

Funding for Sustainability: Three Challenges of Trust Fund Implementation in Papua, Indonesia

by Charlie Heatubun

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Article

Funding for Sustainability: Three Challenges of Trust Fund Implementation in Papua, Indonesia

Mercyta J. Glorya^{1*}, Sonny Mumbunan^{1,2}, Sita Primadevi¹, Mokhammad Ardafillah¹, Julia Kalmirah¹ and Charlie Heatubun^{3,4}

¹ World Resources Institute (WRI) Indonesia, Jakarta, Indonesia

² Center for Climate and Sustainable Finance, Faculty of Mathematics and Natural Sciences, University of Indonesia, Depok, Indonesia

³ Faculty of Forestry, University of Papua, Manokwari, Indonesia

⁴ Research and Development Agency, Provincial Government of West Papua, Manokwari, Indonesia

*Corresponding author: mercyta.glorya@wri.org

Abstract: At the global level, trust funds (TF) have emerged from a portfolio of options as an alternative financing mechanism to help countries finance their sustainability agendas. Indonesia recently enacted wide-ranging legal arrangements on TF, including a law that encourages all sub-national governments to implement their own TF endowment model and a government regulation pertaining to special autonomy for sub-national jurisdictions in Papua for the implementation of TF – both of which enable TF to finance intended sustainability outcomes. Sustainability is of high-priority concern as the provinces of Papua and West Papua are responsible for stewardship of one of the world's largest remaining rainforests, which is especially rich in biodiversity. These provinces operate under special autonomy, with special funds allocated from the central government and a decentralized arrangement that differs substantially to the unitary state arrangement applied nationwide; this poses challenges to implementing TF for sustainability in Indonesian Papua. In this paper, we examine TF challenges related to legality, finance, and capacity; moreover, in the context of these challenges, we assess three focus areas related to sources of funding, management, and distribution of earnings. We also discuss the implications these challenges have for operationalizing TF in Papua. This paper contributes to discussions on TF for sustainability by interlinking legal, financial, and capacity-related issues, demonstrated by a context-specific and globally relevant case study in Papua.

Keywords: trust fund; sustainable finance; climate finance; sustainability; Papua; Indonesia

1. Introduction

At the global level, trust funds (TF) have emerged as one of several alternative financing options that can help countries fund their sustainability agendas. Many scholars argue that TF are effective financing instruments for increasing funding, and that they provide significantly more stable, long-term funding for development. Key benefits of TF include multi-year features, and the lower levels of bureaucracy associated with them compared to more conventional public financing instruments (Knight & Stephenson, 2007; GEF, 1998). Funding issues are dominating contemporary discourse on pathways to achieving sustainability. The feasibility of TF implementation, especially for emerging economies like Indonesia, therefore should be addressed as a matter of priority. In Indonesia, the problem of funding for sustainability extends beyond a mere shortage of financial resources; the country's sub-optimal public financing systems have been posited as shortcomings that impede funding for a variety of sustainability programs, necessitating the search for alternatives to conventional state budgets. Recently, Indonesia enacted a law on intergovernmental fiscal relations (Law 1/2022), which encourages sub-national governments to create their own endowment model for TF. Such legal foundations create the opportunity to build TF as an alternative funding mechanism with the potential to

support the achievement of national sustainability targets. However, even with clear legal facilitation at the national level, and with sub-national governments encouraged to establish their own endowment models, myriad challenges remain with regards to the practical establishment of TF in sub-national provinces of Indonesia, particularly those with special autonomy status.

This paper addresses the challenges of implementing a TF in Papua; an Indonesian region with special autonomy that is of global importance with regards to climate stabilization and biodiversity conservation, considering its significant carbon stock, intact tropical rainforest and biological diversity (Gaveau et al., 2021; Cámara-Leret et al., 2020). In the pursuit of achieving sustainability, Papua declared its two provinces' shared commitment to conserving 70 percent of their land as protected forest areas, while also supporting the welfare of local indigenous groups (Cámara-Leret et al., 2019). Papua's ambitions for sustainability, as alluded to in the Manokwari Declaration, signal the need for long-term and stable funding, which is among the many benefits offered by financing instruments such as TF. Papua also operates under a special autonomy arrangement that differs substantially compared to other sub-national zones in Indonesia, allowing a degree of flexibility to provinces in Papua for self-governance according to their priorities and needs. In 2021, the Government of Indonesia extended Papua's special autonomy status with a regulation that now includes the establishment of a Papua-based endowment model TF (GR 107/2021).

Following the establishment of Law 1/2022 at the national level and GR 107/2021 for TF endowment models in Papua, this paper identifies and investigates the various challenges associated with implementing TF in the special autonomous provinces of Papua, specifically in the context of sustainability targets. This paper focuses on three key issues: (i) legality, (ii) finance, and (iii) sub-national government capacity. These emergent challenges are considered the most relevant to national Law 1/2022 and its co-existence with GR 107/2021, with regards to implementing a TF in Papua. Such interrelatedness can lead to legal disputes between national government and Papuan governmental authorities at the sub-national level, with one authority under the mandate of Law 1/2022 and the other under GR 107/2021; the financial aspects of TF, such as its sources of funding, investment schemes, and distribution mechanism, may also be impacted. This contributes to the emergence of what this paper refers to as financial challenges. Both legal and financial challenges must be discussed, taking the role of sub-national Papuan governments and their use of TF funding to finance sustainability development programs into consideration. Specific capacity needs for each of the sub-national Papuan governments should also be considered, to ensure they are fully able to implement and operationalize TF in Papua.

This is the first study that scrutinizes the challenges of implementing a TF within the specific context of special autonomy arrangements for Papua in Indonesia. It acknowledges the presence of two legal arrangements on TF establishment – a unique condition that sets Papua apart from other regions where TF may exist. This study also differs from previous studies on TF in Indonesia (e.g., Sheriffdeen, 2022; Spergel and Taieb, 2008) as their analyses were neither context-specific nor relevant to fiscal policy and planning constellations applied in Indonesia (i.e., TF and special autonomy in Papua).

This paper organizes its arguments by firstly elaborating on the context of special autonomy and Papua's sustainability features. This is necessary to comprehend the relationship between Papua's special autonomy and its nature and climate contexts, whilst also making sense of why implementing a TF within such arrangement prompts legal, financial, and capacity challenges. The scope and scale of these issues is at the core of this research, which presents findings for the aforementioned challenges and then addresses the potential implications each may have for TF implementation in Papua.

2. Indonesian Papua as a Context

Located on the world's most floristic island (New Guinea), Papua's diverse ecosystems are considered to be of global priority for biodiversity conservation. This hub of

endemism is home to thousands of flora and fauna species (Cámara-Leret, 2020; Marshall, 2007) and one of the largest remaining rainforest areas in the world, comprising an extensive range of primary forest that includes mangroves and peat swamps (Parsch et al., 2022; Sasmito et al., 2020; Corlett and Primack, 2011). These critical ecosystems provide food sources and valuable ecosystem services such as carbon storage and are the area of highest carbon value in the world (Nurhasan et al., 2022; Mudiayarso, 2015). Given Papua's unique biodiversity and its importance to the global environment, Indonesia is determined to catalyze climate adaptation and mitigation ambitions in the region.

However, despite its importance, Papua is currently facing a number of major conservation threats. This includes land-use change and environmental degradation associated with industrial plantations (Austin, 2017; Obidzinski et al., 2012); mining (Rifai-Hasan, 2009), and improper infrastructural development (Sloan et al., 2019). The spiraling poverty rate in these provinces has also forced many indigenous groups in Papua (*Orang Asli Papua*, or OAP groups) to sell their customary lands to private enterprises, thereby jeopardizing Papua's biodiversity and destabilizing ecosystem services essential to the region's sustainability agenda (Amindoni and Henschke, 2020). Indeed, there is a direct correlation between Papuan conservation issues and socio-economic conditions, especially with regards to OAP groups.

To promote ecosystem conservation in Papua, whilst also protecting OAP groups' rights to their customary lands, sub-national Papuan governments (through the 2018 Manokwari Declaration) committed to protecting as much as 70 percent of their land area with forest cover. They further promoted the establishment of a provincial, Papua-specific TF, intended to serve as an alternative funding instrument to help the Papuan provinces finance their sustainability commitments. These initiatives are considered a major step towards achieving sustainability in Papua, yet they are beset by number of challenges stemming from Papua's special autonomy status.

Special autonomy in Papua is indicative of Indonesia's asymmetric decentralization process, defined as the transfer of political, fiscal, and administrative responsibilities from national to sub-national governments (Lele, 2021). Special autonomy was initially formalized by the enactment of Law 21/2001. Following a number of subsequent changes, it is currently regulated under Law 2/2021. With special autonomy, Papuan government authorities at the sub-national level are endowed with greater authority compared to other provinces, specifically in regard to formulating sub-national development programs to suit local needs, context and priorities (Kanowski et al., 2009). Furthermore, special autonomy arrangements for Papua also reflect a number of features common to partial decentralization, whereby sub-national governments continue to receive fiscal transfers from the national government (Borge, et al., 2014). In addition, Papua receives fiscal transfers from the national government, known as the Special Autonomy Fund (SAF), in order to execute development programs under its own special autonomy mandate.

A new regulation on special autonomy was recently enacted through GR 107/2021. It included a mandate to use revenue from the exploitation of natural resources in Papua as sources of funding for TF. Meanwhile, Law 1/2022 also included instructions for how sub-national governments across Indonesia can implement their TF endowment. These overarching arrangements reflect how asymmetric decentralization plays out in Papua, and how it can influence the implementation and operationalization of TF for sustainability agendas in the region.

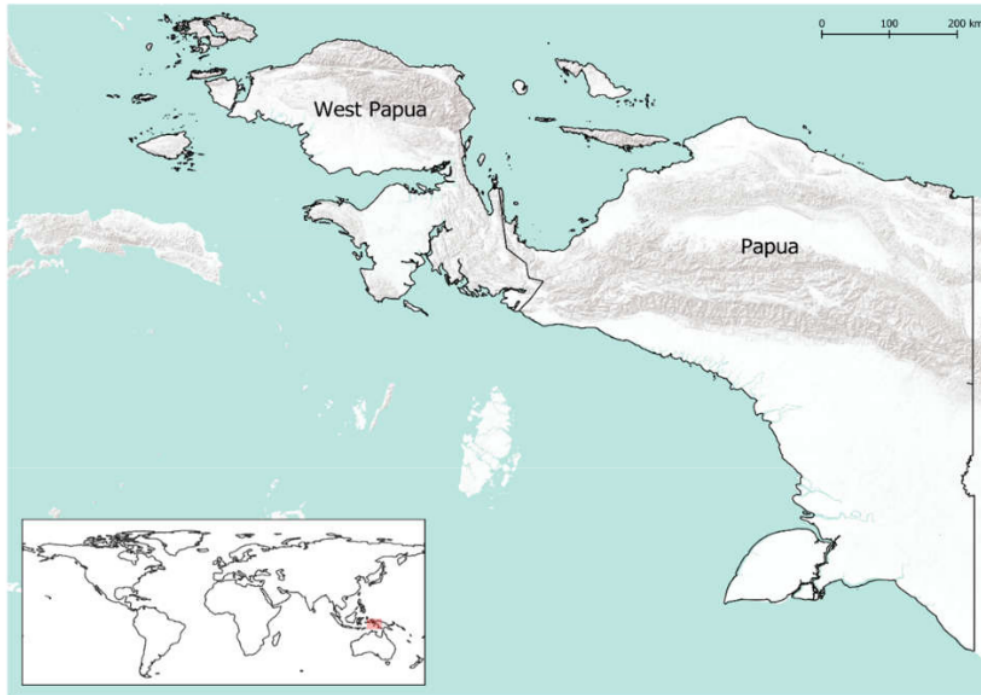


Figure 1. Map of the two provinces in Papua.

3. Scope

Any meaningful observation of challenges pertaining to TF implementation must define the extent and exactitude of its investigation (Sharifi, et al., 2021; Arksey and O'Malley, 2005). For this paper, we applied (i) a general defining scope, designed to provide boundaries for intended analysis; and (ii) a specific scope, in order to operationalize issues of particular interest contained within the general scope.

For the general defining scope, we featured three elements for scoping purposes. First, the differences and interplays associated with parallel arrangements under the national constitution of Indonesia, as applicable to all sub-national jurisdictions nationwide, and special autonomy status for Papua. The latter includes, among others, Papua's right to administer its own area and the provision of SAF (Law 2/2021, Art.4). These rights are potentially vulnerable, however, as they are subordinate to Indonesian constitutional law. Any analysis of challenges in implementing a TF in Papua should therefore take these differences and interplays into consideration. Second, the most relevant aspects of a TF, namely its source of funding, its management strategy, and the distribution of its benefits (Shumais & Mohamed, 2020). Within each of these three areas, we selected key illustrative elements of interest, and further operationalized them in order to sharpen the analysis. The third element covers potential challenges for TF with special focus on key thematic areas, including legality, finance, and the capacity of sub-national stakeholders.

In the context of Papua, the challenges associated with each of these three areas are interrelated and, to an extent, stem from the interplay between national and special autonomy arrangements. To illustrate this duality, there are currently two regulatory arrangements related to the establishment and management of TF; one is recognized at the national level (GR 80/2011), while the other is in Papua only (GR 107/2021). The impacts of these legal arrangements include, but are not limited to, limitations in funding options available for TF, issues with the alignment of arrangements, and disparities between national and sub-national government capacities. Ultimately, these issues impact

stakeholders at the local level and undermine broader attempts to implement TF for sustainability purposes in Papua. Table 1 outlines this scope in more detail.

Table 1. Selected (sub)elements and their respective rationale under the three thematic areas for trust funds.

Elements	Sub-elements	Description and/or justification for the choice of elements and sub-elements
<i>Thematic area: legal</i>		
1. <i>Funding sources.</i> The authority of Papua to manage and seek potential funds from domestic sources		In GR 107/2021, revenue from domestic natural resources can be used as a source of funding for TF. Given the various types of natural resource revenues available, it is important to determine which fund is legally viable for TF.
2. <i>Management strategy.</i> The authority to manage trust funds	No sub-element(s) considered	The authority of sub-national Papuan governments in managing TF depends on and is legally defined by the applicable law.
3. <i>Distribution of benefits.</i> The legal framework for TF distribution		Decisions about who benefits from TF in Papua should be made on a solid legal basis. Allocation of TF benefits is inseparable from where benefits (derived from natural resources exploitation revenues in Papua) are directed to.
<i>Thematic area: finance</i>		
1. <i>Funding sources.</i> Mobilizing financial resources for TF	(i) Definition of revenues derived from natural resources	As defined by GR 107/2021, revenue derived from natural resource exploitation can be used as a source of funding of TF. A clear understanding of what constitutes natural resource revenue is therefore instrumental.
	(ii) Mandatory spending provision on the use of oil and gas revenue in Papua	Under special autonomy, oil and gas revenues are mandated to be spent for health, education, infrastructure, and OAP groups' welfare (GR 107/2021). In-depth analysis on how earmarking rules apply is crucial, as it helps determine whether oil and gas revenues can later be mobilized as sources of funding for TF.
2. <i>Management strategy.</i> Managing financial resources under applicable regulations and authorities	(i) Authority of trust fund manager	The authority of TF managers, such as national or sub-national public service agencies (<i>Badan Layanan Umum</i> ; BLU), has direct implications for the type of investment instruments that can be chosen for TF. Investment instruments are crucial in deciding income generated by a TF (Graham, 2005).
	(ii) Type of trust fund	Possible types of TF, which in turn define how the fund should be invested and managed.
3. <i>Distribution of benefits.</i> Distributing TF benefits to achieve sustainability in Papua	(i) Number of intermediaries	The number determines the length of distribution channels for possible TF schemes. A long distribution channel likely undermines effectiveness of benefit distribution mechanisms, especially with regards to ensuring benefits reach the right beneficiary (Andjelkovic & Radosavljevic, 2020).
<i>Thematic area: capacity</i>		
1. <i>Funding sources.</i> Collecting natural resource revenues as a source of funding for TF	(i) Knowledge on the arrangement of natural resource revenue allocation between provincial and district governments	Natural resource revenues shall be divided between Papua's provincial and district governments. Knowledge from the sub-national Papuan government on the allocation of revenues is a matter of priority, to help them decide on ways to collect revenues as sources of funding for TF.
	(ii) Coordination between different layers of government to mobilize natural resource revenues as sources of funding for TF	Once sub-national Papuan government officials understand the allocation arrangements between different layers of government, actual coordination capacity between provincial and district governments to decide on the approach for collecting the revenues is crucial.
2. <i>Management strategy.</i> Coordinating with institutions as the owner of natural resource	(i) Coordination capacity with sub-national BLU as potential TF institution	With regards to legal uncertainty over TF management authorities, it is important to build sub-national Papuan government capacity to coordinate with BLUs at both the

Elements	Sub-elements	Description and/or justification for the choice of elements and sub-elements
revenues to optimize management of TF finance	(ii) Coordination with national BLU as potential TF institution	national and sub-national levels. This is essential to ensuring that sub-national Papuan governments can guarantee a stable source of funding, while experts and TF institutions can optimize their management strategies to generate maximum earnings.
3. <i>Distribution of benefits.</i> Distributing earnings to the intended beneficiaries in Papua	(i) Decision on development programs (most relevant for OAP groups) that will receive trust fund finance	Considering distribution mechanism opted is through intermediaries (e.g., development programs), Sub-national Papuan Governments' capacity to decide on which programs, considering many programs in-place already in Papua especially for OAP groups, is essential to address. Without this capacity, chances of TF earnings distributed to least impactful programs is far greater.
	(ii) Technical skills to ensure TF funding reaches the development programs and supports the intended outcomes	Once a development program is selected, it is essential that sub-national Papuan governments have the capacity to ensure TF funding reaches the intended development programs. This demands technical competence and falls under the specific supervision of the executing government institution.

4. Findings

4.1. Legal Considerations

Legal Arrangements Related to Sources of Funding for Trust Funds

In terms of legal arrangements for the source of funding, two particular findings are of particular importance: (1) legal definition of revenues from natural resources and (2) deciding on the institutions responsible for the allocation of such revenues. Regarding the legal definition, special autonomy regulation GR 107/2021 mandates sub-national Papuan governments to save part of their revenue from the exploitation of natural resources in Papua in a form of an endowment TF; however, such legal statements are somewhat ambiguous, as there is no further elaboration on what technically constitutes natural resources exploitation. Even at the national level, there is no specific definition for the term, or revenues associated with it. Through Law 1/2022, the Government of Indonesia only recognizes the term 'revenue from natural resources', which relates to forestry, general mining, fishery, oil and gas, and geothermal energy. Within the framework of state revenue, these revenues are known as natural resource revenue sharing (*dana bagi hasil sumber daya alam*).

What distinguishes Papua is the authority of its OAP groups, which crucially have decision-making power at the sub-national level (Law 2/2021). In this case, it is unlikely that the meaning of revenues from natural resources exploitation in Papua will be aligned with the definition accepted at the national level, as OAP groups may have their own understanding and interpretation of what natural resource exploitation means. However, sub-national Papuan governments are yet to decide upon a Special Autonomy Provincial Regulation (SAPR), better known as *Perdasus*, specific to Papua in regard to the matter. From a legal perspective, the absence of a clear legal definition for Papua means the national government's version is likely to prevail. This must be addressed, in order to ensure the definition of natural resources exploitation reflects Papua's particular concerns and objectives.

With regards to which authorities decide on the allocation of revenue from natural resources for TF funding, under the existing arrangement there are two provisions, namely for national and sub-national Papuan governments. The special autonomy regulation grants authority to sub-national Papuan governments to allocate a portion of revenue from the exploitation of natural resources to an endowment TF (GR 107/2021, Art.7). However, the ways in which these revenues are utilized must go through the conventional planning and budgeting cycles, which include an evaluation and assessment processes that requires approval from national ministries such as the Ministry of Finance (MoF), the Ministry of Home Affairs (MoHA), and the National Development Planning Agency (NDPA) (GR

107/2021, Art.22). Therefore, if sub-national Papuan governments intend to reallocate such revenues as sources of funding for TF, they must first obtain approval from all relevant ministries. This stipulation weakens sub-national Papuan governments' authority, as they ultimately need permission from the national government to assign natural resources revenues to TF.

Authority for the Management of Trust Funds

Under the existing arrangements, there are three different regulations in place, each with different directions as to whether national or sub-national Papuan governments are entitled to management authority over TF. At the national level, there is a presidential regulation (PR No 80/2011) and a law (1/2022); although both deal with the establishment of TF, Law 1/2022 sits higher in the legal hierarchy compared to the Presidential Regulation. Nonetheless, Law 1/2022 refers to TF endowment in a general context, which is applicable to all regions across Indonesia. Moreover, there is another presidential regulation (PR 80/2011) that serves as the only existing national regulation on TF in Indonesia.

The current situation opens up a number of possibilities with regards to TF management. According to PR 80/2011, the authority to manage TF in Indonesia involves approval from the national government, whereby the establishment of a board for TF management requires consideration and approval from the NDPA and the MoF. On the other hand, according to Law 1/2022, a sub-national government, including Papua, may be granted the authority to manage its own endowment TF, depending on two factors: (i) sub-national fiscal capacity and (ii) a proven track record of high-level service performance. This raises a number of questions. For example, if we follow Law 1/2022, could sub-national Papuan governments manage their own TF without intervention from the national government, provided Papua meets the required conditions? Furthermore, GR 107/2021 never specifically addressed which institution will hold actual authority over the management of TF. These gray areas have led to an uncertain legal arrangement, thereby rendering the authority of sub-national Papuan governments over TF management somewhat ambiguous.

Legal Frameworks for Trust Fund Distribution to Local Indigenous People

Unlike the ownership concept of indigenous land, which is well-regulated, the ownership concept of natural resources in Papua – especially those that are in the OAP groups' land (land of *ulayat* rights; *Ulayat* is often defined as an area where communities operating under customary law (*adat*) have the authority to live on and use the land) – remains debatable. Under the national scheme, the constitution of the Republic of Indonesia (1945) along with the Law 5/1960 on Agrarian Principles have stipulated that all land, along with any natural resources contained therein, are under the sovereignty of the state. At the same time, these two national-scale regulations recognize OAP groups, along with their associated rights. In terms of indigenous peoples' rights, state rules specify that they may use and take advantage of, but cannot own, natural resources. Similarly, the state places natural resources under its sovereignty, but not under its possession.

Laws relating to special autonomy in Papua generally recognize and reaffirm the rights of indigenous peoples, by obliging the sub-national Papuan governments to recognize, respect, protect, empower, and develop the rights of indigenous peoples, and by referring to the provisions of the applicable legal regulations. Moreover, specific regulations have been enacted, such as SAPR 21/2008, SAPR 22/2008, and SAPR 23/2008 in Papua; and SAPR 9/2019 and SAPR 10/2019 in West Papua; all of which grant ownership rights to OAP with regards to their lands and natural resources, so long as claims made by OAP groups can be supported by the results of formal investigation from district governments and their relevant counterparts.

This overarching arrangement contributes to the confusion surrounding the extent to which OAP groups in Papua can fully assert their power in owning, managing, and benefiting from natural resources and land ownership. Such ambiguity concomitantly positions state in a much more powerful and more certain position. Ultimately, this leads one

to ask the following questions: to what extent could revenues from land management be transferred to communities for their prosperity, and to what extent could the communities manage and receive direct benefits from their natural resources' exploitation without having to wait for the distribution of benefits through conventional government transfer schemes?

4.2. Financial Dimensions of Papua Trust Funds

Tapping Into Natural Resource Revenues as Sources of Funding for Trust Funds

As mentioned in the legal section, there is currently no clear definition of what special autonomy regulation (GR 107/2021) means by 'revenues from natural resources exploitation'. This further impacts the financial aspect of TF, as an unresolved legal definition influences the sources of funding that can be utilized and therefore the amount of funding available for investment in a Papuan TF. However, assuming that legal clarity over such a definition can be obtained, the question remains – can these revenues be tapped into as sources of funding for a Papuan TF?

We have found that in Papua, certain types of natural resource revenue, under special autonomy regulations, are bound to mandatory spending. Here, oil and gas are the biggest contributor to natural resource revenues in Papua (DGoFB-MoF, 2022; GR 107/2021). However, these revenues are all 100 percent mandated to be spent on education (35%), health (25%), infrastructure (30%), and matters pertaining to affairs of OAP groups (10%) (GR 107/2021). This is in contrast to other regions in Indonesia, where there is no provision related to the use of such funds (Law 1/2022). While other provinces have total freedom to determine the use of oil and gas revenues, Papua does not. Considering this mandatory spending provision, natural resource revenues could not be freely tapped and mobilized as sources of funding for TF in Papua, even with a clear legal definition.

Financial Resources and Trust Fund Management

We found two issues related to management of financial resources and investment strategy, namely (i) the implications of TF management for authorities and (ii) the type of TF. As for the former issue, there remains uncertainty over which authorities can manage Papuan TFs (see Section 1.2). In this case, we are working on the assumption that two authorities are eligible: at the national level, the National Public Service Agency (national BLU); and the sub-national level, with the Sub-national Public Service Agency (sub-national BLU).

Certainly, each option leads to different investment strategies for a Papuan TF. In the case of a national BLU (MoF Regulation PMK 129/PMK.05/2020 regarding fund management through BLU), it may apply to both long-term and short-term investments using low-risk investment instruments to generate earnings. This provision generally applies to all BLU, both at the national and sub-national level. In contrast to previous provisions, according to Law 1/2022, a sub-national TF must be carried out in short-term investments with financial instruments that are free from the risk of impairment. This is clearly inconsistent with the regulations regarding BLU as stated in the MoF regulations. This condition, along with the absence of any regulation on TF investment strategy under special autonomy in Papua (GR 107/2021) lead to the condition that Papua should follow the arrangement as defined by Law 1/2022. However, this could potentially impose limitations on the investment strategies used to generate maximum income from TF.

The second issue is related to the type of TF and how it relates to investment strategy. As far as the type of TF and its implications for the use of fund is concerned, the TF investment strategy also is determined by the type of TF model. Our findings show that the type of TF mentioned in the special autonomy provision in Papua is an endowment model TF. This means the funds are restricted to saving and investment for a period of time, and only the earnings from investment can be used (Bayon & Deere, 1998).

Distribution Mechanism for Trust Fund Benefits

We classify TF benefits distribution mechanisms as one of two different structures: (i) *without channel* (direct distribution to beneficiaries); and (ii) *with channel*, which includes one or two levels of intermediaries (indirect distribution to beneficiaries). The dynamics of natural resources ownership mean the people of Papua could potentially have the right to receive and manage TF benefits themselves (see section 4.1.3). With that in mind, another viable solution that we promote in this study includes distributing TF benefits directly to beneficiaries.

To that end, we identify distribution channels according to the number of intermediaries involved along the line to distribute TF benefits to OAP groups, assuming the latter are the main beneficiaries of TF benefits in Papua. Specifically, we reflect on cases involving (i) *Badan Pengelola Dana Lingkungan Hidup* (BPD LH, national BLU), where trustees are national-level institutions; and (ii) Papua's sub-national BLU, where trustees are sub-national-level institutions. Both cases were chosen because they are the most feasible models for the implementation of a TF (based on discussions with sub-national Papuan governments, 2021).

As we compare the two models, we reveal that the current distribution channel uses a long distribution system at the national and sub-national levels. It is understood that there are two possible distribution channel structures for BPD LH for benefits distribution to OAP groups; the first possible structure refers to Presidential Regulation No. 80/2011, which involves one intermediary consisting of sub-national government or non-government organizations (NGOs). In this case, what is meant by sub-national government is *Satuan Kerja Perangkat Daerah* (SKPD), a sub-national government working unit that distributes money or organizes development programs, while the NGOs consist of CSOs, research institutions, or private sectors. These institutions will receive funds from BPD LH and then distribute them to OAP groups in all possible agreed forms. The second possible structure uses multi-tiered channel distribution. Provisions of GR 107/2021 mention the sub-national government as first channel, in this case sub-national BLU/sub-national general treasurer of Papua. The nationally instituted BPD LH will transfer funds to a sub-national BLU, before the benefits are transferred to OAP groups via the SKPD or NGOs, pending approval of proposals submitted to the Papua sub-national BLU.

Meanwhile, in the case of the Papua sub-national BLU, at least one intermediary is required to ensure the benefits of TF reach OAP groups. According to Law 1/2022, the management of sub-national BLU assets will be organized by and attributed to own-source revenue, thereby financing a range of SKPD programs. In other words, the distribution of TF benefits under a sub-national BLU must pass through the SKPD before it can reach the OAP groups.

4.3. The Need for Government Capacity

Collecting Natural Resource Revenues as Sources of Funding for Trust Funds

As mentioned in the finance section, oil and gas revenues under special autonomy constitute the biggest portion of natural resource revenues received by Papua (see 4.1.2). To collect the revenues as sources of funding for Papuan TF, it is important to understand that transfer of oil and gas revenues to Papua follows a complex multi-layered arrangement for fund allocation, from national to provincial government, and later to producing and non-producing district governments (GR 107/2021, Art.6). Once a provincial government has received oil and gas revenues, they must then obtain agreement from all district governments with regards to allocating these funds, in line with the mandatory spending regulations on oil and gas (GR 107/2021). The agreement must then be outlined in a form of binding SAPR on revenue sharing allocation.

For the sake of illustration and considering there is a legal decision justifying TF institution to be established in Papua (e.g., Papua sub-national BLU), there is also an important issue to address with regards to the capacity of sub-national Papuan governments. In this case, what capacity is required from Papuan government, so that the revenues that

will be divided and placed at different layers of government, can be collected and mobilized as sources of funding for TF? Such conditions require the Papuan government to be knowledgeable and coordinated, with the capacity to collect revenues as sources of funding for Papuan TF according to the complex arrangements of revenues allocation.

Trust Fund Management Authority

The various co-existing legal arrangements mean that ultimate authority for TF management could be assigned to either national government or sub-national Papuan governments, depending on which legal document one refers to (see 4.1.2). Law 1/2022 appointed BLU as TF institutions in Indonesia; however, whether this is the national or sub-national BLU is an outcome determined by the authorities tasked with managing the TF.

BLU are agencies that operate somewhere between public institutions and state-owned enterprises. In terms of their composition, BLU will employ both public officials and non-public official experts who are deemed competent candidates for the job (Mafira et al., 2020). This has certain implications for the management of TF, as there will be experts with a proven track record of investment strategy and relevant TF models for Papua, who will strategize the optimization of TF earnings at the BLU. In turn, this reduces the role of the sub-national Papuan governments to the owner of resources, entrusting the management of any associated revenues to the BLU. Therefore, there is a clear distinction between the roles played by BLU and sub-national Papuan governments in managing TF. With regards to capacity building, this illustrates the importance of appropriate coordination capacity to sub-national Papuan governments as the owner of resources, in order for them to coordinate effectively with either the national or sub-national BLU, and to ensure a stable flow of funding sources to the TF.

Trust Fund Distribution to OAP Groups

Just like special autonomy regulations, the distribution of TF earnings must reach out to and directly benefit OAP groups (discussion with sub-national Papuan governments, 2021; GR 107/2021). Two distribution options are discussed in this research, namely via (i) intermediaries and (ii) direct distribution (see 4.2.3). This section specifically focuses on the former, for the sole purpose of illustrating the kinds of capacity needs required in attempts to distribute TF earnings to OAP groups.

There are already many development programs in place for OAP groups, which are initiated by stakeholders such as national government, sub-national government, and development partners. Unfortunately, these programs often overlap, as they were planned separately by different institutions, following different and often siloed planning and budgeting procedures (Ekawati et al., 2019; Sadiawati et al., 2019; Nurfatriani et al., 2015; Blöndal et al., 2009). As a result, there is a tendency for TF earnings to be distributed to development programs that are not necessarily the most impactful for OAP groups. In this phase, Papuan government knowledge capacity, particularly in relation to the complexities of the development program landscape and decision-making pertaining to the rightful program for OAP groups, is important to address.

Once a development program has been decided, technical planning capacity is essential to ensuring TF earnings reach their destination and ultimately support the intended outcome: supporting the welfare of OAP groups. In addition to the formal bureaucratic process of formulating medium-term, sub-national plans (RPJMD), program planning supervised by sub-national Papuan governments includes additional procedures for the formulation of SAPR. This takes place between provincial and district government, the Papuan People's Representative Council (DPRP), and the Papuan People's Assembly (MRP) (Law 2/2021; discussion with sub-national Papuan governments, 2021). Technical planning is essential to capacity building, as it guides sub-national Papuan governments in ensuring TF earnings can navigate the various complex processes on the way to their intended beneficiaries.

5. Discussions

5.1. Mobilizing Revenue from Natural Resource Exploitation

According to regulation, Papua is required to save half its earnings from natural resource revenues in an endowment TF, and yet oil and gas revenues under special autonomy are still bound to its mandatory spending. Moreover, the allocation of revenues must be approved by national ministries, which limits the autonomy and authority of sub-national Papuan governments in the decision-making process for how revenues should be utilized. This situation creates legal challenges, as there is a lack of clarity over who gets to decide on the allocation of revenues from natural resources. Legal disputes over the authority to mobilize natural resource revenues as sources of funding for TF are therefore likely to arise. This is a problem that applies to various dimensions of the Papua-Indonesia relationship: releasing the cat (granting special autonomy), but continuing to hold its tail (imposing restrictions on how special autonomy shall be implemented).

On a more positive note, there is an opportunity to strengthen sub-national Papuan governments' authority to mobilize revenue derived from the exploitation of natural resources as TF sources, through the stipulation of SAPR. However, the stipulation of SAPR in Papua presents its own set of challenges; firstly, SAPR must ensure that provisions regarding Papuan government authority to mobilize funds to TF do not conflict with statutory provisions. This also relates to the national government's authority to assess the relevant program, in accordance with provisions for the use of SAF. In Papua, SAPR development involves a long and protracted bureaucratic process, during which various political interests may clash. This makes it nearly impossible to reach an agreement and implement a mandate for special autonomy regulations (discussions with sub-national Papuan governments, 2021). Conflicts that arise, both from regulatory ambiguity and the SAPR formulation process, hinder the mobilization of TF funding.

In addition, issues related to finance also intersect with legal challenges, particularly in terms of sources of funding. The absence of a clear definition of revenue from the exploitation of natural resources complicates the decision of which specific type and overall size of fund can be mobilized to the TF. This information is important, as the allocation of revenue to the TF requires an estimation of initial capital and the development of a business plan for the TF, both of which are essential to the interests of donors and investors. On the bright side, this presents an opportunity to use all types of revenue from natural resources in Papua, thereby mobilizing a larger amount of funds – provided that the government is able to establish a clearer definition of revenue from natural resources exploitation through SAPR.

Moreover, if we follow the definition of revenue from the exploitation of natural resources as it is referred to at the national level, it is important to consider that all revenues are subject to their own diverse set of rules. For example, oil and gas make the biggest contribution to revenue from natural resources in Papua, and are subject to complex mandatory spending requirements which stipulate that revenue is allocated to specific development programs. Funds reallocation by sub-national Papuan governments can therefore become restricted by the rigidity of these rules, which further limit the pool of funds available to the TF.

With regards to capacity, revenues from oil and gas feature a complex distribution mechanism (see 4.3.1). Re-allocation of these revenues as sources of funding for TF in Papua demands a combination of knowledge and coordination capacities. Knowledge relates to building understanding across different layers of government, especially in terms of the purpose of reallocating oil revenues as sources of funding for a TF. This presents a challenge, as it requires consensus from all producing and non-producing districts, each of which have their own agendas for the use of oil revenue. As a result, sub-national Papuan governments may request that oil revenues be withheld at the sub-national level, which may in turn be a bone of contention for district governments in Papua.

Coordination, on the other hand, is the capacity to foster cooperation among sub-national and district governments in Papua, with a view to establishing a mechanism for

collecting oil revenues from different producing and non-producing districts. Whilst the amount allocated can be determined by financial consultants, collectively determining the best approach to collect revenues at different layers of government – and thereby enabling the creation of revenue-collection infrastructure – requires capacity building for sub-national Papuan governments. Here, challenges extend beyond the absence of revenue-collection infrastructure. The main challenges lie in the poor comprehension of sub-national Papuan governments with regards to how revenue allocation mechanisms operate under special autonomy, which may prevent coordination and cooperation from taking place (discussion with sub-national Papuan governments, 2021).

If all current capacity shortcomings could be addressed, Papua would be better able to collect and utilize its oil revenues as sources of funding of the TF. In turn, Papua may be able to reduce its dependency on funding from less reliable international climate finance, such as the termination of REDD+ between Indonesia and Norway (MoFA Indonesia, 2021). A lack of knowledge and coordination capacity on the other hand, may jeopardize the process of collecting and utilizing oil revenues for TF, destabilizing the flow of funding, and making the TF unstable.

5.2. Trust Fund Management Authority

Three different legal documents, comprising one law and two regulations, discuss the feasibility of TF management under the authority of a sub-national government. Each document points in different directions with regards to overall responsibility for TF management in Papua (see 4.1.2). This has both positive and negative legal implications.

The only document to mention the possibility of a sub-national government having authority over TF management is Law 1/ 2022. Even so, this law comes with conditions, relating to (i) sub-national fiscal capacity performance and (ii) proven high service performance. It is unlikely that Papua will meet these criteria, considering its low budget absorption and poor service performance (discussion with sub-national Papuan government, 2021; Resosudarmo et al., 2009). Conversely, Presidential Regulation PR 80/2011 strongly favors the national government over sub-national Papuan governments with regards to authority for TF management, a stance that appears counterintuitive to Papuan interests (discussion with sub-national Papuan Government, 2021).

The third legal document, GR 107/2021, does not specifically cover management authority for TF. This creates a legal loophole and leaves the door open for sub-national Papuan governments to strategize and strengthen their position in relation to authority over TF management. However, unless this legal challenge is resolved, sub-national Papuan governments could potentially lose the opportunity to manage their own TF, while the establishment of the TF could even lead to serious clashes between national and sub-national government.

With regards to financial challenges, problems could arise if TF management authority were granted to the sub-national Papuan governments. Sub-national authorities are limited in terms of formulating investment strategy for TF, because they are confined to only short-term investments and risk-free investment instruments. Short-term investment strategies usually experience a speedy turnover with higher risks caused by volatility in market price (Straehl & Ibbotson, 2017). In other words, options for short-term, risk-free investment instruments will be severely limited; for instance, only through deposits that consider the risk and time profiles. This begs the question, how would this investment option impact a TF?

Papua can only invest its capital in schemes such as deposits with a maximum tenure of one year (see Section 3.2.2). In general, deposits are investment instruments with the lowest financial risks, but their returns are comparatively low (Vliet & Koning, 2017; Cooper & Priestlet, 2010). This has both positive and negative implications. This investment option can help Papua to avert the financial disasters associated with higher investment options. In the long term, avoidance of financial risks may provide the TF with a modicum of stability. However, this option curbs a TF's potential to generate optimal

earnings; opting for low-risk deposits also results in a lower return on investment. There are a wide range of development programs in need of direct funding in Papua, such as time-restricted endowment schemes, and a comparatively small pool of investment returns available for use. Many are compelled to save money as an endowment TF, rather than funding direct development programs. Following this course of action, the achievement of sustainability targets is far from certain. Therefore, Papua needs to thoroughly address these financial challenges, in order to optimize investment strategies for TF.

Finally, ambiguity in legal aspects related to the authority of TF management demands a wider set of management capacities from sub-national Papuan governments, so they can thrive under the jurisdiction of whichever authorities are assigned (i.e., national or sub-national BLU). In their role as owner of revenues from natural resources (see 4.3.2), sub-national Papuan governments need to coordinate closely with financial experts sitting at either the national or sub-national BLU. Coordination here specifically relates to the capacity of sub-national Papuan governments to follow the requests made by the experts, based on the model of TF later decided for Papua (see finance 2.2.2). This is important to ensure a smooth fund-transfer mechanism from the sub-national treasury, where revenues such as oil were collected from in Papua, to the TF institutions at either the national or sub-national BLU.

Indeed, there are certain capacity challenges associated with this. First, if TF management authority falls to the sub-national BLU, sub-national Papuan governments (e.g., provincial government) would not be aware of approaches to mobilize funding from the provincial treasury to the TF institution, as such mechanisms remain absent in Papua (discussions with sub-national Papuan governments, 2021). This is exacerbated by pre-existing capacity gaps; sub-national Papuan governments need to mobilize funding to the sub-national BLU in line with an investment dynamic determined by financial experts, which changes on an annual basis in terms of the amount and frequency of transfers required (Bladon et al., 2014). This could result in a scenario whereby the management authority of TF falls to the national BLU, which utilizes different operational features and budget-cycle timelines (MoF Regulation PMK 129/PMK.01/2019), implying different coordination dynamics and potentially tougher criteria with which the sub-national Papuan governments would be required to comply.

Looking on the bright side, the aforementioned capacity challenges should help Papua to become better prepared and more responsive to the needs of various different TF management authorities. Nevertheless, failure to address these issues may disrupt TF institutions' ability to optimize their investment earnings, as their sources of funding, especially with regards to amount and stability, become unpredictable due to the lack of sub-national Papuan governments' capacity. Therefore, even with the best financial experts at both the national and sub-national BLU, the capacity of TF management to provide reliable earnings may still be in question if sub-national Papuan governments do not have the capacity to align with the experts' requests.

5.3. Distributing Earnings from TF to the Rightful Beneficiaries

The lack of clarity surrounding official ownership of natural resources in Papua raises a legal issue in relation to TF beneficiaries. As stated in a regulation on indigenous (*adat*) forest and private forest (MoEF Regulation no 17/2020, Art. 5), indigenous peoples have the right to use and take advantage of forests, but do not have ownership rights (Fatem et al., 2018; Sari et al., 2018). This confuses matters on use and ownership when it comes to potential economic value from forest resources derived from the land of indigenous peoples.

This anomaly, that indigenous peoples do not own the resources associated with their land, is the source of much debate and economic dialogue. Where should the economic value be allocated, for instance? Should it flow to indigenous people based on their *ulayat* rights or to the national government, in respect to their sovereignty over natural resources? Resolving this issue will be essential to establishing a TF, considering that such

potential economic value, once monetized, represents a vital source of funding. To date, regulations have not reflected the importance of this matter, but have rather obfuscated this issue or muddied the waters with regards to allocation and distribution of TF earnings to beneficiaries. Unclear or inconsistent regulations have led to a number of contradictions in this case. For example, Papuans can propose themselves as the beneficiary of a TF via a direct benefit-beneficiary link, while simultaneously occupying a relatively weak position. There are currently no existing regulations in Papua (see 4.1) that fully identify OAP groups as beneficiaries of TF earnings; although OAP groups' welfare is mentioned and several SAPR acknowledge OAP groups' ownership and rights to manage natural resources and land, the context remains general, conditional and not specifically tied to TF earnings. This also applies to national law, wherein any mention of indigenous groups as owners of natural resources and beneficiaries of TF remains ambiguous.

With regards to finance, one of the biggest obstacles to sharing TF benefits with OAP groups is multi-tiered intermediaries. We maintain that intermediaries can encourage more strategic and contextual planning for the use of funds for OAP groups (Engel et al., 2008; Pagiola & Platais, 2007; Landell-Mills & Porras, 2002). For example, as an intermediary, sub-national governments should exercise broader authority to allocate TF finance to public services, with a view to improving the welfare of the Papuan people. These interventions should be well-planned and take local conditions into account, in order to deliver positive and lasting impacts for beneficiaries (Lewis et al., 2020; Pagiola & Platais, 2007). In addition, according to Ritzer-Angerer (2018), intermediaries can also help to increase trust and play a role as advisors, connecting the needs of beneficiaries with the resources available. In the context of Papua, intermediaries can act as a person whose judgment is trusted by trustors, so that investment opportunities can increase, and the Papuan TF's needs can be met.

There are a number of reasons why this is not necessarily the case. In general, the involvement of intermediaries poses certain risks. First, it drives operational costs higher, including payment for goods and services by intermediary institutions to manage and implement programs and distribute benefits to beneficiaries. Furthermore, intermediaries' operational costs take up a substantial part of TF earnings when compared to program implementation costs (Bladon et al., 2014). Ultimately, this takes money and resources out of beneficiaries' pockets.

Second, formalizing the use of intermediaries may also undermine beneficiary inclusion (Cummine, 2016), taking the decision-making process for TF-financed programs largely out of their hands. In this scenario, OAP groups as beneficiaries would no longer have a say in how TF resources are used (Myers et al., 2015; Pham et al., 2010; Muñoz-Piña et al., 2007). Formalizing the role of intermediaries can therefore be considered counterproductive, especially in places where the ownership of land remains contested. Finally, if intermediaries are indeed chosen as a TF distribution mechanism, it is vital to ensure that TF earnings are properly distributed (e.g., through government development programs) and that they reach the intended OAP beneficiary groups.

Success in this regard requires integrated and technical planning capacities; essentially being able to identify and reflect upon the complexity of conditions at ground level, while also viewing them in their wider context (Probst & Bassi, 2014). This includes knowledge of existing development programs and the institutions responsible for them, along with an awareness of the degree to which such programs have been successful in achieving their intended outcomes. Decisions made by sub-national Papuan governments have implications beyond the Papuan development context; for example, allocating TF earnings to one development program in Papua could potentially impact the overarching development planning, financing and licensing dynamics of a given jurisdiction (Samadhi & Mumbunan, 2015). Being cognizant of this issue can help to ensure that development programs chosen to receive TF earnings will positively impact OAP groups. Cooperative action is needed; regrettably, integrated decision-making processes continue to be impeded by the many siloed operational structures that remain the norm in Indonesia (Samadhi & Mumbunan, 2015).

Once a development program has been decided, knowing which institution the program belongs to, along with its program and budget planning procedures (i.e., technical planning capacity) becomes essential. For example, if sub-national Papuan governments operating under a sub-national development agency (Bappeda) identify programs under district environmental services to receive TF earnings, they need to integrate TF earnings by mobilizing them from the TF institution to the sub-national financial system (e.g., a sub-national financial and asset management agency) where program budgeting for district environmental services usually takes place. Whilst planning consultancy may help them in determining the most efficient approach for the mobilization process, Papua's Bappeda require the technical capacity to ensure TF earnings can reach the district environmental services and fund their programs (rather than going through the complex distribution channels from sub-national BLUs to financial and asset management agencies). This also poses a challenge, due to a lack of capacity among sub-national Papuan governments and difficulties in coordinating between district and provincial government (discussions with sub-national Papuan governments, 2021).

In order to ensure that TF earnings are distributed to the rightful beneficiaries and achieve the intended outcomes, integrated and technical capacities must be built. Conversely, failure to address current capacity shortcomings as mentioned above may result in TF earnings being lost in the distribution processes, or in a worst-case scenario, being allocated to development programs that jeopardize rather than safeguard the welfare of OAP groups.

6. Conclusion

TF is a prominent financing instrument with the potential to help Papua achieve its sustainability targets. Our analysis centered on issues of uncertainty or inconsistency, as there are various different legal documents related to TF that coexist together. This situation leads to multiple interpretations of how TF should be implemented in Papua and creates a number of legal, financial, and capacity challenges. In response, these challenges require systemic change, such as refining existing or establishing new, clearer legal definitions; a crucial step towards establishing a fully operational and effective Papuan TF. In light of these issues, there are certain things to be considered moving forwards.

First, a concrete definition of natural resource revenues is required, so there can be clarity over which sources of funding are available and can be tapped for TF in Papua. This definition should fully recognize and respect the indigenous context in Papua. Secondly, sub-national Papuan government authority remains somewhat ambiguous under the existing legal arrangements pertaining to TF management. To enjoy maximum earnings from TF, Papua's position and level of management authority needs to be strengthened and clarified. This includes establishing a clear legal basis that explicitly confirms whether management authority is at the national level or with sub-national Papuan governments, so Papua can better anticipate financial risks and the government capacity needs associated with different TF management authorities. Finally, regarding the matter of TF earnings distribution, a legal basis to regulate natural resources ownership, along with unconditional guarantees for OAP groups as the main beneficiaries of TF, must be formulated to ensure their rights are upheld.

Our initial research findings have carved a path towards a clearer understanding of the challenges associated with establishing a Papuan-based TF endowment model. Further research could therefore make use of these findings to ask a number of pertinent questions – for example, are there ways to reconcile the current contradictions in legal arrangements? And if so, how can the existing conditions be improved? How can these changes help Papua to deliver its sustainability agenda? Further research could also detail the pros and cons of following a particular legal standing in the establishment of a Papuan TF model, or investigate the feasibility of establishing more than one TF in Papua, with each operating on a different legal basis.

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References

- Amindoni A, Henschke R. The Burning Scar: Inside the Destruction of Asia's Last Rainforests. BBC Indonesia News. 2020 Nov 12 [Cited 2022 June 17]. Available from: <https://www.bbc.com/news/world-asia-54798452>.
- Andjelkovic A, Radosavljevic M. The Length of the Distribution Channel as A Factor of Its Efficiency. *Strategic Management* 25(2):9-17. 2020. doi: 10.5937/StraMan2002009A.
- Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology: Theory and Practice*. 2005; 8(1): 19–32. doi: 10.1080/1364557032000119616.
- Austin KG, Mosnier A, Pirker J, McCallum I, Fritz S, Kasibhatla PS. Shifting Patterns of Oil Palm Driven Deforestation in Indonesia and Implications for Zero-Deforestation Commitments. *Land Use Policy*. 2017; 69: 41–48. doi: 10.1016/j.landusepol.2017.08.036.
- Bayon R, Deere C. Financing biodiversity conservation: The potential of environmental funds. 1998.
- Bladon A, Mohammed EY, Milner-Gulland EJ. A Review of Conservation Trust Funds for Sustainable Marine Resources Management: Condition for Success. London: IIED Working Paper. 2014.
- Blöndal JR, Hawkesworth I, Choi HD. Budgeting in Indonesia. *OECD Journal on Budgeting*. 2009; 2. ISSN 1608-7143/OECD.
- Borge L, Brueckner J, Rattsø J. Partial fiscal decentralization and demand responsiveness of the local public sector: Theory and evidence from Norway. *Journal of Urban Economics*. 2014; 80: 153-163. Doi: 10.1016/j.jue.2014.01.003.
- Cámara-Leret R, Schuiteman A, Utteridge T, Bramley G, Deverell R, Fisher L, McLeod J, Hannah L, Roehrdanz P, Laman T, Scholes E, De Fretes Y, Heatubun C. 2019. The Manokwari Declaration: Challenges ahead in conserving 70% of Tanah Papua's forests. *Forest and Society*. 2019; 3(1): 148. doi: 10.24259/fs.v3i1.6067.
- Cámara-Leret R, Frodin D, Adema F, Anderson C, Appelhans M, Argent G et al. New Guinea has the world's richest island flora. *Nature*. 2020;584(7822):579-583. doi: 10.1038/s41586-020-2549-5.
- Cooper I, Priestlet R. Real Investment and Risk Dynamics. *Journal of Financial Economics*. 2010; 101: 182-205. doi: 10.1016/j.jfineco.2011.02.002.
- Corlett RT, Primack RB. *Tropical Rain Forests: An Ecological and Biogeographical Comparison*. 2nd Ed. Wiley-Blackwell; 2011.
- Cummine A. *Citizen's Wealth: Why (and how) sovereign funds should be managed by the people for the people*. New Haven and London: Yale University Press; 2016.
- DGoFB, MoF (Directorate General of Fiscal Balance, Ministry of Finance) [Internet]. Postur TKDD Nasional. c2021 – [cited 2022 June 17]. Available from: <https://djpk.kemenkeu.go.id/portal/data/tkdd?tahun=2021&provinsi=&pemda=->.
- Ekawati S, Subarudi, Budiningsih K, Sari GK, Muttaqin MZ. Policies Affecting the Implementation of REDD+ in Indonesia (Cases in Papua, Riau, And Central Kalimantan). *Forest Policy and Economics*. 2019; 108. doi: 10.1016/j.forpol.2019.05.025.
- Engel S, Pagiola S, Wunder S. Designing payments for environmental services in theory and practice: an overview of the issues. *Ecological economics*. 2008; 65(4): 663-674. doi: 10.1016/j.ecolecon.2008.03.011.
- Fatem SM, San AW, Satyawan P, Muhammad AKS, Andita AP, Ahmad M. Camouflaging Economic Development Agendas with Forest Conservation Narratives: A Strategy of Lower Governments For Gaining Authority In The Re-Centralising Indonesia. *Land Use Policy*. 2018; 78: 699-710. doi: 10.1016/j.landusepol.2018.07.018.

-
- Gaveau DLA, Santos L, Locatelli B, Salim MA, Husnayaen, Meijaard E, Heatubun C, Sheil D. Forest loss in Indonesian New Guinea (2001-2019): Trends, drivers, and Outlook. *Biological Conservation*. 2021; 261:109225. doi: 10.1016/j.biocon.2021.109225.
- GEF. Evaluation of Experience with Conservation Trust Funds. GEF Secretariat; 1998.
- Government Regulation (GR) no 107 in 2021 on Revenue, Management, Supervision, and Master Plan for the Acceleration of Development in the Framework of the Implementation of Special Autonomy for Papua Province (Peraturan Pemerintah No 107 tahun 2021 tentang Penerimaan, Pengelolaan, Pengawasan, dan Rencana Induk Percepatan Pembangunan Dalam Rangka Pelaksanaan Otonomi Khusus Provinsi Papua).
- Graham B. Trust Funds in the Pacific: Their Role and Future. The Asian Development Bank Publication; 2015.
- Kanowski P, Ballard C, Alhamid H. Forests for the people?: Special autonomy, community forestry cooperatives and the apparent return of customary rights in Papua. In: Warren C, McCarthy JF, editors. *Community, Environment and Local Governance in Indonesia: Locating the Commonweal*. Taylor & Francis Group, Routledge; 2009. Pp 145-165.
- Knight C, Stephenson J. National REDD+ Funding Frameworks and Achieving REDD+ Readiness - Findings from Consultation. London: Conservation Finance Alliance and PriceWaterhouse Coopers (PwC); 2007.
- Landell-Mills N, Porras I. Silver Bullet or Fools' Gold? A Global Review of Markets for Forest Environmental Services and their Impact on the Poor. IIED; 2002.
- Law no 5 in 1960 on Agrarian Principles (*Undang-undang No 5 Tahun 1960 tentang Peraturan Dasar Pokok-pokok Agraria*).
- Law no 21 in 2001 on Special Autonomy for Papua Papua Province (*Undang-undang No 21 Tahun 2001 tentang Otonomi Khusus Bagi Provinsi Papua*).
- Law no 2 in 2021 on the Second Amendment to Law no 21 in 2001 on Special Autonomy for Papua Papua Province (*Undang-undang No 2 Tahun 2021 tentang Perubahan Kedua atas Undang-Undang No 21 Tahun 2001 tentang Otonomi Khusus bagi Provinsi Papua*).
- Law no 1 in 2022 on Intergovernmental Fiscal Relation between Central Government and Sub-national Government (*Undang-undang No 1 Tahun 2022 tentang Hubungan Keuangan antara Pemerintah Pusat dan Pemerintah Daerah*).
- Lele G. Asymmetric Decentralization, Accommodation and Separatist Conflict: Lessons from Aceh and Papua, Indonesia. *Territory, Politics, Governance*. 2021. doi: 10.1080/21622671.2021.1875036.
- Lewis B, Nguyen H, Hendrawan, A. 2020. Political accountability and public service delivery in decentralized Indonesia: Incumbency advantage and the performance of second term mayors. *European Journal of Political Economy*. 2020; 64 (101910): 1-15. doi: 10.1016/j.ejpoleco.2020.101910.
- Mafira T, Mecca B, Muluk S. Indonesia Environment Fund: Bridging the Financing Gap in Environmental Programs. *Climate Policy Initiative*; 2020.
- Marshall AJ. The Diversity and Conservation of Papua's Ecosystem in Marshall AJ and Beehler BM: *The Ecology of Papua Part One*. Singapore: Periplus Editions; 2007.
- MoEF (Ministry of Environment and Forestry) Regulations no 17 in 2020 on Indigenous Forest and Private Forest (*Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia No P.17/Menlhk/Setjen/Kum.1/8/2020 Tentang Hutan Adat dan Hutan Hak*).
- MoF (Ministry of Finance) Regulation no 129/PMK.01/2019 in 2019 on Guidelines for Public Information Services by Information Management and Documentation Officers of the Ministry of Finance and Equipment of Information Management and Documentation Officers of the Ministry of Finance (*Peraturan Menteri Keuangan Republik Indonesia No 129 / PMK.01/ 2019 tahun*

-
- 2019 tentang Pedoman Layanan Informasi Publik oleh Pejabat Pengelola Informasi dan Dokumentasi Kementerian Keuangan dan Perangkat Pejabat Pengelola Informasi dan Dokumentasi Kementerian Keuangan).
- MoF (Ministry of Finance) Regulation no 129/PMK.05/2020 in 2020 on Guidelines for the Management of Public Service Agencies (*Peraturan Kementerian Keuangan No 129/PMK.05/2020 tahun 2020 tentang Pedoman Pengelolaan Badan Layanan Umum*).
- MoFA Indonesia (Ministry of Foreign Affairs Indonesia) 2021: MoFA Indonesia. Indonesia Terminates the Lol on REDD+ with Norway. MoFA Indonesia. 2021 Sep 10 [cited 5 April 2022]. Available from: <https://kemlu.go.id/portal/en/read/2912/berita/indonesia-terminates-the-loi-on-redd-with-norway>
- Mudiyarso D, Purbopuspito J, Kauffman JB, Warren MW, Sasmito S, Donato D, Manuri S, Krisnawari H, Taberima S, Kurnianto S. The Potential of Indonesian Mangrove Forests for Global Climate Change Mitigation. *Nature Climate Change*. 2015; 5(12): 1089-1092. doi: 10.1038/nclimate2734.
- Muñoz-Piña C, Guevara A, Torres J M, Brana J. Paying for The Hydrological Services of Mexico's Forests: Analysis Negotiations, And Results. *Ecological Economics*. 2008; 65: 725-735. doi: 10.1016/j.ecolecon.2007.07.031.
- Myers R, Ravikumar A, Larson A M. Benefit Sharing in Context: A Comparative Analysis of 10 Land-Use Change Case Studies in Indonesia. *CIFOR info briefs no. 118*; 2015. doi: 10.17528/cifor/005585.
- Nurhasan M, Maulana A, Ariesta D, Usfar A, Napitupulu L, Rouw A, Hurulean F, Hapsari A, Heatubun C, and Ickowitz A. Toward a Sustainable Food System in West Papua, Indonesia: Exploring the Links Between Dietary Transition, Food Security, and Forests. *Frontiers in Sustainable Food Systems*. 2022; 5. doi: 10.3389/fsufs.2021.789186.
- Nurfatriani F, Darusman D, Nurrochmat DR, Yustika AE, Muttaqin MZ. Redesigning Indonesian Forest Fiscal Policy to Support Forest Conservation. *Forest policy and Economics*. 2015; 61: 39-50. doi: 10.1016/j.forpol.2015.07.006.
- Obidzinski KR, Andriani H, Komarudin, Andrianto A. Environmental and social impacts of oil palm plantations and their implications for biofuel production in Indonesia. *Ecology and Society*. 2012; 17(1): 25. doi: 10.5751/ES-04775-170125.
- Pagiola S, Platais G. *Payments for Environmental Services: From Theory to Practice*. World Bank; 2007.
- Parsch C, Benjamin W, Margaretha PA, Craig N, Holger K, Julian S. 2022. Papua At The Crossroads: A Plea For Systematic Conservation Planning In One Of The Largest Remaining Areas Of Tropical Rainforest. *Frontiers In Forests and Global Change*. 2022; 5(763131). doi: 10.3389/ffgc.2022.763131.
- Pham TT, Campbell BM, Garnett S, Aslin H and Hoang MH. Importance And Impacts of Intermediary Boundary Organisations in Facilitating Payment for Environmental Services in Vietnam. *Environmental Conservation*. 2010; 37:64–72. doi: 10.1017/S037689291000024X.
- Presidential Regulation no 80 in 2011 on Trust Fund (*Peraturan Presiden No 80 tahun 2011 tentang Dana Perwalian*).
- Probst G, Bassi A. *Tackling Complexity A Systemic Approach for Decision Makers*. 1st ed. Sheffield: Greenleaf Publishing Limited; 2014.
- Resosudarmo BP., Manning C., and Napitupulu L. Papua II: Challenges for Public Administration and Economic Policy Under Special Autonomy. In: *Resosudarmo BP, Jotzo F, editors. Working With Nature Against Poverty: Development, Resources and The Environment in Eastern Indonesia*. Singapore: Institute of Southeast Asian Studies; 2009. pp. 59 - 73.
- Rifai-Hasan P. Development, Power, and the Mining Industry in Papua: A Study of Freeport Indonesia. *Journal of Business Ethics*. 2019 Nov; 89(2): 129-143. doi: 10.1007/s10551-010-0371-y.

-
- Ritzer-Angerer P. The role of intermediaries within trust rebuilding after financial crisis and encouraging implications for the existence of “calculative trust”. *Trust Research*. 2018; 8(1): 87–102; doi:10.1080/21515581.2018.1476870.
- Sadiawati D, Sholikin M, Nursyamsi F, Damayana G, Argama R, Rofiandri R et al. *Kajian Reformasi Regulasi di Indonesia: Pokok Permasalahan dan Strategi Penanganannya*. 1st ed. Jakarta: Yayasan Studi Hukum dan Kebijakan Indonesia (YSHK); 2019.
- Samadhi T, Mumbunan S. (Eds.), *Tambang, Hutan, dan Kebun Tata Kelola Perizinan dan Penerimaan Negara di Sektor Berbasis Lahan*. 2nd ed. Bogor: IPB Press; 2015.
- Sari, D., Mayastuti, A., Rianto, A. and Lutfiyah, Z. Indigenous people’s forest management to support REDD program and Indonesia one map policy. *IOP Conference Series: Earth and Environmental Science*. 2018; 200: 1 – 10. doi: 10.1088/1755-1315/200/1/012048.
- Sasmito SD, Sillanpää M, Hayes MA, Bachri S, Saragi-Sasmito MF, Sidik F, Hanggara B, Mofu WY, Rumbiak VI, Hendri, Taberima S, Suhaemi, Nugroho JD, Pattiasina TF, Widagti N, Barakalla, Rahajoe JS, Hartantri H, Nikijuluw V, Jowey RN, Heatubun C, zu Ermgassen P, Worthington TA, Howard J, Lovelock CE, Friess DA, Hutley LB, Murdiyarso D. Mangrove Blue Carbon Stocks and Dynamics are Controlled by Hydrogeomorphic settings and land-use change. *Global Change Biology*. 2020; 26:3028-3030. doi: 10.1111/gcb.15056.
- Sharifi F, Levin I, Stone W, Nygaard A. Green space and subjective well-being in the Just City: A scoping review. *Environmental Science and Policy*. 2021; 120: 118-126. doi: 10.1016/j.envsci.2021.03.008.
- Sheriffdeen M, Nurrochmat DR, Perdinan, Abubakar HKA. Effectiveness of Emerging Mechanisms for Financing National Climate Actions: Example of The Indonesia Climate Change Trust Fund. *Climate And Development*. 2022. doi: 10.1080/17565529.2022.2057905.
- Shumais M, Mohamed I. What makes an environmental trust fund successful? A case study of the Maldives. *Climate Change*. 2020; 161(2): 327-344. doi: 10.1007/s10584-020-02700-x.
- Sloan S, Campbell MJ, M.Alamgir J, Engert FY, Ishida N, Senn J, Huther WF, Laurance. Hidden challenges for conservation and development along the Trans-Papuan economic corridor. *Environmental Science and Policy*. 2019; 92: 98–106. doi: 10.1016/j.envsci.2018.11.011.
- Special Autonomy Provincial Regulation (SAPR) or Perdasus of Papua Province Number 21 in 2008 on Sustainable Forest Management in Papua Province (Peraturan Daerah Khusus Provinsi Papua Nomor 21 Tahun 2008 Tentang Pengelolaan Hutan Berkelanjutan di Provinsi Papua).
- Special Autonomy Provincial Regulation (SAPR) or Perdasus of Papua Province Number 22 in 2008 on Protection and Management of Natural Resources of the Papuan Indigenous Law Community (Peraturan Daerah Khusus Provinsi Papua Nomor 22 Tahun 2008 Tentang Perlindungan dan Pengelolaan Sumber Daya Alam Masyarakat Hukum Adat Papua).
- Special Autonomy Provincial Regulation (SAPR) or Perdasus of Papua Province Number 23 in 2008 on the Ulayat Rights of Indigenous Peoples and Individual Rights of Indigenous Peoples to Land (Peraturan Daerah Khusus Provinsi Papua Nomor 23 Tahun 2008 Tentang Hak Ulayat Masyarakat Hukum Adat dan Hak Perorangan Warga Masyarakat Hukum Adat Atas Tanah).
- Special Autonomy Provincial Regulation (SAPR) or Perdasus of West Papua Province Number 9 in 2019 on Guidelines for Recognition, Protection, Empowerment of Indigenous Peoples and Customary Territories in West Papua Province (Peraturan Daerah Khusus Nomor 9 Tahun 2019 Tentang Pedoman Pengakuan, Pelindungan, Pemberdayaan Masyarakat Hukum Adat dan Wilayah Adat di Provinsi Papua Barat).

Special Autonomy Provincial Regulation (SAPR) or Perdasus of West Papua Province Number 10 in 2019 on Sustainable Development in West Papua Province (Peraturan Daerah Khusus Nomor 10 tahun 2019 tentang Pembangunan Berkelanjutan di Provinsi Papua Barat).

The Constitution of the Republic of Indonesia 1945 (*Undang-Undang Dasar Negara Republik Indonesia Tahun 1945*).

Vliet PV, Koning JD. High Returns from Low Risk: A Remarkable Stock Market Paradox. First Edition. Wiley; 2017. doi:10.1002/9781119357186.

Spergel B, Taieb P. Rapid Review of Conservation Trust Fund. Second Edition Working Group on Environmental Funds. Washington: CFA; 2008.

Straehl P, Ibbotson RG. The Long-Run Drivers of Stock Returns: Total Payouts and the Real Economy. *Financial Analysts Journal*. 2017; 73(3): 1-21. doi: 10.2469/faj.v73.n3.4.

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