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List of abbreviations

BAPPENAS	Ministry of Development Planning
BPS	Statistics Indonesia
BIG	Geospatial Information Agency
DPMPTSP	Office of Investment and One Stop Integrated Services
FPIC	Free, Prior and Informed Consent
Kementan	Ministry of Agriculture
Kemendagri	Ministry of Home Affairs
K/L	Ministries/Agencies
K/L/D	Ministry/Agency/Regional
KLHK	Ministry of Environment and Forestry
LPPD	Regional Government Implementation Report
OPD	Regional Apparatus Organisations
RAD KSB	Regional Action Plan for Sustainable Oil Palm
RAN KSB	National Action Plan for Sustainable Oil Palm
RPJMD	Regional Medium Term Development Plan
RTRWK	District Spatial Planning
SDGs	Sustainable Development Goals
SDI	One Data Indonesia
SIPD	Development Information System
SP4N LAPOR	National Public Service Complaint Management System

Introduction

Terpercaya aims to drive a shift towards sustainable commodity production across Indonesian districts by increasing market recognition of the efforts and incremental progress made to achieve sustainability. The process of Terpercaya can be divided into two phases. During the first phase of the process, the European Forest Institute (EFI) and Yayasan Inobu played a convening role, bringing together multiple stakeholders in an Advisory Committee (AC) to guide the Terpercaya process in developing 22 indicators. The second phase of Terpercaya was started when the Ministry of National Development Planning (BAPPENAS) took the leadership of convening and chairing the AC meetings. Five AC meetings and a series of Focus Group Discussions at the national and local levels, chaired by BAPPENAS, were carried out during the second phase to validate and test the indicators in four districts.

At the end of the second phase, the EU-funded KAMI project initiated activities on “Operationalising Terpercaya indicators and data platform” to refine the existing indicators and further develop the Terpercaya data platform. This refinement includes, for each indicator, strengthening how it is measured and how time series data can be collected. The project also aimed to improve the Terpercaya web platform to give access to wider audiences to information on the performance of district governments towards sustainability.

This report summarises the progress achieved, including the status of the Terpercaya indicators, the guidelines for data sharing (collection), and the web platform. The report consists of eight sections detailing:

- The latest status of the Terpercaya indicators, including the addition of the food security indicator
- Guidelines or standard operating procedures (SOPs) for data sharing on indicators where the national datasets are available at the national level
- Guidelines or SOPs for data collection on indicators where national datasets are unavailable, focusing on data collection at the subnational level
- The refinement of the indicators and lessons learnt from the process
- Update on the web platform of Terpercaya, including the multi-year database
- Guidelines or SOPs for automatic and manual update of indicator data, as well as data maintenance of Terpercaya indicator data
- Guidelines or SOPs for the operationalisation and maintenance of the Terpercaya web platform
- Recommendations on how to improve and upgrade the Terpercaya web platform

The report summarises work carried out between February and June 2022 involving 12 focus group discussions and two workshops with around 30 stakeholders from government ministries and agencies, district governments and non-governmental organisations (NGOs).

Chapter 1: Updating and revising the Terpercaya indicators and data

1.1 The refinement of the Terpercaya indicators

In the second phase of Terpercaya, between November 2019 and March 2021, 22 indicators were selected to measure the performance of local governments towards sustainable commodity production through multistakeholder processes led and convened by the Ministry of National Planning (BAPPENAS). The indicators were further validated in four districts.

At the start of the project, several indicators were further refined as there was no consensus on means of verification in the second phase of Terpercaya. During the project 12 Focus Group Discussions (FGDs) and two workshops with Indonesian ministries/agencies were held. Besides refining the indicators, the meetings also discussed the availability of datasets in respective ministries. Finally, a new indicator was also proposed by BAPPENAS on food security, bringing the total number of indicators to 23.

The respond to BAPPENAS' request to include food security as one of the Terpercaya indicators, three FGDs were carried out with the National Food Agency (BPN). These FGDs aimed to facilitate in-depth discussion on food security indicators and review the data sources that could be used. The first FGD was held on 28 September 2021, the second on 5 October 2021, and the third on 5 April 2022. The FGDs focused on the Food Security and Vulnerability Atlas (FSVA) developed by the National Food Agency (BPN). FSVA is a tool for policy makers to identify vulnerable areas and recommend how to improve food and nutrition security at the district level throughout Indonesia. The concept of food security in the FSVA is built on several parameters that are divided into the three pillars of food security: food availability; food affordability; and food utilisation. These parameters are combined to produce a composite value of food security, which is then used as the Food Security Index (IKP)¹. IKP adopts a global food security index (GFSI) measurement with various methodological adjustments according to the data availability and information at the district/city and provincial levels.

1.2 Status of Terpercaya indicators

The project has further refined 12 Terpercaya indicators, including by revisiting the type of data used in the calculation and the formula for measuring the indicators. No further changes were required for the other 11 indicators. The 12 modified indicators are:

1. Protection of permanent forests (Indicator 1)
2. Protection of peatland areas (Indicator 4)
3. Climate change mitigation (Indicator 5)
4. Environmental quality control (Indicator 7)
5. Recognition of customary communities (Indicator 9)

¹ Badan Ketahanan Pangan 2021, Indeks Ketahanan Pangan 2021

6. Resolution of land and agricultural conflicts (Indicator 10)
7. Food security (Indicator 13) (new indicator)
8. Number of Plantation Farmer Association/Groups (Indicator 15)
9. Support for plantation farmers (Indicator 16)
10. Multistakeholder participation in district planning (Indicator 21)
11. Complaint mechanism (Indicator 22)
12. Sustainable land-use planning (Indicator 23)

The changes for each of the 12 indicators are detailed below:

a. Protection of permanent forest (Indicator 1)

Indicator 1 aims to monitor the commitment of district governments to protect conservation areas in their jurisdictions. Stakeholders raised concerns that Indicator 1 used the District Spatial Planning (RTRWK) as the denominator. To measure the commitment of district governments in forest protection, Terpercaya should use the state forest areas (*kawasan hutan*) as reference.

Indicator 1 was then updated to assess the compliance of RTRWK with the zoning stipulated in the state forest areas (*kawasan hutan*). The assessment can be carried out by comparing the areas classified as protected and conservation forests in the state forest areas (*kawasan hutan*) with the areas protected in the RTRWK, as well as an indicative map of the forest moratorium, as follows:

$$HP_i(\%) = \frac{(HL_i + HK_i + M_i)}{HL_k + HK_k} \times 100\%$$

where:

- HL_i : total area of protected forests in district i (hectare)
- HK_i : total area of conservation forests in district i (hectare)
- M_i : total area under the new licence moratorium (PIPPIB) in district i (hectare), excluding $HL_i + H_i$
- $HL_k + HK_k$: total area of protected forests and conservation forests in the Decision Letter (SK) of the Indonesia Forest Estate

The formula for the implementation of the indicator was changed accordingly, as follows:

$$FC.HP_i(\%) = \frac{(FC.HL_i + FC.HK_i + FC.M_i)}{HL_k + HK_k} \times 100\%$$

where:

- $FC.HL_i$: total area of forest cover within protected forests in district i (hectare)
- $FC.HK_i$: total area of forest cover within conservation forests in district i (hectare)
- $FC.M_i$: total area of forest cover under the new licence moratorium (PIPPIB) in district i (hectare), excluding $HL_i + H_i$

- $HL_k + HK_k$: total area of protected forests and conservation forests in the Decision Letter (SK) of the Indonesia Forest Estate

b. Protection of peatland areas (Indicator 4)

Indicator 4 aims to identify district government commitment to protecting peatland areas in their jurisdictions. In the previous formula, the measurement of Indicator 4 was the percentage of total peatland that is protected by RTRWK and the moratorium area map as compared to the total area of peatland in the district. The total peatland is measured based on the protected and conservation areas under RTRWK and under the moratorium area. Stakeholders raised the concern that the measurement does not consider peatland outside forest areas such as non-forest estate areas (APL) that must be protected. According to the Ministry of Environmental and Forestry, peat ecosystems are located both inside and outside forest areas, with 31.79% of peatland areas located in areas zoned as APL². To include peat located in both state forests and APL, Indicator 4 should measure the proportion of peat that is included protected under RTRWK as compared to the area protected stipulated by the Ministry of Environmental and Forestry in the district, as described in the formula below:

$$HP_i(\%) = \frac{RTRWK_{lindung} \cap KHG}{KHG_{lindung}} \times 100\%$$

where:

- $RTRWK_{lindung} \cap KHG$: total intersection area between the District Spatial Planning (RTRWK) of the protected area and the peatland located in the district area (hectare)
- $KHG_{lindung}$: total area of peatland with protection function in the district (hectare).

c. Climate change mitigation (Indicator 5)

Indicator 5 aims to measure the progress made by district governments to reduce emissions from deforestation and forest degradation against the Forest Reference Emission Level (FREL) established by the Ministry of Environment and Forestry. However, due to the unavailability of FREL data, emissions from deforestation and forest degradation at the national level for all districts are not accounted or reported. Therefore, the indicator cannot be measured and had to be adjusted.

Three important considerations were put forward by stakeholders consulted to measure the progress made by local government to reduce emissions from deforestation and degradation, including:

- The completion of a report on the greenhouse gas inventory (IGRK).
- The availability of a forest reference emission level (FREL) calculation, which is used as a baseline for the district government.
- The presence of a Climate Change Mitigation Action Plan. After the District calculates the emissions, it is obliged to translate it into an action plan.

Based on above points, updated formula of indicator 5 is written as follow:

² Kementerian Lingkungan Hidup dan Kehutanan, 2020, Rencana Perlindungan dan Pengelolaan Ekosistem Gambut Nasional 2020-2049

$$EDF = (v_n \times w_n) + (v_m \times w_m) + (v_a \times w_a)$$

where:

- $v_n \in \{0, 1\}$, $v_m \in \{0, 1\}$, $v_a \in \{0, 1\}$
- v_n : Index that indicates whether or not there is reporting of greenhouse gas (GHG) emissions inventory
- w_n : Weight of GHG emission inventory reporting index (25%)
- v_m : Index that indicates the presence/absence of the FREL formula (baseline) at the district level
- w_m : Index weight of FREL formula (baseline) (30%)
- v_a : Index that indicates whether or not there is a climate change mitigation action plan
- w_a : Index weight of the existence of climate change mitigation action plan (40%)

d. Environmental quality control (Indicator 7)

Indicator 7 aims to measure the environmental quality in a jurisdiction to ensure that development activities do not have a negative environmental impact on local communities. The previous formula focuses on measuring the water and air quality. Stakeholders pointed out that Indicator 7 should include the quality of land resources in the measurement of the environmental quality. Deforestation, land clearing and the use of chemicals in land-based activities can lead not only to deterioration of water and air quality, but also of land resources quality.

In Indonesia, the quality of environmental performance is measured by environmental quality index data (IKLH). The three environmental quality indicators used to calculate the IKLH are: the Water Quality Index (IKA); the Air Quality Index (IKU); and the land cover quality index (IKTL)³. To measure the quality of the environment as a whole, it is important to include the IKTL as it measures conservation and rehabilitation aspects that affect land/forest cover changes. Indicator 7 can use IKLH as a source data to measure the environmental quality of the jurisdiction. Since the data source has changed, the indicator's name is also adjusted. The updated formula of indicator 7 is written as follows:

$$AWPC_i = IKLH$$

where:

- IKLH: environmental quality index in the district

e. Recognition of customary communities (Indicator 9)

The aim of indicator 9 is to assess local government commitments to recognising customary land (*masyarakat hukum adat*). There are two possible ways to measure the performance of local governments on Indicator 9:

³ Kementerian Lingkungan Hidup dan Kehutanan, 2018, Indeks Kualitas Lingkungan Hidup Indonesia 2017.

1. Using the proportion of customary land area that has been recognised based on the district regulations as compared with the total potential area of customary land in the district; or
2. Checking the existence of one of the following criteria: number of recognised customary law community (MHA); number of verified MHA, local wisdom or traditional knowledge; number of verified local wisdom or traditional knowledge rights; number of legalised MHA rights; percentage of MHA facilitated compared to total MHA; percentage of MHA provided by infrastructure compared to total MHA.

Based on the previous data collection process, the compilation of district regulations on customary land was carried out by the Customary Territory Registration Agency (BRWA), a non-governmental organisation that focuses on the registration of Indonesian customary territories. Stakeholders raised the concern of using the dataset maintained by a non-governmental organisation and suggested finding an official government dataset at the national level.

Terpercaya can use the data on customary land/forests and community management areas that have been recognised by KLHK/Kemendagri in the district. This data is available in KLHK. Since the data source has changed, the indicator name is also adjusted. Based on the results of the FGD and workshop, it was agreed to use only one approach as follows:

$$CL (\%) = \frac{(CL_{legalised})}{CL\ Area_i} \times 100\%$$

where:

- *(CL_{legalised})*: Management Area of customary communities that has been recognised based on KLHK/Ministry of Home Affairs in district i (hectare)
- *CL Area_i*: The area of customary forest in district i (hectare) based on the indicative customary forest map.

f. Resolution of land and agricultural conflicts (Indicator 10)

Indicator 10 aims to monitor the performance of district governments in resolving social conflicts related to plantation development. Indicator 10 previously used the total number of conflicts reported at the national level as the measurement. After the data collection process, it was found that not all districts have collected the information on the year when conflicts occurred. This makes one district appear to have more conflicts than others, which is not necessarily the case. It is also challenging to collect conflict data within the same year, especially only for the plantation sector for all districts. Therefore, the data source needed to be adjusted.

To measure the district performance on the resolution of land and agricultural conflicts, Terpercaya can use the availability of SOPs for handling land and agricultural conflicts in a district. At present, the data is available at the district level. Later on, Terpercaya can collect the SOP for handling land and agricultural conflicts through the SDI platform. SOP data for handling land and agricultural conflicts is one of the datasets approved by SDI to be made available on the SDI platform. Since the data source has changed, the indicator name was also adjusted.

The updated formula of indicator 10 is written as follows:

$$RK \in \{0, 1\}$$

where:

RK_i is equal to 1 if district i has an SOP for handling land and agricultural conflicts, and 0 otherwise.

g. Food security (Indicator 13)

Indicator 13 is a new indicator to measure the performance of local governments to achieve food security in their jurisdictions. The National Food Agency (BPN) carries out a regular assessment of food security in all districts in Indonesia using the Food Security Index (IKP), with the index value ranging from 0-1.

Indicator 13 of Terpercaya will use IKP as the data source. The elements measured by the IKP are: food availability; food affordability; and food utilisation. A comprehensive IKP calculation can assess food security at the district level. The IKP database is available on an annual basis on the website: <http://app2.badanpangan.go.id/>.

The formula of indicator 13 is written as follows:

$$FSI = IKP_i$$

where:

- IKP_i : Food Security Index in district i (index)

h. Number of plantation farmer associations/groups (Indicator 15)

Indicator 15 aims to track the number of plantation farmer associations, especially oil palm farmers, at the district level. To do so, we calculate the number of farmer associations (*poktan*) per thousand farmers. However, stakeholders noted the need to distinguish between the data of agricultural farmer associations (*poktan pertanian*) usually focusing on food crops, and plantation farmer associations (*poktan perkebunan*). The Ministry of Agriculture has the relevant data.

The formula of indicator 15 is written as follows:

$$CL (\%) = \frac{plant.G_i}{plant.F_i} \times 100\%$$

where:

- $plant.G_i$: Number of plantation farmer groups registered in district i (count).
- $plant.F_i$: Number of independent smallholders in district i (count)

i. Support for plantation farmers (Indicator 16)

The indicator aims to measure government support for smallholders. It is measured by comparing the number of extension agents and the total number of smallholders within the district. The Ministry of Agriculture has the relevant data.

The formula of indicator 16 is written as follows:

$$CL (\%) = \frac{ext. agent_i}{plant. F_i} \times 100\%$$

where:

- $plant. G_i$: Number of extension agent in the district i (count)
- $plant. F_i$: Number of independent smallholders in district i (count)

j. Multistakeholder participation in district planning (Indicator 21)

Indicator 21 aims to measure the performance of district governments in ensuring the involvement of the public in regional planning processes. The indicator is measured by identifying the existence of SOP for community participation in the spatial planning process and the development of mid-term and annual plans. However, after carrying out the data collection process, it was found that such data is unavailable.

Based on discussions with the Ministry of Home Affairs, the involvement of the public in the regional planning process can be measured by SOPs for community participation in the implementation of *Musrenbang*. *Musrenbang* (*musyawarah perencanaan pembangunan* or development planning meeting) is a mechanism to collect people's aspirations in the development planning process. Every district is obliged to conduct the *Musrenbang* in the preparation of planning documents (National Development Plan and Regional Development Plan). SOPs for community participation in the implementation of *Musrenbang* is one of the datasets approved by One Data Indonesia (SDI) to be made available on the SDI platform. Furthermore, SOPs for community participation in the implementation of *Musrenbang* can be accessed on the SDI platform in January 2023. The *Terpercaya* initiative can use this SOP as a data source to measure indicator 21.

The formula of indicator 21 is written as follows:

$$MSP_i \in \{0, 1\}$$

where:

- MSP_i is equal to 1 if there is an existence of SOPs for SOP for Development Planning Deliberations for Community Participation in Spatial Planning and Medium and Annual Development Plans, and 0 otherwise.

k. Complaint mechanism (Indicator 22)

Indicator 22 aims to measure government performance in handling complaints. It is measured by SOPs related to handling complaints. However, based on phase 2 data

collection, the data for SOP on the Community Complaint Mechanism is unavailable at the national level. It was suggested that Terpercaya use data on the implementation of SP4N-LAPOR in the district. Through Presidential Regulation number 76/2013 on Public Service Complaint Management, the Indonesian Government established a National Public Service Complaint Management System – People's Aspiration and Online Complaints Service (SP4N-LAPOR). This national complaint handling management system is implemented by all public service providers (ministry, institution and local government) and is already integrated at the national level. The integration aims to centralise all complaint data, making it easier to identify the types of complaints received. The objective is to use the data to improve the public service system at the district level. The list of districts that operate SP4N-LAPOR is available in the Information Center (Pusat Penerangan), Ministry of Home Affairs. The Ministry of Home Affairs can monitor the status of all complaints, for example, those that have not been verified, not followed up, in process or not processed by the local government.

The formula of indicator 22 is written as follows:

$$I_c \in \{0, 1\}$$

where:

- I_c is equal to 1 if the district operates SP4N-LAPOR, and 0 otherwise

I. Sustainable land-use planning (Indicator 23)

Indicator 23 aims to measure the commitment of the district government in developing a jurisdictional plan to protect and manage the environment, including climate mitigation and adaptation. It is measured by the existence of documents such as the environmental carrying capacity (DDDTLH) and the Environmental Protection and Management Plan (RPPLH). From the data collection process, it was found that not all districts have developed DDDTLH and RPPLH. Therefore, the data source needs to be adjusted.

This indicator is to assess the government's performance from the availability of the DDDTLH or RPPLH. Both documents are mandatory, but not widely developed by districts. According to the Indonesian Law No 32 of 2009 on Environmental Protection and Management, if RPPLH has not been developed, natural resources utilisation can be carried out based on the environmental carrying capacity (DDDTLH). Information on the status of every district in developing DDDTLH and RPPLH is available at the Directorate of Environmental Impact Prevention for Regional and Sectoral Policies (PDLKWS).

Table 1. Addition of indicators and improvement of methodology and data

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
1	Protection for permanent forest	-	v	-	<p><u>Policy indicators</u></p> $HP = [(HL_i + HK_i + M_i) / Area_i] \times 100\%$ <p><u>Implementation indicator</u></p> $FC.HP_i (\%) = [(FC.HL_i + FC.HK_i + FC.M_i) / Area_i] \times 100\%$ <p>HL_i: total area of protected forest in district i (hectare)</p> <p>HK_i: total area of Conservation Forest in district i (hectare)</p> <p>M_i: total area under new licences moratorium (PIPIB) in district i (hectare), excluding HL_i & HK_i</p> <p>Area: total area of Protected Forest and Conservation Forest in the District i Spatial Planning (RTRW) (hectare)</p>	<ol style="list-style-type: none"> 1. Area (map) of protected forest in the district within the District RTRW 2. Area (map) of conservation forest in the district within the District RTRW 3. Area (map) of the new licence moratorium (PIPIB) in the district 4. Area (map) of protected forest in the district in the SK PKH 5. Area (map) of conservation forest in the district in the SK PKH 	<p><u>Policy indicators</u></p> $HP = [(HL_k + HK_k + M_i) / (HL_k + HK_k)] \times 100\%$ <p><u>Implementation indicators</u></p> $FC.HP_i (\%) = [(FC.HL_i + FC.HK_i + FC.M_i) / (HL_k + HK_k)] \times 100\%$ <p>HL_i: total area of protected forest in district i (hectare)</p> <p>HK_i: total area of Conservation Forest in district i (hectare)</p> <p>M_i: total area under the new licence moratorium (PIPIB) in district i (hectare), excluding HL_i + H_i</p> <p>HL_k + HK_k total area of Protected Forest and Conservation Forest in the Decision Letter (SK) of the forest area enactment</p>	<ol style="list-style-type: none"> 1. Area (map) of protected forest in the district within the District RTRW 2. Area (map) of conservation forest in the district within the District RTRW 3. Area (map) of the new licence moratorium (PIPIB) in the district 4. Area (map) of protected forest in the district in the SK PKH 5. Area (map) of conservation forest in the district in the SK PKH
2	Protection for areas critical to ecological services	-	-	-	$ESP(\%) = [(RTRWL_i) / KEE_i] \times 100\%$ <p>RTRWL_i: total area of district spatial planning (RTRWK) with protected function in district (hectare)</p>	<ol style="list-style-type: none"> 1. The area (map) of the RTRWK with a protected function in the Regency 	$ESP(\%) = [(RTRWL_i) / KEE_i] \times 100\%$ <p>RTRWL_i: total area of district spatial planning (RTRWK) with protected function in district (hectare)</p>	<ol style="list-style-type: none"> 1. The area (map) of the RTRWK with a protected function in the Regency

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
					HK _i : total area of i Zone of Ecosystem Essential (KEE) (hectare)	2. Area (map) of Essential Ecosystem Areas in the district	HK _i : total area of i Zone of Ecosystem Essential (KEE) (hectare)	2. Area (map) of Essential Ecosystem Areas in the district
3	Fire Prevention	-	-	-	$\Delta BA_{it} = BA_{ib} - BA_{ib}$ BA _{it} : total burn area in district (year baseline) (hectare) BA _{ib+1} : total burn area in district i year baseline + 1) (hectare)	Area of fire in the district	$\Delta BA_{it} = BA_{ib} - BA_{ib}$ BA _{it} : total burn area in district (year baseline) (hectare) BA _{ib+1} : total burn area in district i year baseline + 1) (hectare)	Area of fire in the district
4	Protection for peatlands	-	v	v	$HP (\%) = ((Peat_HL_i + Peat_HK_i + Peat_M_i) / Peat_area_i) \times 100\%$ Peat_HL _i : total area of peatland in protected forest in District i (hectare) Peat_HK _i : total area of peatland in conservation forest in District i (hectare) Peat_M _i : total area of peatland under new licence moratorium (PIPIB) in District i (hectare) Peat_area _i : total area of peatland with protection function in district i (hectare)	1. PIPPIB Map 2. RTRW (regional data) 3. Peat Hydrologic Unit Map	$HP (\%) = ((RTRWK_{indung} \cap KHG) / KHG_{indung}) \times 100\%$ RTRWK _{indung} ∩ KHG: total area of the intersection between the District Spatial Planning (RTRWK) of the district protected area and the peat hydrological unit located in the district area (hectare) KHG _{indung} : total area of peatland with protection function in the district (hectare).	1. The area (map) of land that is included in the hydrology of peat that is within the area/protection function area identified in the Regency RTRW 2. Peat area (map) with protection function in the district
5	Climate Change Mitigation	-	v	v	$EDefRel\ Ratio. (\%) = (EDefor_t / FREL_t) \times 100\%$ EDefor _t : Total annual emissions from deforestation and forest degradation in i in year t (tonnes CO2) FREL _t : Forest Reference Emission Level (FREL) of district i (tonnes CO2) as	1. Deforestation emission 2. District forest reference emission level (FREL)	$EDF = (v_n \times w_n) + (v_m \times w_m) + (v_a \times w_a)$ where $v_n \in \{0,1\}, v_m \in \{0,1\}, v_a \in \{0,1\}$	1. The existence of IGRK report at District Level 2. The existence of baseline (FREL) calculation in the district

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
					enacted by the Ministry of Environment and Forestry.		\mathcal{V}_n : Index that indicates whether or not there is reporting of greenhouse gas (GHG) emissions inventory W_n : Weight of GHG emission inventory reporting index (25%) \mathcal{V}_m : Index that indicates the presence/absence of the FREL formula (baseline) at the district level W_m : index weight of FREL formula (baseline) (30%) \mathcal{V}_a : Index that indicates whether or not there is a climate change mitigation action plan W_a : Index weight of the existence of climate change mitigation adaptation action plan (40%)	3. Climate change mitigation adaptation action plan document
6	Sustainable production forest management	-	-	-	$SHP\ Ratio\ (\%) = [(SForcon_i) / HP_j] \times 100\%$ $SForcon_i$: total concession area in production forest with PHPL dan FSC certification in district (hectare) $SForcon_i$: total area of production forest based on forest estate (hectare)	1. Logging concession with PHPL/FSC certification 2. Forest estate	$SHP\ Ratio\ (\%) = [(SForcon_i) / HP_j] \times 100\%$ $SForcon_i$: total concession area in production forest with PHPL and FSC certification in district (hectare) $SForcon_i$: total area of production forest based on forest estate (hectare)	1. Total production forest concessions that have obtained sustainability certification (PHPL and FSC) in the district 2. Total production forest in the district
7	Environmental quality control	v	v	v	$AWPC_i = (50\% \times WQ) + (50\% \times AQ)$ WQ : Water quality index (IKA)	Water and air quality index	$AWPC_i = IKLH$ IKLH: environmental quality index in the district	Environmental quality index (IKLH) in the district

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
					AQ : Air quality index (IKU)			
8	Free, prior and informed consent (FPIC) that is integrated into the plantation permit application process	-	-	-	$FPIC_i \in \{0,1\}$ FPIC _i is equal to 1 if there is an existence of SOP FPIC, and 0 otherwise.	The existence of SOPs in districts to obtain community approval regarding plantation permits	$FPIC_i \in \{0,1\}$ FPIC _i is equal to 1 if there is an existence of SOP FPIC, and 0 otherwise.	The existence of SOPs in districts to obtain community approval regarding plantation permits
9	Recognition of Customary Law Communities	v	v	v	$CL(\%) = (CL \text{ legalised}_i) / (CL \text{ Area}_i) \times 100\%$ CL legalised _i : Management Area of customary law community that has been recognised based on SK/Perda Bupati in district i (hectare) CL Area _i : The area of customary forest in district i (hectare) based on customary forest indicative map $CL_i \in \{0,1\}$ CL _i is equal to 1 if there is an existence of one of the criteria, and 0 otherwise. <ul style="list-style-type: none"> ●Number of recognised customary law community (MHA) ●Number of verified MHA, or local wisdom, or traditional knowledge ●Number of verified local wisdom, or traditional knowledge rights ●Number of legalised MHA rights ●Percentage of MHA facilitated compared to total MHA ●Percentage of MHA provided by infrastructure compared to total MHA 	1. The area (map) of MHA management area that has been recognised based on SK/Perda Bupati in the district 2. Indicative map of district customary forest 3. Data of each criterion	$CL(\%) = (CL \text{ legalised}_i) / (CL \text{ Area}_i) \times 100\%$ CL legalised _i : Management Area of customary law community that has been recognised based on KLHK/Ministry of Home Affairs in district i (hectare) CL Area _i : The area of customary forest in district i (hectare) based on customary forest indicative map	1. The area (map) of MHA management area that has been recognised based on the KLHK/Kemendagri in the district 2. Indicative map of district customary forest

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
10	Resolution of land and agricultural conflicts	v	v	v	Total number of conflicts or cases reported at the national level and accepted by the Ministry of Agriculture	Number of conflicts	$RK_i \in \{0, 1\}$ RK_i is equal to 1 if district i has an SOP for handling land and agricultural conflicts, and 0 otherwise	The existence of SOP for handling district land and agricultural conflicts
11	Percentage for independent smallholders	-	-	-	$sholder_i (\%) = [(sh.area_i) / plantation_i] \times 100\%$ $sh.area_i$: total area of plantations managed by smallholders in district i (hectare). $plantation_i$: total plantations area in district i (hectare).	1. Area of plantations managed by independent smallholders in the district 2. Plantation area in the district	$sholder_i (\%) = [(sh.area_i) / plantation_i] \times 100\%$ $sh.area_i$: total area of plantations managed by smallholders in district i (hectare). $plantation_i$: total plantations area in district i (hectare).	1. Area of plantations managed by independent smallholders in the district 2. Plantation area in the district
12	Independent smallholder registration	-	-	-	$Stdb.ratio_i (\%) = [(sh.stdb_i) / sh_i] \times 100\%$ $sh.stdb_i$: total number of independent smallholders who have STDB in district i (count) sh_i : total number of independent smallholders in district i (count)	1. Number of independent smallholders who have STDB in the district 2. Number of independent smallholders in the district	$Stdb.ratio_i (\%) = [(sh.stdb_i) / sh_i] \times 100\%$ $sh.stdb_i$: total number of independent smallholders who have STDB in district i (count) sh_i : total number of independent smallholders in district i (count)	1. Number of independent smallholders who have STDB in the district 2. Number of independent smallholders in the district
13	Food security	-	-	-	-	-	<u>New indicator</u> $FS_i = IKP_i$ IKP_i : Food Security Index in district i (index)	Food Security Index

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
14	Productivity of independent smallholders	-	-	-	$\text{sh.prod}_i (\%) = [(\text{sh.yield}_i) / \text{sh.area}_i] \times 100\%$ <p>sh.stdb_i: total production of smallholder oil palm plantations in district i (kg).</p> <p>sh.area_i: total area of oil palm plantations managed by smallholders in district i (hectare).</p>	<p>1. Total production of independent smallholder oil palm plantations in the district</p> <p>2. Area of plantations managed by independent smallholders in the district</p>	$\text{sh.prod}_i (\%) = [(\text{sh.yield}_i) / \text{sh.area}_i] \times 100\%$ <p>sh.stdb_i: total production of smallholder oil palm plantations in district i (kg).</p> <p>sh.area_i: total area of oil palm plantations managed by smallholders in district i (hectare).</p>	<p>1. Total production of independent smallholder oil palm plantations in the district</p> <p>2. Area of plantations managed by independent smallholders in the district</p>
15	Number of Plantation Farmer Association/Groups	-	-	v	$\text{plant.FG}_i (\%) = [(\text{plant.G}_i) / \text{plant.F}_i] \times 1000 \text{ farmers}$ <p>plant.G_i: number of plantation farmer groups registered in district i (count).</p> <p>Plant.F_i: total number of independent smallholders in district i (count)</p>	<p>1. Number of farmer groups in the district</p> <p>2. Number of independent smallholders in the district</p>	$\text{plant.FG}_i (\%) = [(\text{plant.G}_i) / \text{plant.F}_i] \times 1000 \text{ farmers}$ <p>plant.G_i: Number of plantation farmer groups registered in district i (count).</p> <p>Plant.F_i: Number of independent smallholders in district i (count)</p>	<p>1. Number of farmer groups (plantation) in the district</p> <p>2. Number of independent smallholders in the district</p>
16	Support for plantation farmers	-	-	v	$\text{rext.agent}_i = [(\text{ext.agent}_i) / \text{Plant.F}_i] \times 100\%$ <p>ext.agent_i: Number of extension agent in the district i (count)</p> <p>plant.F_i: Number of independent smallholders in the district i (hectare).</p>	<p>1. Number of extension agent in the district</p> <p>2. Number of independent smallholders in the district</p>	$\text{rext.agent}_i = [(\text{ext.agent}_i) / \text{Plant.F}_i] \times 100\%$ <p>ext.agent_i: Number of extension agent in the district i (count)</p> <p>plant.F_i: Number of independent smallholders in the district i (hectare).</p>	<p>1. Number of extension agent in the district</p> <p>2. Number of independent smallholders in the district</p>
17	Certified Sustainable Plantation	v	-	-	$\text{SC}_i (\%) = [(\text{ISRSPO.area}_i) / \text{OP.Plantation}] \times 100\%$ <p>ISRSPO.area_i: RSPO and/or ISPO certified oil palm plantation area in district i (hectare)</p>	<p>1. RSPO and/or ISPO certified oil palm plantation area in the district</p>	$\text{SC}_i (\%) = [(\text{ISRSPO.area}_i) / \text{OP.Plantation}] \times 100\%$ <p>ISRSPO.area_i: RSPO and/or ISPO certified oil palm plantation area in district i (hectare)</p>	<p>1. RSPO and/or ISPO certified oil palm plantation area in the district</p>

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
					Population _i : total area of oil palm plantations in district i (hectare).	2. Area of oil palm plantations in the district	Population _i : total area of oil palm plantations in district i (hectare).	2. Area of oil palm plantations in the district
18	Poverty level	-	-	-	$Poverty_i (\%) = [(Poor.people_i) / Population] \times 100\%$ Poor.People _i : the number of people living below the poverty line in the district <i>i</i> . Population _i : total population in district / (people)	District level poverty percentage	$Poverty_i (\%) = [(Poor.people_i) / Population] \times 100\%$ Poor.People _i : Number of people living below the poverty line in the district <i>i</i> . Population _i : total population in district / (people)	District level poverty percentage
19	Proportion of district budget allocated for sustainability	-	-	-	$bratio.DLH_i (\%) = [(budget.DLH_i) / APBD_i] \times 100\%$ budget.DLH _i : the amount of the budget allocated to the environmental office (rupiah) budget.DLH _i : the total amount of the district budget allocation (rupiah)	1. APBD for sustainability/environment 2. District level budget	$bratio.DLH_i (\%) = [(budget.DLH_i) / APBD_i] \times 100\%$ budget.DLH _i : the amount of the budget allocated to the environmental office (rupiah) budget.DLH _i : the total amount of the district budget allocation (rupiah)	1. APBD for sustainability/environment 2. District level budget
20	Access for public information	-	-	-	$PIA_i \in \{0,1\}$ PIA _i is equal 1 if there is an existence of Regional Regulation/Regent Decree for the appointment of PPID officials in the district, and 0 otherwise.	The existence of Regional Regulation/Regent Decree for the appointment of PPID officials in the district	$PIA_i \in \{0,1\}$ PIA _i is equal 1 if there is an existence of Regional Regulation/Regent Decree for the appointment of PPID officials in the district, and 0 otherwise.	The existence of Regional Regulation/Regent Decree for the appointment of PPID officials in the district
21	Multistakeholder participation in district planning	-	-	v	$MSP_i \in \{0,1\}$ MSP _i is equal 1 if there is an existence of SOP for Community Participation in Spatial Planning and Mid-Term and	SOP for Community Participation in Spatial Planning and Mid-Term and Annual Development Plans	$MSP_i \in \{0,1\}$ MSP _i is equal to 1 if there is an existence of SOP for community participation in the implementation of	SOP for community participation in the implementation of <i>musrenbang</i> in the district

N°	Indicator	Change			Old version		New version	
		Name	Formulation	Data	Formulation	Data	Formulation	Data
					Annual Development Plans, and 0 otherwise.		<i>musrenbang</i> in the district, and 0 otherwise.	
22	Complaint mechanism	-	-	v	$I_c \in \{0,1\}$ I_c is equal 1 if there is an existence of SOP regarding the community complaint mechanism, and 0 otherwise.	SOP regarding the community complaint mechanism	$I_c \in \{0,1\}$ I_c is equal 1 if the district operates SP4N Lapor, and 0 otherwise	List of districts that operate SP4N Lapor
23	Sustainable land-use planning	-	v	-	$SLUP_i \in \{0,1\}$ $SLUP_i$ is equal 1 if there is an existence of DDDTLH and RPPLH document, and 0 otherwise.	1. List of Districts that have DDDTLH documents 2. List of Districts that have RPPLH documents	$SLUP_i \in \{0,1\}$ CL_i is equal 1 if there is an existence of DDDTLH document or RPPLH, and 0 otherwise.	1. List of Districts that have DDDTLH documents 2. List of Districts that have RPPLH documents

Chapter 2: Guidelines/SOPs for data sharing at the national level

2.1 Procedure

Before carrying out the data exchange process, BAPPENAS needs to have its own institutional structure in the form of a secretariat that focuses on the operation of the Terpercaya system. The Terpercaya Secretariat will carry out the process of sharing, inputting and maintaining the platform. There are two SOP schemes that can be carried out by BAPPENAS regarding the process of data sharing between Ministries/Agencies (K/L) which will be processed by the Terpercaya Secretariat: Scheme 1 is Direct Data Sharing, namely data exchange is directly carried out between the Terpercaya Secretariat and K/L data guardians. Scheme 2 is data sharing through One Data Indonesia (SDI). All data needed, as listed in Annex A, is on a district basis with the most recent year.

SDI is one of the national policies mandated under Presidential Regulation No. 39 of 2019 on One Data Indonesia (SDI) and is in line with Presidential Regulation 95/2018 on Electronic-Based Government Systems. SDI has an online platform containing data produced by the government, both nationally and regionally. All displayed data is public, so that any party may access the data. The function of SDI is to facilitate the management of data produced by the central and local governments, so that it can be used as reference in sound planning policies. In addition, SDI also strengthens the transparency of government data for the public. The National Secretariat of SDI is under the authority of BAPPENAS, therefore in charge of the operation and maintenance of the SDI platform.

2.1.1 Scheme 1: Direct data sharing through ministries

This scheme is used to obtain data that is unavailable on One Data Indonesia (SDI) and K/L public websites. The data collection through K/L public websites does not require data sharing agreements. It is explained in Chapter 6 in more detail. In scheme 1, two parties in one K/L will be involved, namely the Data Guardian⁴ and Data Producer⁵, who are described in Presidential Regulation No. 39 of 2019 on One Data Indonesia (SDI). The data sharing scheme through K/L is directly carried out between the Terpercaya Secretariat (BAPPENAS) and the K/L data guardian. The process of data collection through this scheme commenced in June 2022.

The necessary steps under scheme 1 are as follows:

⁴ Data guardians are units under Central Agencies and Regional Agencies that carry out activities for collecting, examining, and managing data submitted by data producers, as well as disseminating data.

⁵ Data producers are units under the central agencies and local agencies that produce data based on their authority in accordance with the provisions of laws and regulations.

A. Identification of data needs and request for data sharing licences:

1. The Terpercaya Secretariat compiles a list of data needs for Terpercaya analysis consisting of data in shapefile and tabular (excel) formats, which are summarised in Annex A
2. The Terpercaya Secretariat submits a request for a data sharing licence (Annex C) to the data producer with a copy to the data guardian in the respective K/L
3. After obtaining permission from the data producer, the Terpercaya Secretariat shall request for a data transfer process to each data guardian in the relevant K/L
4. Data guardians from each K/L prepares for transferring the data to the Terpercaya Secretariat by fulfilling the data format criteria as listed in Annex A
5. All data that will be distributed shall use the regional reference code pursuant to the Regulation of Minister of Home Affairs (Permendagri) Number 72 of 2019 on Amendments to the Regulation of the Minister of Home Affairs Number 137 of 2017 on Government Administration Area Codes and Data

B. Data transfer procedure

1. The data sharing mechanism is carried out once a year. The Terpercaya Secretariat ensures that the data collection process is carried out annually from January to March, except if the data provider releases the updated data after the mentioned period.
2. After obtaining permission to share the data, the data guardian in each K/L will send the data to the Terpercaya Secretariat through one of these procedures:
 - a. Via e-mail (pertanian@bappenas.go.id) by inserting or attaching the shared data
 - b. Via e-mail that includes a link to download the shared data file from the Ministry/ Agency online storage
 - c. Via Terpercaya platform (input the data directly into the platform)
 - d. Any other procedure agreed upon by both parties, for example using host-to-host between K/L websites by taking into account both parties' system readiness. This is only if the three options above are not recommended.
3. If the procedure used to send data is via e-mail, the Minutes of Handover form has to be completed. The minutes' format can be provided by the Ministries/Agencies that send the data to the Terpercaya Secretariat or that of the Minutes of Handover in Annex D.
4. If data is inputted directly into the system, the Terpercaya Secretariat will provide dashboard access to the K/L data guardian. Subsequently, the K/L data guardian can upload the data according to the system guidelines.
5. The data sent by the K/L data guardian may be accompanied by a disclaimer, a decision letter and/or other written information deemed important for the Terpercaya Secretariat to know. For example, restrictions on access to the public of such data and other information for the use of the data.
6. A Memorandum of Understanding (MoU) can be developed if necessary and upon agreement of both parties (BAPPENAS and respective Ministries/Agencies).
7. If the K/L chooses to send data to the Terpercaya Secretariat, then the data entry is carried out by the Terpercaya Platform admin.

8. During data entry, the Terpercaya Secretariat admin will verify the data. If there is unsuitable data, the admin will communicate it to the K/L's database coordinator.

2.1.2 Scheme 2: Data sharing through SDI

The development of the One Data Indonesia platform is stipulated under Presidential Regulation No. 39 of 2019 on One Data Indonesia. The scheme for sharing Terpercaya data through SDI may start as of January 2023. BAPPENAS put forward a proposal to the SDI Forum for inclusion of Terpercaya data so that it can be made available under the SDI umbrella. The priority data approval process includes the following steps:

1. BAPPENAS submits priority data to the National Secretariat of SDI
2. The proposed data is reviewed by the SDI Forum
3. The SDI Forum, consisting of data guardians, decides whether the proposed priority data can be integrated in SDI by considering the data availability and readiness of the data integration infrastructure

The SDI Forum has announced the approval of Terpercaya indicators at the end of June 2022. The Minutes of Agreement between K/L are contained in Annex E. For the time being, SDI and K/L are carrying out the data collection and platform integration process until December 2022. Approved and available priority data at the Ministry/Agency/Regional (K/L/D) can be directly integrated into the SDI platform when the database system is ready for integration.

The SDI Forum's decision on the proposed priority data was announced in June 2022. Data will be available on the SDI platform for 19 of the 23 Terpercaya indicators. However, the data source for three indicators are only partially approved. This partial approval means that not all data sources are approved in one indicator (one indicator might have more than one source of data). Even though most data has been approved by SDI, they will be available on SDI website as of January 2023.

Terpercaya's approved priority data will be accessible through SDI as of January 2023. The data provided by Ministries/Agencies/Regions (K/L/D) in the SDI will become public data, so downloadable by all parties. Here are the steps to share data via SDI:

1. The Terpercaya Secretariat compiles a list of data needs for Terpercaya analysis consisting of shapefile data and tabular (excel) formats that are summarised in Annex A.
2. The Terpercaya Secretariat directly downloads the necessary dataset based on topics relevant to the Terpercaya indicators through the SDI website, available at: <https://data.go.id/home>.
3. After the data is downloaded, the Terpercaya Secretariat can input⁶ the data into the platform.
4. The data will then be analysed by the system and displayed on the platform.
5. The public can access the results of each indicator analysis through the website by registering as website user.

⁶ Guidelines for data entry are in the Brief of Guidelines/SOPs for platform operationalisation and maintenance, including on data processing and cleaning

2.2 Data analysis and information dissemination

After being entered, data will be analysed and the information disseminated:

1. After the data is collected and input into the Terpercaya platform, the platform will calculate and assess the indicator calculations set by BAPPENAS (described in the chapter 7). The results will be displayed on the platform.
2. The public can access the results of the indicator analysis through the website by registering as website user. They can also download the analysis results in the District Ranking page.
3. If the public wants access to raw data, they may contact the Terpercaya Secretariat. The Secretariat will provide public access to raw data with a URL link. However, for the data that is not yet public, the Secretariat will direct platform users to contact data producers in the respective K/L to maintain confidentiality.

Chapter 3: Guidelines/SOPs for data collection at the subnational level

3.1 Results of the subnational data collection pilot study

Data on five Terpercaya indicators is collected and held by sub-national governments. Table 2 shows the list of data for the five indicators along with data producers. The data producers in Table 2 are Regional Apparatus Organisations (OPDs). The five indicators with subnational data sources are:

1. Protection of permanent forests (indicator 1)
2. Protection of areas critical to ecological services (indicator 2)
3. Protection of peatlands (indicator 4)
4. Free, prior and informed consent (FPIC) that is integrated into the plantation permit application process (indicator 8)
5. Resolution of land and agricultural conflicts (indicator 10)

Based on the pilot study conducted in 12 districts (see Annex G), there are two indicators for which data sources need to be changed. First, the data source of the FPIC indicator, which was previously sourced from the Office of Investment and One Stop Integrated Services (DPMPSTSP) the Government Division, which became the Legal Division of the District Government. Second, the data source of the resolution of land and agricultural conflicts indicator, which was previously sourced from the Ministry of Agriculture, Directorate General of Plantation), which became the Legal Division of the District Government. Both indicators are measured by the presence or absence of SOPs, where the SOP database is hosted by the Legal Division of the District Government.

Of the five above-mentioned indicators, three require data sourced from the District Spatial Plan (RTRWK), while the other two require data about the SOPs for FPIC and land and agricultural conflict resolution. Specifically, for the SOP for Conflict Resolution, the necessary data has changed from the initial number of conflicts to the SOP for land and plantation conflict resolution. This change is based on suggestions from local government and experts. Below is a summary of the discussions on these three data types.

RTRWK data is already available at the district government with the Regional Development Planning Agency (BAPPEDA) as the data guardian. Indicator data related to RTRWK⁷ cannot be accessed through SDI. BAPPENAS had proposed that it be priority data to SDI, but they were not approved.

FPIC data is not yet available in the agricultural agencies of the 12 pilot districts (Annex G). After holding FGDs and interviews with 12 local governments, it was decided to replace SOP for FPIC with a plantation business licence as an alternative. The plantation business licence

⁷ RTRWK is used to analyse indicator 1, indicator 2, and indicator 4. RTRW is necessary to obtain the data of protected and conservation forest area in the district within the District RTRW (indicator 1), area of the RTRWK with a protected function in the Regency (indicator 2), and area of land that is included in the hydrology of peat that is within the area/protection function area identified in the Regency RTRW (indicator 4).

can be collected from the Office of Investment and One Stop Integrated Services (DPMPTSP) and the Government Division. However, after consulting with legal experts, the plantation business licence cannot represent the FPIC because the scheme does not involve the surrounding communities. It was recommended to collect SOP of FPIC in the Legal Division of the District Government. This data has been approved by SDI to be available on the SDI platform as of January 2023.

Land and agricultural conflicts resolution data was subject to a formula change in data product and source data. This indicator data was previously sourced from the Office of Agriculture/Plantation. After expert discussion, it was suggested to source from the Legal Division of the District Regional Government. In terms of data, it used to calculate the number of conflicts. However, local governments suggested not to look at the number of conflicts that have occurred and have been handled. The number of conflicts does not reflect conflict reduction efforts. In addition, the Regional Government does not yet have the number of cases of plantation conflicts that have been resolved. After consulting with legal experts, the data source on conflict resolution was converted into SOPs for conflict resolution. The data source is the local governments' Legal Divisions. This data has been approved by SDI to be available on the SDI platform as of January 2023.

Table 2. Details of Terpercaya indicators data available only from local governments

Indicator	Data Name	Data Format	Unit	Data Producer (OPD)	Data Collection Scheme
Protection of permanent forest	Map of protected forest in the district RTRWK	zip (cpg, dbf, prj, shp, shx)	hectare	BAPPEDA	OPD
	Map of conservation forest in the district RTRWK	zip (cpg, dbf, prj, shp, shx)	hectare	BAPPEDA	OPD
Protection of areas critical to ecological services	Map of RTRWK with protection function in the district	zip (cpg, dbf, prj, lhx)	hectare	BAPPEDA	OPD
Protection of peatlands	Map of land included in the peat hydrology within the area/territory/ protection function area identified in the RTRWK	zip (cpg, dbf, prj, shp, shx)	hectare	BAPPEDA	OPD

Indicator	Data Name	Data Format	Unit	Data Producer (OPD)	Data Collection Scheme
Free, prior and informed consent (FPIC) integrated into the plantation permit application process	Availability of SOPs/regulations in the district regarding community consent regarding plantation permit applications	Confirm yes or no	Confirm yes or no	District Government Legal Division	SDI
Resolution of land and agricultural conflicts	Availability of SOPs/regulations in the district regarding the district land and agricultural conflict resolution	Confirm yes or no	Confirm yes or no	District Government Legal Division	SDI

3.2 Subnational data collection procedure

Data collection at the regional level requires certain policy strategies for straightforward and effective implementation (these policies are discussed in section 3.3). For this reason, BAPPENAS needs to train the Terpercaya Secretariat team to run this data collection scheme. The function of the Secretariat is to contact the district governments so that they can share their data through the Terpercaya platform. Data guardians at the regional level are advised to be able to input data independently into the platform. Similar to data collection at the national level, data collection at the local level consists of two schemes: direct data collection with OPD or through SDI.

3.2.1 Subnational data collection through OPDs

The purpose of this scheme is to obtain data that has not been integrated into SDI through the OPDs. There are six types of source data as shown in Table 2. Details of Terpercaya indicators data available only from local governments. The data source for FPIC and Conflict Resolution indicators can be obtained from OPDs and SDI. Based on the results of a study on regional data collection, the following steps explain the recommendations for Terpercaya data collection at the district level through an OPD scheme:

A. Process for submission of data requests to Regional Apparatus Organisations (OPDs)

1. Data submission is addressed through correspondence to the relevant OPDs
2. The Terpercaya Secretariat attaches a list of necessary data (including format) and guidelines for manual data input
3. OPDs choose whether to input data by themselves or to submit the raw data to the Terpercaya Secretariat
4. OPDs will provide a response regarding their willingness to share data

B. Data transfer

If OPDs want to input the data independently, the Terpercaya Secretariat will provide access to the dashboard and data input guidelines⁸. The following is the data transfer mechanism:

1. OPD performs data entry on a Terpercaya Platform (Figure 1)
 - a. OPDs appoints the person in charge to input the data into the platform
 - b. The Terpercaya Secretariat provides access to the OPDs as an indicator data admin
 - c. OPDs input data into the platform according to the module that will later be provided
 - d. Data entry⁹ is done manually by inputting the data source entry form on the indicator
 - e. The Terpercaya Secretariat validates and verifies the suitability of the data with the indicator formulation in the system
 - f. The Terpercaya Secretariat approves the inputted data that would be analysed
2. OPDs transfer data to the Terpercaya Secretariat
 - a. Data is transferred via email or sent via flash disk (physically) to the Terpercaya Secretariat. For physical schemes, it is necessary to have Minutes of Data Handover. The analysis will be carried out by the Secretariat.

C. Document checking by the Terpercaya Secretariat

After data collection, the Terpercaya Secretariat needs to verify the data by checking the data format and the suitability of the data content. If the documents do not meet the needs of the indicators, the Terpercaya Secretariat will contact the relevant OPD for correction.

D. Data publication

Once the district data is verified, the data can be analysed within the Terpercaya platform. The results of the indicator analysis can then be directly displayed on the website. The public can obtain information related to the results of the indicator analysis by registering as users.

⁸ Refer to Chapter 7- Guidelines SOPs for platform operationalisation and maintenance.

⁹ Steps to input this data can be seen in Guidelines/SOPs for platform operationalisation and maintenance, including on data processing and cleaning.

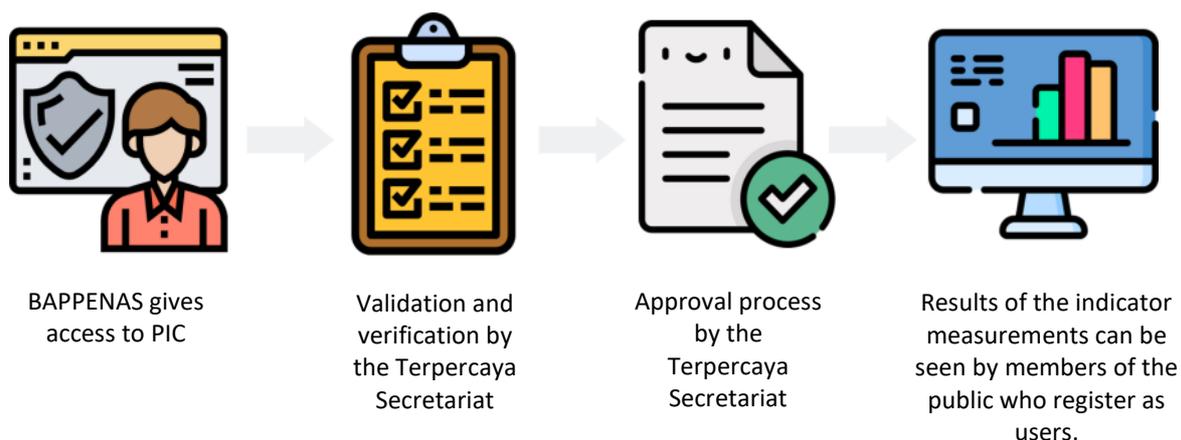


Figure 1. Process of data transfer by district person in charge

3.2.2 Regional data collection through the SDI scheme

Based on the decision of the SDI Forum, there are two types of data that can be accessed through the SDI platform. However, data collection by the Terpercaya Secretariat will only start in January 2023, because both data types will be effectively available on the SDI platform as of that date. It should be noted that although the SDI Forum has approved the two types of indicator data, not all data is available in SDI. This is because some districts' platforms are not ready to be integrated into SDI, so their data cannot be submitted through SDI. The following are the steps that the Terpercaya Secretariat can perform for the SDI scheme:

1. Data download
 - a. The Terpercaya Secretariat can download data per district on the SDI platform. Data is stored in the Secretariat's storage media. BAPPENAS' Directorate of Food and Agriculture already has a server in place at the Data Center at Menara BAPPENAS Kuningan. The server capacity is 4 TB of storage, 32 GB RAM and 20 core processors.
2. Data compilation
 - a. The Terpercaya Secretariat compiles data into bulk insert format¹⁰ provided by the programmer.
3. Inputting data on the Terpercaya Platform
 - a. Once compiled, the Secretariat can input on the Terpercaya platform by using the indicator data input scheme simultaneously¹¹. Then, the platform will analyse and generate indicator values.
4. Public access
 - a. After the data is uploaded and analysed by the platform, the data can be displayed directly on the Terpercaya website.

¹⁰ Excel bulk-insert format can be accessed at: shorturl.at/diGJL

¹¹ Guidelines for data entry can be accessed in Guidelines/SOPs for platform operationalisation and maintenance, including on data processing and cleaning.

3.3 Proposed national regulations for data collection in the subnational

To expedite simultaneous data collection at the regional level, there should be regulations binding regions to collect data independently. Two national regulations are needed to increase the commitment of local governments to provide data for Terpercaya, namely:

A. One Data Indonesia (SDI) scheme

One Data Indonesia (SDI) is a government data management policy to produce data that is accurate, up-to-date, integrated and accountable, as well as easy to access and share between central and regional agencies. SDI is regulated by Presidential Regulation No. 39 of 2019, which stipulates that there is an obligation to involve government agencies, both at central and district level, as data guardians in the development of this platform.

Every year, SDI creates a list of priority data. Priority Data is selected data that will be collected the following year as agreed by the One Data Indonesia Forum. To collect subnational data at the national level, the first step is to submit priority data to the SDI Secretariat. In the Terpercaya context, the data for indicators available at the district level need to be listed and then proposed to SDI. The results of the priority data submission will be announced annually in January. It is expected that in January 2023, regional data will be accessed directly through SDI.

The Terpercaya Secretariat (admin) can directly download the data through the SDI platform. After the data is downloaded, the input process is carried out by the admin, followed by validation, cleaning and data verification. The data will be analysed by the system to generate indicator values.

In this new version, the Terpercaya Platform includes an approval system carried out by BAPPENAS. Each result of the indicator analysis requires approval before being displayed on a publicly accessible website. Members of the general public can access indicator results by registering as platform users.

B. Policy of the Ministry of Home Affairs (Kemendagri)

In relation to local governments, the Ministry of Home Affairs is one of the ministries/agencies (K/L) that has a stake in implementing policies at the local government level, especially programme planning. Terpercaya needs to be integrated into Ministry of Home Affairs policies, which have the potential to simplify data collection at the regional level. Through such policy, the Ministry of Home Affairs can mandate local governments to actively participate in the data-sharing process with BAPPENAS regarding Terpercaya. The Ministry of Home Affairs needs to encourage local governments to each appoint a Terpercaya person in charge¹², who will later be able to directly input this data into the platform.

Terpercaya can be included in the Regional Action Plan for Sustainable Oil Palm (RAD-KSB) through the Circular Letter of Minister of Home Affairs No. 525/5133/SJ. The letter contains

¹² Suggested person in charge is the data guardian.

guidelines to develop RAD-KSB. Terpercaya Indicators can be included in Component A, namely Strengthening Plantation Data to support good plantation governance. Terpercaya Indicators can be used as part of a measuring tool for the improvement of programmes and activities that are relevant or need to be strengthened in a specific area/jurisdiction.

In addition to the Circular Letter, the integration of Terpercaya Indicators into the Ministry of Home Affairs' policies can be carried out through the Regional Medium Term Development Plan (RPJMD) and the Regional Government Implementation Report (LPPD). The integration of Terpercaya into the RPJMD and LPPD can be carried out through one of two options:

1. Option 1: Include Terpercaya Indicators as Key Performance Index (IKK) on Regional Development Information System (SIPD). This option still requires confirmation regarding the momentum/plan for the revision of the Permendagri. A meeting held with the Ministry of Home Affairs indicated that the revision of the regulation was planned.
2. Option 2: The Minister of Home Affairs issues a Circular Letter instructing the Palm Producing Regions to input their data directly into the provided Platform. Option 2 has been agreed with the Ministry of Home Affairs, which would be integrated in the Minister of Home Affairs' Circular Letter on RAD KSB. However, it needs to be adjusted to the format of the National Action Plan for Sustainable Palm Oil (RAN KSB). As an alternative, BAPPENAS can collaborate to utilise the results of the monitoring and evaluation and RAD-KSB reports as data sources for the Terpercaya Platform.

Chapter 4: Refining and operationalising Terpercaya indicators, including lessons learnt

This chapter summarises the process of refining indicators, securing commitment for data sharing and populating the Terpercaya web platform. It also includes lessons learnt throughout the process.

4.1 The refinement and implementation of Terpercaya indicators

A series of FGDs with ministries/agencies (K/L) was carried out in two phases to (i) review and refine indicators (session 1) and (ii) explore data sources available for their measurement and reveal data that is unavailable or partially available at the national level (session 2).¹³ Table 3 summarises the discussions that were held with the ministries/agencies as the Terpercaya indicator data owners at the national level.

Table 3. Schedule of FGDs and workshops with ministries/agencies

N°	Ministries/agencies (k/l)	Activity	Date (dd/mm/yy)
1	National Secretariat for SDGs (TPB)	FGD	22/02/2022
2	One Data Indonesia (SDI)	FGD	23/02/2022
3	Ministry of Environment and Forestry (MoEF/KLHK)	FGD	04/03/2022
		FGD	07/06/2022
4	Data and Information Center (PUSDATIN)	FGD	08/03/2022
5	Central Statistics Agency (BPS) and Geospatial Information Agency (BIG)	FGD	09/03/2022
6	Ministry of Agriculture (Kementan)	FGD	16/03/2022
7	Ministry of Home Affairs (MoHA/Kemendagri)	FGD	18/03/2022
8	Ministry of Agrarian and Spatial Planning/National Land Agency (ATR/BPN)	FGD	25/03/2022
9	National Food Agency (BPN)	FGD	28/09/2021
			10/05/2022
11	Ministry of Finance (Kemenkeu), National Food Agency (BPN)	FGD	04/05/2022
12	Directorate of Food and Agriculture, BAPPENAS	Workshop	25-26/04/2022

¹³ Partially available means that data is only available in some districts.

All session 1 FGDs lasted two to three hours, starting with a presentation on Terpercaya, followed by discussions on indicator refinement and data exchange mechanisms. All session 2 FGDs lasted for two hours, starting with a presentation on Terpercaya followed by a discussion of alternative sources of data and their availability at the national level through the Ministry, SDI, and SDGs. Table 4 shows a list of questions posed in each FGD session.

Table 4. List of questions in the FGD sessions

FGD session	Nº	List of questions
1. Indicator refinement	1	Are these indicators' data sources available within your institution?
	2	How often is the data updated by Ministries/Agencies (K/L?) Is it once a month or annually?
2. Data exchange mechanism	3	How is the data sharing protocol between K/L and BAPPENAS carried out? Is there a need for a Memorandum of Understanding (MoU) between K/L and BAPPENAS or is there another alternative?
	4	What is the mechanism for data collection from K/L through the Secretariat of One Data Indonesia?
	5	What is the mechanism of the data entry process to the Terpercaya Platform? Do K/L have a preference for uploading data directly on the web platform? Is there any other input?

In all FGDs, BAPPENAS, the National Secretary for SDGs and One Data Indonesia (SDI) were present to ensure the indicator discussions were in line with the SDGs and the Terpercaya platform could be seamlessly integrated into SDI mechanism to allow data to be collected simultaneously from national and district governments.

Session on indicators refinement

The objective of this session was to ensure that national datasets are available to measure all Terpercaya indicators. During the FGDs, all indicators were reviewed. The session focused on nine indicators:

1. Protection of permanent forest (indicator 1)
2. Protection of areas that are important for ecological services (indicator 2)
3. Protection of peatland areas (indicator 4)
4. Climate change mitigation (indicator 5)
5. Integrated Free, Prior and Informed Consent (FPIC) in the process of applications for plantation permits (indicator 8)
6. Environmental quality control (indicator 7)
7. Multistakeholder participation in district planning (indicator 21)
8. Complaint mechanism (indicator 22)
9. Sustainable land-use planning (indicator 23)

The nine indicators involve four ministries, namely the Ministry of Environment and Forestry (KLHK), the Ministry of Agriculture (Kementan), the Ministry of Home Affairs (Kemendagri),

and the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) (Table 5).

The discussion with KLHK, which was held on 4 March 2022, **addressed the improvement of three indicators**, namely: climate change mitigation (indicator 5); environmental quality control (indicator 7); and sustainable land-use planning (indicator 23). Five¹⁴ KLHK resource persons attended this discussion. The questions listed in Table 4 were asked to each data owner and data producer of the Terpercaya indicators' data source.

The Directorate for Inventory and Monitoring of Forest Resources (IPSDH) is the data owner of spatial data in KLHK. According to their statement, the data source of the climate change mitigation indicator, which consists of deforestation emissions and forest reference emission level (FREL), is not available. Moreover, KLHK confirmed that the data of the Water Quality Index and Air Quality Index (IKA-IKU) 2021 is available at the district level. The water and air quality report is being prepared and is to be published in 2022. Furthermore, the Directorate of Environmental Impact Prevention for Regional and Sector Policies (PDLKWS) confirmed it has a list of districts that already have manual/tabular environmental carrying capacity (DDDTLH) and/or Environmental Protection and Management Plan (RPPLH), which can be used for indicator 23 (Table 5).

Before finding the alternative data for climate change mitigation (indicator 5), Yayasan Inobu and BAPPENAS held the second FGD and invited Professor Rizaldi Boer and two resource persons from the Directorate of Greenhouse Gas Inventory and Monitoring, Reporting and Verification (*IGRK MPV*), KLHK. The two national datasets required for the measurement of indicator 5 on climate change mitigation are the FREL and emissions from deforestation and forest degradation. Professor Rizaldi identified the determination of a FREL at the district level as the main challenge. At present, FREL will not be detailed at the district level. A presidential decree will be issued to require provincial governments to develop the baseline level prior to developing the allocation of emissions that can be generated by each district. So, each district should measure their own FREL based on the baseline determined by the province. KLHK is in the process of developing an Information system called SIMONELA (emission monitoring system in the land sector). The government, the public and private sector can use and view emission allocations in a jurisdiction.

Regarding the second data source, namely emissions from deforestation and forest degradation, the Directorate of IGRK confirmed that the national government does not calculate these emissions at district level. District governments are obliged to calculate their own emissions. The national government provides the National Registry System (SRN), a system for managing data and information on actions and resources for climate change adaptation and mitigation in Indonesia. If the district measures deforestation emissions, this data can be reported or registered to the National Registry System (SRN), and then be available on the SRN platform. Currently, the most accessible data related to deforestation emissions at the national level is the report on greenhouse gas (GHG) inventories.

¹⁴ The Directorate for Inventory and Monitoring of Forest Resources (IPSDH), the Directorate for the Development and Marketing of Forest Products (BPPHH), the Directorate for Planning, Use and Formation of Forest Management Areas, the Directorate for Forest and Land Fire Control (PKHL), Directorate of Tenure Conflict Management and Customary Forests (PKTHA), and Directorate of Environmental Impact Prevention for Regional and Sector Policies (PDLKWS).

According to Presidential Decree 98/2021 on the Implementation of Carbon Economic Value to Achieve Nationally Determined Contribution Targets and Control over Greenhouse Gas Emissions in Relation to National Development, each district/city is required to report its GHG inventory to the province. Subsequently, the province will report it to the central government. The inventory data will be displayed in an information system called Sign Smart, a national GHG inventory system.

Every district is also required to develop an action plan for climate change mitigation. The compilation of these documents will later be available in the SRN. In the future, the SRN will be integrated into AKSARA BAPPENAS. AKSARA is an application for planning and monitoring Indonesia's low-carbon development actions.

Based on the discussion with KLHK, three elements can be measured to track the performance of district governments in relation to indicator 5, namely:

1. Whether a reporting document on the Greenhouse Gas Inventory (IGRK) exists. This document is relevant in relation to progress on SDG 13.
2. Whether there is a forest reference emission level (FREL), which is used as a guideline for the district government. Reporting on the existence of an FREL should help to encourage districts to develop the data necessary for a FREL.
3. Whether there is a Climate Change Mitigation Action Plan document. After the district calculates its emissions, it is obliged to develop an action plan to reduce them.

On 16 March 2022, a discussion with the Ministry of Agriculture was held on **the improvement of the indicator on** Integrated Free, Prior and Informed Consent (FPIC) in the process of applications for plantation permits (indicator 8). The FGD included the Directorate General of Plantations, the Director of Annual and Beverage Plants, and the Agricultural Extension Center.

The data source of indicator 8 is the existence of SOP for FPIC in the district. However, there is no SOP for FPIC at the national level. The Ministry of Agriculture suggested the existence of a letter of agreement between smallholders and the owners of the plantation permit as an alternative data source. However, this agreement is only kept by the two parties and cannot be used by Terpercaya. Other data sources relevant for FPIC at the central level are the core plasma reporting records. These are reports by companies that own plasma plantations, which are held by the central government¹⁵. If a plasma plantation is established, it is assumed that a letter of agreement exists.

On 18 March 2022, a FGD with the Ministry of Home Affairs **discussed the improvement of two indicators**, multistakeholder participation in district planning (indicator 21), and the complaint mechanism (indicator 22). The resource persons from the Ministry of Home Affairs who attended this discussion were from the Information Center (pusdatin), the Directorate of Planning for Evaluation and Information on Regional Development, and the Directorate General of Regional Development.

¹⁵ Plasma plantation refers to oil palm plots for smallholders developed by plantation companies under the Nucleus-Plasma Scheme created by the Indonesian Government.

For the indicator of multistakeholder participation in district planning (indicator 21), the Ministry of Home Affairs explained that Terpercaya can use the data within the Regional Development Information System (SIPD) as an alternative data source. SIPD is an application of development data management that is managed by the Director General of Regional Development of the Ministry of Home Affairs. Data on the SIPD application is processed and presented in the form of regional development information. This information is expected to improve understanding, serve as guidance and reference for provincial and regency/city governments to enhance the quality of planning, control and evaluation of regional development. The two data sources within SIPD that can be used by Terpercaya for indicator 21 are the public aspirations form provided by the local government and the database of the public's input during the Development Planning Deliberation (*Musrenbang*). *Musrenbang* is one of the stages in the formulation of planning documents and every local government must conduct *Musrenbang*.

Related to the complaint handling (indicator 22), Terpercaya is suggested to use the implementation of the National Public Service Complaint Management System – People's Aspiration and Online Complaints Service (SP4N-LAPOR) in the district. It is Indonesia's national complaint handling management system that is implemented by all public service providers (ministries, institutions, local governments) and is already integrated at the national level. The Ministry of Home Affairs, together with the Ministry of State Apparatus and Bureaucratic Reform (KemenPANRB), the Ministry of Communication and Informatics (Kemenkominfo) and the Presidential Staff Office (KSP) are encouraging the use of SP4N-LAPOR at every level of government, including the local government. The list of districts that implemented SP4N-LAPOR is available at the Ministry of Home Affairs Information Center.

On 25 March 2022, an FGD with the Ministry of Agrarian and Spatial Planning/National Land Agency (ATR/BPN) **discussed the data on district spatial planning (RTRWK) that is used in three indicators**, namely: protection of permanent forests (indicator 1); protection of areas that are important for ecological services (indicator 2); and protection of peatland areas (indicator 4). Participants who attended this FGD were from the Directorate of Regional Spatial Planning Development for Region II and the Directorate General of Spatial Planning.

The Ministry of ATR/BPN has launched a Geographic Information Systems Spatial (GISTARU) to compile the spatial planning data in districts, provinces and at national level. Even if district spatial planning data is available at the national level, the Ministry of ATR/BPN cannot give access to shapefile data because it requires district permission. Shapefile data that can be shared through the Ministry of ATR/BPN is the national spatial planning.

Table 5. Summary of results from FGDs on indicators refinement

N°	Date	K/I	Indicator	Previous data		Alternative data		Notes	Next step		
				Data source	Availability at national	Data source	Availability at national				
1	4 March 2022	MoEF/KL HK	Environmental quality control (indicator 7)	Water Quality index in the district	Not available	Water Quality index in the district	Available	The data has been collected per 31 August 2022	Upload the data to the platform		
				Air Quality index in the district	Not available	Air Quality index in the district	Available				
			Sustainable land-use planning (indicator 23)	List of Districts that have DDDTLH documents	Not available	DDDTLH	Available			PDLKWS has a list of districts that have developed DDDTLH and RPPLH, the data is still compiled manual.	Follow up with PDLKWS for the data on DDDTLH and RPPLH.
				List of Districts that have RPPLH documents	Available	RPPLH	Available				
2	7 June 2022		Climate change mitigation (indicator 5)	District FREL	Not available	1. The existence of IGRK reporting District Level 2. The existence of baseline (FREL) calculation in the District 3. Report of Climate Change	1. Available	Data numbers 1 & 3 are compiled in the SRN. Data number 2 will be compiled in Smart Sign. All the data (apart from district FREL) is available at the Directorate of Greenhouse Gas Inventory and Monitoring, Reporting, and Verification (IGRK MPV)	Follow-up with the Directorate of IGRK MPV		
				Emissions from deforestation	Not available		2. Not available at the moment 3. Available				

N°	Date	K/I	Indicator	Previous data		Alternative data		Notes	Next step
				Data source	Availability at national	Data source	Availability at national		
						Mitigation Action Plan			
3	16 March 2022	Ministry of Agriculture	Integrated Free, Prior and Informed Consent (FPIC) in the process of applications for plantation permits (indicator 8)	The existence of SOPs in districts to obtain community approval regarding plantation permits	Not available	Permits report for plasma smallholders	Not available	It has been proposed to SDI and approved to be made available on SDI website by 2023	Follow-up with SDI for 2023 data input
4	18 March 2022	Ministry of Home Affairs	Multistakeholder participation in district planning (indicator 21)	SOP	Not available	1. Public aspirations form provided by local government 2. Database of public's input during the Development Planning Deliberation (Musrenbang).	1. Available 2. Available	Data available in SIPD (Regional Government Information System) under Regional Development Strengthening (Bangda)	Follow-up SDI for 2023 data input
			Complaint mechanism (indicator 22)	SOP/decreed that handles complaints at district level	Not available	Implementation of SPAN-LAPOR in district	Available	SP4N LAPOR Management Team; Action plan; and SOPs for complaints at the local government are available at the Information Center (Puspen).	Follow-up SDI for 2023 data input

N°	Date	K/I	Indicator	Previous data		Alternative data		Notes	Next step
				Data source	Availability at national	Data source	Availability at national		
5	25 March 2022	Ministry of ATR BPN	Protection of permanent forests (indicator 1)	District Spatial Planning (RTRWK)	Not available	District Spatial Planning (RTRWK)	Not available	Shapefile data of district spatial planning cannot be accessed through the ministry of ATR/BPN. There is no alternative data that can replace RTRWK. Requires contacting each BAPPEDA district to ask for permission and data.	-
			Protection of areas that are important for ecological services (indicator 2)						
			Protection of peatland areas (indicator 4).						

The data exchange discussion

The purpose of creating a data exchange mechanism is to allow data sharing among Ministries/Agencies so that in the future the data can be updated regularly. Based on the results of the FGD, the data exchange mechanism of each Ministry/Agency is different (Annex A). There are eight ministries/agencies involved in the process:

1. Ministry of Environment and Forestry (KLHK)
2. Geospatial Information Agency (BIG)
3. Statistics Indonesia (BPS)
4. Ministry of Agriculture (Kementan)
5. Ministry of Home Affairs (Kemendagri)
6. Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN)
7. Ministry of Finance (Kemenkeu)
8. National Food Agency (BPN)

Terpercaya requires the permission of a data owner for data exchange for both spatial and non-spatial data. In terms of data owned by KLHK, the data owner of spatial data is the Directorate of IPSDH KLHK. Data protocol of thematic geospatial information (IGT) is regulated under the Regulation of Minister of Environment and Forestry Number P.24/2021. Data exchange can be performed between Ministries/Agencies through data requests/agreements (not an MoU), which is valid for one year and can be extended. When the third party is involved in the preparation of the platform, additional documents such as the Integrity pact and agreement document between BAPPENAS and the third party are required. On the other hand, the data guardian of non-spatial data is the data producer. Terpercaya requires to directly contact the data producer by sending a request letter.

Discussions with the Geospatial Information Agency (BIG) and Statistics Indonesia (BPS) were held on 9 March 2022. Participants who attended the discussion were representatives of the Center for Geospatial Information Management and Dissemination from BIG and of the Directorate of Social Security, Statistics Indonesia from BPS. Terpercaya requires a shapefile data district administration boundary owned by BIG. To access the district boundary data, Terpercaya can directly download it from Indonesia Geospatial Portal, which is accessible to the public (<https://tanahair.indonesia.go.id/portal-web>). From the BPS, Terpercaya needs the data on district-level poverty. This data is already accessible to the public and produced annually, therefore Terpercaya can directly access the BPS website.

Terpercaya needs several datasets from the Ministry of Agriculture, such as data on plantation area in the district, smallholder plantation area, number of independent smallholders, smallholder productivity and smallholder who have STDB. The process of data exchange under the Ministry of Agriculture can be done through the Data and Information Center (Pusdatin). Terpercaya was required to send a request letter to Pusdatin.

Regarding the data exchange mechanism from the Ministry of Home Affairs with BAPPENAS, it can be done through the SDI mechanism. Before the SDI mechanism is operational for Terpercaya, data exchanges can be carried out through Pusdatin at the Ministry of Home Affairs. First, Terpercaya is required to create a Cooperation Agreement (PKS), which specifies the data needed and its purpose. If the data is public, it can be

accessed through the website (<https://e-database.kemendagri.go.id/>). If the data is non-public, Terpercaya is advised to seek approval from the data producer then contact Pusdatin.

A discussion with the Ministry of Finance (Kemenkeu) and the National Food Agency was held on 5 April 2022. Terpercaya needs data on the total district budget and district budget allocated for sustainability/environment. To access such data, the applicant needs to write a data request to the Directorate General of Fiscal Balance (DJPK). If the data has been approved by DJPK, then DJPK will cooperate with the Information and Technology Center (Pusintek) to do data exchange mechanisms. Prior to the data from the National Food Agency (BPN), Terpercaya was required to write a request letter to the Chief Secretary officer (Plt. Sestama).

4.2 The workshops with BAPPENAS and selected local governments

The refinement and operationalisation of the Terpercaya indicators continued with a workshop organised by the Directorate of Food and Agriculture, BAPPENAS, on 25-26 April 2022, at Hotel Santika Bogor. It was attended by representatives of the Data and Information Center (Pusdatin) of BAPPENAS, One Data Indonesia (SDI), the National Secretariat of SDGs, the Environmental Governance Lead of USAID-SEGAR and Terpercaya Experts. The workshop discussed the following actions:

- Update the indicator formulation and data based on the in-depth discussions on all Terpercaya indicators and FGD results
- Prepare the integration of the Terpercaya Platform with the Data and Information Center (Pusdatin) BAPPENAS
- Follow-up of data exchange mechanisms

Importantly, the workshop contributed to identifying the steps to be taken prior to integrating the platform and operationalising the data exchange mechanism.

The first day of the workshop discussed the update of the indicator formula and data based on in-depth discussion on all Terpercaya indicators and FGD results. Several indicator changes also resulted in adjustments to indicator names. The following 12 Terpercaya indicators were updated:

1. Protection of permanent forest (indicator 1)
2. Protection of peatlands (indicator 4)
3. Climate change mitigation (indicator 5)
4. Environmental quality control (indicator 7)
5. Recognition of Customary Law Communities (indicator 9)
6. Resolution of land and agricultural conflicts (indicator 10)
7. Food Security (indicator 13)
8. Number of associations per independent smallholder group (indicator 15)
9. Assistance to independent smallholders (indicator 16)
10. Multistakeholder participation in district planning (indicator 21)

11. Complaint mechanism (indicator 22)
12. Sustainable land-use planning (indicator 23)

The second day of the workshop discussed preparations for integration of the Terpercaya Platform into the Data and Information Center (Pusdatin) BAPPENAS and data exchange mechanisms. Pusdatin is currently in the server installation stage to accommodate the Terpercaya platform. Actions that need to be performed for the next step are application management assistance, penetration tests and the provision of domains for platforms. BAPPENAS informed that the server is ready and Terpercaya platform is currently set up for installation process.

Prior to the data exchange mechanism through SDI, Terpercaya is required to submit the list of indicators' data sources to the SDI secretariat¹⁶. If the proposed data source is approved by SDI, then it will become a priority data to be collected by K/L in 2023. The priority data collection will also receive funding. In the future, if the Terpercaya data source can be provided through the SDI mechanism, then data exchange between Ministries/Agencies will not require a Memorandum of Understanding (MoU). As for now, Terpercaya has submitted the list of priority data and the approval data has been announced (Annex A).

Workshop with local governments

The Terpercaya indicators are used as Environment Governance Indicators in the USAID SEGAR project in collaboration with BAPPENAS. There are 12 pilot districts in four provinces of the SEGAR Project in which Terpercaya indicator data was collected. Prior to validating the data collection and analysis of the Terpercaya indicators in 12 districts, a workshop with local and provincial governments¹⁷ was conducted online on 28 March 2022.

4.2.1 Discussion on the grading system

On 15 February 2022, discussions with Terpercaya experts were held to improve the Terpercaya grading method. Previously, the grading system used national and provincial averages to rank the districts. This grading system should be revisited because the national and provincial average is affected by the extreme values as it includes all the data in a series.

¹⁶ The process of the data sharing mechanism using SDI is described in Chapter 2.

¹⁷ Bappeda of 12 districts and four provinces.

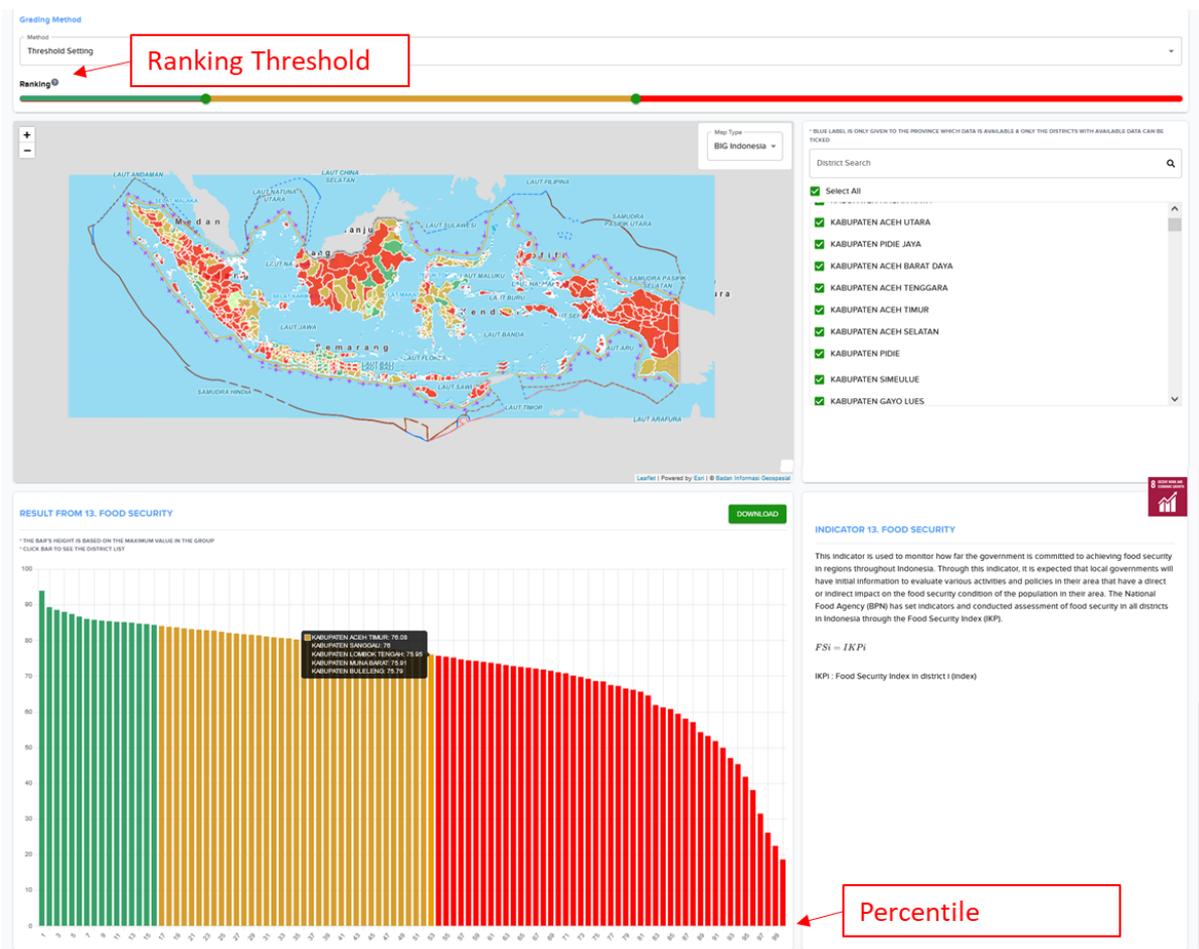


Figure 2. Percentile and threshold values in platform

The proposed improvement is to apply the percentile method. A percentile is a comparison between a particular score and the scores of the rest of a group. It shows the percentage of scores that a particular score surpassed. For example, if the value of indicator 13 for district X is 75.79 and is ranked in the 53rd percentile, it means that the value 75.79 is higher than 53% of the value. There are multiple districts consisting in the 53rd percentile (Figure 2). In determining how many values are categorised as green (A rank), yellow (B rank) and red (C rank), the user can customise the threshold according to their respective preferences. The A rank with green colour means very good, portraying the region with the highest indicator performance, the B rank with yellow colour means good, portraying the region with moderate indicator performance, and the C rank with red colour means needing special attention, portraying the regions which need to improve on their indicator performance.

4.3 Lessons learnt from the Terpercaya process

From January to June 2022, the indicators were refined, and the data exchange mechanism and platform were developed to operationalise Terpercaya as a national system. The main lessons learnt from refining and operationalising Terpercaya indicators can be categorised as follows:

A. Communications among ministries/agencies and building their support

1. The process of refining the Terpercaya indicators has gone through intensive dialogues with several ministries and agencies. Communication is a pivotal process to ensure all ministries are aligned with the Terpercaya goals and understand exactly what is expected of them.
2. Through the FGD series, it was observed that each ministry has different levels of understanding. The FGDs carried out during the project involved data owners and data producers that may not have been invited to previous Terpercaya AC meetings. Regular updates, for example through newsletters, to ministries/agencies on the progress of Terpercaya are necessary.
3. It is important to keep participants engaged to get more insight. Workshops and in person meetings tend to be more effective because all participants have a chance to speak and clarify misunderstandings or other issues directly.

B. Data exchange mechanism with ministries/agencies

1. Establishing ongoing data exchanges between ministries is a long process. It consists of several steps, such as identifying the data owners and data producers, communicating and coordinating with the respective data owner and data producers, understanding the data exchange mechanism of each ministry, and fulfilling the requirements of the data exchange mechanism.
2. To ensure every step of the data exchange process goes according to the timeline, it is important to regularly follow-up with each ministry.

C. Expert and government involvement in indicator refinement process

1. In the process of indicator refinement, the involvement of experts and Ministries/Agencies is important. Prior to identifying suitable data sources available at the national level, feedback from the government and experts is necessary because the availability of accurate and up-to-date data is key for the success of Terpercaya.

Chapter 5: Redesigned and updated Terpercaya platform, including a multi-year database

5.1 Terpercaya online system design upgrade

The Terpercaya initiative has developed 23 indicators for measuring the sustainability of Indonesian districts. The data used for measuring these indicators' performance are spatial and tabular data. The system upgrade consisted mainly in: User Interface/User Experience (UI/UX); a functional dashboard; a multi-year database system; and simplified data entry. The detailed advancement and data collected are described in Tables 6 - 8. The data in Table 8 represents the current data upload status (as per 16 September 2022). Annex J shows additional illustrations of the platform upgrade.

Table 6. System specifications

Nº	Component	Detail
1	Operating system	Linux CentOS 7
2	Programming language	<ul style="list-style-type: none"> • Frontend using javascript (react) • Backend using C#
3	Database system	PostgreSQL
4	Specification of the IT infrastructure	<ul style="list-style-type: none"> • RAM: 4GB • CPU: 4vCPU • Storage: 100 GB
5	Storage and memory options available	<p>It will be provided by the Directorate of the Food and Agriculture of BAPPENAS. It has a specification:</p> <ul style="list-style-type: none"> • RAM: 32 GB • Processor: 20 Core • Storage: 4 TB
6	The specific version of each software used should be identified beforehand	<ul style="list-style-type: none"> • NET core version 5.0.101 (Server) • PostgreSQL version 11.5 (Database) • React version 16.9.0 (Frontend)

Table 7. System development highlight

N°	Updated component/ feature	Explanation
1	Detail access	<ul style="list-style-type: none"> ● Website: http://103.97.102.41/ ● Username: inobu@midiharmonica.com ● Password: inobu123 <p>*access will be changed after handover, so only BAPPENAS has access to the system</p>
2	Dashboard	<ul style="list-style-type: none"> ● Dashboard is added to show and monitor the platform activity entirely and to enter the data into the platform
3	User access right	<ul style="list-style-type: none"> ● A dashboard is added to show and monitor the platform activity and enter the data into the platform ● To regulate whether users are given access to become admin or not <p>The Terpercaya Secretariat, BAPPENAS enters the data. However, the District Government or K/L can enter their data in the platform if necessary.</p>
4	Data entry mechanism	<p>The data input has three optional mechanisms:</p> <ul style="list-style-type: none"> ● Filling the online form <p>Admin fills the data form with indicator data value as instructed</p> <ul style="list-style-type: none"> ● Bulk-insert scheme <p>Admin uploads excel files containing indicator data in the platform. The system will transfer the excel data to the indicator database automatically; no need to fill out the data form. The excel files are divided into default excel and Terpercaya excel. Default excel means that the excel is from the K/L website, which can be uploaded directly to the platform without any modification. At the same time, the Terpercaya excel is based on a platform database template. The Terpercaya excel compiles scattered or non-excel data files into one excel file.</p> <ul style="list-style-type: none"> ● Shapefile data entry ● Admin can upload the shapefile data; the system can calculate it to result in the value.
5	Data period	<ul style="list-style-type: none"> ● Support multi-year data input
6	Scatter diagram	<ul style="list-style-type: none"> ● Added download feature, so users can download the analysed data of indicator measurement in excel ● Added more information on the scatter diagram ● Year option
7	District profile	<ul style="list-style-type: none"> ● The colour of indicators has been adjusted following the SDGs ● Added indicator explanations on the right side of the diagram

N°	Updated component/ feature	Explanation
		<ul style="list-style-type: none"> ● Year option
8	District ranking	<ul style="list-style-type: none"> ● Integrated map (one of the options is connected to Geospatial Information Agency) ● Added year option ● Added grading explanation alert explaining grading measurement. ● Added values range on grading slider ● Added download feature so that users can download the analysed data of indicator measurement in excel
9	Other features	<ul style="list-style-type: none"> ● FAQ ● Contact Us ● Bilingual (English-Indonesia) ● Added video on the homepage
10	Interactive design	<ul style="list-style-type: none"> ● The monitoring system is interactive, requiring data to be entered in specific formats and units and notifying the user that correction needs to be made if the data is not in the required form. ● The platform allows users to ask questions through the Contact Us menu; the admin can answer the questions by email.
11	Scalable	<ul style="list-style-type: none"> ● The system can be used for all districts in Indonesia ● The district government and K/L can obtain access to update their data on the platform if necessary
12	General security and privacy configuration	Custom authentication & authorisation
13	User roles and permission configuration	Custom authentication & authorisation
14	Robot files (.txt and .htaccess) configuration	Configured in appsettings.json; not using robot.txt anymore
15	Restriction of certain files and sensitive documents	Custom authentication & authorisation

Table 8. Data collected as per 16 September 2022

N°	Indicator	Collected from national data	Collected from districts data	Uncollected data
1	Protection of permanent forest		√*	
2	Protection of areas that are important for ecological services		√*	
3	Fire prevention	√		
4	Protection of peatland areas		√	
5	Climate change mitigation			√
6	Sustainable management of production forest			√
7	Environmental quality control	√		
8	Integrated Free, Prior and Informed Consent (FPIC) in the process of applications for plantation permits			√
9	Recognition for customary land			√
10	Land and agriculture conflict resolution			√
11	Independent smallholder share	√		
12	Independent smallholder registration		√	
13	Food security	√		
14	Smallholder productivity	√		
15	Number of plantation farmer associations/groups	√*		
16	Support for plantation farmers	√*		
17	Sustainably certified plantation	√*		
18	Poverty rate	√		
19	Proportion of district budget allocated to sustainability	√		

N°	Indicator	Collected from national data	Collected from districts data	Uncollected data
20	Public information access	✓		
21	Multistakeholder participation in district planning			✓
22	Complaint mechanism		✓	
23	Sustainable land-use planning		✓	

Note: * means only one source data collected (one indicator might require two sources of data)

Chapter 6: Guidelines/SOPs for automatic and manual update of indicator data, including appended data sharing agreements where relevant

6.1 Automatic update of Terpercaya indicator data

Automatic update of Terpercaya indicator data can be done with Open Application Programming Interface (API) or Web Service schemes. It can be used as a data exchange service mechanism through integration between websites. It embeds K/L data into the Terpercaya platform, so when the data in K/L is updated, the data in the platform can automatically update at the same time. Currently, there is no API integration between the Terpercaya Platform and K/L platform. In addition, Ministries and Agencies are still creating API infrastructure and not all are ready to use this system.

The API integration can only proceed once the Terpercaya Secretariat receives the API link from K/L (Figure 3). As per 16 September 2022, BAPPENAS has disseminated data sharing letter to K/L to collect the required indicator data. Currently, the data collection is still ongoing. The schedule for data update on the Terpercaya Platform via API follows the rules in Ministries/Agencies that have APIs. Every K/L might have different protocols in API sharing; however, they suggest that there should be an agreement first. After that, K/L can guide the Terpercaya Secretariat to collect the data through an open API mechanism. K/L shares the API link with the Terpercaya Secretariat, and then the programmer performs coding using the link to create the synchronisation.

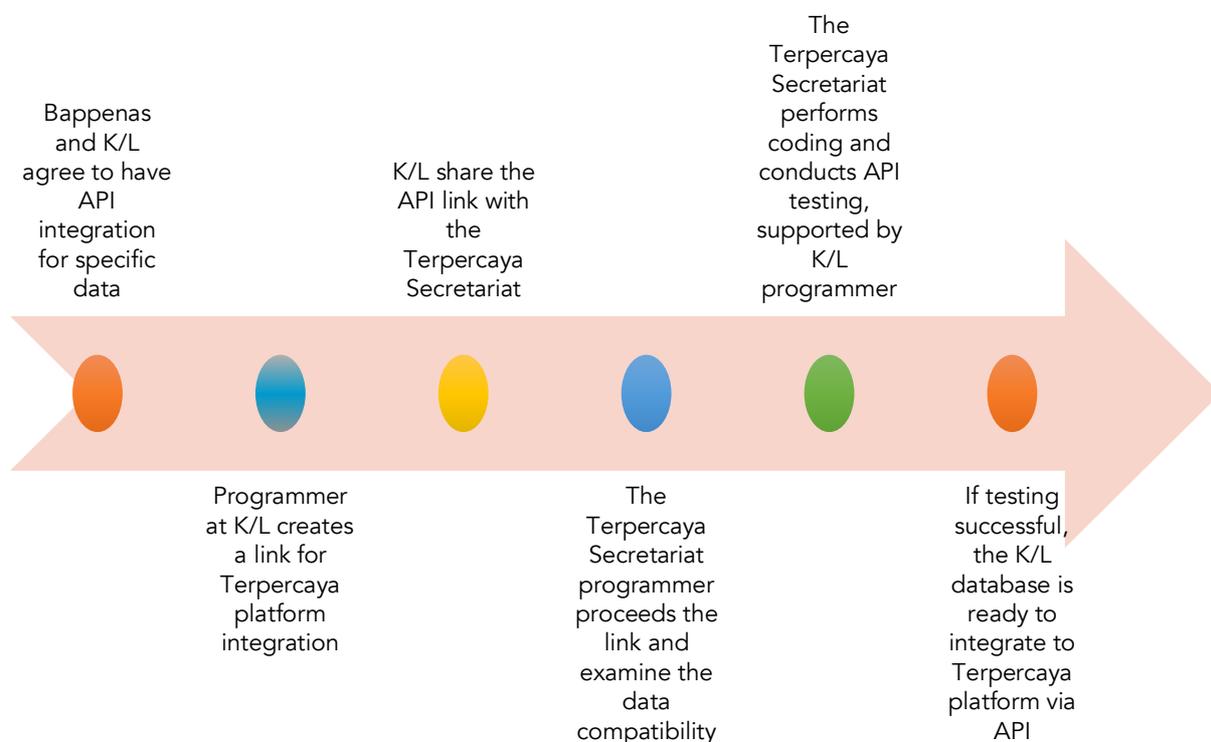


Figure 3. API Integration Process

6.2 Manual update of Terpercaya indicator data

The Terpercaya Secretariat needs to update data once a year. It is suggested this update occurs no later than 30 April each year. A Programmer Team and GIS analyst for data entry and system development also have to be appointed. The Programmer team consists of front-end and back-end programmers. Required skills of a front-end programmer include programming in HTML5, CSS and JavaScript and working with front-end libraries and frameworks (Bootstrap, Foundation, Semantic UI, Angular, React JS, etc.). While required back-end programmer skills are programming languages such as Python, Java, Golang, .NET, or Ruby on Rails. This process can be carried out by multiple parties if they have dashboard access. In other words, the Terpercaya Secretariat (BAPPENAS), local government (represented by Regional Apparatus Organisations/OPD) and K/L relevant to the indicators can input the data into the system. As the platform owner, BAPPENAS will have the main authority in granting access. BAPPENAS can provide access to local governments and K/L that are willing to input data. However, it is suggested that the Terpercaya Secretariat perform data entry, especially for the data sourced from SDI and K/L.

Here is how to grant access to parties outside of BAPPENAS:

1. The Terpercaya Secretariat maps out which K/L or OPD will perform data entry independently. At the same time, K/L and OPD register themselves as users. The user registration is explained in Chapter 7, section 7.1.
2. After registering, K/L and OPD contact the Terpercaya Secretariat and provide their username.
3. The Secretariat grants roles and access rights to the K/L and OPD to be able to input data on the platform.
4. K/L and OPD can then directly upload data to the platform after obtaining access.

Based on the data source, the mechanism for Terpercaya manual data update can be divided into three groups based on the data sourcing, namely schemes using data from SDI, K/L public website, and K/L or District Government (non-public data). The list of indicators based on the schemes are mentioned in Annex I. In the SDI scheme, the Terpercaya Secretariat can download data directly through the SDI website, so there is no need to use a data sharing licence, because the data provided is of a general nature. Then, in the K/L or District Government scheme, the data renewal procedure is carried out with a data sharing licence with the relevant K/L, especially for data that is not yet available on the SDI platform. In manual entry mechanism (Table 9), there are three types of entry model as described in the following table:

Table 9. Type of Manual Entry

N°	Type of Manual Entry	Explanation
1	Form Entry	<ul style="list-style-type: none"> • Admin can input the value of the data in the form (online) • After being entered, the data value needs to be approved by super admin before being proceeded
2	Bulk-insert Entry	<ul style="list-style-type: none"> • Bulk-insert allows the admin to upload the data using excel format. There are two types of excel for this entry: default and predefined excel. • Default excel means that the excel is downloaded from the ministry website. It is uploaded to the Terpercaya platform without any modification. • The predefined excel is the excel file designed by the Terpercaya programmer. Admin can fill the data information in this excel, then upload it to the platform. • There is no approval in this mechanism since all the data is based on ministerial databases.
3	Shapefile Entry	<ul style="list-style-type: none"> • It is used to upload the shapefile data • The shapefile data is adjusted with district code and specific properties for each indicator that contain area in hectares, thus it is easier to integrate with other government platforms based on the district code.

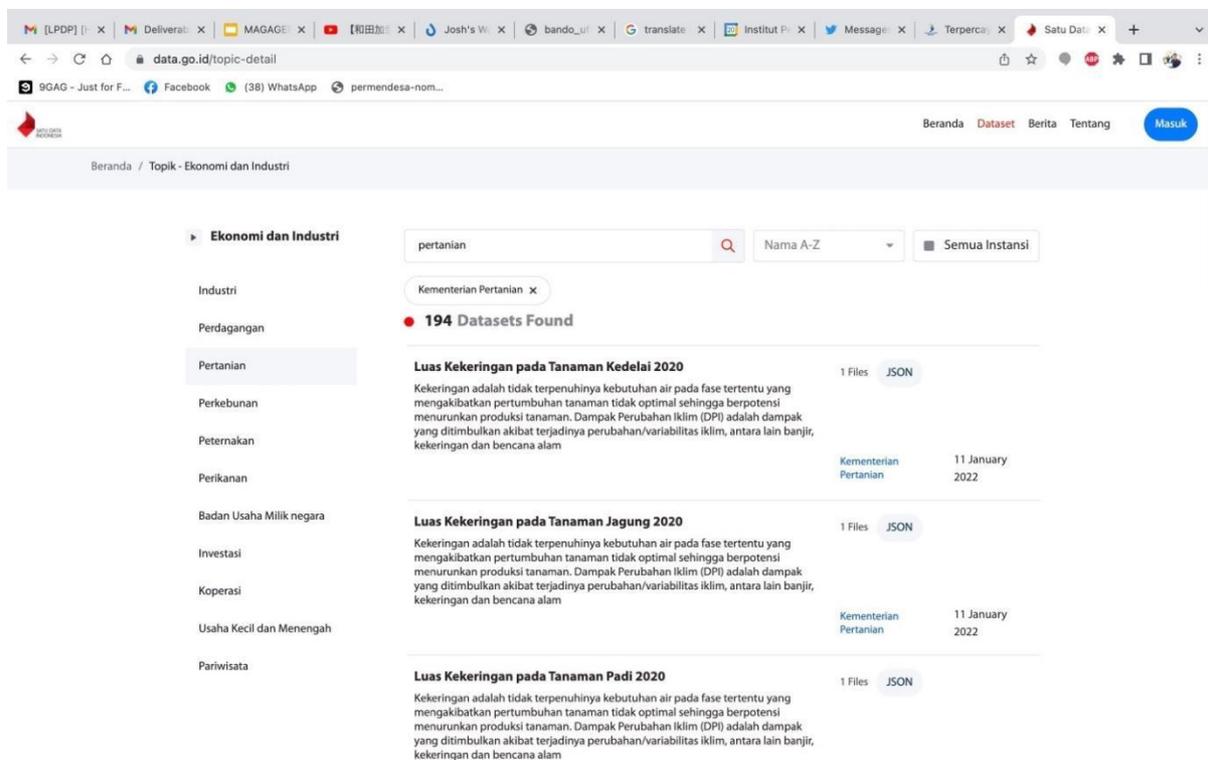
6.2.1 Data accessed via SDI

For update of data available in SDI, the Terpercaya Secretariat should be the one that inputs the data on the platform. In this case, no K/L is involved in data entry, because the Terpercaya Secretariat does not request the data directly from K/L. Through SDI, K/L data can be accessed on the SDI website (<https://data.go.id/home>). The detailed process for manual data updates with data sourced from SDI is as follows:

A. Data collection stage

The data collection process is performed by the Terpercaya Secretariat. The mechanism includes downloading data directly from the SDI website (<https://data.go.id/home>). Terpercaya Indicators data will be published on the SDI website as of January 2023. The Terpercaya Secretariat can start the data collection afterwards. Here are the steps (see Figure 5):

1. After the data is published on the SDI website, the Terpercaya Secretariat downloads the indicator data (Figure 4).
2. After the data is downloaded, the Terpercaya Secretariat checks the data before it is entered into the Terpercaya Platform. The checking is done by the Terpercaya Secretariat considering the type and format of the data taken from SDI. If the data complies with the platform requirement, then it can be processed.
3. The data is transferred to the predefined excel for bulk-insert entry.
4. The predefined excel is ready to be uploaded on the platform.



The screenshot shows the SDI website interface. The search bar contains 'pertanian' and the results show 194 datasets found. The first three results are for 'Luas Kekeringan pada Tanaman Kedelai 2020', 'Luas Kekeringan pada Tanaman Jagung 2020', and 'Luas Kekeringan pada Tanaman Padi 2020'. Each result includes a description of the data, the number of files (1 File), the format (JSON), and the source (Kementerian Pertanian) and date (11 January 2022).

Dataset Name	Files	Format	Source	Date
Luas Kekeringan pada Tanaman Kedelai 2020	1 File	JSON	Kementerian Pertanian	11 January 2022
Luas Kekeringan pada Tanaman Jagung 2020	1 File	JSON	Kementerian Pertanian	11 January 2022
Luas Kekeringan pada Tanaman Padi 2020	1 File	JSON	Kementerian Pertanian	11 January 2022

Figure 4. SDI website

Note:

1. Organisation option e.g., Ministry of Agriculture, District Government, etc.
2. Keyword
3. Type of file (open the title and download the data)

B. Data input process stage¹⁸

After all data in SDI is downloaded, verified and transferred into the predefined excel file by the Secretariat, the next step is inputting data into the system. For the data input stage, the process includes:

1. The Terpercaya Secretariat transfers the data into the predefined excel template¹⁹.
2. The Terpercaya Secretariat enters the predefined excel data file into the Terpercaya Platform.
3. The data is then calculated by the system according to the indicator formula.
4. After the data is calculated, the indicator value results automatically appear on the “District Ranking” page. The results of the Terpercaya Indicator data analysis can then be accessed by the user (including downloading).
5. Data from the previous year is stored on the platform.

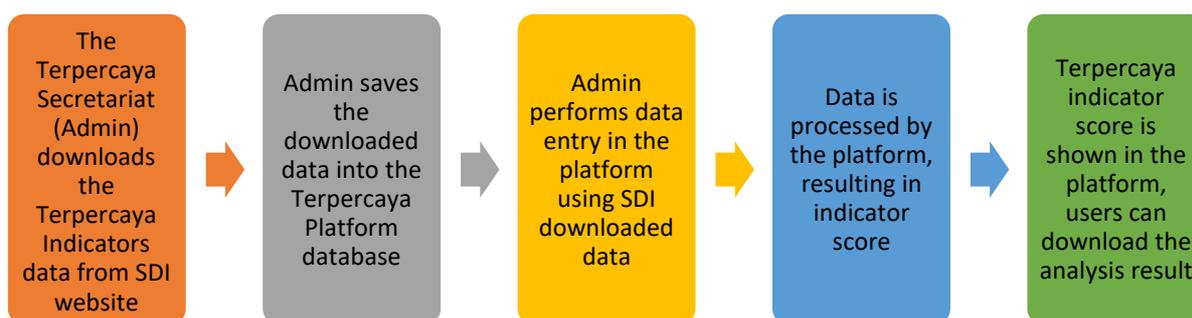


Figure 5. Terpercaya indicators update with data sourced from the SDI website

6.2.2 Data accessed via K/L public websites

There are four indicators for which data is available on K/L websites. It is public data that everyone can download and access. For this scheme, the Terpercaya Secretariat only needs to download the data from K/L. All the data of the four indicators are available in excel format. After that, the data can be entered into the Terpercaya Platform directly using the bulk-insert method. Table 10 shows the four indicators for which data is available on K/L websites.

¹⁸ The technical procedure for data input can be seen in Chapter 7 Guidelines/SOPs for platform operationalisation and maintenance, including on data processing and cleaning.

¹⁹ See the details in Chapter 7.

Table 10. Indicators for which data is sourced from K/L public data websites

Indicator	Data name	K/L Website
Fire prevention	Area of fire in the district	https://sipongi.menlhk.go.id/
Poverty levels	District level poverty percentage	https://www.bps.go.id/indicator/23/624/1/garis-kemiskinan-menurut-kabupaten-kota.html
Food security	Food Security Index	http://app2.badanpangan.go.id/
The proportion of budgets for sustainability	APBD for sustainability/environment and District level budget	https://djpk.kemenkeu.go.id/?p=5412

Here are the steps to process the data from K/L websites:

1. The Terpercaya Secretariat (Admin) downloads the data from K/L websites (all the data provided on the websites are in excel format). Figure 6 shows the example of the K/L public data website on total fire area per District.
2. The downloaded file (without any content modification) is then uploaded into the Terpercaya Platform using the bulk-insert method. To bulk-insert, go to: DASHBOARD > Indicator > INPUT INDICATOR DATA AT ONCE.
3. The platform processes the data and the resulting indicator score is directly be available.

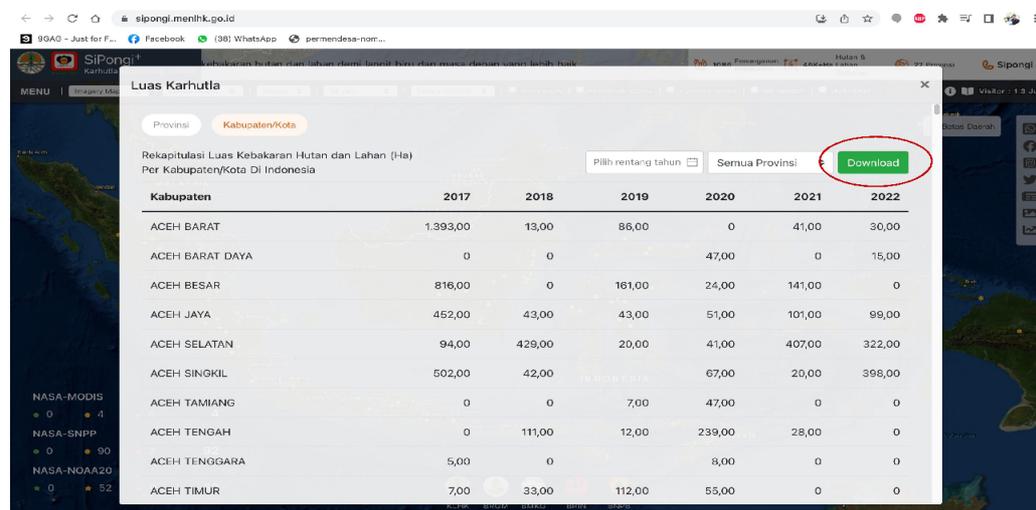


Figure 6. Example of K/L public data website on fire area

6.2.3 Data accessed via K/L and District Government

Data updated through this mechanism is done for data that is unavailable on the SDI and K/L websites. Data update processes for data unavailable in SDI will first require a data sharing licence with K/L and local governments. This is because the source of data and

access is in the relevant K/L. The stages of data update through a direct data sharing scheme with K/L are as follows:

A. Data collection

Data collection is carried out under direct coordination with the Data Guardian in each K/L. Below are the stages:

1. The collection of data sourced from K/L is carried out every year from 1 January to 1 April.
2. The Terpercaya Secretariat identifies the required data from each K/L.
3. The Terpercaya Secretariat processes data sharing licences²⁰ with K/L.
4. If the K/L wants to upload the data directly into the system, then the Terpercaya Secretariat will provide access²¹ to the K/L staff to become admin of the system dashboard.
5. For K/L that choose to send raw data directly to the Terpercaya Secretariat, it can be done via email to the secretariat responsible for data collection (pertanian@bappenas.go.id).

B. Data input process

For the data input process, the mechanism is almost the same as the SDI data update. The difference lies in the party doing the data entry. Through this scheme, the K/L data integration into the system can be carried out by the K/L themselves or by the Secretariat. Here are the steps:

1. The data input process is carried out every year from 1-30 April.
2. The Terpercaya Secretariat or K/L inputs data into the Terpercaya system.
3. The Terpercaya Secretariat performs data checking before the data is analysed by the system. The aim of data checking is to examine whether the data entered is matched with the requirements of the Terpercaya platform or not.
4. After being checked, the data will be calculated by the system based on the indicator formula.
5. After the data is calculated by the system, the indicator value results will be generated automatically.
6. Data from the previous year will remain stored and accessible on the platform.

6.3 Data maintenance²²

Data maintenance is carried out entirely by the Terpercaya Secretariat, especially the programmers and admins. Here are the steps that need to be done:

1. Conduct monitoring to anticipate data errors on a regular basis. The monitored aspects are data security, database capacity and system bugs.

²⁰ The guideline for data sharing at national level is explained in Chapter 2

²¹ Access here means access to become an admin, so that the party can perform data input independently.

²² Detailed data maintenance guidelines can be found in Guidelines/SOPs for platform operationalisation and maintenance, including on data processing and cleaning.

2. Fix the detected bugs. The bugs can be in the form of sudden hang, data anomaly (the final indicator data is different from what has been entered), etc. The programmers check the platform programming and fix the bugs.
3. The Terpercaya Secretariat checks the “message” feature regularly to receive user complaints. The Terpercaya Secretariat passes on the complaints to the programmer for fixing.
4. Data is backed up monthly and stored in a separate database.
5. Access to the database system is monitored periodically.

Chapter 7: Guidelines/SOPs for platform operationalisation and maintenance, including on data processing and cleaning

7.1 User access to the platform

The Terpercaya platform can be accessed by administrators and users. This section will be divided into two parts. First, we will detail the access of administrators (or “admin”) in the platform. Second, we will discuss the access of users or visitors.

Administrators

Administrators²³ have access to operate the platform. Three types of administrators are: user, data and super administrators. The roles of each type of administrator and the institutions that will assign the access are detailed in Table 11 below.

Table 11. Admin roles on the platform

Admin Roles	Activity	Institutions
User Admin	Admin managing the division of roles and granting access to roles for all users including data entry, updating FAQs and answering visitors' questions on the platform	BAPPENAS Terpercaya Secretariat
Data Admin	Responsible for the data entry process for all indicators, including the verification process and data cleaning	<ul style="list-style-type: none">● BAPPENAS (Terpercaya Secretariat)● Person in charge from Ministries/Agencies (K/L)²⁴● Person in charge of Regional Apparatus Organisations (OPDs)²⁵
Super Admin	Has full power to access all features, a combination of user admin and data admin.	BAPPENAS (Terpercaya Secretariat)

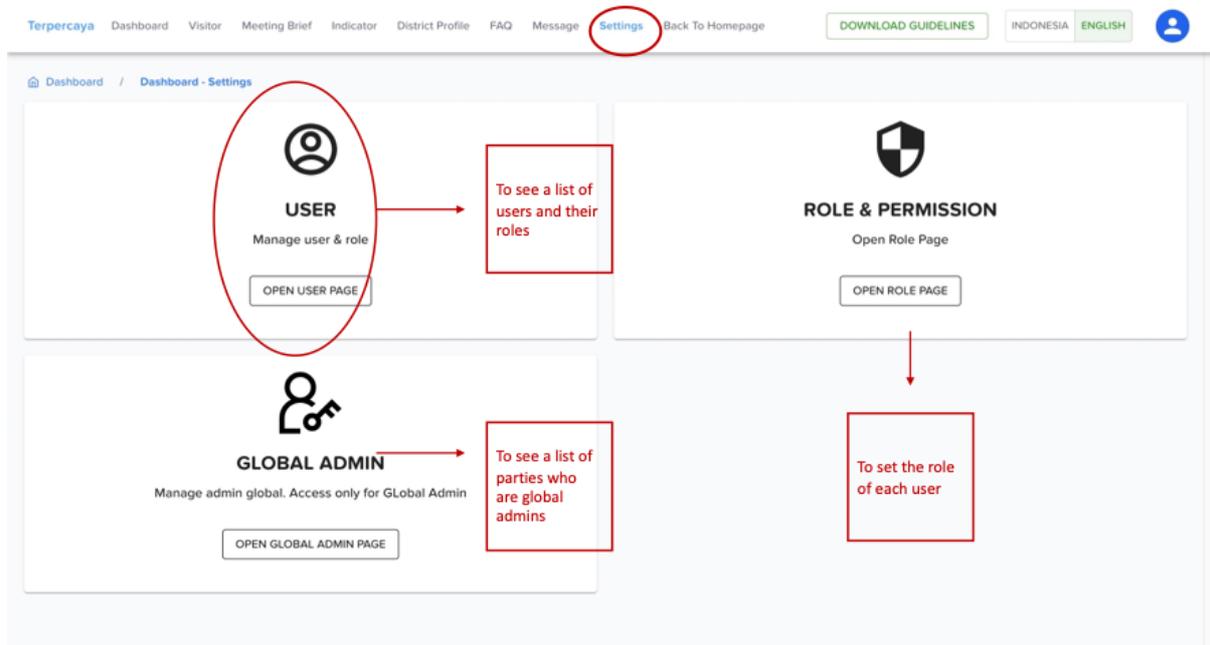
Super Admin can change the function of each admin at any time. Super Admin can add more types of Admin by following the steps below:

²³ When logging into the platform, there are two choices: user/admin and global admin. Global admin is usually a programmer who monitors and performs all platform activities, including backend tasks. It is higher than super admin.

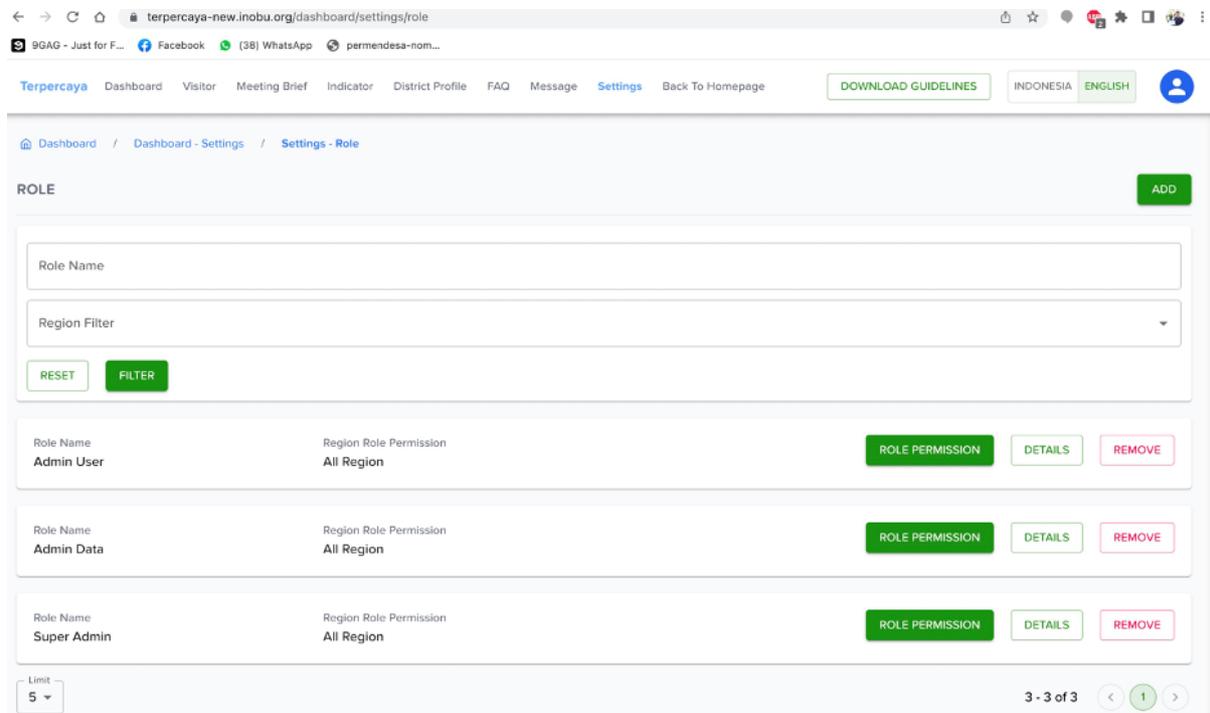
²⁴ The person in charge of the K/L is the representative at the Information Data Center (Pusdatin) in each K/L.

²⁵ Person in charge from OPD is tentative depending on the policy of each OPD in the district government.

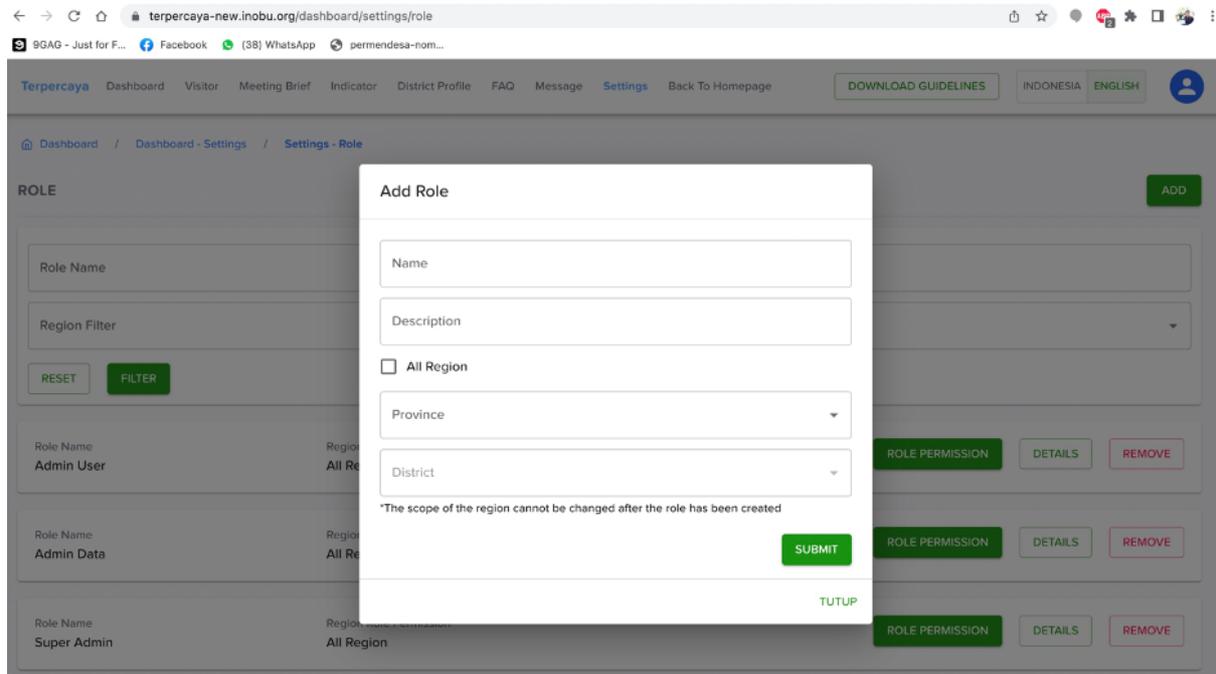
1. Super Admin visits the website (<http://103.97.102.41/>) and click **DASHBOARD**, then **Settings**, then **USER**.



2. Click **ADD**.

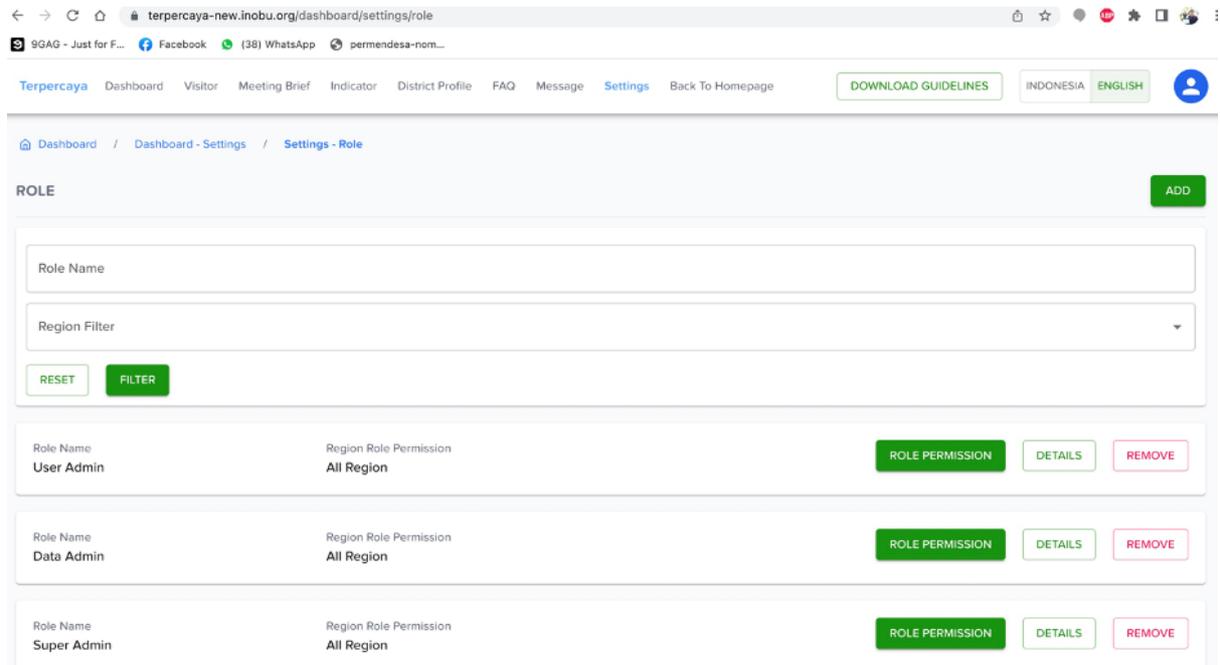


3. Fill out the form for the new type of admin, then click **SUBMIT**.

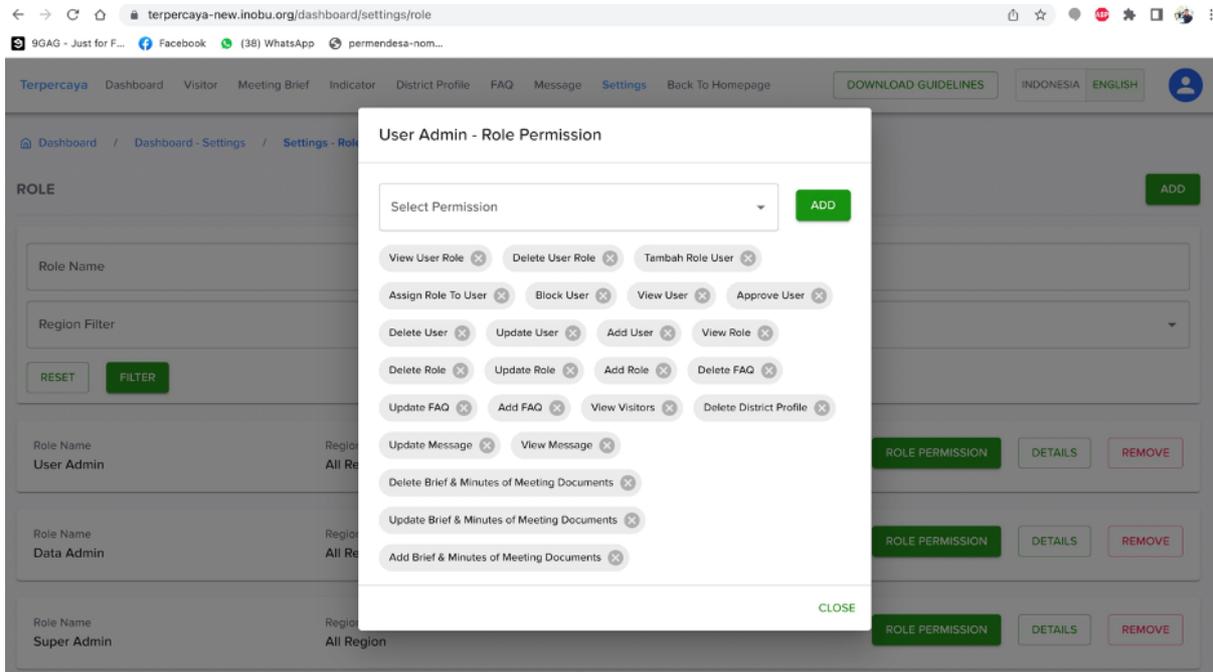


Super Admin can add roles for each admin if needed. The steps to add roles by Super Admin are:

1. Open **DASHBOARD**, click **Settings**, and then choose **ROLE & PERMISSION**. Click **Role Permission**.

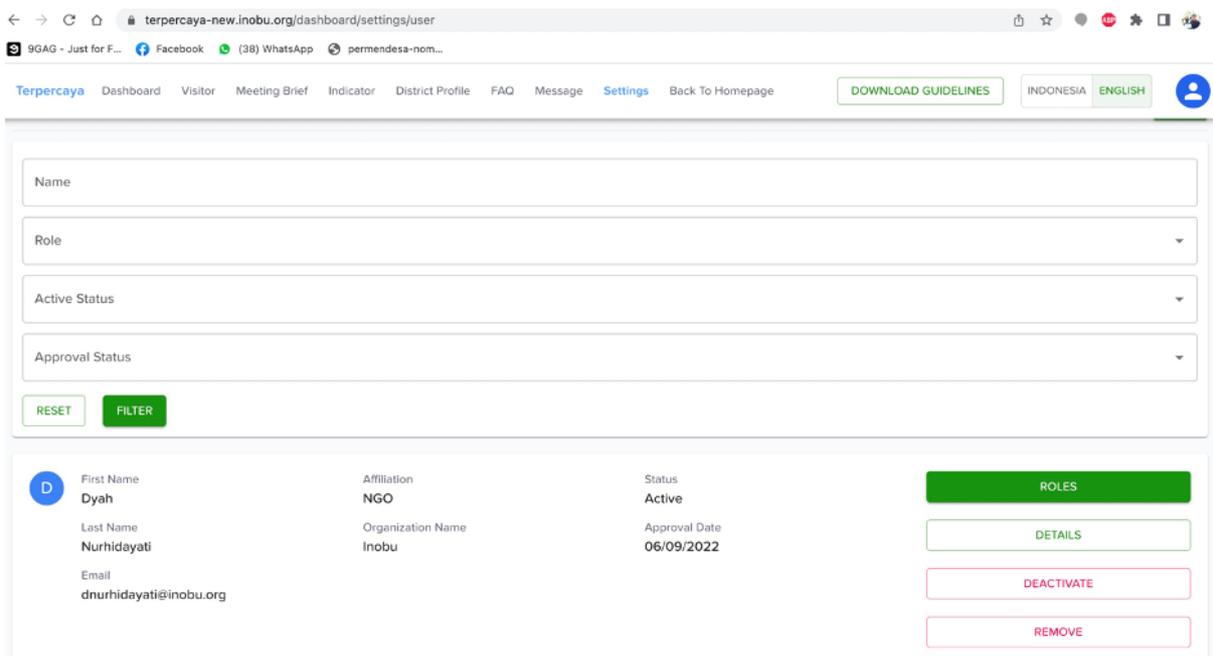


2. Click **Select Permission** and then click **ADD**.



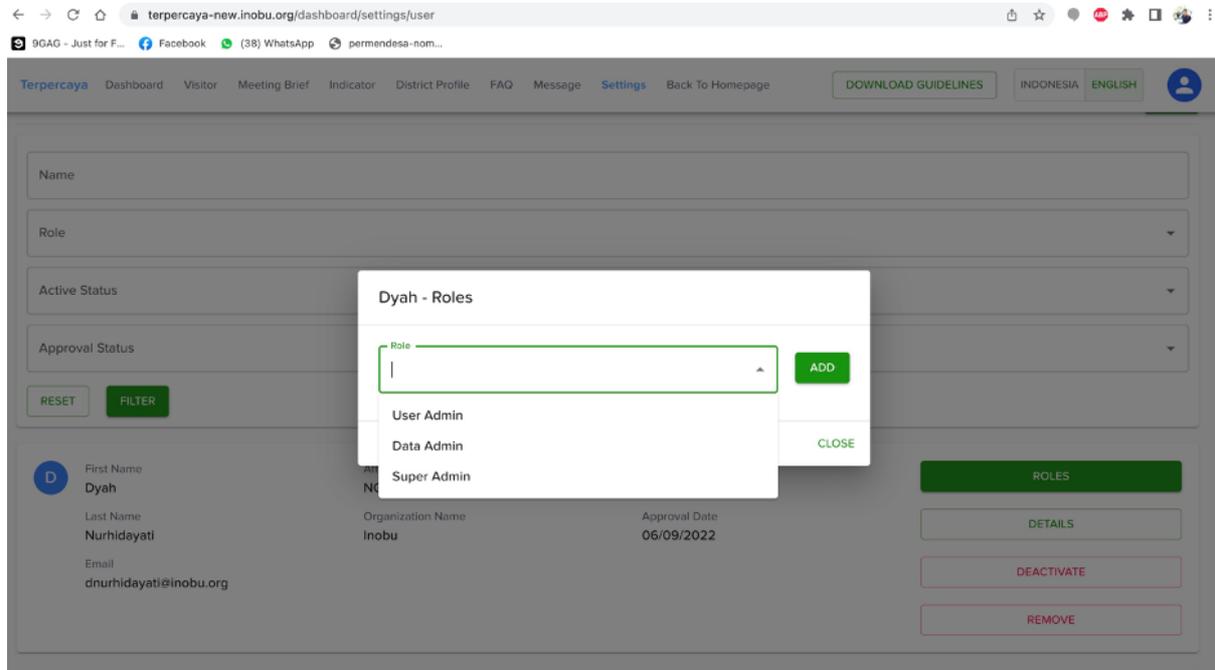
To make a user an admin, Super Admin can grant access rights by taking the following steps:

1. Super Admin can visit the website page (`http://103.97.102.41/`) and click **DASHBOARD**, and click **Settings**, then click **USER**. The page is displayed below. Choose the user who will be made admin. Click **ROLES**.



2. After finding the user (for example: K/L or District Government person in charge), click **ROLES**. Choose what type of admin for this specific user. Click **DEACTIVATE** if the Secretariat wants to freeze the user's admin role. Click **REMOVE** if the Secretariat no longer wants the user to be admin.

3. After clicking **ROLES**, choose the type of admin. And then, click **ADD**.

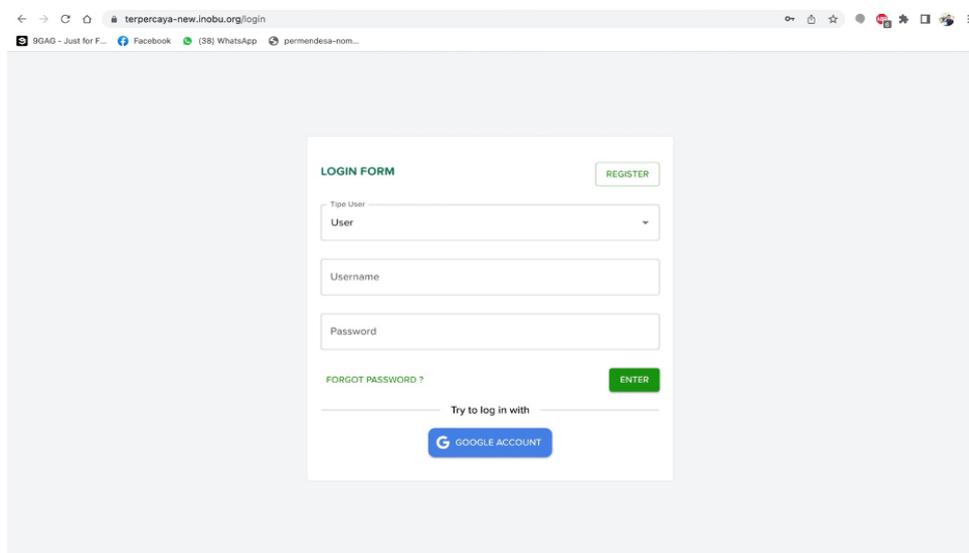


4. The user is officially an admin.

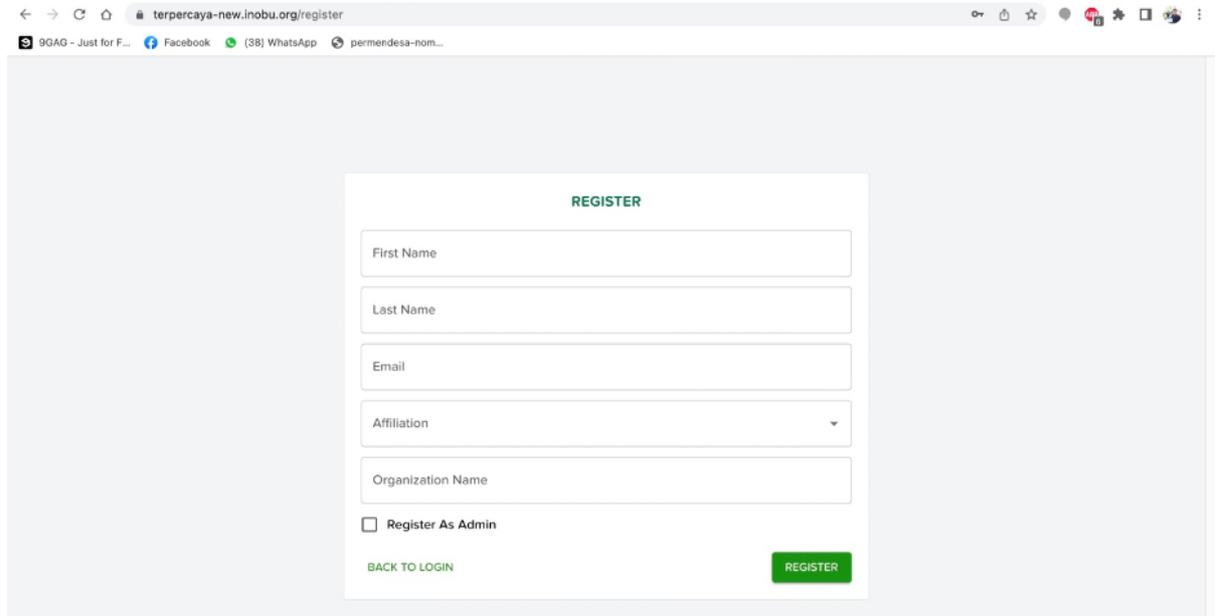
Users

Users are the visitors that wish to use the Terpercaya platform. Anyone can register to access the platform without any prior approval. To register as a user, here are the steps:

1. Open (<http://103.97.102.41/>)

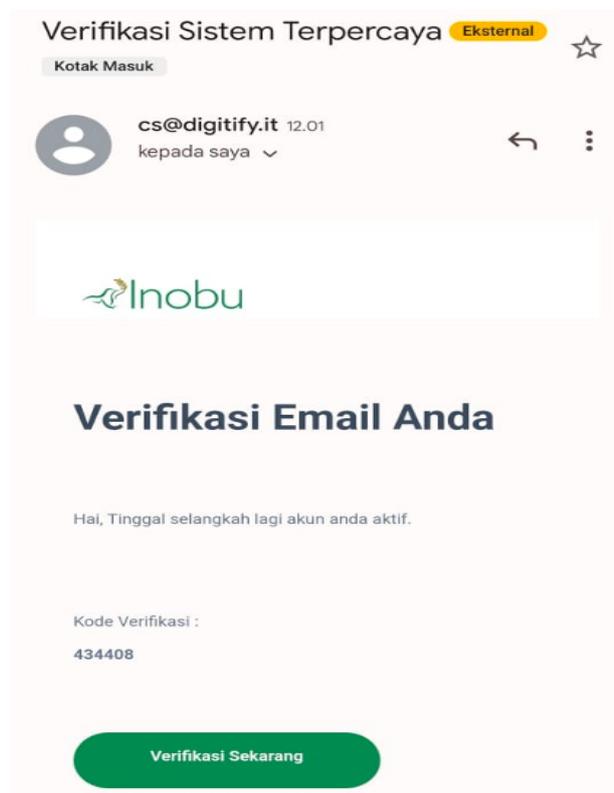


2. Click **REGISTER** and fill out the form below. After that, click **REGISTER**.

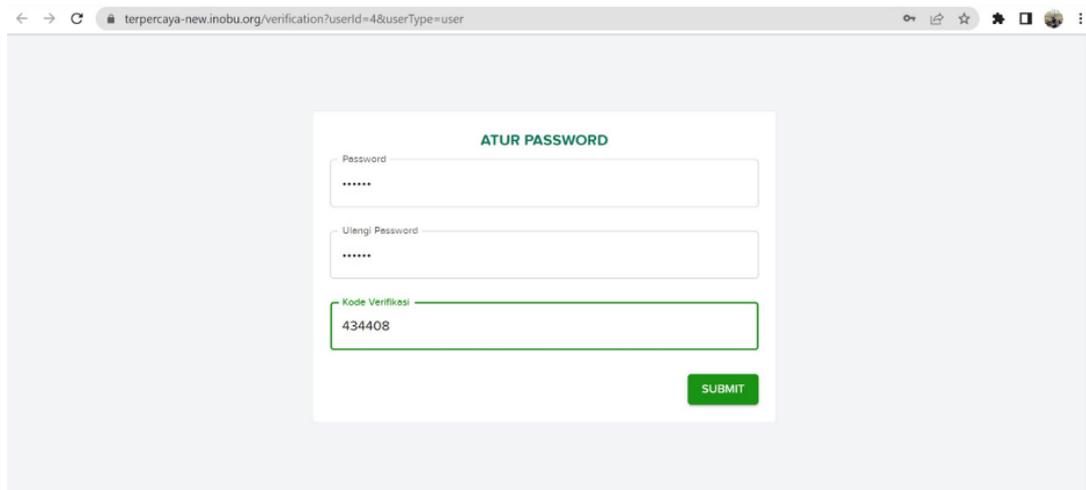


The screenshot shows a web browser window with the URL terpercaya-new.inobu.org/register. The page contains a registration form with the following fields: First Name, Last Name, Email, Affiliation (dropdown menu), and Organization Name. There is a checkbox labeled "Register As Admin" and a green "REGISTER" button. A link "BACK TO LOGIN" is also visible at the bottom left of the form.

3. The user candidate will receive a verification code by email. They should then verify their account. Click “Verifikasi Sekarang”



4. After clicking “Verifikasi Sekarang”, fill in the password setting below and click **SUBMIT**:



The screenshot shows a web browser window with the URL `terpercaya-new.inobu.org/verification?userId=4&userType=user`. The page title is "ATUR PASSWORD". The form contains three input fields: "Password" (masked with dots), "Ulangi Password" (masked with dots), and "Kode Verifikasi" (containing the value "434408"). A green "SUBMIT" button is located at the bottom right of the form.

6. Users can access the platform by inputting their password and username (email)

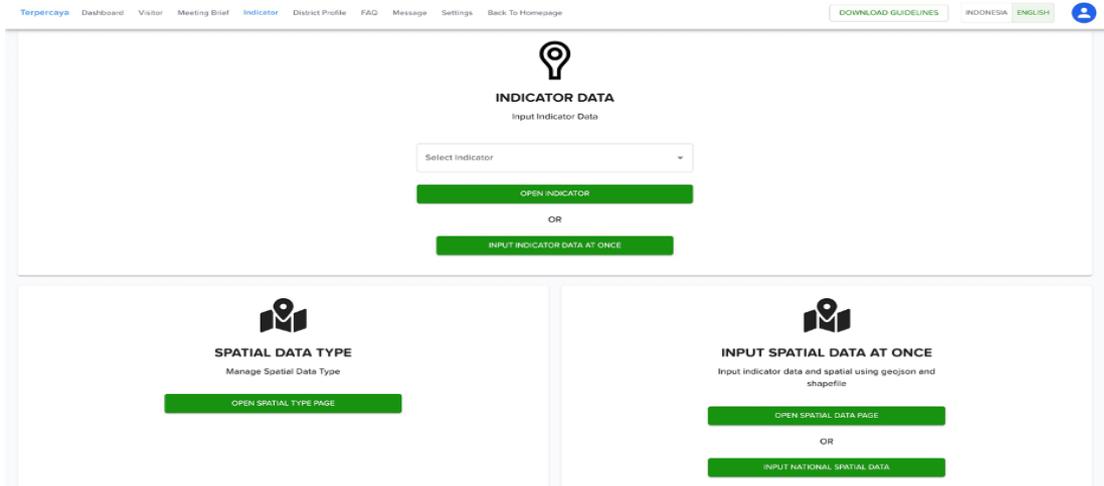
7.2 Data entry guidelines

Data entry can only be performed by administrators who have been given access to input data. Depending on the data format, the three methods of data entry are: manual, bulk-insert using excel document, and shapefile. This section details the steps for each data entry method.

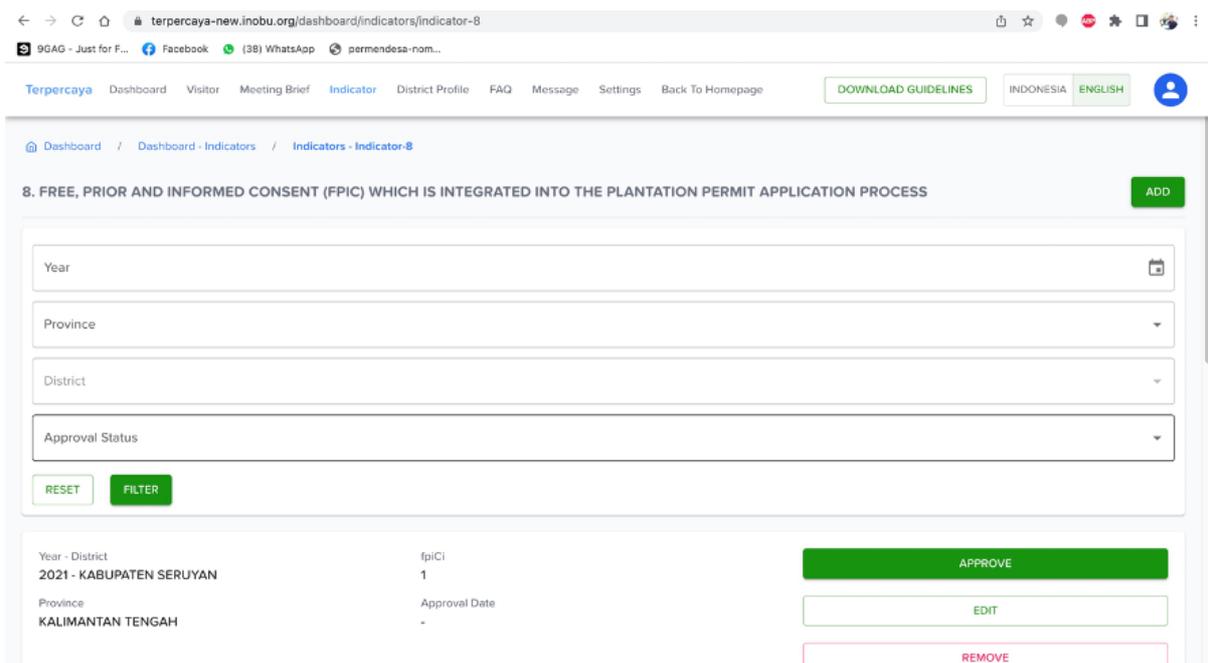
7.2.1 Manual entry

Manual entry can be performed by all data owners from line ministries and local governments; however, an approval is needed before data can be integrated into the database. The Super Admin will assign access to specific users to grant the approval through the following steps:

1. Click **SELECT INDICATOR** and then select the indicator for which data will be entered. After that, click **OPEN INDICATOR**.



2. After selecting the indicator to be analysed, for example, indicator 8, the display will be shown as below. Click **ADD** to enter indicator data.



3. Fill out the form manually and click **SUBMIT**.

← → ↻ 🏠 terpercaya-new.inobu.org/dashboard/indicators/indicator-8/new 🌟 📧 🗄️ 🏠 🌐

9GAG - Just for F... Facebook (38) WhatsApp permendesana-nom...

Terpercaya Dashboard Visitor Meeting Brief **Indicator** District Profile FAQ Message Settings Back To Homepage DOWNLOAD GUIDELINES INDONESIA ENGLISH 👤

Dashboard / Dashboard - Indicators / Indicators - Indicator-8 / Indicator-8 - New

8. FREE, PRIOR AND INFORMED CONSENT (FPIC) WHICH IS INTEGRATED INTO THE PLANTATION PERMIT APPLICATION PROCESS

Attachment can be uploaded after the indicator has been successfully added

INFORMATION

$FPIC_i \in \{0, 1\}$

FPIC_i : is equal to 1 if there is an SOP in district i to gain community approval regarding plantation licensing, and 0 otherwise.

INDICATOR DATA

Year 📅

District ▾

FpiCi ▾

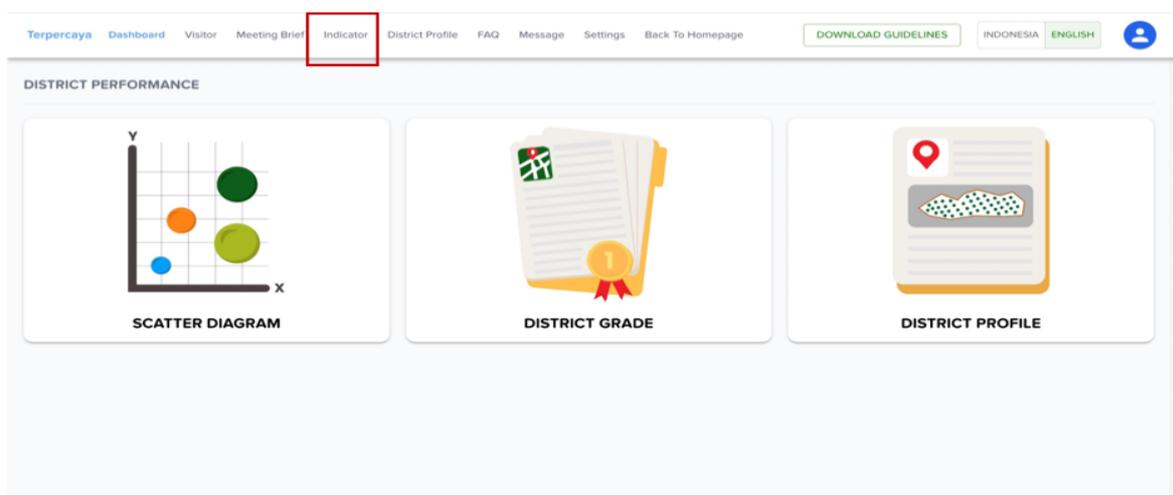
SUBMIT

4. Fill out the information on this screen, then click **SUBMIT**.

5. After clicking submit, it will return to the previous page with the information **Successfully Added**. The Data admin who has access to give approval can perform data approval (7.3).

7.2.2. Bulk Insert data entry using predefined excel template

1. Visit the website (<http://103.97.102.41/>) and login as an admin, choose **DASHBOARD** and click the **Indicator** tab.



2. Click **INPUT INDICATOR DATA AT ONCE**.

← → ↻ 🏠 terpercaya-new.inobu.org/dashboard/indicators 🗄️ ☆ 🔍 🌐 🗂️ 👤

9GAG - Just for F... Facebook (38) WhatsApp permendesa-nom...

Terpercaya Dashboard Visitor Meeting Brief **Indicator** District Profile FAQ Message Settings Back To Homepage [DOWNLOAD GUIDELINES](#) INDONESIA ENGLISH 👤

Dashboard / Dashboard - Indicators

INDICATOR DATA

Input indicator data. Each indicator data requires approval (by admin who has approval access) before entering into chart analysis

Select Indicator ▾

OPEN INDICATOR

OR

Input indicator data at once. The inputted data will automatically be approved

INPUT INDICATOR DATA AT ONCE

3. Download the excel template by clicking **here**.

Terpercaya Dashboard Visitor Meeting Brief **Indicator** District Profile FAQ Message Settings Back To Home [DOWNLOAD GUIDELINES](#) INDONESIA ENGLISH 👤

Dashboard / Dashboard - Indicators / Indicators - Bulk

BULK INSERT / INPUT DATA INDICATORS AT ONCE

NOTES:

- *data inputted through this page automatically becomes approved/verified
- *if the data with the same district and year has already been inputted, it cannot be added again
- *please make sure the inputted data is correct, incorrect data cannot be corrected in bulk (must be corrected/deleted one by one)
- *please contact the side who has access to the database if you want to do mass deletion of data

Year 📅

Upload All Indicator Data According to Template

Drag and drop the file here, or click to upload

Excel to add 23 indicators data at once, [download template here](#)

Just fill in the desired row, please don't delete the sheet or change the template format

Some data lines may be overwritten / replaced by data provided via external excel data

4. After that, fill in the excel with the data. This excel template is only for one-year period.

labProfileId	lab	dokumen	sluPI
ID KABUPATEN	NAMA KABUPATEN	dokumen DODTLH dan/atau RPLH di kabupaten	SLUPI
1101	KABUPATEN SIMEULUE		0,00
1102	KABUPATEN ACEH SINGKIL		0,00
1103	KABUPATEN ACEH SELATAN		0,00
1104	KABUPATEN ACEH TENGGARA		0,00
1105	KABUPATEN ACEH TIMUR		0,00
1106	KABUPATEN ACEH TENGAH		0,00
1107	KABUPATEN ACEH BARAT		0,00
1108	KABUPATEN ACEH BESAR		0,00
1109	KABUPATEN PIDIE		0,00
1110	KABUPATEN BIREUEN		0,00
1111	KABUPATEN ACEH UTARA		0,00
1112	KABUPATEN ACEH BARAT DAYA		0,00
1113	KABUPATEN GAYO LUES		0,00
1114	KABUPATEN ACEH TAMIANG		0,00
1115	KABUPATEN NAGAN RAYA		0,00
1116	KABUPATEN ACEH JAYA		0,00
1117	KABUPATEN BENER MERIAH		0,00
1118	KABUPATEN PIDIE JAYA		0,00

5. Upload the .xls/ .xlsx data in the page no. 3 above, make sure to fill the year. Then click submit. This scheme does not need approval. For the data upload section, the excel file used is a file that contains all indicators with a formatted template.

7.2.3. Bulk Insert Data Entry using Excel Obtained from a K/L website

1. Admin downloads the data from the K/L website (all the data is in excel format). The picture below is an example of data downloaded from the Ministry of Environment on fire.

Kabupaten	2017	2018	2019	2020	2021	2022
ACEH BARAT	1.393,00	13,00	86,00	0	41,00	30,00
ACEH BARAT DAYA	0	0		47,00	0	15,00
ACEH BESAR	816,00	0	161,00	24,00	141,00	0
ACEH JAYA	452,00	43,00	43,00	51,00	101,00	89,00
ACEH SELATAN	94,00	429,00	20,00	41,00	407,00	322,00
ACEH SINGKIL	502,00	42,00		67,00	20,00	398,00
ACEH TAMIANG	0	0	7,00	47,00	0	0
ACEH TENGAH	0	111,00	12,00	239,00	28,00	0
ACEH TENGGARA	5,00	0		6,00	0	0
ACEH TIMUR	7,00	33,00	112,00	55,00	0	0

2. Follow the step in 7.1.1. and then upload the downloaded excel in the fire prevention section.

7.2.4. Shapefile entry

Data in shapefile format is mostly map data. The data can be entered through the following steps:

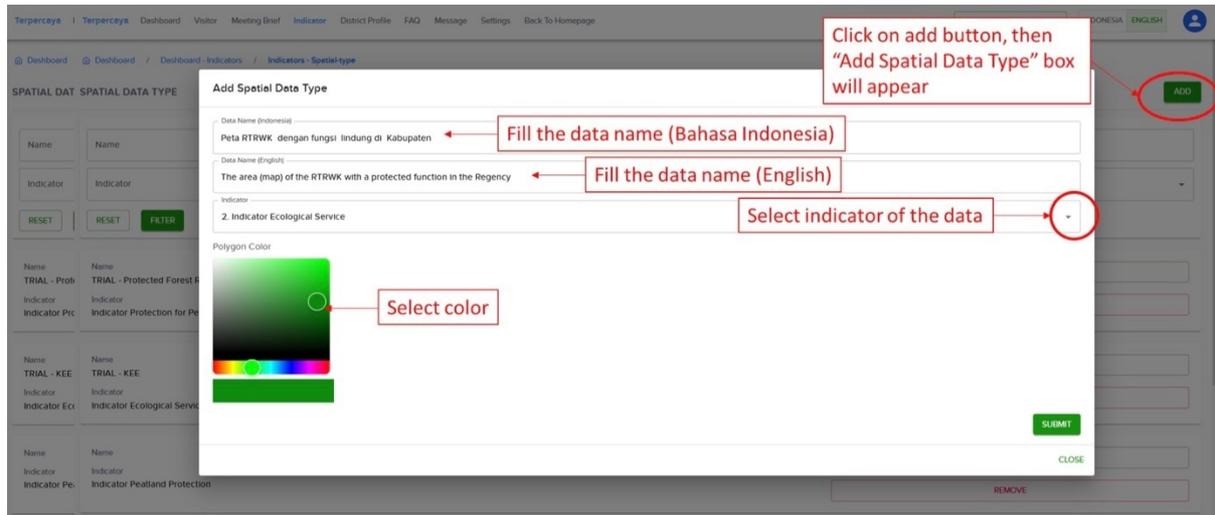
1. There are two types of shapefile data, namely district and national data. If an Admin wants to input national data, he/she can choose **NATIONAL DATA INPUT**. If an admin wants to fill out per district, then he/she can choose **OPEN SPATIAL DATA PAGE**. Admin for district data input should be performed by each district government.

The screenshot shows the 'INDICATOR DATA' section of a web application. At the top, there is a navigation bar with links like 'Terpercaya', 'Dashboard', 'Visitor', 'Meeting Brief', 'Indicator', 'District Profile', 'FAQ', 'Message', 'Settings', and 'Back To Homepage'. On the right, there are buttons for 'DOWNLOAD GUIDELINES', 'INDONESIA', 'ENGLISH', and a user profile icon.

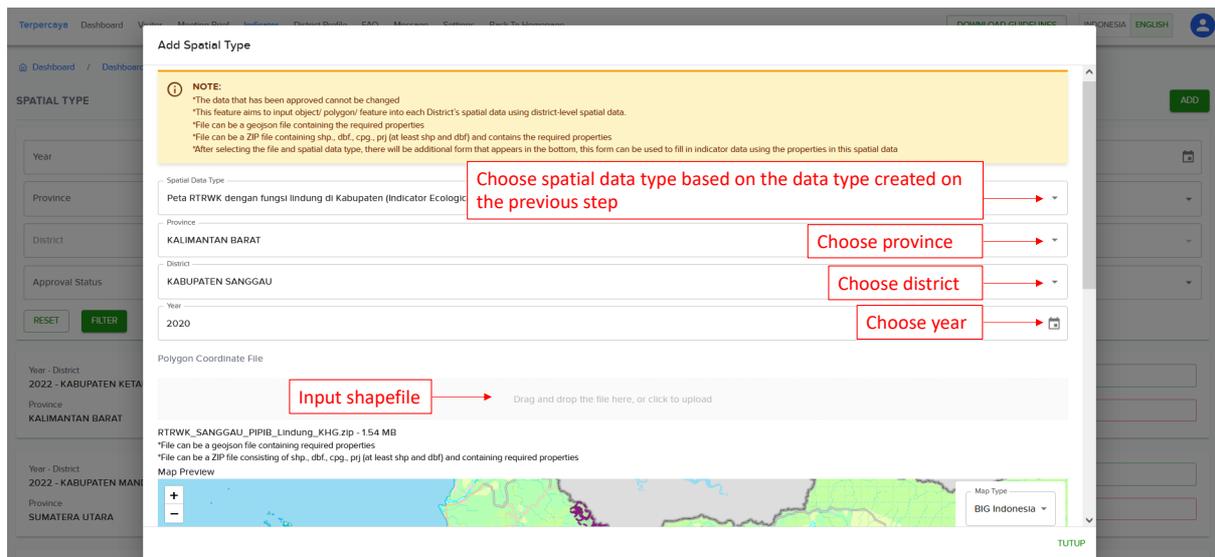
The main content area is titled 'INDICATOR DATA' and contains the following text: 'Input indicator data. Each Indicator data requires approval (by admin who has approval access) before entering into chart analysis'. Below this is a dropdown menu labeled 'Select Indicator' and a green button labeled 'OPEN INDICATOR'. Below that is the word 'OR' and another block of text: 'Input indicator data at once. The inputted data will automatically be approved', followed by a green button labeled 'INPUT INDICATOR DATA AT ONCE'.

Below the main content area, there are two columns of options. The left column is titled 'SPATIAL DATA TYPE' and 'Manage Spatial Data Type', with a green button labeled 'OPEN SPATIAL TYPE PAGE'. A red box with an arrow points to this button, containing the text: 'To input the data name before inputting spatial data (district and national)'. The right column is titled 'INPUT SPATIAL DATA AT ONCE' and contains two options: 'OPEN SPATIAL DATA PAGE' and 'INPUT NATIONAL SPATIAL DATA'. A red box with an arrow points to the 'OPEN SPATIAL DATA PAGE' button, containing the text: 'To input shapefile data of district such as RTRWK. Usually done by district government as the PIC'. Another red box with an arrow points to the 'INPUT NATIONAL SPATIAL DATA' button, containing the text: 'To input national shapefile data'.

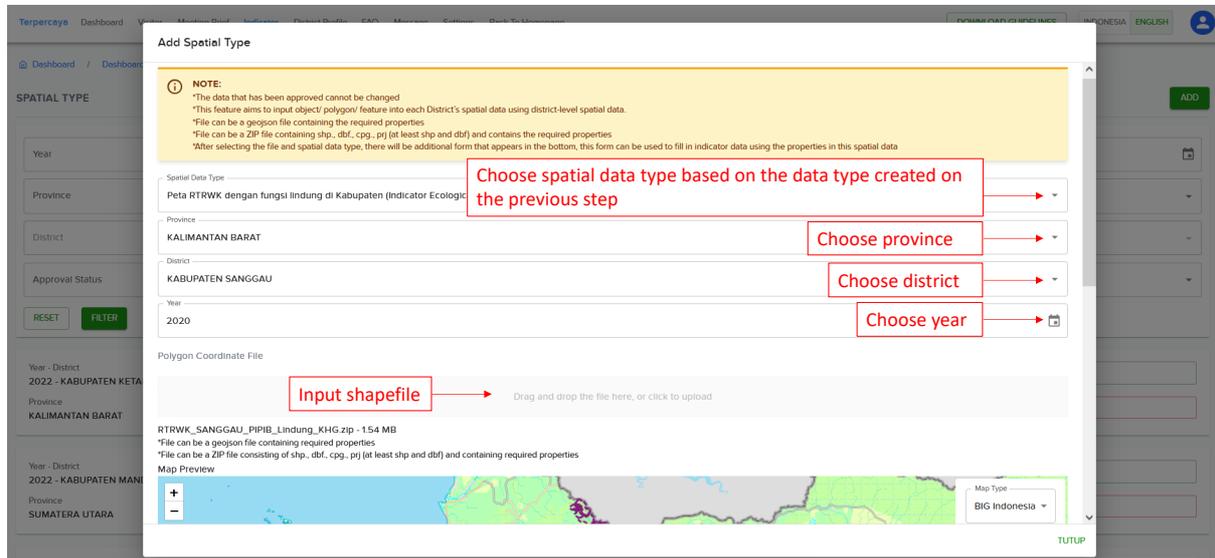
2. Before uploading spatial data, the Admin needs to first go to the **OPEN SPATIAL TYPE PAGE**. On this page, the name of the data source and the indicator can be entered. Click **ADD** and fill out the **data name** and **indicators**, as well as the **colour** for the shapefile. The data name is filled out with the data source's name for each indicator. Indicator information from the data is then inputted into the indicator column. Then click **SUBMIT** and return to the indicators page.



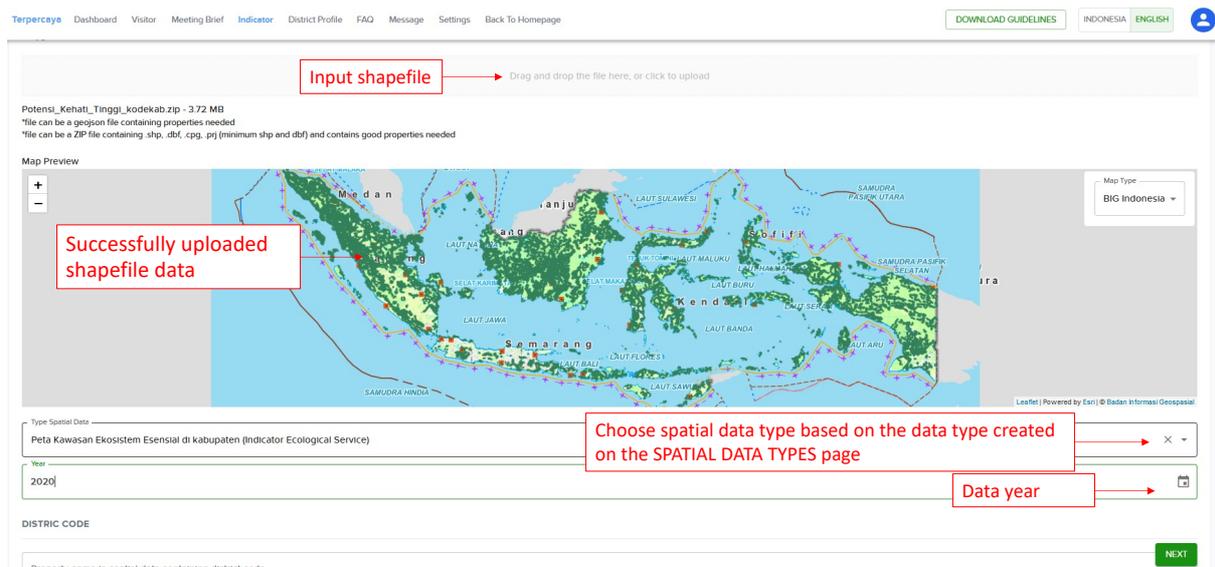
3. For data per District, select **OPEN SPATIAL DATA PAGE**, then select **ADD**. Fill out the Spatial Data Type information based on the data name that was inputted in the previous step. Then fill out the province, district and year of data. Upload regional data (namely District RTRW) in geoJSON or zip form (.shp .dbf .cpg .prj). Make sure the data already has a property in the form of area information from the required data.



After inputting the shapefile successfully, the shapefile will appear in the map preview. For the area (map) of the RTRWK with a protected function in the regency, there is one data source that needs to be input, **rtrwLi**. In the drop-down properties, select the data that refers to the area of each data source.



4. To input national data, select the **INPUT NATIONAL DATA** page. Fill out the formula and upload the national data in the form of geoJSON or zip (.shp .dbf .cpg .prj). Make sure the data already has the district code property and area information of the intended data. Then select the **Type of Spatial Data** based on the name of the data that we input in the previous step. Also, fill out the year of data information. The uploaded spatial data will appear in the **MAP PREVIEW**.



After inputting the spatial data, the **DISTRICT CODE** and **SPATIAL DATA PROPERTIES** information will appear. In the **DISTRICT CODE**, fill out the property name based on the district code. And in **SPATIAL DATA PROPERTY**, fill out the property name with the area of the targeted data. Value/filter information can be left blank. Once uploaded, click **CONTINUE**.

The screenshot shows the Terpercaya dashboard interface. At the top, there is a navigation bar with links like 'Dashboard', 'Visitor', 'Meeting Brief', 'Indicator', 'District Profile', 'FAQ', 'Message', 'Settings', and 'Back To Homepage'. There are also buttons for 'DOWNLOAD GUIDELINES', 'INDONESIA', 'ENGLISH', and a user profile icon.

The main content area is divided into several sections:

- Year:** A dropdown menu set to '2020'.
- DISTRICT CODE:** A form with a label 'Property name in spatial data containing district code' and an input field containing 'kode_kab'. A red box highlights this field with the annotation 'Fill property name that contain district code'.
- FILTER OBJECT:** A dropdown menu labeled 'Filter object by property' with 'Optional' selected. A red box highlights this dropdown with the annotation 'Optional'. To its right is a text input field 'Value / Nilai Filter'.
- USE SPATIAL DATA PROPERTY AS INDICATOR DATA:** A section with three rows of indicator variables:
 - Indicator Variable: 'ITWLI' with a dropdown menu set to 'Property'. A red box highlights this dropdown with the annotation 'Optional, we can upload this variable separately'.
 - Indicator Variable: 'KREI' with a dropdown menu set to 'AREA_HA'. A red box highlights this dropdown with the annotation 'Select property containing area (hectare)'.
 - Indicator Variable: 'esPi' with a dropdown menu set to 'Property'.

At the bottom right, there is a green 'NEXT' button. Small text at the bottom left provides instructions: '*Leave blank if you don't want to fill in the indicator field' and '*only property in the form of numbers is shown as an option, if spatial data property does not appear, please check again whether the type the data is correct'.

7.3 Data approval

Data that is uploaded through shapefile and manual scheme needs to be approved before it can be integrated into the database. To approve the data, the Data Admin can take the following steps:

1. Open the Click **“Select Indicator”** and choose the indicator (e.g. FPIC)

The screenshot shows the 'INDICATOR DATA' section of the Terpercaya dashboard. At the top, there is a lightbulb icon and the title 'INDICATOR DATA'. Below the title, there is a paragraph: 'Input indicator data. Each indicator data requires approval (by admin who has approval access) before entering into chart analysis'.

The main content area contains a dropdown menu labeled 'Select Indicator' with the selected option '8. Free, prior and informed consent (FPIC) which is i'. Below the dropdown menu, there is a green button labeled 'OPEN INDICATOR'. Below this button, there is the text 'OR' and another paragraph: 'Input indicator data at once. The inputted data will automatically be approved'. At the bottom, there is a green button labeled 'INPUT INDICATOR DATA AT ONCE'.

2. Fill in the year and click **“FILTER”**. Find the data that needs to be approved, click the **“APPROVE”** button on the right-hand side.

The screenshot shows the Terpercaya dashboard at the URL `terpercaya-new.inobu.org/dashboard/indicators/indikator-8`. The page title is "8. FREE, PRIOR AND INFORMED CONSENT (FPIC) WHICH IS INTEGRATED INTO THE PLANTATION PERMIT APPLICATION PROCESS". There is an "ADD" button in the top right corner.

Below the title, there is a filter section with the following fields:

- Year: 2021
- Province: (dropdown menu)
- District: (dropdown menu)
- Approval Status: (dropdown menu)

There are "RESET" and "FILTER" buttons below the filter fields.

Below the filter section, there is a table with the following data:

Year - District 2021 - KABUPATEN SERUYAN	fpiCI 1	APPROVE
Province KALIMANTAN TENGAH	Approval Date -	EDIT
		REMOVE

7.4 Data checking

To check whether the data has been entered successfully, the Data Admin can perform the following steps:

1. Click **“Select Indicator”** and choose the indicator (e.g. Fire Prevention)

The screenshot shows the Terpercaya dashboard at the URL `terpercaya-new.inobu.org/dashboard/indicators`. The page title is "Dashboard - Indicators".

A dropdown menu is open, showing the following list of indicators:

1. Protection For Permanent Forests
2. Protection for areas important for ecological services
3. Fire Prevention
4. Protection for peatlands
5. Climate Change Mitigation
6. Sustainable production forest management
7. Environmental quality control
8. Free, prior and informed consent (FPIC) which is

Below the dropdown menu, there is an "OPEN INDICATOR" button. Below that, there is an "OR" text, followed by the text "Input indicator data at once. The inputted data will automatically be approved". Below this text, there is an "INPUT INDICATOR DATA AT ONCE" button.

2. Fill the year that will be checked and click "FILTER".

3. FIRE PREVENTION

Year: 2021

Province: [Dropdown]

District: [Dropdown]

Approval Status: [Dropdown]

RESET FILTER

Year - District	Value (DBAIt)	EDIT
2022 - KABUPATEN YALIMO	-2.00	
Province	Approval Date	REMOVE
PAPUA	20/06/2022	

3. Check whether the uploaded data exists or not.

7.5 Platform maintenance

Platform maintenance is carried out by the Terpercaya Secretariat of BAPPENAS, especially the Programmer Team. To perform platform maintenance, the following steps need to be performed:

7.5.1 System repair

System repair relates to activities to fix errors or bugs that occur in the system. Steps that can be taken:

1. Daily supervision is carried out by the Admin and programmer.
2. If an error occurs, the Admin is required to report to the Programmer Team a maximum of one hour after the error occurs.
3. The Admin collects input from platform users and then follows up by informing the programmers.
4. The Programmer team collects bugs data every day and makes improvements as soon as possible.
5. Users may provide input regarding system improvements through "CONTACT US" on the platform's home page (our contact scheme is in the appendix).
6. The "CONTACT US" feature will notify the Terpercaya Secretariat by email at this address: pertanian@bappenas.go.id.
7. The Admin will respond to users' questions via email. After responding, the admin will update the users' questions on the "Message" feature dashboard by ticking "already followed up".

7.5.2 System security control

To ensure data and system security, anticipatory measures that should be performed are:

1. User monitoring is the main step to ensure that the data is inputted by the parties granted access.
2. Access for data input is granted for approximately three months to each data admin.
3. The Programmer team backs up the data every month, with the storage in a separate database.

7.5.3. The development of system features

Feature updates are carried out once a year, namely at the beginning of July each year. Testing needs to be executed on new features for a maximum of three days. Users should be notified when the platform is under repair.

Chapter 8: The process of improving and upgrading the Terpercaya data platform including lessons learnt and data gaps

8.1. Data platform improvement process

During this project, significant improvements were made to the Terpercaya platform. Several features that were built into the system, namely:

1. Line ministries and local governments as data owners can input data directly in the system.
2. The platform can receive data from various sources through two different methods: manual and bulk-insert data entry. The platform can also receive spatial data for specific indicators that require overlaying maps to calculate their value.
3. The platform has a multi-year database to visualise time series data.
4. The system can self-analyse the raw data submitted automatically by line ministries and local governments.

The platform has been transferred to BAPPENAS' server. The transfer process was completed on 23 September 2022. BAPPENAS will then carry out testing and analysis before proceeding with installing the domain for the Terpercaya platform.

The platform has also been updated to incorporate the latest version of the Terpercaya indicators as discussed in Chapter 1 of this report. Based on the FGD results, the data needs and format were compiled and incorporated into the platform design. The refinement process was followed by a discussion about stakeholders' expectations on the system.

Based on the results of the discussion, the main data entry process can be carried out by BAPPENAS through the Terpercaya Secretariat. If ministries or local governments wish to input data directly in the system, the Terpercaya Secretariat can grant them access. For the national data scheme, BAPPENAS can input the data after obtaining data from K/L. However, if a Ministry/Agency wishes to input the data themselves, then BAPPENAS can provide access to the dashboard for data entry to the K/L. Data can also be submitted directly by district governments. Therefore, the data entry system is facilitated.

During the data platform development process, several consultation sessions were carried out involving EFI, BAPPENAS and other ministries. The ministerial consultations were held simultaneously with FGD for indicator refinement and data protocol. The Table 12 below shows the inputs from ministries during the FGDs. Trials were also conducted internally. They were performed to anticipate and repair errors such as bugs. Evaluation of the platform development is carried out periodically by involving several parties, for example BAPPENAS and EFI. The feedback obtained served to guide improvement of the platform's performance. The improvements made are described in the summary of the platform (Chapter 5), especially in terms of data entry flow and admin operational access.

Table 12. System Development input from K/L

N°	Date	Ministry/agency	Comment	
			Feature	User interface
1	4/3/2022	Ministry of Environmental and Forestry (KLHK)	Need to create levelling user for data access	
			Download menu for result analysis	
2	9/3/2022	Geospatial Information Agency (BIG)	In the district profile, there should be a menu option to select which districts can be prioritised if the government will provide special interventions, making it easier for the government if there will be interventions with limited costs.	
		Statistics Indonesia (BPS)	Using BIG basemap	
			Need additional download menu on thematic map or analysis result table	
			The "search" menu can be added to make it easier for users to search for certain topics	
			In the spread chart menu, you can also give the year conditions of the analysed indicators. So, there is no need to go back to see the existing indicator metadata.	
			Addition of a poverty indicator regarding the number (absolute) of the poor, so that a complete analysis can be made, both relative (percent) and absolute (amount)	
			A FAQ menu to provide users with information about the platform	
			Add contact person in case there are further questions, for example from BAPPENAS	
Need commodity selection option				

N°	Date	Ministry/agency	Comment	
			Feature	User interface
3	16/3/2022	Ministry of Agriculture (Kementan)	Need a cumulative assessment of all indicators in one district	
4	18/3/2022	Ministry of Home Affairs (Kemendagri)	No comment	
5	25/3/2022	Ministry of Agrarian Affairs and Spatial Planning/ National Land Agency (ATR BPN)	No Comment	Need red colour in the front page
				The district ranking on the map cannot be seen just by colour A,B,C. It needs gradation. The ranking can only be seen in the histogram.
6	5/4/2022	National Food Agency (BPN)	On the district profile page, the right side (green area) only shows indicator 1. It does not change even if other indicators are clicked.	There is no colour description in the net diagram.
			Need a guide or description for a scatter chart	Terpercaya has not followed the SDGs colour standards

8.2. Lessons learnt and recommendations

8.2.1. Data availability

The Terpercaya Initiative database is mainly sourced from the government. Data from non-government parties will be avoided at this stage. Of all the data needed, one of the challenges of data collection is when there is no national database available at the national level. Under this situation, BAPPENAS must ensure the licences for data sharing with all district governments. Chapter 3 provides guidelines for data collection at the local level.

In the future, data availability should be further studied, especially in finding solutions for those indicators where no national dataset is available. We have provided suggestions on how this data can be collected, either through SDI or the line ministries.

BAPPENAS were supported in submitting priority data to the Secretariat of One Data Indonesia (SDI) so that this data needed by Terpercaya can be available on the SDI platform. The SDI Forum has announced a list of Terpercaya data that is approved to be available on the SDI platform in 2023. Of the 36 proposed data sources for 23 indicators,

about 23 data sources were approved. The Terpercaya Secretariat will be able to collect data through the SDI platform as of January 2023. Currently, if BAPPENAS wants to collect data, it needs to apply for a data sharing licence with each data guardian in the K/L. This also applies to data that has not been approved by SDI, where data can be submitted directly to producers and data guardians in the Ministry/Agency.

8.2.2. The Terpercaya Secretariat

A dedicated secretariat is required to administer the platform. Terpercaya will be managed entirely by the Directorate of Food and Agriculture of BAPPENAS. BAPPENAS needs to set up a Secretariat Team, consisting of at least programmers and three admins: user admin, data admin and super admin.

Platform development will continue to be carried out by adjusting to the prevailing government policies. For example, when One Data Indonesia (SDI) has been running effectively and the Terpercaya priority data proposal is approved by the SDI Forum, BAPPENAS will not need to ask for permission to use data from local governments and K/L, because it will be able to merely download the data file from the SDI platform. In these cases, a data admin team will have to download data from the SDI and input it into the platform. An IT team needs to be formed to carry out platform maintenance, including repairs when there are problems, feature enhancements and system security maintenance. Some of the Terpercaya indicator data is in shapefiles format. BAPPENAS should use a GIS expert to analyse shapefiles before they are included in the platform. The establishment of a Terpercaya institution must have a strong legal basis.

8.2.3. Data platform development

The data platform development process, which includes inputting and updating the database, must continue periodically. User testing needs to be carried out regularly to develop a data entry platform, especially for local governments. This is to improve the process of collecting and inputting data. Subsequently, BAPPENAS needs to train local governments on the operation of the Terpercaya Platform.

8.3 Data gaps

BAPPENAS sent the data sharing letters to the relevant ministries on 9 August 2022, and the data collection process should be continued. Currently, data for four indicators can be easily obtained through public domains, namely:

- Indicator 3. Fire prevention
- Indicator 13. Food security
- Indicator 18. Poverty level
- Indicator 19. Proportion of district budget for sustainability

The above data is already available on the respective ministries/agencies' website and updated every year. Terpercaya Admin only has to download the excel files and upload them to the platform according to the data year.

Data for five indicators are not available at the national level. The data should be collected at the district level. BAPPENAS can encourage local governments to input them directly. The following are indicators for which data is only available to local governments:

- Indicator 1. Protection of permanent forest
- Indicator 2. Protection of areas critical to ecological services
- Indicator 4. Protection of peatlands
- Indicator 8. Free, prior and informed consent (FPIC) integrated into the plantation licence application process (to be available in SDI)
- Indicator 10. Resolution of land and agricultural conflicts (to be available in SDI)

Data in shapefile formats presents specific challenges. For example, data on District Spatial Planning that need to be inputted in shapefile format. Shapefile data is quite sensitive for the government because of concerns that it will be misused. Therefore, the process of collecting data at the local level will be difficult when there is no national policy that requires district governments to input Terpercaya data. Table 13 below summarises the gaps in data collection for all indicators.

Table 13. Data gaps

N°	Indicator	Data name	Data producer	Ministries/ Agencies	Data format	Data gap (Yes/No)	Note
1	Protection of Permanent Forest	Map of protected forest in the district Spatial Planning (RTRW)	District Bappeda	Local Government	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Collected from 12 pilot Districts, will be available at SDI by 2023
		Map of conservation forest in the district RTRW	District Bappeda	Local Government	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Collected from 12 pilot Districts, will be available at SDI by 2023
		Map of the new licence moratorium (PIPIB) in the district	Directorate of Forest Resource Inventory and Monitoring	Ministry of Environment and Forestry	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
		Map of protected forest in the district in the Decision Letter on Forest Estate Release (SK PKH)	Directorate of Gazettement and Administration of Forest Areas	Ministry of Environment and Forestry	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
		Map of conservation forest in the district in SK PKH	Directorate of Gazettement and Administration of Forest Areas	Ministry of Environment and Forestry	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
2	Protection of areas critical to	Map of District Spatial Planning (RTRWK) with protection function in the district	District Bappeda	Local Government	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Collected from 12 pilot Districts, will be available at SDI by 2023

N°	Indicator	Data name	Data producer	Ministries/ Agencies	Data format	Data gap (Yes/No)	Note
	ecological services	Map of Essential Ecosystem Areas in the district	Directorate of Ecosystem Management Development and Recovery	Ministry of Environment and Forestry	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
3	Fire Prevention	Area of fire in the district	Directorate of Forest and Land Fire Control	Ministry of Environment and Forestry (https://sipongi.menlhk.go.id/)	csv, xls, or dbf	No	
4	Protection of peatlands	Map of land included in the peat hydrology that is within the area/territory/protection function area identified in the District RTRW	District Bappeda	Local Government	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Collected from 12 pilot Districts, will be available in SDI by 2023
		Peat map with protection function	Directorate of Peatland Ecosystem Damage Control	Ministry of Environment and Forestry	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
5	Climate change mitigation	List of Districts that have reported GHG emissions inventory	Directorate of Greenhouse Gas Inventory and Monitoring Report Verification	Ministry of Environment and Forestry	csv, xls, or dbf	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
		List of Districts that have established guidelines for calculating FREL at the district level	Directorate of Greenhouse Gas Inventory and Monitoring Report Verification	Ministry of Environment and Forestry	csv, xls, or dbf	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L

N°	Indicator	Data name	Data producer	Ministries/ Agencies	Data format	Data gap (Yes/No)	Note
		List of Districts that already have a Climate Change Mitigation Action Plan	Directorate of Greenhouse Gas Inventory and Monitoring Report Verification	Ministry of Environment and Forestry	csv, xls, or dbf	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
6	Sustainable production forest management	Total production forest concessions that have obtained sustainability certification (PHPL and FSC) in the district	Directorate of Forest Utilisation Business Development	Ministry of Environment and Forestry	csv, xls, or dbf	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
		Total production forest in the district	Directorate of Forest Resource Inventory and Monitoring	Ministry of Environment and Forestry	csv, xls, or dbf	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
7	Environmental quality control	Environmental quality index (IKLH) in the district	Directorate General of Pollution and Environmental Damage Control	Ministry of Environment and Forestry	csv, xls, or dbf	No	
8	FPIC	District SOPs/regulations regarding community consent regarding plantation permit applications	District Government Legal Division	Local Government	csv, xls, or dbf	Yes	Will be available in SDI by 2023
9	Recognition of customary	Map of recognised MHA management areas based on MoEF (KLHK)/MOHA (Kemendagri) in districts	Directorate of Conflict Management, Tenure and Customary Forests	Ministry of Environment and Forestry	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L

N°	Indicator	Data name	Data producer	Ministries/ Agencies	Data format	Data gap (Yes/No)	Note
	law communities (MHA)	Indicative map of district customary forest	Directorate of Conflict Management, Tenure and Customary Forests	Ministry of Environment and Forestry	zip (cpg, .dbf, .prj, .shp, .shx)	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
10	Resolution of land and agricultural conflicts	Are there SOPs/Regulations in the district regarding the handling of district land and agricultural conflicts	District Government Legal Division	District local government	csv, xls, or dbf	Yes	Will be available at SDI by 2023
11	Percentage of independent smallholders	Area of plantations managed by independent smallholders in the district	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	
		Area of oil palm plantations in the district*	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	
12	Registration of independent smallholders	Number of independent smallholders who have registration for plantation cultivation (STDBs) in the district	Directorate of Processing and Marketing of Plantation Products	Ministry of Agriculture	csv, xls, or dbf	No	
		Number of independent smallholders in the district	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	
13	Food security	Food Security Index	National Food Agency	National Food Agency (http://app2.badanpangan.go.id/)	csv, xls, or dbf	No	

N°	Indicator	Data name	Data producer	Ministries/ Agencies	Data format	Data gap (Yes/No)	Note
14	Productivity of independent smallholders	Total production of independent smallholder oil palm plantations in the district	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	
		Area of plantations managed by independent smallholders in the district	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	
15	Number of independent smallholder associations/groups	Number of smallholder groups in the district	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	Yes	Data is available in Kementan**, data sharing being processed by BAPPENAS to K/L
		Number of independent smallholders in the district	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	
16	Assistance for smallholders	Number of extension workers in the district	Agricultural Extension Center	Ministry of Agriculture	csv, xls, or dbf	No	
		Number of independent smallholders in the district	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	
17	Certified sustainable plantation	RSPO and/or ISPO certified oil palm plantation area in the district	Directorate of Processing and Marketing of Plantation Products	Ministry of Agriculture	csv, xls, or dbf	No	
		Area of oil palm plantations in the district*	Directorate of Annual and Beverage Plants	Ministry of Agriculture	csv, xls, or dbf	No	

N°	Indicator	Data name	Data producer	Ministries/ Agencies	Data format	Data gap (Yes/No)	Note
18	Poverty level	District level percentage of poverty	Statistics Indonesia (BPS) Social Resilience	Statistics Indonesia (https://www.bps.go.id/indicator/23/624/1/garis-kemiskinan-menurut-kabupaten-kota.html)	csv, xls, or dbf	No	
19	Proportion of District budget allocated to sustainability	Local Budget (APBD) for sustainability/environment	Directorate General of Fiscal Balance	Ministry of Finance (https://djpk.kemenkeu.go.id/?p=5412)	csv, xls, or dbf	No	
		District level budget	Directorate General of Fiscal Balance	Ministry of Finance (https://djpk.kemenkeu.go.id/?p=5412)	csv, xls, or dbf	No	
20	Public information access	Whether there is a Regional Regulation/Regent's Decision Letter (SK) for the appointment of PPID officials in the district	Ministry of Home Affairs Information Center	Ministry of Home Affairs	csv, xls, or dbf	Yes	Data is available in Kemendagri, data sharing being processed by BAPPENAS to K/L
21	Multistakeholder participation in district planning	Whether there is a SOP for community participation in planning deliberation (<i>musrenbang</i>) in the district	Directorate of Regional development planning, evaluation and information	Ministry of Home Affairs	csv, xls, or dbf	Yes	Data is available in Kemendagri, data sharing being processed by BAPPENAS to K/L
22	Complaint mechanism	List of districts that operate SP4N Lapor	Ministry of Home Affairs Information Center	Ministry of Home Affairs	csv, xls, or dbf	Yes	Data is available in Kemendagri, data sharing

N°	Indicator	Data name	Data producer	Ministries/ Agencies	Data format	Data gap (Yes/No)	Note
							being processed by BAPPENAS to K/L
23	Sustainable land-use planning	List of districts that have district environmental carrying capacity (DDDTLH) documents	Directorate of Environmental Impact Prevention for Regional and Sector Policies	Ministry of Environment and Forestry	csv, xls, or dbf	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L
		List of districts that have district environmental protection and management plan (RPPLH)	Directorate of Environmental Impact Prevention for Regional and Sector Policies	Ministry of Environment and Forestry	csv, xls, or dbf	Yes	Data is available in KLHK, data sharing being processed by BAPPENAS to K/L

Annexes

Annex A: List of required data

Table 14. List of data needs

N°	Producer	Data guardian	Necessary dataset	Unit	Indicator	Data sharing scheme	Type/ format
I. Ministry of Agriculture							
1	Directorate of Annual and Beverage Crops	Data and information Center	a. Area of oil palm plantations managed by independent smallholders in the district	Hectare	Percentage of independent smallholders	SDI	csv, xls, or dbf
			b. Total oil palm plantation area in the district	Hectare		K/L	csv, xls, or dbf
			c. Number of oil palm smallholders in the district	Hectare	Independent smallholder registration	SDI	csv, xls, or dbf
			d. Total production of independent smallholders' oil palm plantations in the district	Ton	Productivity of independent smallholders	SDI	csv, xls, or dbf
			e. Area of oil palm plantations managed by independent smallholders in the district	Hectare		SDI	csv, xls, or dbf
			f. Number of oil palm smallholder groups in the district	Person	Number of independent smallholder associations/groups	SDI	csv, xls, or dbf
			g. Number of oil palm smallholders in the district	Person		SDI	csv, xls, or dbf
			h. Number of independent smallholders in the district	Person	Assistance for Independent Smallholders	SDI	csv, xls, or dbf

N°	Producer	Data guardian	Necessary dataset	Unit	Indicator	Data sharing scheme	Type/ format
2	Director General of Plantation		i. Area of oil palm plantations in the district	Hectare	Certified Sustainable Plantation (Palm Oil In particular)	K/L	csv, xls, or dbf
			a. Number of independent smallholders who have STDB in the district	Person	Independent smallholder registration	SDI	csv, xls, or dbf
			b. RSPO and/or ISPO certified oil palm plantation area in the district	Hectare	Certified Sustainable Plantation (Palm Oil in particular)	SDI	csv, xls, or dbf
3	Center for Agricultural Extension	Center for Agricultural Extension	Number of extension workers in the district	Person	Assistance for Independent Smallholders	SDI	csv, xls, or dbf
II. National Food Agency							
4	National Food Agency	Head of the National Food Agency	Food Security Index	Index	Food security	SDI	csv, xls, or dbf
III. Ministry of Environment and Forestry							
5	Directorate of Forest Resources Inventory and Monitoring	Directorate of Forest Resources Inventory and Monitoring	a. Map of the new licence moratorium (PIPPIB) in the district	Hectare	Protection for Permanent Forest	K/L	Shapefile/zip (.cpg, .dbf, .prj, .shp, .shx)
	Directorate of Forest Area Establishment and Management		b. Map of protected forest in the district in the Decision Letter on the Enactment of Forest Areas	Hectare			

N°	Producer	Data guardian	Necessary dataset	Unit	Indicator	Data sharing scheme	Type/ format	
	Directorate of Forest Area Establishment and Management		c. Map of conservation forest in the district in the Decision Letter on the Enactment of Forest Areas	Hectare		K/L	Shapefile/zip (.cpg, .dbf, .prj, .shp, .shx)	
	Directorate of Ecosystem Management and Recovery		d. Map of Essential Ecosystem Areas in the district	Hectare		K/L	Shapefile/zip (.cpg, .dbf, .prj, .shp, .shx)	
	Directorate of Peat Ecosystem Damage Control		e. Peat map with protection function	Hectare		K/L	Shapefile/zip (.cpg, .dbf, .prj, .shp, .shx)	
	Directorate of Forest Utilisation Business Development		f. Total production forest concessions that have obtained sustainability certification (PHPL and FSC) in the district	Hectare		K/L	Sustainable Production Forest Management	csv, xls, or dbf
	Directorate of Forest Resources Inventory and Monitoring		g. Total production forest in the district	Hectare				
	6		Directorate of Environmental Impact Prevention for Regional and Sector Policies	Data and information Center		a. List of districts that have district DDDTLH documents	confirmation of yes/no	Sustainable Land-use planning
b. List of Districts that have district RPPLH documents		confirmation of yes/no			SDI	csv, xls, or dbf		

N°	Producer	Data guardian	Necessary dataset	Unit	Indicator	Data sharing scheme	Type/ format
7	Directorate of Forest and Land Fire Control	Data and information Center	The area of forest and land fires in the district	Hectare	Fire Prevention	SDI	csv, xls, or dbf
8	Directorate of Greenhouse Gas Inventory and Verification Report Monitoring	Data and information Center	a. List of districts that have reported their GHG inventory to KLHK	confirmation of yes/no	Climate Change Mitigation	K/L	csv, xls, or dbf
			b. List of districts that already have baseline calculation guidelines (FREL)	confirmation of yes/no		K/L	csv, xls, or dbf
			c. List of districts that already have an Action Plan for Climate Change Mitigation by the Province along with the district	confirmation of yes/no		K/L	csv, xls, or dbf
9	Directorate of Conflict Management, Tenure and Customary Forests	Directorate of Forest Resources Inventory and Monitoring	a. Map of recognised Customary Law Communities (MHA) management areas based on KLHK/MoHA (Kemendagri) in districts	Hectare	Recognition of Customary Law Communities (MHA)	K/L	Shapefile/zip (.cpg, .dbf, .prj, .shp, .shx)
			b. Indicative map of district customary forest	Hectare		K/L	Shapefile/zip (.cpg, .dbf, .prj, .shp, .shx)
10	Directorate General of Environmental Pollution and Damage Control	Data and information Center	Environmental quality index (IKLH) in the district	Index	Environmental quality control	SDI	csv, xls, or dbf
IV. Ministry of Finance							
11			a. Local budget (APBD) for sustainability/environment	Rupiah		SDI	csv, xls, or dbf

N°	Producer	Data guardian	Necessary dataset	Unit	Indicator	Data sharing scheme	Type/ format
	Director of Evaluation and Information Systems	Director of Evaluation and Information Systems	b. District level local budget	Rupiah	Proportion of District Budget Allocated for Sustainability	SDI	csv, xls, or dbf
V. Ministry of Home Affairs							
12	Information Center	Data and information Center	a. List of districts that have regional regulation (Perda)/Regent's Decision Letter regarding the appointment of PPID Officers in the district	confirmation of yes/no	Public Information Access	SDI	csv, xls, or dbf
			b. List of districts that operate SP4N Lapor	confirmation of yes/no	Complaint Mechanism	SDI	csv, xls, or dbf
13	Directorate of Regional Development Planning, Evaluation and Information		List of districts that have SOPs/Regional regulation (Perda) related to community participation in the implementation of <i>musrenbang</i> in the district	confirmation of yes/no	Multistakeholder participation in district planning	SDI	csv, xls, or dbf
VI. Statistics Indonesia (BPS)							
14	Directorate of Social Resilience Statistics	Directorate of Social Resilience Statistics	District level poverty percentage	Percentage	Poverty level	SDI	csv, xls, or dbf

Annex B: Minutes of FGD

BAPPENAS Letterhead				
MINUTES OF FOCUS GROUP DISCUSSION (FGD)				
DATA PROTOCOL AND TERPERCAYA PLATFORM DEVELOPMENT				
Draft				
<p>On this day, Date month Year Two Thousand Twenty Two (...-...-2022), at Western Indonesia Time (WIB), through a virtual meeting room, a Focus Group Discussion (FGD) of Data Protocol and Development of Terpercaya Platform was held by the Directorate Food and Agriculture, National Development Planning Agency of the Republic of Indonesia (BAPPENAS RI). This activity was attended by representatives of Ministries/Agencies and representatives of related non-governmental organisations.</p> <p>Whereas in the FGD it was agreed that the support/participation of the relevant Ministries/Institutions in the process of sharing data with BAPPENAS RI for Terpercaya Platform.</p> <p>The details of the discussion results are listed in the attachment of the Minutes of Meeting.</p>				
Participant				
No	Name	Position	Organisation	Signature
1				
2				
3				
4				
5				
6				

Annex C: Draft data sharing letter

BAPPENAS Letterhead

Nomor : Jakarta, ... June 2022

Attachment : 2 (dua) files

Concern : Data Sharing Letter

Dear

(Directorate of)

In connection with the One Data Regulatory Framework and the RPJMN on Sustainable Jurisdiction, we intend to submit a request for data and information sharing to the Ministry/Agency (K/L) with the details of the data as in the attachment. For further information, please contact Ms. Wulan Metafurry (081542049595). Thank you for your attention and cooperation.

Directorate of Food and Agriculture,

Anang Noegroho

cc: Deputy for Maritime Affairs and Natural Resources

Attachment 1: List of Data Producer

Attachment 2: List of Data Required

Annex D: Form of minutes of data handover

BAPPENAS Letterhead	
MINUTES OF DATA HANDOVER	
Number :	
On the day..... the date .../..... 20... it has been received:	
Data	
Name of Data	: _____
Format/Type of data	: _____
Details/ Additional	
Descriptions	: _____

Received from	
Name	: _____
Position	: _____
Ministries/Agencies:	_____
Received by	
Name	: _____
Position	: _____

Thus this data is submitted for proper use by complying with all data confidentiality protocols.	
	_____, _____ 20__
The submitter	The recipient
_____	_____

Annex E: SDI priority data provision agreement

Jakarta, 21 Juni 2022

Nomor :

BERITA ACARA KESEPAKATAN FORUM SATU DATA INDONESIA TINGKAT PUSAT “PENYEPAKATAN DATA PRIORITAS TAHUN 2022”

Bahwa pada hari ini Selasa, tanggal dua puluh satu, bulan Juni, tahun *dua ribu dua puluh dua*, di Hotel Sahid, telah dilaksanakan *Forum Satu Data Indonesia tingkat Pusat* dalam rangka musyawarah dan pengambilan kesepakatan mengenai *Penyepakatan Data Prioritas tahun 2022*:

I. BUTIR-BUTIR KESEPAKATAN

Dalam Forum Satu Data Indonesia tingkat pusat mengenai *Data Prioritas tahun 2022* ini disepakati beberapa hal sebagai berikut :

No	Butir Kesepakatan	Instansi Terkait
1	Data Prioritas Tahun 2022	Seluruh Penyelenggara Satu Data Indonesia Tingkat Pusat
	<ul style="list-style-type: none">Bahwa Data Prioritas Tahun 2022 ini telah disepakati dan secara utuh memenuhi kriteria sebagai berikut:<ol style="list-style-type: none">Mendukung prioritas pembangunan dan prioritas Presiden dalam Rencana Pembangunan Jangka Menengah Nasional (RPJMN) dan/atau Rencana Kerja Pemerintah (RKP);Mendukung pencapaian Tujuan Pembangunan Berkelanjutan (TPB/SDGs); dan/atauMemenuhi kebutuhan mendesak atau sesuai dengan arahan Presiden.Penentuan Data Prioritas Tahun 2022 berdasarkan:<ol style="list-style-type: none">Usulan Walidata tingkat Pusat;Arahan Dewan Pengarah.Penetapan Data Prioritas Tahun 2022 dalam pelaksanaannya melibatkan Pembina Data dan Kelompok Kerja Forum Satu Data Indonesia tingkat pusat, serta difasilitasi oleh Sekretariat Satu Data Indonesia tingkat pusat, Kementerian PPN/Bappenas.	
2	Tindak Lanjut Data Prioritas Tahun 2022	Seluruh Penyelenggara Satu Data Indonesia Tingkat Pusat
	<ul style="list-style-type: none">Perencanaan Teknis Pengumpulan Data bersama Produsen Data/Walidata, Pengguna Data dan Pembina Data, meliputi: identifikasi variabel,	

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	penyusunan data model, pengisian metadata, jadwal hingga penganggaran pengumpulan data; <ul style="list-style-type: none"> • Tahap Pengumpulan, Pemeriksaan dan Penyebarluasan Data Prioritas 2022; • Pemantauan dan Evaluasi (semesteran - tahunan) Data Prioritas 2022; • Penyusunan usulan Data Prioritas tahun 2023. 	
3	Implementasi Data Prioritas Tahun 2022	Seluruh Penyelenggara Satu Data Indonesia Tingkat Pusat
	<ul style="list-style-type: none"> • Data Prioritas Tahun 2022 disepakati oleh Instansi Pusat untuk dijadikan acuan bagi Instansi Daerah dalam penyusunan Daftar Data dan Data Prioritas Tingkat Daerah. • Data Prioritas Tahun 2022 dapat digunakan sebagai dasar dalam perencanaan dan penganggaran dalam mendukung penyelenggaraan Satu Data Indonesia, baik yang dilaksanakan oleh Kementerian/Lembaga dan Pemerintah Daerah. • Dalam proses pengumpulan Data Prioritas Tahun 2022, Walidata melaporkan perkembangan pelaksanaannya secara tertulis kepada Sekretariat Satu Data Indonesia tingkat Pusat, Kementerian PPN/Bappenas paling sedikit 1 (satu) kali dalam 1 (satu) tahun. • Dalam rangka pelaksanaan monitoring dan evaluasi Data Prioritas Tahun 2022, seluruh pengguna Data Prioritas Tahun 2022 melaporkan hasil pelaksanaan kegiatan secara tertulis kepada Sekretariat Satu Data Indonesia tingkat pusat, Kementerian PPN/Bappenas. 	

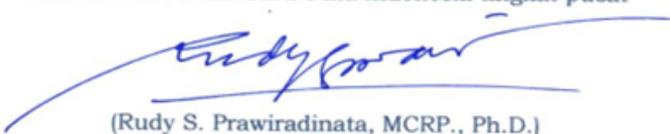
II. CATATAN TAMBAHAN

- Seluruh penyelenggara Satu Data Indonesia perlu secara persisten untuk terus mengupayakan implementasi Satu Data Indonesia.
- Data pemerintah harus dilakukan kontrol dan diperlakukan sebagai aset negara tidak berwujud, agar terkelola dan dimanfaatkan dengan baik.
- Dibutuhkan kolaborasi antar penyelenggara Satu Data Indonesia agar setiap Instansi Kementerian/Lembaga dapat menghasilkan Data yang valid dan akurat sesuai dengan prinsip Satu Data Indonesia.
- Diperlukan sistem yang dapat mengkonsolidasi data keuangan di tingkat daerah, dengan manajemen data referensi dan master data yang baik dan terintegrasi.

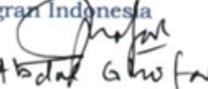
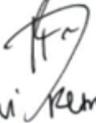
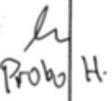
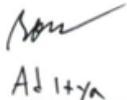
ZR

III. PENUTUP

Berita Acara Forum Satu Data Indonesia tingkat pusat mengenai Data Prioritas Tahun 2022 ini berlaku sebagai panduan pelaksanaan tindak lanjut implementasi kebijakan Satu Data Indonesia yang sah. Berita Acara sebagaimana dimaksud telah sesuai dengan Pasal 28 ayat (4) dan 30 ayat (1) Peraturan Presiden Nomor 39 tahun 2019 tentang Satu Data Indonesia dan Pasal 16 ayat (1) Peraturan Menteri Perencanaan Pembangunan Nasional Nomor 18 tahun 2020 tentang Tata Kerja Penyelenggaraan Satu Data Indonesia, bahwa Data Prioritas disepakati pada Forum Satu Data Indonesia tingkat Pusat.

Jakarta, 21 Juni 2022 Pihak dibawah ini selaku Kelompok Kerja Forum Satu Data Indonesia tingkat pusat telah hadir dan menyetujui Data Prioritas Tahun 2022	
Koordinator Forum Satu Data Indonesia tingkat pusat  (Rudy S. Prawiradinata, MCRP., Ph.D.)	
Ketua Kelompok Kerja Interoperabilitas dan Portal SDI  (Semuel Abrijani Pangerapan, B.Sc) <i>SA</i>	Ketua Kelompok Kerja Hubungan Daerah dan Data Kependudukan  (Prof. Dr. Zudan Arif Fakrulloh, SH, MH.) <i>ZA</i>
Ketua Kelompok Kerja Keuangan Negara  (Sudarto, SE, MBA, M.Kom., Ph.D., CGEIT)	Ketua Kelompok Kerja Data Statistik  (Dr.Eng. Imam Machdi, M.T.) <i>IM</i>
Ketua Kelompok Kerja Data Spasial  (Dr. Antonius Bambang Wijanarto)	Ketua Kelompok Kerja Arsitektur Data dan Informasi  (Nanik Murwati, S.E., M.A.) <i>NM</i>

Jakarta, 21 Juni 2022
 Pihak dibawah ini telah hadir dan menyetujui Data Prioritas Tahun 2022

1.	Badan Informasi Geospasial ()	 (Chonirwan, M)	9.	Badan Pangan Nasional ()	 (Rus Kurznidzak)
2.	Badan Intelijen Negara ()	 (JEFFRI)	10.	Badan Perlindungan Pekerja Migran Indonesia ()	 (Abdur Ghofur)
3.	Badan Keamanan Laut Republik Indonesia ()	 (Tri F)	11.	Badan Pengawas Obat dan Makanan ()	 (Syamsidar Thamin)
4.	Badan Kepegawaian Negara ()	 (ELINI)	12.	Badan Pengawasan Keuangan dan Pembangunan ()	
5.	Badan Kependudukan dan Keluarga Berencana Nasional ()	 (Lina Widayastuti)	13.	Badan Pusat Statistik ()	 (Rini Kurno)
6.	Badan Meteorologi, Klimatologi, dan Geofisika ()	 (SUNARYO)	14.	Badan Riset dan Inovasi Nasional ()	 (Probo H.)
7.	Badan Nasional Penanggulangan Terorisme ()	 (Aditya)	15.	Badan Siber dan Sandi Negara ()	 (Nur Khoir)
8.	Badan Nasional Pencarian dan Pertolongan ()	 (MASRUKI ARIFIN)	16.	Dewan Perwakilan Daerah Republik Indonesia ()	 (Masruki)

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17.	Dewan Perwakilan Rakyat Republik Indonesia (<u>Djoko A. Wiratomo</u>)		25.	Kementerian Keuangan (<u>Djoko A. Wiratomo</u>)	<u>Djoko A. Wiratomo</u> Djoko A. Wiratomo
18.	Kementerian Agama (<u>Andriyanto</u>)		26.	Kementerian Komunikasi dan Informatika (<u>Siwardi Nur</u>)	<u>Siwardi Nur</u> Siwardi Nur
19.	Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional (<u>Mulyati</u>)		27.	Kementerian Koordinator Bidang Kemaritiman dan Investasi (<u>Mulyati</u>)	<u>Mulyati</u> Mulyati
20.	Kementerian Dalam Negeri (<u>Pratiwi</u>)		28.	Kementerian Koordinator Bidang Pembangunan Manusia dan Kebudayaan (<u>Pratiwi</u>)	<u>Pratiwi</u> Pratiwi
21.	Kementerian Hukum dan Hak Asasi Manusia (<u>NOVA</u>)		29.	Kementerian Koordinator Bidang Politik, Hukum, dan Keamanan (<u>Andy Novian</u>)	<u>Andy Novian</u> Andy Novian
22.	Kementerian Kelautan dan Perikanan (<u>RENNISKA RAY</u>)		30.	Kementerian Koperasi dan Usaha Kecil dan Menengah (<u>ADI TRISANTO JUMANTO</u>)	<u>ADI TRISANTO JUMANTO</u> ADI TRISANTO JUMANTO
23.	Kementerian Kesehatan (<u>Supriyadi</u>)		31.	Kementerian Lingkungan Hidup dan Kehutanan (<u>Supriyadi</u>)	<u>Supriyadi</u> Supriyadi
24.	Kementerian Ketenagakerjaan (<u>SUPRIYADI</u>)		32.	Kementerian Luar Negeri (<u>KETUT TRI.M (STAF PUSTIKFP)</u>)	<u>KETUT TRI.M (STAF PUSTIKFP)</u> KETUT TRI.M (STAF PUSTIKFP)

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33.	Kementerian Pertahanan ()	 ANNES HERAWAN	41.	Kepolisian Negara Republik Indonesia ()	 Agus Santoso
34.	Kementerian Pekerjaan Umum dan Perumahan Rakyat ()	 Paul Asido	42.	Komisi Nasional Hak Asasi Manusia ()	 Agus D.
35.	Kementerian Pemuda dan Olahraga ()	 Bambang Pamungkas	43.	Kementerian Sekretariat Negara ()	 Fernando
36.	Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi ()	 sahid U	44.	Kementerian Pariwisata dan Ekonomi Kreatif/Badan Pariwisata dan Ekonomi Kreatif ()	 Siti Samudra
37.	Kementerian Perdagangan ()	 WAHU DYAN	45.	Kementerian Pertanian ()	 EKO NUGROHO
38.	Kementerian Perencanaan Pembangunan Nasional / Bappenas ()	 AGUNG I	46.	Mahkamah Konstitusi Republik Indonesia ()	 Supriyanto
39.	Kementerian Perhubungan ()	 Rahma Pratiwi	47.	Komisi Pemilihan Umum ()	 Anton
40.	Kementerian Perindustrian ()	 HERY MULYANA	48.	Majelis Permusyawaratan Rakyat Republik Indonesia ()	 Darajat Agus

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49.	Ombudsman Republik Indonesia ()	 Jun	57.	Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah ()	 Jidha Hadiyana
50.	Badan Narkotika Nasional () Drs (Agus Inanto, ST, MT, M.Si, PhD		58.	Lembaga Perlindungan Saksi dan Korban ()	
51.	Badan Pemeriksa Keuangan ()	 Puh	59.	Perpustakaan Nasional Republik Indonesia ()	
52.	Badan Pengusahaan Kawasan Perdagangan Bebas dan Pelabuhan Bebas Batam (Sylvia Marahatta ^{Maharollo})		60.	Pusat Pelaporan dan Analisis Transaksi Keuangan () (Drs. Aris Priatno, Ak. ISE, MA)	
53.	Dewan Ketahanan Nasional ()	 (Ari Purno (a) ARI PURNOMO)	61.	Kementerian Pemberdayaan Perempuan dan Perlindungan Anak () (DR. IRI LES. ROSDI/MTT, MS)	
54.	Komisi Pemberantasan Korupsi ()	 SRI RAHMAN	62.	Badan Nasional Penanggulangan Bencana ()	 Sri
55.	Komisi Pengawas Persaingan Usaha ()	 AND. HANIN	63.	Badan Pengawas Pemilihan Umum ()	 AN. MARS
56.	Lembaga Administrasi Negara ()	 Puji Latho	64.	Badan Pengawas Tenaga Nuklir ()	 AMF

Annex F: Methodology for Guideline/SOPs for Terpercaya data sharing at the National level

This guideline/SOP was developed based on the results of consultations with the Ministries/Agencies (K/L) as data producers and data guardians of Terpercaya Indicators led by BAPPENAS through focus group discussions (FGDs). The discussion focused on aspects of data availability, data exchange mechanisms, and regulations that govern those data in each K/L. The FGDs were held from March to June 2022. The list of participants who attended the FGD²⁶ can be read in the following table:

Table 15. List of Ministries/Agencies participating in the FGD²⁷

Nº	Ministries/Agencies	Indicators
1	Ministry of Environment and Forestry (KLHK)	<ul style="list-style-type: none"> ● Protection for permanent forest ● Protection for areas critical for ecological services ● Fire Prevention ● Protection for peatlands ● Climate change mitigation ● Environmental quality control ● Sustainable production forest management ● Recognition of Customary Law Communities ● Sustainable land-use planning
2	Geospatial Information Agency (BIG)	<ul style="list-style-type: none"> ● Protection for permanent forest ● Protection for areas critical for ecological services ● Protection for peatlands
3	Statistics Indonesia (BPS)	Poverty level
4	Ministry of Agriculture (Kementan)	<ul style="list-style-type: none"> ● Free, Prior and Informed Consent (FPIC) which is integrated into the Plantation Permit Application Process ● Resolution of land and agricultural conflicts ● Percentage of independent smallholders ● Independent smallholder registration ● Productivity of independent smallholders ● Number of Independent Smallholder Associations/Groups ● Assistance to independent smallholders ● Certified Sustainable Plantation
5	Ministry of Home Affairs (Kemendagri)	<ul style="list-style-type: none"> ● Public information access ● Complaint mechanism ● Multistakeholder participation in district planning
6	Ministry of Agrarian and Spatial Planning/National Land Agency (ATR BPN)	<ul style="list-style-type: none"> ● Protection for permanent forest ● Protection for areas critical for ecological services ● Protection for peatlands
7	Ministry of Finance (MoF)	Proportion of district budget allocated for sustainability

²⁶ Details of FGD implementation and results are attached in the deliverable titled Produce a report on updated, revised Terpercaya indicators and data.

²⁷ One indicator has several developer variables. The source of data in one indicator can be from different K/L. For example, forest protection indicator, the forestry aspects are in KLHK, while spatial planning (RTRW) is related to Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) (both K/L have the same indicators).

N°	Ministries/Agencies	Indicators
8	National Food Agency (BPN)	Food security
9	One Data Indonesia (SDI)	All indicators
10	Secretariat for SDGs	All indicators

Annex G: Methodology for Guideline/SOP for Terpercaya data collection at the Subnational level

This guideline is prepared based on the results of a pilot study of Terpercaya data collection in 12 districts with the following details:

Table 16. Location of the pilot study data collection at the regional level

Province	District
East Kalimantan	Kutai Timur Berau Mahakam Hulu
Central Kalimantan	Kotawaringin Barat Seruyan
West Kalimantan	Kuburaya Sanggau Sintang Ketapang
Nangroe Aceh Darussalam	Aceh Tamiang Aceh Timur Aceh Utara

The trial of this data collection was conducted in January – March 2022. The data collection process involved respectively one Local Assessor (LA) at the Provincial level. The methods used include:

1. Interviews

Interviews were conducted by each LA to each Regional Apparatus Organization (OPD) in the district that has relevance to the Terpercaya indicator. Prior to the interview, the LA obtained permission from the Provincial BAPPEDA to conduct an audience analysis with the relevant OPD. Interviews were conducted with a focus on questions concerning the availability of indicator data. The following is a list of OPDs interviewed:

Table 17. OPDs interviewed

No	Indicators	Data sources	OPDs
1	Protection for permanent forest	RTRWK	Regional Development Planning Agency (Bappeda)
2	Protection for areas critical to ecological services	RTRWK	Bappeda
3	Protection for peatlands	RTRWK	Bappeda

No	Indicators	Data sources	OPDs
4	Free, Prior and Informed Consent (FPIC) which is integrated into the plantation permit application process.	FPIC SOP	One Stop Integrated Service and Investment Service (DPMPTSP) and Government Division
5	Resolution of land and agricultural conflicts	Plantation and Land Conflict Database	Office of Agriculture/ Plantation

2. Document checking and verification

After discussions with the relevant OPDs, the team evaluated the findings in the field. Then, the data transfer process is carried out. In this stage, the internal team validates and verifies the suitability of the data with the indicator formulation. When the data does not match, it cannot be input into Terpercaya calculation analysis.

3. Data validation workshop with local government

Terpercaya indicator validation workshop was held on 28 March 2022 and was attended by representatives from the Ministry of National Development Planning/BAPPENAS, Ministry of Environment and Forestry (KLHK) and OPDs in 12 districts. Several inputs from the attending offices were used as material for the data collection process at the district level. The purpose of this workshop was to evaluate the data collection process in the region and identify opportunities and challenges.

4. Annex pilot study evaluation

After the validation workshop, the Team carried out an evaluation to determine the appropriate data collection process and change the indicator formulation if necessary. Meanwhile, in this process, the team involved consultants who were experts in the field of law. The results of the evaluation are used as the main material for the preparation of this guideline.

Annex H: Data update person in charge

Table 18. Schematic of data update on Terpercaya platforms

Stage	Description	PIC	Timeline
1. Data collection and compilation	<p>Automatic schematic:</p> <ul style="list-style-type: none"> • Licence to share data and open API <p>Manual schematic:</p> <ul style="list-style-type: none"> • Download existing data on SDI platform • Perform data compilation, including transferring data into excel bulk insert according to the format specified by the platform • Spatial data analysis if needed • Perform testing for automatic data updates (Open API) 	Terpercaya Secretariat	January – March
2. Data input	<p>Automatic schematic:</p> <p>Open API operation, data is automatically updated when K/L updates the data</p> <p>Manual schematic:</p> <ul style="list-style-type: none"> • Input data into the platform • Data verification and data cleaning for manually input data (not via bulk insert scheme) 	<ul style="list-style-type: none"> • The Terpercaya Secretariat to process manual data, data via SDI and open API • Regional Apparatus Organizations/ OPD for data sourced from district governments. • K/L (optional) 	April
3. Data maintenance	<ul style="list-style-type: none"> • Monitoring of data errors and security 	Terpercaya Secretariat	Periodically, every three months, after April.

Annex I: Data update scheme based on data sourcing

Table 19. Data Sourcing divided based on the manual data update scheme

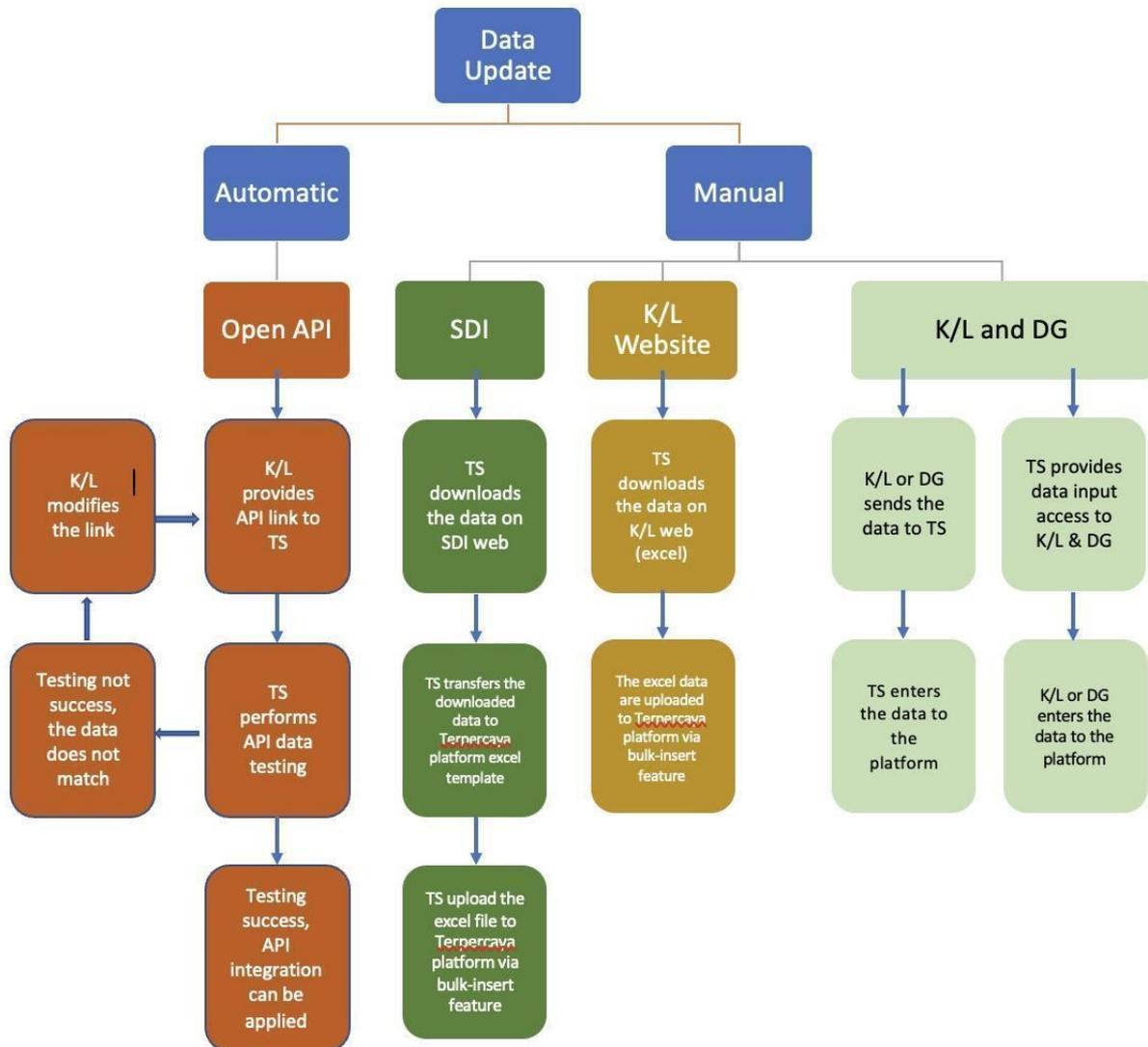
N°	Indicator	SDI (Scheme 1)	K/L website (Scheme 2)	Request to District Government (Scheme 3)	Request to K/L (Scheme 3)
1	Protection for permanent forest			√*	√
2	Protection for areas that are important for ecological services			√*	√
3	Fire Prevention	√	√		
4	Protection for peatland area			√*	√
5	Climate Change Mitigation	√			
6	Sustainable management of production forest	√**			√
7	Environmental quality control	√			
8	Integrated Free, Prior, Informed Consent (FPIC) in the process of applications for plantation permits.	√		√	
9	Recognition for Customary Land				√
10	Land and Agriculture Conflict Resolution	√		√	
11	Independent smallholder Share	√**			√
12	Independent smallholder registration	√			
13	Food Security	√	√		
14	Smallholder productivity	√			
15	Number of Plantation Farmer Association/Groups	√			
16	Support for plantation farmers	√			
17	Sustainably Certified Plantation	√**			
18	Poverty Rate	√	√		

N°	Indicator	SDI (Scheme 1)	K/L website (Scheme 2)	Request to District Government (Scheme 3)	Request to K/L (Scheme 3)
19	Proportion of district budget allocated for sustainability	✓	✓		
20	Public information access	✓			
21	Multistakeholder participation in district planning	✓			
22	Complaint Mechanism	✓			
23	Sustainable land-use planning	✓			

Note:

- ✓* the data are included in RTRWK
- ✓** some data in the indicator are approved, not all (partial)

Annex J: Summary of data update process



Note:

- DG: District Government
- TS: The Terpercaya Secretariat