













































Central to Local	Incentive Fund (DID) for Waste	Fiscal incentive to regencies or municipal governments who manage to reduce plastic waste	Local regulation on waste management, waste bank, plastic waste restriction policy	Medium possibility for reform, needs political will
Province to Local	Province Financial	Also known as Provincial EFT (TAPE). It rewards regencies or municipalities or municipalities with high environmental performance.	Regencies and municipalities that fulfill the province-made criteria. North Kalimantan is the only province that uses this instrument.	High depending on provincial-level political will and fiscal capacities
Regency to Villages	Village Fund	Also known as Regency EFT (TAKE). It rewards villages with high environmental performance.	Villages fulfilling the regency-made criteria criteria, such as Jayapura (Papua) and Nunukan (North Kalimantan) regencies	Highly depending on regency-level political will and fiscal capacities

## 2.3 SUSTAINABLE VILLAGE DEVELOPMENT INDEX (IDM+)

In collaboration with Berau Regency government, CPI proposes a new indicator called the Sustainable Village Development Index or (Indeks Desa Membangun Plus—IDM+) that would support a regency-level Ecological Fiscal Transfer capable of translating SDG priorities to the village level. IDM+ bridges the gap in current ecological performance indicators, and builds on existing, widely used instruments such as the Village Development Evaluation

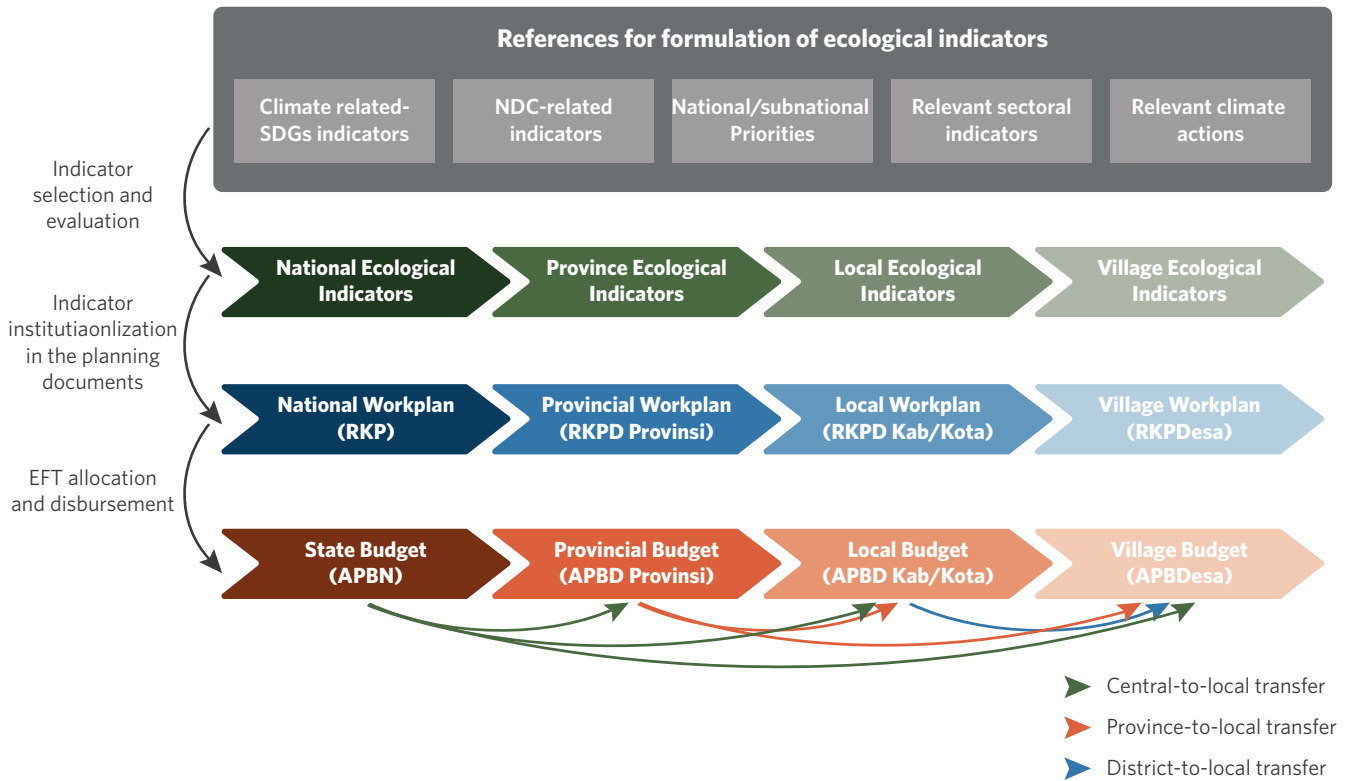
(Index Pembangunan Desa—IPD)<sup>7</sup> and the Village Development Index (Indeks Desa Membangun—IDM)<sup>8</sup>, to avoid lengthy bureaucratic adaptations and trainings.

7 IPD was first developed and published by the Center of Statistical Agency (Badan Pusat Statistik—BPS) together with Bappenas in 2014. Then BPS revised it in 2018 based on the evaluation of the 2014-2019 National Mid-Term Development (RPMJN) target. In the 2020-2024 RPMJN, the Village Development target still uses IPD with 3 classifications of village development. See more detail on <https://www.bps.go.id/publication/2019/05/09/4edae4bd6c18d24b1b4273fe/indeks-pembangunan-desa-2018.html>

8 IDM was first implemented based on Ministry of Village Regulation No. 2/2016 following the implementation of Law No. 6/2014 and Village Fund transfer. See more detail on <https://idm.kemendesa.go.id/view/detil/1/tentang-idm>

**BOX 2.** Framework to mainstream EFT into governmental planning and budgeting

**Normally, fiscal reforms concerning EFT require new ecological indicators simultaneously. Thus, the enhanced design indicator needs to be incorporated into the local-government administrative process. The process of incorporation usually follows the flow below.**



Civic society organizations (CSOs) are also coming up with locally-tailored ecological indicators, although these indicators are not necessarily connected to the fiscal framework.

**Table 1.** Ongoing reforms on the framework of ecological indicator mainstreaming

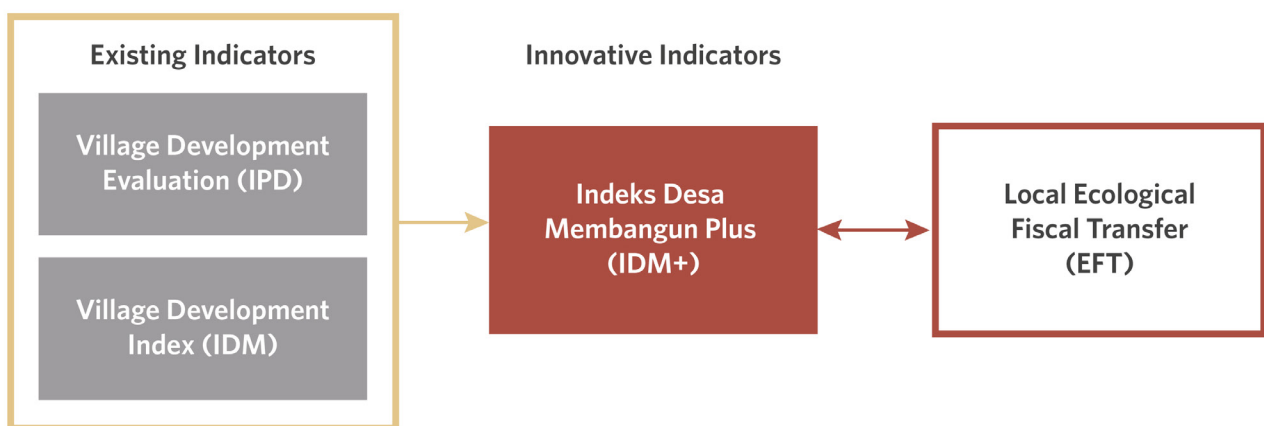
Promoting Institution	Institution Type	Description
Lingkar Temu Kabupaten Lestari (Roundtable on Sustainable Districts—LTKL)	Subnational Governments convened under CSO's supports	LTKL has been developing Local Competitiveness Framework (KDSD) as tool for evaluating sustainable jurisdictions for its members. The framework consist of 5 principles/criteria and 18 indicators synthesized from various relevant parameters. LTKL has no specific intention to link the framework to transfer instruments.
National Planning Agency (BAPPENAS)	Ministry	Currently, Bappenas is developing TERPERCAYA (Indicators to measure SDGs performance at subnational level) but still unclear pertaining its linkage to the existing fiscal transfer instruments
Earth Innovation Institute (Inobu)	CSO	Currently, Inobu is developing TERPERCAYA as indicators underpinning the Special Allocation Fund (Dana Alokasi Khusus

IDM+ adds 10 different ecological indicators which is divided into two main categories; One, land-use and natural resource management, under which there are two main indicators - village spatial planning and land-use innovation. And two, climate actions. Under climate actions there are 8 main indicators including environmental protection infrastructures, waste management, renewable energy, climate adaptation infrastructure, dual benefits (mitigation and adaptation), community-based environmental protection, community-based climate adaptation, and community-based dual benefits.

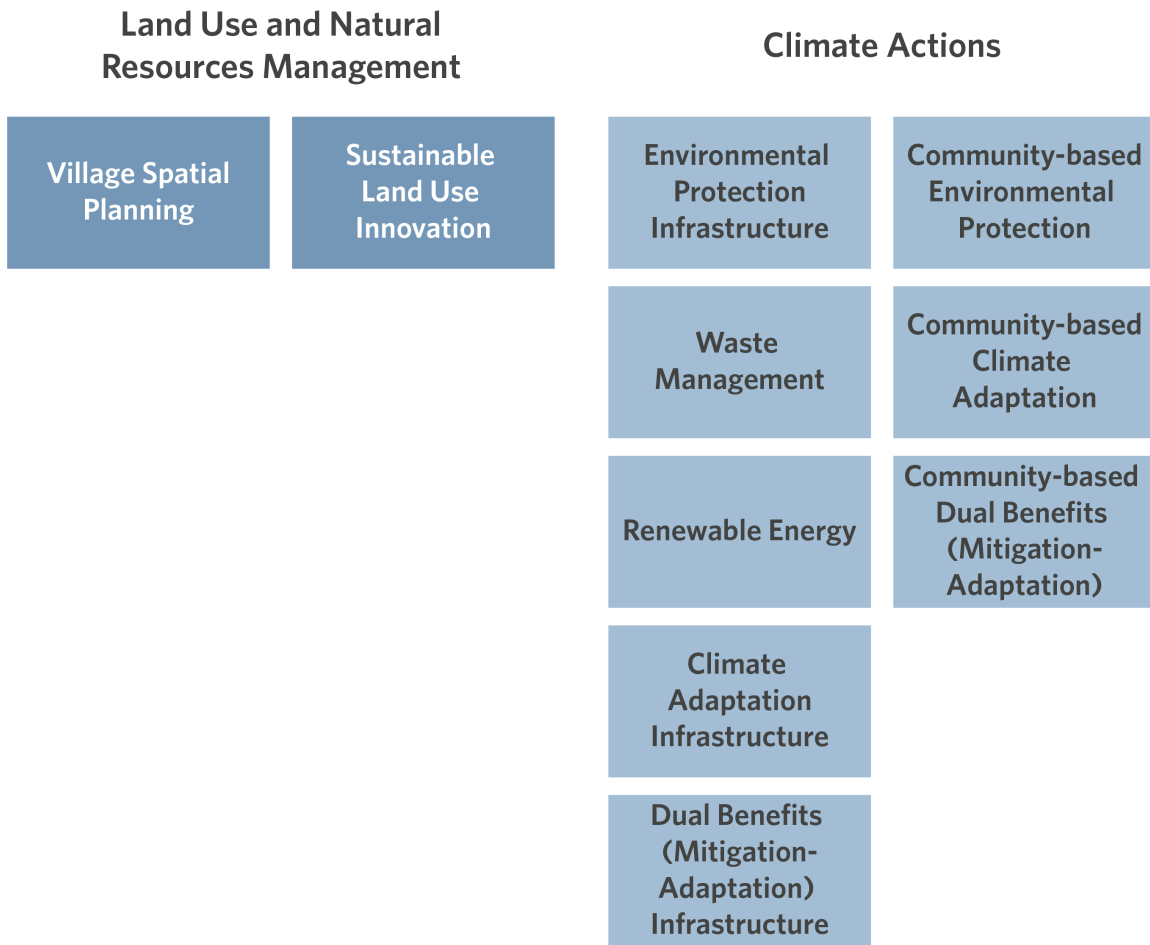
It is important to note that though the index adds important ecological performance indicators, it does not create a new index. These 10 IDM+ indicators are designed to be universally applicable across all villages, while also flexible to take on local characteristics. For example, some villages with specific goals might take on additional sub-indicators beyond the main 10 to showcase high performance.

**IDM+ measures 10 different ecological indicators. It is thus more comprehensive than existing ecological evaluations, while also flexible to take on local characteristics. For example, in the case of Berau, IDM+ could have 4 sub-indicators in addition to the main 10.**

In Berau, we would use the 10 IDM+ indicators as well as an additional 4 sub-indicators. The additional four indicators are agribusiness diversification, agricultural commodities diversification, agricultural products processing, and social forestry which account for local characteristics in measuring village ecological performances beyond forest cover.



**Figure 2.** IDM+ 10 main indicators















**Table 2.** ADD Reformulation in Berau Regency

	Nation-wide Regencies (Government Regulation 43 Year 2014 as amended by Government Regulation 11 Year 2019)	Berau Regency
<b>Existing formula as stipulated in the regulation</b>	<p><b>ADD = ADD-M + ADD-P</b></p> <p>ADD = the amount of ADD received by each village.</p> <p>ADD-M = Minimum ADD allocation (<i>ADD Merata</i>) or the sum of the regency's ADD divided by all villages in the regency. Each village will get the same amount of ADD. ADD-M must meet the minimum costs of village officials' salary; the bigger the allocation of ADD-M, the smaller the amount of ADD-P.</p> <p>ADD-P = Proportionate ADD allocation (<i>ADD Proporsional</i>)</p>	<p><b>ADD = ADD-M (70%) + ADD-P (30%)</b></p> <p>ADD is the amount of ADD received by each village.</p> <p>ADD-M = Minimum ADD allocation (<i>ADD Merata</i>) or the sum of the regency's ADD divided by all villages in the regency. Each village will get the same amount of ADD.</p> <p>ADD-P = Proportionate ADD allocation (<i>ADD Proporsional</i>)</p> <p>This percentage is defined by a regent regulation.</p>
<b>ADD reformulation to add the ecological dimension</b>	<p><b>ADD = ADD-M + ADD-P + ADD-K</b></p> <p>ADD-M = Basic allocation based on a village's fixed income and apparatus costs.</p> <p>ADD-P = Proportionate allocation based on normative variable</p> <p>ADD-K = Performance/incentive-based allocation (<i>Alokasi Kinerja/Insentif</i>) based on the ecological performance indicator (IDM+ indicators)</p> <p>ADD-P and ADD-K = Calculated after the need for ADD-M is fulfilled</p> <p>ADD-P proportion is bigger than the ADD-K</p> <p>ADD-K proportion considers the number of villages with good performance and the expected level of competition. The greater the expected level of competition, the greater the budget that needs to be allocated.</p>	<p>The designated trial models for ADD reformulation in Berau Regency are as follows:<sup>1</sup></p> <p><b>Model 1</b>  <b>ADD = ADD-M (70%) + ADD-P (25%) + ADD-K (5%); in which ADD-K is ecological performance</b></p> <p><b>Model 2</b>  <b>ADD = ADD-M (50%) + ADD-P (40%) + ADD-K (10%); in which ADD-K is ecological performance</b></p> <p><b>Model 3</b>  <b>ADD = ADD-M (60%) + ADD-P (30%) + ADD-K (10%); in which ADD-K is ecological performance</b></p>

<sup>1</sup> The new Government Regulation 11 Year 2019 which stipulated that the use of ADD should be prioritized for village apparatus. This results in several regencies in Indonesia to have the proportion of ADD-M at the range of 80-85%; although it is not the case in Berau Regency until 2020 where it allocates ADD-M at the range of ~70%

### ADD Case Study in Berau: ADD Reformulation Simulation using IDM+

In Berau, the term **ADD** (*Alokasi Dana Desa*—village fund allocation) is replaced by its equivalent, namely **ADK** (*Alokasi Dana Kampung*—village fund allocation).

The amount of regency to village transfer through ADK is annually renewed through the regent’s regulation. Therefore, the ADK’s transfer value in Berau through 2016-2020 is not stable. From IDR 160 billion in 2016, the value increased to IDR 225 billion in 2017. It then decreased to IDR 144 billion in 2018 and rose again to IDR 225 billion in 2019. It dropped to IDR 141 billion in 2020. With a total of 100 villages, the highest ADK was IDR 225 billion in 2017 and 2020, whereas the lowest ADK average occurred in 2020.

Despite the very high volatility in the amount of ADK received by villages, this illustrates that villages in Berau are used to these changes and are adapting to them. Although the amount fluctuates, the average ADK received by each village in Berau Regency (more than IDR 1 billion/village) is still relatively higher than the national average.

Berau’s ADK is distributed to all villages with the formula  $ADK = ADK-M + ADK-P$ , where the minimal ADK (ADK-M) is divided evenly and the proportionate ADK (ADK-P) is divided based on 4 normative variables (population number, poverty rate, area, and geographic difficulties). The proportions of ADK-M and ADK-P have undergone several changes. For example in 2018, the proportion was 60:40 compared to 70:30 in 2019 and 2020. Likewise, the weight of the normative variable has changed from the composition of 50:10:20:10 in 2018 to 60:20:10:10 in 2019 and 2020. This suggests that changes in proportion and weight are not new to the villages in Berau.

Ideally, the ADK reformulation in Berau should refer to 3 considerations. These are the basic allocation for the needs of the village head and village apparatus, proportional allocation, and performance or incentive-based allocation. Therefore, we reformulated Berau ADK’s formula to incorporate the ecological performance indicator as follows:

$$ADK = ADK-M + ADK-P + ADK-L$$

**ADK-L (ADK Lestari: equivalent to performance on ecological governance) is calculated based on the village sustainability development index (IDM+)**

The proposed simulation does not change the weight of the normative variables for ADK-M or ADK-P. Instead, it tries to change the proportion of its allocation structure by developing 3 proportional models. Furthermore, it is a zero-sum game in nature, and it is assumed that there is no additional budget for this policy. Therefore, each model will create fiscal-winning and fiscal-losing villages. It is assumed that the ADK allocation in Berau for 2021 is similar to the allocation in 2019, which amounts to a total of IDR 225 billion for 100 villages.

ADD-IDM+ Compared to ADD 2019	IDM+ Categories	Model 1 ADK M70+P25+L5			Model 2 ADK M50+P40+L10			Model 3 ADK M60-P30-L10		
		Number of Villages	% Increase (Decrease)	Incentive Average	Number of Villages	% Increase (Decrease)	Incentive Average	Number of Villages	% Increase (Decrease)	Incentive Average
		0			0			0		
Winning villages (higher ADD received than 2019)	Very High	0			0			0		
	High	1	12%	243,620,617	2	10% - 15%	288,968,760	2	4% - 18%	237,985,385
	Improving	7	1% - 9%	144,779,885	15	2% - 12%	157,114,036	10	3% - 13%	168,873,916
	Low	32	0.2% - 7%	82,048,086	31	0.4% - 4%	49,925,891	33	0.3% - 7%	68,499,631
	Very Low	23	0.01% - 3%	37,336,943	0			6	1%	16,126,141
	<b>Total</b>	<b>63</b>			<b>48</b>			<b>51</b>		
Losing villages (lower ADD received than 2019)	Very High	0			0			0		
	High	1	-4%		0			0		
	Improving	8	(3%) - (20%)		0			5	(1%) - (12%)	
	Low	16	(1%) - (9%)		17	(0.1%) - (2%)		15	(0.2%) - (6%)	
	Very Low	12	(0.1%) - (7%)		35	(2%) - (11%)		29	(0.2%) - (10%)	
	<b>Total</b>	<b>37</b>			<b>52</b>			<b>49</b>		

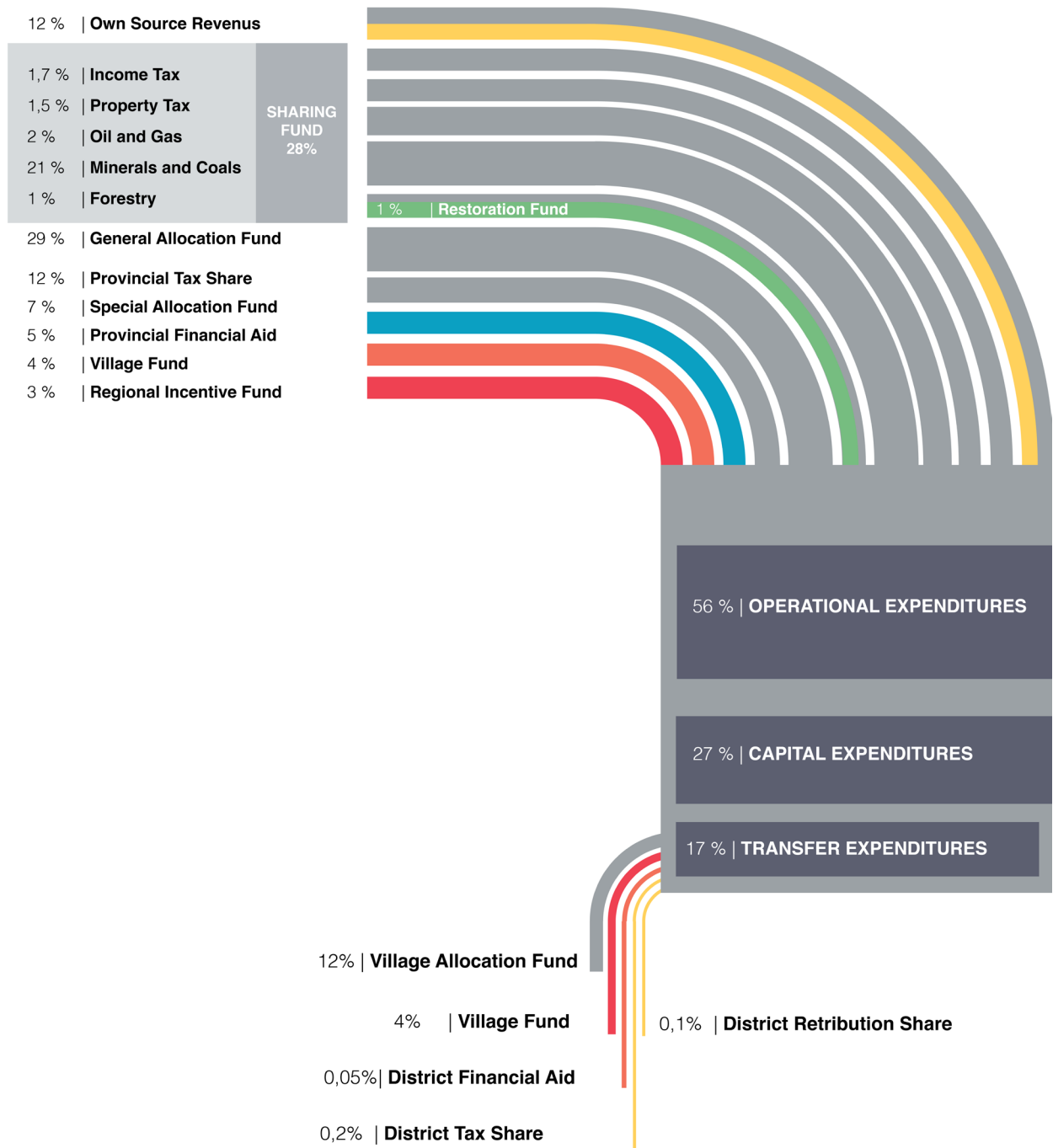
Our result shows that compared to 2019 baselines, it is difficult to analyze the convergence of incentive effects by merely changing the formula. While model 2 appears to be more practical in terms of average ADK incentive for fiscal-winning villages at reasonable rates, it also creates more fiscal-losing villages. The other two models (model 1 and 3) are not feasible as the models create disincentives for villages that demonstrate a high and improving status of ecological performance. The simulation also shows that the higher the proportion of ADK-M, the smaller the resulting incentive effects. It is necessary to reduce the proportion of ADK-M to produce a higher incentive effect capable of encouraging behavior change that supports sustainable development.

However, adding ecological indicators in the ADK allocation formula can still enable political support for village-level ecological governance. In the case of Berau, ADK reformulation to support ecological performance can be carried out based on the following recommendations:

1. Change the ADK formula to include a new element of ecological performance-based fiscal transfer, so that the formula becomes:
2. Change the proportion and distribution method of ADK-M by referring to the provisions of the latest government regulation
3. Reallocate the ADK-M proportion to increase the ADK-P and ADK-L, provided that the ADK-P is more than the proportion ADK-L.
4. Carry out several simulation models such as the examples in the table to find the right composition by considering the real adequacy of the basic allocation, the fairness of distribution between villages and the expected incentive effects.
5. Revise regency regulations regarding the allocation and distribution of ADK.



### 3.4.1 POLICY OPTION 2: SUSTAINABLE VILLAGE INCENTIVE FUND (IDM+ FUND) SCHEME



At the national level, the regional incentive fund (*Dana Insentif Daerah—DID*) is given to local governments based on certain performance categories determined by the central government. Comparable to the DID model, the sustainable village incentive fund scheme is designed by the regency government as a fiscal incentive instrument based on IDM+ for certain villages that meet the criteria for a sustainable village.

**Berau case study: The survey highlights the top 12 villages with the strongest IDM+ score**

In this scenario, the preliminary results from the IDM+ are used to underpin the allocation of the regency's incentives. Based on the IDM+, the top 12 villages are identified. These include two villages with high sustainability status and ten villages with improving sustainability status.

In this simulation, total fiscal incentive allocation is assumed at IDR 1.4 billion, which is equivalent to 1% of the Berau village fund allocation in 2020. The incentive is then divided proportionally based on the IDM+ scores of the villages. The higher the score of sustainable indexes (IDM+), the bigger the portion of fiscal incentives received.

No.	Village	District	Score	Indeks Desa Membangun Plus (IDM+)	Status	Proportion of Incentives	Rank	Fiscal Incentive (IDR)
1	Sido Bangen	Kelay	61	83.93	High	10.31%	1	14,53,28,947
2	Sukan Tengah	Sambailung	59	80.36	High	9.87%	2	13,91,44,737
3	Gurimbang	Sambailung	56	75	Improving	9.21%	3	12,98,68,421
4	Tasuk	Gunung Tabur	54	71.43	Improving	8.77%	4	12,36,84,211
5	Temnudan	Batu Putih	53	69.64	Improving	8.55%	5	12,05,92,105
6	Labanan Makmur	Teluk Bayur	52	67.86	Improving	8.33%	6	11,75,00,000
7	Biduk-Biduk	Biduk-Biduk	52	67.86	Improving	8.33%	6	11,75,00,000
8	Bena Baru	Sambailung	51	66.07	Improving	8.11%	7	11,44,07,895
9	Merabu	Kelay	49	62.50	Improving	7.68%	8	10,82,23,684
10	Maluang	Gunung Tabur	46	57.14	Improving	7.02%	9	9,89,47,368

This policy option will require a new regent regulation that manages the manual allocation of the incentives or financial assistance instruments based on the IDM+ index score.

**3.5.1 POLICY OPTION 3: MIXED INCENTIVES AND ASSISTANCE SCHEME**

Another possible option, specific to Berau, is the residual of Revenue Sharing Fund for Reforestation instrument (Dana Bagi Hasil Dana Reboisasi—DBH DR). Berau can levy from reforestation activities to fund the fiscal incentives for villages. To date, Berau has the highest untapped DBH DR fund in East Kalimantan, amounting to IDR 358 billion. Unless this fund is utilized immediately, Berau's fiscal revenue is at risk as the central government is obliged to reduce its budget due to inefficient spending (PATTIRO, 2020).

Nationwide, if the regency government can mobilize other sources of funding outside the regency's budget, such as CSR funds, donor or non-profit grants, and philanthropic donations, the regency government can optimize this policy scenario. This combined policy brings together a fiscal incentive approach for well-performing sustainable villages with financial assistance for villages that perform poorly under ecological governance.

An evaluation of the level of village sustainability, as measured in the IDM+, offers information regarding those villages that deserve incentives as well as those that deserve assistance. This policy provides an opportunity for all villages to increase their sustainability status. Some of the policy mix options are listed in the following table:



























