the agricultural data reported by the Ministry of Agriculture and that reported by the provincial and district governments. Table 1 shows examples of such discrepancies in terms of oil palm area at the provincial level that was reported by the Ministry and the provincial governments. Such discrepancies eventually led to further discrepancies at the district level. Metadata, if/when available, can be used to identify inconsistencies among the national, provincial and district data.

Table 1. Size of oil palm planted area (ha) (2017) from two different sources

Size of oil palm planted area (Ha) (2017), as reported by:		
Province	Ministry of Agriculture	Provincial Government
West Papua	58 256	20 704
Central Kalimantan	1 359 025	1 508 216

Therefore, we recommended that the Ministry of Agriculture and/or the Provincial Government provide Bappenas with the flowchart of their data collection process. It will enable Bappenas to identify any loopholes in the data collection process and develop recommendations to improve the data collection process.

¹ A dataset providing basic information about other data that can make tracking and working with specific data easier.

3.13. Indicator 12: Smallholder registration

The indicator is developed to measure the district government's performance in facilitating smallholders' inclusion in the sustainable agricultural commodity supply chain. One way of measuring this indicator is to calculate the proportion of smallholders owning government-issued cultivation registration letters (*Surat Tanda Daftar Budidaya*/STDB). STDB is required for many administrative purposes. The needed information is the number of smallholders in possession of STDB at the district level and the total number of smallholders at the district level. Data on the total number of smallholders having STDB is not publicly available.

The total number of smallholders at district level can be publicly obtained from the official website of Directorate General of Estate Crops of the Ministry of Agriculture. Specifically, the data on the total number of smallholders at district level can be obtained from the annual 'Tree Crop Estate Statistics of Indonesia', a publication of the Directorate General of Estate Crops. As of March 2020, the latest available dataset at the district level was from 2017. Unfortunately, the metadata, which is vital to ensure the reliability of the data itself, is not available. Bappenas would need to send a request to the Directorate General of Estate Crops requesting the metadata.

Data on the total number of smallholders having STDB is not publicly available. For this, Bappenas or the Ministry of Home Affairs with the Ministry of Agriculture may need to send out official letters urging the Plantation Agency (Dinas Perkebunan) at the district level to report and submit the data to Bappenas (as the hub for Terpercaya's data collection). The challenge would then be to ensure that smallholder registration data is published and updated regularly (annually). Options to be considered include:

- Self-declaration by the district governments in the Terpercaya online platform.
- Submission of the data annually to the Ministry of Agriculture, which would then be reported through the statistics of the estate crops published by the Directorate General of Estate Crops.

3.14. Indicator 13: Smallholder productivity

The indicator aims to track smallholder productivity, in particular for palm oil, at the district level. This indicator is measured by calculating the total production of smallholders in a certain area (i.e. smallholders' area). It is assumed that higher productivity will result in higher income and reduced land pressure to meet palm oil demand. Data needed for this indicator includes: total area of plantations owned by smallholders and total commodity production by smallholders at the district level. This data can be publicly obtained from the official website of the Directorate General of Estate Crops of the Ministry of Agriculture. Specifically, the data needed can be obtained from the 'Tree Crop Estate Statistics of Indonesia,' an annual publication of the Directorate General of Estate Crops. As of March 2020, the latest available dataset at district level was for 2017. Unfortunately, the relevant metadata is not available. Given the importance of metadata to ensure data reliability, Bappenas could send an official request letter to the Directorate General of Estate Crops data to obtain it.

In addition, we found some inconsistencies between the agricultural data reported by the Ministry of Agriculture and that reported by the provincial and district governments. Table 2 shows examples of such inconsistencies in terms of palm oil production. Thus, the metadata is critical to discover why such inconsistencies exist and provide solutions.

Table 2. Palm oil production from two different sources

Palm oil production (in tons) (2017), as reported by:		
Province	Ministry of Agriculture	Provincial Government
West Papua	143 622	148 778
Central Kalimantan	5 778 611	5 493 249

3.15. Indicator 14: Number of smallholders' associations/groups

The indicator aims track the number of smallholders' associations, especially for palm oil, at district level. To do this, we calculated the number of smallholders' associations per thousand farmers/smallholders. The information needed to analyse the indicator is: number of smallholders affiliated with smallholders' associations and the total number of smallholders in the district. The total number of smallholders at the district level can be publicly obtained from the official website of Directorate General of Estate Crops of the Ministry of Agriculture. However, the number of smallholders affiliated with a smallholder's association, segregated by commodity type, is not publicly available or accessible.

The total number of smallholders at district level can be obtained from the 'Tree Crop Estate Statistics of Indonesia', published annually by the Directorate General of Estate Crops. As of March 2020, the latest available dataset at district level was from 2017. Unfortunately, the metadata is not available. Because the metadata is important to ensure data reliability and because other data from the same source (see indicators 11 and 13) is considered questionable, Bappenas might need to request it by sending an official letter to the Directorate General of Estate Crops.

Similarly, a request for data on the number of oil palm smallholders affiliated with smallholders' or farmers' associations might be needed. If the data does not exist, the request should be directed toward the pilot districts. This might involve several interviews, with details as follows:

1. Interviewing the district-level government to obtain a list of farmers'/smallholders' associations in each district, segregated by commodities.
During the interview, several questions shall be asked to collect data and check its validity:
 - Does the Plantation Agency (Dinas Perkebunan) in the district regularly update or record the number of farmers' groups?

- Are there mechanisms or systems to regularly count/validate the actual number of farmers' groups in the district? Perhaps through the local farmers'/smallholders' census by Dinas Perkebunan?
2. Interviewing the representatives of each farmers'/smallholders' association (preferably the head/general secretary) to obtain the list of associations' members. The list should at least contain members' basic information (name, date of birth, address, etc.), number of plots and area of plantations owned. The list drawn up shall be cross-checked to ensure reliability and prevent double-counting of farmers affiliated with multiple associations.
- During the interview, several questions shall be asked to collect data and check its validity:
- Does the farmers' group submit a progress report regularly or annually to the district-level Dinas Perkebunan?
 - Does the farmers' group receive regular support through the district government's programmes?

Another challenge is for all the districts in the country to report and publish the data on a regular basis. These options may be considered:

- Self-declaration by district governments in the Terpercaya online platform
- Making the reporting of the numbers of smallholders' associations an output of the local government workplan that is budgeted officially (through APBD)

3.16. Indicator 15: smallholders support

This indicator aims to measure the subnational government support for smallholders. It is measured by comparing the number of extension service officers and the total number of smallholders at the district level. The information needed to analyse the indicator are the number of extension service officers provided by the government and the total number of smallholders at the district level. The total number of smallholders at the district level can be publicly obtained from the SUTAS, the Agricultural Census by the Statistics Agency. Meanwhile, the number of extension service officers at the district level can be found in the SIMLUHTAN information system, managed by the Agency for Agricultural Extension and Human Resources Development (*Badan Penyuluhan dan Pengembangan SDM Pertanian*) at the Ministry of Agriculture.

At present, the data of total smallholders/farmers at the district level is assessed by using the number of smallholding households in each district based on SUTAS, regardless of commodities. This approach is taken because the extension service officers work across commodities within a district. Therefore, to be fair to other non-oil palm-producing districts, the number of total smallholding households is used to assess the indicator.

3.17. Indicator 16: Plantations (oil palm) with sustainability certification

This indicator assesses the coverage of smallholders' plantations with sustainability certification. This indicator is measured by calculating the number of certified smallholders

per smallholders' plantation area at district level. The data needed to analyse the indicator includes data on smallholders' plantation area certified by ISPO or RSPO and data on the area of smallholders' plantation at the district level. The total number of smallholders at district level can be publicly obtained from the official website of Directorate General of Estate Crops of the Ministry of Agriculture. Meanwhile, information on smallholders' plantation area that is certified by ISPO or RSPO is available on their respective websites.

Data on the total number of smallholders at district level can be obtained from the 'Tree Crop Estate Statistics of Indonesia,' an annual publication of the Directorate General of Estate Crops. As of March 2020, the latest available district-level dataset was from 2017. Unfortunately, the metadata is not available. As the metadata is important to ensure data reliability and because other data from the same source (see indicators 11 and 13) is considered questionable, Bappenas may send an official letter to the Directorate General of Estate Crops to request the metadata.

As for the ISPO and RSPO smallholder registration data, the date of this information differs and both websites only show the most recent data, no historical data is shown. Bappenas or the Ministry of Agriculture should send an official letter to both certification bodies to obtain the historical data. With the historical data and exact timeframes, the data shall be cross-checked to avoid double-counting.

We also suggest that Bappenas urges the Ministry of Agriculture to set up a database by working with the certification bodies to record, update and validate farmers' data. With such a cooperation, the Ministry of Agriculture, including district-level Dinas Perkebunan, would have a nationally synchronised database for the certified oil palm smallholders. The Terpercaya platform could be used for data publication.

At present, the ISPO data and information come from the ISPO website. As for RSPO, no national database provides the information.

3.18. Indicator 17: Poverty rate

This indicator aims to measure: the opportunities available to local people in terms of employment/livelihoods in the plantation sector; and the performance of local governments in reducing poverty. One means of doing so is by using the poverty rate as an indicator to measure the population's general well-being at district level. This indicator is publicly available on the Central Bureau of Statistics' website. As of March 2020, 2019 data was available to the public. The data is calculated from the annual National Socio-Economic Survey (SUSENAS) consumption module. The sample count for SUSENAS is roughly 25% of the total population, representing all provinces and cities. In summary, the data is calculated by creating a proportion of individuals whose per capita expenditure is less than the expenditure threshold set by each district. The complete metadata is available on the Central Bureau of Statistics' website. The calculation and tabulation of poverty rate is done by the Central Bureau of Statistics.

3.19. Indicator 18: Proportion of district budget allocated for environmental protection and management

The indicator aims to assess the performance of district governments in allocating their budget to manage the environment sustainably. It is represented by the allocation of budget specifically directed to the District Environmental Agency (DLH). The district-level regional budget planning (APBD) specifically for DLH is not publicly accessible. However, the Directorate General of Fiscal Balance at the Ministry of Finance publishes district-level regional budget planning annually, segregated into several purposes, including economic, health, order and peace, environment, tourism and culture, public service, education, social protection, housing, etc. The budget allocated for environmental purpose can be used as a proxy for this indicator. The data can be obtained from the official website of Directorate General of Fiscal Balance of the Ministry of Finance. As of March 2020, data from 2019 and previous years was available on the website. In some fiscal years, there are multiple versions of the data due to revisions, thus the data selected for this indicator shall be the latest version for each year. However, the detailed description on what constitutes the environmental-purpose budget is not explained or documented on the website.

3.20. Indicator 19: Public information access

This indicator aims to measure the performance of district governments in ensuring good governance in government administration. It captures how district governments ensure transparency by establishing a Public Information Commission – Komisi Informasi Publik (KIP) and allocating it enough budget. Thus, the indicator encourages establishment of KIP at the district level. However, currently, KIP only exists at the provincial level. After consultations with various stakeholders at the national and local level, we decided to use, as a proxy, the existence of an Information Management and Documentation Officer (PPID), either for a district-level agency that regulates the agriculture sector or for the whole district government. Specifically, the existence of a government regulation (Perda) or a district head's decree (SK Bupati) appointing a PPID in an agency in charge of regulating the agriculture sector or for the whole district government should be a sufficient proxy for this indicator.

The Perda or SK Bupati are likely available on the district governments' official websites. However, some districts have not published them online. Therefore, there is a need to confirm the existence of PPID manually. Report on the existence of PPID can be found in the PPID of the Ministry of Home Affairs that was accessed through the KIP.

An alternative could be to ask district governments to fill in a survey prepared by the KIP for the provincial-level government that measures the quality of access to information in its jurisdiction. Fieldwork shows that the Central Kalimantan Government uses this survey with district-level governments, but other piloted provinces do not use this practice. Therefore, in the future, such survey can be encouraged for Terpercaya evaluation purpose.

3.21. Indicator 20: Multistakeholder participation in district planning

This indicator aims to measure local governments' performance in ensuring public involvement in the regional planning processes. National-level laws and regulations, such as the Minister of Home Affairs Regulation No. 86 of 2017, include clear requirements on public participation in the development of the mid-term development plan (RPJMD) and annual work plan (RKPD). The quality of the public participation process, however, has not been measured. Therefore, this indicator is measured through local governments' commitment to deliver good quality public participations by identifying the existence of an SOP for community participation in spatial planning and in the development of mid-term and annual development plans.

The indicator is measured in a form of binary variable, MSP_i , described as:

$$\text{Equation 23: } MSP_i \in \{0,1\}$$

Where, MSP_i equals 1 if a SOP for community participation in spatial, mid-term, and annual planning development exists in district i , and 0 if otherwise. The list of related SOPs in each district is the data required for the analysis. This data is unfortunately unavailable at the national level.

To collect information on multistakeholder participation, FGDs were conducted in pilot districts. The FGDs, involving the district planning agency and all relevant technical agencies, discussed and listed Perda or SK Bupati that regulate or contain an SOP of community participation at the district level. During the FGD, the following questions were used to guide the discussion:

- In general, what are the phases/stages in developing the district-level development plan (RPJMD)?
- Who should participate in developing the RPJMD? Are members of the public able to participate? If so, how significant is the role of the public in developing the RPJMD (please provide documents to support your answer)?
- If the public can participate, are there challenges in involving the public in the development of the RPJMD? If the public cannot participate, please explain why.
- Are there regulations and SOPs that recognise the participation right of marginal parties/stakeholders in regional planning? Please describe such mechanisms.
- Are aspects of sustainable land management discussed inclusively as part of developing district development programmes and targets? For example, whether the agricultural expansion takes the KLHS or other environmental assessment documents into consideration.

Answers to the above questions could indicate the existence of documents that regulate or contain SOPs for community participation at the district level. The challenge is how to collect such data from all districts in the country on a regular basis. An option that may be considered is for district governments to:

- Submit Berita Acara Kesepakatan (record of agreement) produced during the development process of RPJMD and RKPD as obliged in the Minister of Home Affairs Regulation No. 86 of 2017 to Terpercaya platform managed by Bappenas (as part of the Terpercaya evaluation). This record will detail those who participated and agreed to the draft RPJMD/RKPD.

3.22. Indicator 21: Complaint-handling mechanism

This indicator aims to measure subnational governments' performance in handling complaints. It assesses the performance of district governments in handling complaints related to: i) the performance of district governments in providing public services; ii) public dissemination of information related to transparency; iii) the handling of conflicts related to agricultural development, such as land and labour-related conflicts. The measurement of the indicator can be characterised as *Complaint.Mechanism_i* (score):

$$\text{Equation 24: } \textit{Complaint.Mechanism}_i = 100 \times (\sum_{c=1}^C w_c \times I_c)$$

Which

$$\text{Equation 25: } I_c \in \{0,1\}$$

Where, w_c is the weight of each index of the component listed for the complaint mechanism and the value is $0 < w_c < 1$; $c \in C$, which is the set of components listed for the evaluation of the complaint mechanism; I_c is the index binary variable indicating how complaints are handled or the existence of complaint mechanism component; 1 indicates 'good' or 'exist' and 0 is otherwise. For this analysis, data to be used includes audit rules or regional regulations to resolve complaints on the violation of good governance principles and practices.

The data on the set of components is still unavailable, and the district-level SOPs on complaint mechanism are not publicly accessible. Thus, the team may collect the data needed for this indicator by:

- Obtaining the components: FGDs shall be conducted at the districts. The FGD shall involve relevant agencies to discuss and list Perda or SK Bupati that regulate or contain the SOP for handing complaints at district level.

During the FGD, the following questions will be used to guide the discussion:

- What SOPs are in place to manage agriculture-related complaints? Is it sufficient to handle all agricultural complaints thus far? If not, why?
- Which unit/agency at the district level is responsible for handling agricultural complaints?
- If such SOPs are not in place, what is? How are agricultural complaints handled in practice?

- How is the conflict situation related to the land-use planning mechanism? Does any decision regarding proposed location for a permit or another use take into account the complaint mechanism?
- What are the similarities and differences in the SOPs to manage the agricultural complaints that are produced by different district-level agencies? List all the similarities and treat them as ‘components’.
- What are the problems in implementing those SOPs? Are there any ‘components’ not listed but that should be added to help overcome the issues? If so, please list them.
- Rank and weight all the collected ‘components’.

Answers to the above questions may indicate documents that regulate or contain SOPs for handling and solving complaints at the district level.

- Obtaining the document: Representatives from the district government need to be interviewed to obtain the documents that will be assessed, based on the criteria produced in the FGD.

During the FGD, the following questions might be used to guide the discussion:

- Please describe complaints commonly received by the government and how the government usually handles them.
- Are there any official procedures (SOPs) implemented to handle agricultural complaints? Please provide the relevant documents.
- What are the challenges in handling the complaints with existing SOPs (if they exist)?

Further, the challenge is to collect data from all districts in the country on a regular basis. Options to be considered include for the district government to:

- Produce quarterly/semi-annual reports of district-level agricultural complaints that have been lodged, including their status. The report should also include the procedures used to handle these complaints.

Alternatively, the Ombudsman Commission indicated that they plan to conduct regular evaluations of the quality of the complaint handling mechanisms of all governmental units at national and local level, including districts. In the future, this evaluation can be used as a proxy for this indicator.

3.23. Indicator 22: Sustainable land-use planning

The indicator aims to measure the commitment of district governments in developing a jurisdictional plan that will help protect and manage the environment, including plans on climate mitigation and adaptation. It is measured by the existence of documents such as environmental carrying capacity (DDDTLH) and environmental protection and management plan (RPPLH). The indicator is characterised as binary variable:

Equation 26: $SLUP_i \in \{0,1\}$

$SLUP_i$ equals 1 if DDDTLH and RPPLH documents exist in district i , and 0 if otherwise. The ideal situation is to analyse whether the environmental analyses have been integrated into the RPJMD and the RTRW. Information on the existence of DDDTLH and RPPLH for each district can be found from the Ministry of Environment and Forestry. Currently, only several districts in Indonesia have developed or are in the process of developing such documents. Further discussion with the Ministry of Environment and Forestry is necessary to check for any updates.

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