

## Article

# Performance Auditing to Assess the Implementation of the Sustainable Development Goals (SDGs) in Indonesia

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**Abstract:** Regular assessment of progress on the implementation of Sustainable Development Goals (SDGs) is crucial for achieving the goals by 2030 yet such assessments often require extensive resources and data. Here, we describe a method using performance auditing as a novel approach for assessing the implementation of SDGs that would be useful for countries with limited resources and data availability but might also provide an alternative to choosing particular goals and implementing them one at a time, for all countries. We argue that, instead of monitoring all 169 targets and 242 indicators, a country could assess the effectiveness of its governance arrangement as a way of ensuring that progress on implementing SDGs is on track, and hence improve the likelihood of achieving the SDGs by 2030. Indonesia is an archipelagic upper-middle-income country facing challenges in data availability and reliability, which limits accurate assessments of SDG implementation. We applied a standardized performance audit to assess the effectiveness of current governance arrangements for the implementation of SDGs. We used the Gephi 0.9.2 software (Open sourced program by The Gephi Consortium, Compiègne, France) to illustrate the regulatory coordination among public institutions. We found that Indonesia's governance arrangements are not yet effective. They might be improved if Indonesia: (1) synchronize its SDG regulations; (2) redesigns its governance structure to be more fit for purpose; and (3) involves audit institutions in the SDG governance arrangements. These findings would likely apply to many other countries striving to implement the SDGs.

**Keywords:** governance; audit; Indonesia; SDGs; trade-offs

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## 1. Introduction

The United Nations (UN) Sustainable Development Goals (SDGs) are a powerful yet problematic concept. Sustainability is the process of living within environmental limits to counter ecological constraints [1]. Sustainable development, on the other hand, is the process of enhancing the quality of economic growth, where trade-offs between environmental, social and economic aspects of sustainability are sometimes unavoidable [2]. When the UN established the Sustainable Development Goals or SDGs, sustainability or sustainable development was broken down into 17 goals, with 169 targets and 232 indicators, all to be achieved by 2030 [3,4]. It is up to the implementing country which direction—sustainability or sustainable development—the SDGs are meant to take [5]. Hence, regular assessment of progress towards the achievement of SDG targets and goals is crucial for a

participating country to ensure the implementation of SDGs is always heading in the right direction [6].

Many approaches are used for assessing the implementation of SDGs. The International Council for Science suggests systems thinking and analysis to identify the interrelationship among SDGs and targets using a semi-quantitative matrix [7]. The Organization for Economic Cooperation and Development (OECD) performs comprehensive assessments of the achievement of all goals, targets and indicators for each participating country. OECD uses unique progress comparison methods using only data from the UN SDG indicators and the OECD databases [8]. The Sustainable Development Solutions Network (SDSN) uses decision tree, normalization and weighting, and aggregation of both official and non-official data [9,10]. Moreover, Voluntary National Reviews (VNR) consist of a wide range of approaches among different volunteer countries including gap analysis, multi criteria analysis, thematic reviews and systems thinking. The databases these approaches use draw upon various sources including the country's own national statistics [11]. The UN has a dedicated interactive website, SDGs Dashboard (<https://www.sdgdashboard.org/> accessed on 12 December 2021), that enables stakeholders from any country to put their information regarding the SDGs onto this online platform. All these assessment approaches require extensive data and resources to produce reliable analyses and results, which present challenges to countries when these information sources are not available.

Here, we propose a novel approach to assessing progress on the implementation of SDGs, which involves performance auditing. One reason this approach was adopted is because of the lack of data in Indonesia. Obtaining reliable data in an archipelagic developing country, spanning more than 17,000 islands and populated by 275 million people is a major task [12,13]. Indonesia's administrative offices, consisting of 34 provinces, and 514 districts or cities with contrasting wealth and social capacity [14], were faced with complex tasks even before the introduction of the SDGs [15]. The need for reliable and extensive data and resources has made assessing progress on SDGs implementation in Indonesia, challenging.

Another reason we used this approach is that it provides the possibility of implementing the SDGs with all of their targets and indicators in a holistic way rather than choosing particular goals and implementing them one at a time, which is what is currently happening in other countries. Achieving the SDGs separately will be difficult because some goals and targets contradict one another. Achieving one target might mean that it is impossible to achieve some others. Assessing the effectiveness of governance is to understand to what extent a country would like to balance its achievement for SDGs in general when priorities have to be set and trade-offs have to be made.

The objective of this study is to explore if performance audits can be used to assess the effectiveness of governance arrangements for implementing the SDGs. By effectiveness, we mean that the goals are achieved, to the extent it is possible, in a harmonious arrangement regardless of the conflicting nature of some targets. In other words, we assess whether the collaborative processes among governments, businesses, communities, and NGOs to achieve shared objectives are up to the task of achieving all 17 SDGs, and their 169 targets. We argue that a performance audit mechanism can be used to assess whether the existing governance arrangements allow for different priorities to be reconciled or for trade-offs to be made among the many different stakeholders and their different social, cultural, and economic conditions. To test this idea, we use performance audit methods to assess the effectiveness of the governance of SDG implementation in four different provinces of Indonesia, as case studies. We asked if the current governance arrangements would be effective and if there was room for improvement. We used this process to determine if a performance audit would be useful for assessing progress on the implementation of SDGs.

There are other approaches for assessing governance such as using quantitative scoring and qualitative checklists [16–18]. While these methods are suitable for assessing

governance, collecting reliable data in Indonesia is challenging due to the country's complexity [19]. Auditing is more practical because it accommodates data verifications as part of the process. Moreover, performance audit is already a routine procedure embedded in Indonesia's Supreme Audit Institution (BPK) as it is in most other countries. If performance auditing is found to be a successful way of assessing progress, then BPK and similar institutions in other countries could accommodate auditing the effectiveness of governance arrangements for implementing SDGs into their regular assignments.

The rest of this paper is structured in the following way. Section 2 reviews the literature on principles and approaches to assessing the effectiveness of governance arrangements and identifies four criteria of affective governance to be used for the audit. Section 3, the methods, provides details of the research methodology. Standardized audit methods by International Standard for Supreme Audit Institutions (ISSAI) were applied. We then used these methods to assess the governance of SDG implementation in the four provinces: Riau, Maluku, South Sumatra (Sumatera Selatan, or Sumsel), and West Nusa Tenggara (Nusa Tenggara Barat, or NTB). Section 4 describes our study sites, which are the four selected provinces. Section 5 presents the results, including audit findings. Section 6 is the discussion and Section 7 is the conclusion.

This study should contribute to assisting Indonesia and other similar countries with limited data and resources, to conduct better monitoring on the progress of implementing SDGs to successfully achieve the 2030 agenda.

## 2. Assessing the Effectiveness of Governance Arrangements

Effective governance—a step further than good governance—emphasizes the capacity of all governance actors—governments, the business sector, local communities, and NGOs—within a specific governance arrangement, to compromise their different agendas and achieve their shared goal(s) together [20,21]. Yet, the availability of resources and the capacities of governance actors change over time. Hence, unlike the qualities of good governance, universally applicable criteria on what constitutes effective governance have not yet been developed.

Ostrom [22] in her study of the governance of common pool resources, proposed several principles of enduring self-organized governance arrangements including multi-level institutions, appropriation or fair distribution, unambiguous rights and obligations, common agreement, applied sanctions, in-built mechanisms for conflict resolution, delimited rights and monitoring. Rhodes [23] suggested that in “self-organizing, interorganizational networks”, effective governance should accommodate policy networks, reflexivity, and accountability. Kemp et al. [24] and Voss et al. [25] in their research on sustainable development at the country level, proposed three features: structure, participation, and reflexivity. Callahan [26] suggested measurement, accountability, and participation for more effective governance of public sector government. Sørensen and Torfing [21] in their research on meta-governance networks for sustainable development, argued that effective governance should accommodate coherent policies, participation, coordination, legitimization, reflexivity, and interdependence or mutual trust. Glass and Newig [27] recommend four qualities of effective governance which are participation, reflexivity, policy coherence, and adaptation & democratic institutions. Malik [28] in his research on Islamic governance propose three criteria of effectiveness: accountability, participation and transparency. From these studies, we conclude that criteria for effective governance can be different from one governance arrangement to the next, depending on the challenges that need to be addressed.

A significant challenge for Indonesia in implementing SDGs is policy consistency. Before committing to the SDGs in 2015, Indonesia's overarching policy had been the exploitation of natural resources [29]. This policy saw Indonesia grow to become one of the world's top 20 richest countries, yet its rapid deforestation rate is a global concern [30]. Once it committed to the SDGs, Indonesia began to engage more in climate change

mitigation and environmental protection [31]. This shift in policy placed Indonesia on a rank of 98 out of 162 countries listed on the SDGs implementation index in 2016 [32].

The policy changed again in 2017. Many existing long-term contracts for natural resource exploitation were invoked to further develop infrastructure [33]. The need for Indonesia to feed its large population [34] has inevitably led to more development initiatives. Since 2017, Indonesia, partnering with China in the “Belt and Road Initiatives”, has constructed many infrastructure projects throughout the country [35]. Such policy changes require some trade-offs with environmental protection [36,37], as reflected in Indonesia’s more recent SDG implementation index [9,38]. Implementing the SDGs has made reconciling conflicts of interest in the use of natural resources a see-sawing affair [39]. Conflicting policies implies that abiding by one set of regulations may mean transgressing others [40,41]. Achieving one goal may hinder the achievement of other goals [42].

There are other challenges to assessing progress on the implementation of SDGs in Indonesia. Participation is problematic in a country of 17,000+ islands spanning 5,193,250 square kms with 275 million people. Reflexivity—the in-built mechanism to mitigate conflicts and uncertainty—is also a concern. Conflicting ideas and approaches to solving problems are frequent due to Indonesia’s widely diverse population of 1300+ ethnic groups. Likewise, natural disasters are a constant threat considering its geographic position, situated in an area of active tectonic activity resulting in volcanic eruptions and earthquakes, known as ‘the ring of fire’. Lastly, Indonesia’s complex government structure of 600 + jurisdictions is often a handicap for successful policy implementation.

From the review of principles and approaches above, we identified four criteria for assessing the effectiveness of the implementation of SDGs in Indonesia; policy coherence, adequate participation, agile reflexivity, and a governance structure fit for purpose. Table 1 summarizes these criteria, which become the audit criteria for the performance audit in Sections 3 and 5 below. Each one is described in more detail immediately following Table 1.

**Table 1.** Criteria for effective governance arrangements for the implementation of SDGs in Indonesia by the three types of governance structure (hierarchical, co-governance, self-governance) described in Section 2.4.

Governance Criterion	Hierarchical	Co-Governance	Self-Governance
Policy coherence	Government institutions hold the highest authority/responsibility to initiate SDGs implementation.	All stakeholders are authorized and responsible for implementing SDGs. However, certain stakeholder(s) are/is nominated as the intermediary.	All stakeholders are authorized and responsible for implementing SDGs in silos. Every stakeholder has an absolute autonomy to form clusters or to intervene with other clusters if necessary.
Appropriate participation	Collective action	Collective action and supportive Participation	Supportive participation
Agile reflexivity	Government initiates endeavors for: (1) socializing SDGs among all stakeholders (2) anticipating uncertainty and conflicts among stakeholders (3) anticipating future impacts and the possibility for failure	Intermediary initiates endeavors for: (1) socializing SDGs among all stakeholders (2) anticipating uncertainty and conflicts among stakeholders (3) anticipating future impact and the possibility for failure (4) stakeholder participation	All stakeholders initiate endeavors for: (1) socializing SDGs among all stakeholders (2) anticipating uncertainty and conflicts among stakeholders (3) anticipating future impact and the possibility for failure (4) stakeholder participation

	(4) stakeholder participation (5) formulating the strategy for achieving the SDGs (6) and targets.	(5) formulating the strategy for achieving the SDGs and targets.	(5) formulating the strategy for achieving the SDGs (6) and targets.
Structure fit for purpose	Strong state regulation & ar- rangement	Effective intermediary	Mechanism to allow interven- tion with other clusters if required.

### 2.1. Policy Coherence

The OECD framework defines coherent policies as optimizing trade-offs for economic, social, and environmental dimensions of SDGs and synchronizing the objective of international initiatives with domestic policies [8,43–46]. Picciotto and Nilsson et al. describe policy coherence as a condition in which both vertical policies—international, national, provincial and local levels—and horizontal policies—environment, agriculture, mining, infrastructure and industry sectors—enable synergistic collaboration of governance actors for achieving collective goals [42,47]. Lambin et al., describe synergistic collaboration as interactions between governance actors that are either substitutable for, or complementary with, one another [48]. Policy coherence then is synergistic policies that originate from multiple levels and multiple sectors, which enable acceptable trade-offs for all stakeholders to achieve both their collective and individual agendas.

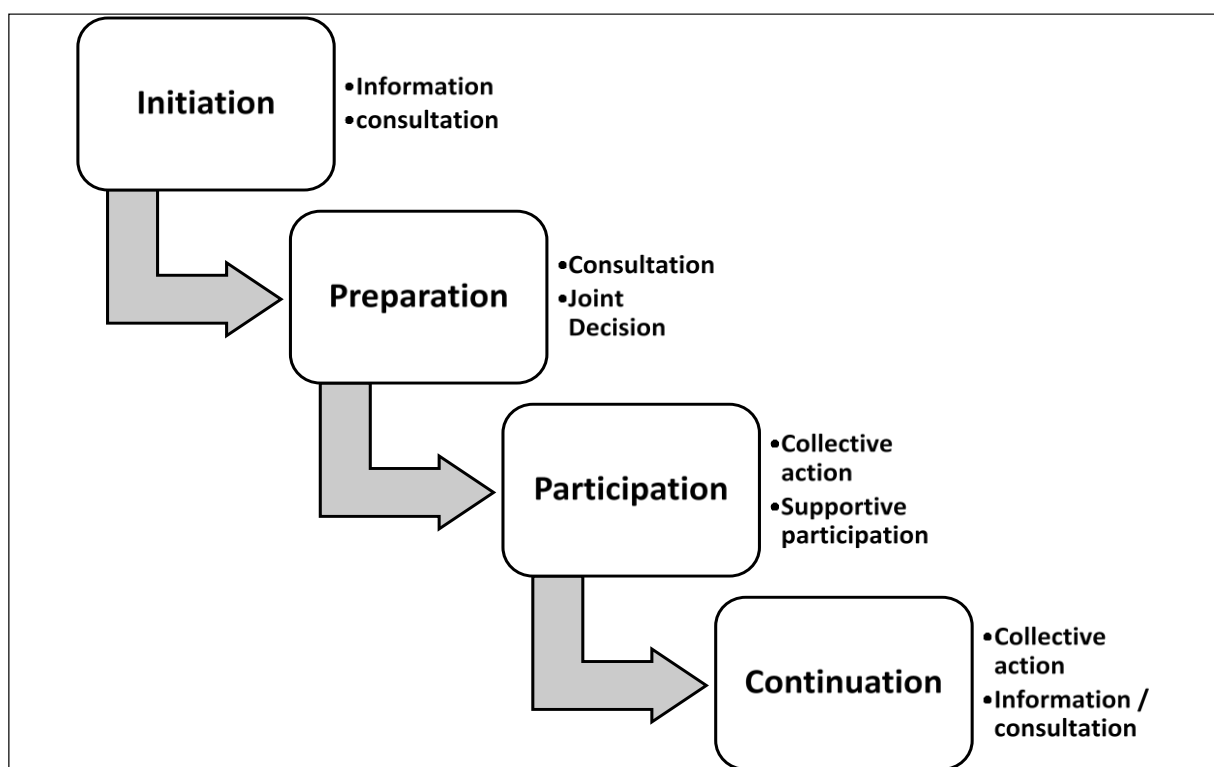
Authority for making regulations on the implementation of SDGs is exercised by more than 600 government institutions from multiple sectors at ministerial and provincial levels. Synthesizing the regulations with the literature, we therefore determine that the criteria for policy coherence are:

- (a) Multi-level policy coherence occurs when policies from the SDGs, government legislation, presidential regulations, ministerial regulations, and provincial regulations, are synergistic towards one another.
- (b) Multi-sector coherence occurs when policies among different ministries regarding the implementation of SDGs are synergistic towards one another.

### 2.2. Appropriate Participation

Participation is a process of making a collaborative decision among stakeholders about what they want, what the options are and what they plan to do to make it happen [49,50]. Appropriate participation, however, is about striking the right balance. Lack of participation leads to conflict among stakeholders and hinders the achievement of governance goals. Too much participation means extra work, extended time, and additional resources, which might not be worth the effort [51,52]. There are five levels of participation: (1) supportive, when the least powerful stakeholder, such as a local community, is granted power to control decision-making; (2) collective action, when all stakeholders form a partnership for decision making; (3) joint decision-making, when all stakeholders contribute their ideas and options for making the most acceptable decision, (4) consultation, when some dominant stakeholders become the decision-making body and offer some options to the rest, asking for feedback; and (5) information, when the decision-making body informs other stakeholders about the decision they have previously made [53,54]. Each decision-making process requires different levels of participation depending on which phase the participation is at, and which stakeholders contribute to the decision-making.

There are four phases of participation in a governance arrangement (Figure 1).



**Figure 1.** Levels of participation and the phases of governance [49,50,53,54,55]

The Initiation phase is the earliest stage where the ideas are introduced. At this stage, information and consultation are more appropriate as the decision-making is at the strategic level. The decision for ratifying SDGs and accommodating the targets into local governance arrangements, for example, does not need participation from every citizen of Indonesia.

The Preparation phase is when the collaborations and interactions of different stakeholders are thought through. At this stage, consultation and joint decision-making are more appropriate since the decision-making is at the managerial level. For example, the decision on designing the most effective governance arrangement for SDG implementation should involve collaborations between all relevant government institutions, technical managers, and experts, but does not need to involve all citizens.

The Participation phase is when governance is implemented. At this stage, collective action and supportive participation are the most appropriate since SDGs require all stakeholders to implement the goals and targets.

The Continuation phase is when governance has been implemented and has or has not reached its goals. At this stage, the level of participation depends on the success of previous stages. The level of participation can return to information and consultation if the current governance arrangement has successfully been implemented and new arrangements for other goals have been initiated. However, if it has not yet been successfully implemented, the level of participation can return to collective action and the process repeated [55,56].

According to Indonesia's SDG roadmap, Indonesia was in the Continuation phase during the time of this study (2018/2019) [57]. Implementation requires full participation of all stakeholders through either collective action or supportive participation [54]. Hence, the criterion for appropriate participation is whether the implementation of SDGs shows evidence of collective action or supportive participation among all stakeholders.

### 2.3. Agile Reflexivity

Reflexivity refers to the forward-looking, analytical, and investigatory mindset of trying to predict the long-term impact of, or problems or conflicts arising from, current actions of stakeholders [25,58]. Agile reflexivity is flexibility in finding solutions to policy problems and public service issues—especially in responding to the dynamics of public demands, preferences, and socioeconomic conditions [23]. There are five elements in an agile reflexivity: (1) an in-depth, multidisciplinary understanding across social, economic, and environmental aspects of sustainability; (2) adaptive strategies and experiments for anticipating uncertainty; (3) anticipation of long-term impacts of potential failure of a sustainability approach; (4) collective goal formulation; and (5) collaborative strategy-making [59]. We further adjusted these five elements with Indonesia's governance arrangements to determine the audit criterion as follows.

Indonesia possesses agile reflexivity if the following conditions are met: (1) an in-depth understanding of the 17 SDGs is achieved among all stakeholders; (2) there is an embedded mechanism for anticipating uncertainty and conflicts among stakeholders regarding the implementation of the SDGs; (3) there is an anticipation and projection of future impacts and the possibility of failure during the implementation of the SDGs; (4) there is evidence of the participation of stakeholders in the adoption of Indonesia's SDGs and targets; (5) there is evidence of the participation of stakeholders in the formulation of Indonesia's strategy for achieving the SDGs and targets.

### 2.4. A Governance Structure Fit for Purpose

A governance structure that is fit for purpose is one that optimizes the collaboration among governance actors for achieving the ultimate goals. Using this context, a fit for purpose governance structure for Indonesia ought to be able to: (1) facilitate the multi-level and multi-sectoral coherence of policies; (2) accommodate all levels of participation and (3) enable agile reflexivity in the whole governance arrangements. [60,61].

In theory, there are three different structures of governance, hierarchical, co-governance and self-governance [62,63]. The practice, however, often demonstrates a mixture of the three: (1) Hierarchical governance is a vertically structured arrangement where the stakeholders are stratified in a hierarchy (typically top-down). To be effective, a hierarchical governance structure should have a governing body with sufficient power and authority to influence the behavior of other stakeholders, voluntarily or involuntarily through reward and punishment [64]. (2) Co-governance is a horizontally structured arrangement where all stakeholders possess relatively equal power. An effective co-governance structure should have an intermediary and/or an established mechanism to facilitate communication, coordination, and collective actions among stakeholders for accommodating both different agendas and shared goals [65]. (3) Self-governance is a scattered arrangement where each of the stakeholders forms their own governance structure and collaborates in a social political autonomy. An effective self-governance structure should have three pre-conditions: (a) the establishment of policy and regulation is indirect and is not associated with particular stakeholders; (b) the governance structure can accommodate unstructured collaboration, such as network governance, poly-centric governance and meta-governance; and (c) the interactions among stakeholders are such that these governance actors possess the autonomy to govern themselves spontaneously [62,66].

The audit criterion for a governance structure that is fit for purpose was defined thus:

- (a) If the governance structure is hierarchical, the only governing bodies are Indonesian government institutions. These institutions should be equipped with the authority to issue policies and regulations and should have sufficient power or influence to enforce implementation by all stakeholders with inducements or punishments [67].
- (b) If the governance structure is co-governance, the governing body is an actor who takes on the role of an intermediary, which is agreed to by all stakeholders. The intermediary should possess adequate authority to limit and balance the power of all

governance actors to enable fair appropriation of power and influence among stakeholders [68].

- (c) If the governance structure is self-governance, none of the stakeholders are the absolute governing body. There should be a mechanism that allows all actors to have appropriate self-autonomy to form governance clusters and to enable intervention with other clusters if they are deemed to conflict with shared goals [69].

### 3. Methods: Audit Techniques and Audit Evidence

An audit is a comparison of “what should be” (the criteria) with “what is” (the condition), using at least two of four types of evidence: documentary, testimonial, physical, and analytical evidence [70]. Performance audit is an assessment on whether a program, system, or activity achieves its designated goals or if there is room for improvement [71]

Following the standard performance audit framework of International Standards for Supreme Audit Institutions (ISSAI) this audit was conducted in eight stages [71,72]: (1) audit objective; (2) audit questions; (3) audit criteria; (4) audit methods; (5) audit evidence; (6) audit findings; (7) audit conclusion and (8) audit recommendation.

#### 3.1. Audit Objective and Audit Question

The audit objective is the goal to be achieved. This objective is then formulated into researchable audit questions. In this audit, the goal was to assess whether the current governance setting is likely to enable achievement of the 17 goals and 169 targets by 2030. Hence, we question (1) Is the current governance arrangement of SDGs implementation in Indonesia effective for achieving the 17 goals by 2030? and (2) is there room for improvement?

#### 3.2. Audit Criteria

In Section 2 above, we reviewed the literature and identified and discussed four criteria of affective governance that if adopted, should enable Indonesia to achieve effective implementation of the SDGs. These four, policy coherence, appropriate participation, agile reflexivity and a structure fit for purpose, now become the criteria used in the audit described below.

#### 3.3. Methods and Data Collection

The method used to obtain data for the Performance Audit includes collecting documents, conducting interviews and validating the different data sources with each other. This is how we derived the information that was used to do the Performance Audit. This information is equivalent to data that has been subject to analysis in an experimental study. We conducted the Performance Audit based on the four criteria described in Section 2 and Table 1. We applied different audit methods to collect audit evidence for each criterion.

For the first criterion, Policy Coherence, we examined data regarding the multi-level and multi-sectoral policies for the adoption of SDGs in Indonesia. For multi-sectoral coherence, we identified which ministries are given responsibility to implement each goal and we mapped the regulations issued by these ministries for accommodating the SDGs. For multi-level coherence, we traced the derivation of the SDGs to government legislation, presidential regulations, ministerial regulations and provincial regulations.

For the second criterion, Appropriate participation, we collected data from online journals, websites, media and databases to determine if there was some sort of online platform for participation of all stakeholders. We also conducted interviews with local communities, businesses, government officials and NGOs to confirm the previous information and collect any additional supporting documents or evidence.

For the third criterion, Agile reflexivity, we obtained data from documents on law, legislation, and regulations from government institutions regarding the strategic policy



for unpredictable situations, conflicts and long-term trade-offs. We then conducted interviews with representatives of all stakeholder groups to verify if the written policy had, in fact, been implemented.

For the fourth criterion, Structure fit for purpose, we gathered data on the interactions of multi-sectoral and multi-level policies through government documents, interviews and online websites, media and Indonesian Government repositories. We conducted multi-criteria analysis to map the relevant networks between relevant actors in SDG implementation. This analysis was done using the Gephi 0.9.2 software. This network analysis revealed the multi-actor interactions and the influence [73] each actor has relative to the other actors [74]. Margules et al., provide an introductory overview of this type of network analysis [75].

#### 4. Study Sites

Indonesia is an archipelago (Figure 2) that varies greatly from one place to another [76]. Java is the most populous and prosperous island in Indonesia, and hosts the capital city, Jakarta. Sumatra, Java's neighboring island to the west, is the second most populous. Both Riau and South Sumatra (referred to hereafter as Sumsel, a contraction of the Indonesian name, Sumatera Selatan) are found on this island. Rich in natural resources, its proximity to the capital city facilitates the distribution of wealth from Java to Sumatra [77]. At the other extreme, Maluku and West Nusa Tenggara (referred to hereafter as NTB, for the Indonesian name Nusa Tenggara Barat) are both made up of groups of smaller islands and are among the poorest provinces in Indonesia. Both are located a long way from Jakarta. They are situated in the Wallacea global biodiversity hotspot, named after Alfred Russel Wallace, the co-discoverer with Charles Darwin, of the theory of evolution. Wallacea is rich in biodiversity and has many rare and endemic species [78].



**Figure 2.** Map of Indonesia and showing the location of the four provinces used in this study. Inset: Riau, Sumsel (a contraction of Sumatera Selatan, South Sumatra), NTB (Nusa Tenggara Barat, West Nusa Tenggara), and Maluku. Images from Google maps.

These four provinces represent different degrees of priorities and trade-offs between development and conservation in Indonesia (Table 2). Riau is the fifth richest province in Indonesia. Some of the world's biggest corporations, including Asia Pacific Resources International Holdings Ltd. (APRIL) and Chevron, operate in Riau [79]. Similarly, Sumsel is the seventh richest province [80]. Both provinces illustrate Indonesia's development priority over conservation. In contrast, Maluku, the third poorest province [81], and NTB, the sixth poorest [82] represent provinces with conservation priorities. The data and observations used in this study were collected from Riau between 2017 and 2019, from Sumsel between 2016 and 2019, and from Maluku and NTB between 2017 and 2019.

**Table 2.** Differences among four provinces in Indonesia 2016–2018.

Description	Riau	Sumsel	Maluku	NTB
Wealth (Rupiah)	755 trillion	420 Trillion	43 Trillion	124 Trillion
Population	6.34 million	8.1 million	1.7 million	4.8 million
Development focus	Oil, plantations, forestry, mining	Oil, plantations, mining	Tourism, fisheries, spices, mining	Tourism, fisheries, Mining
Challenges	Corruption, inequalities, and climate change	Land use conflicts, deforestation, and climate change	Poverty, unemployment, and climate Change	Poverty, natural disasters, and climate change

[https://databoks.katadata.co.id/datapublish/2019/07/31/inilah-pdrb-34-provinsi-di-indonesia-pada-2018; \[76,77,81,82\]](https://databoks.katadata.co.id/datapublish/2019/07/31/inilah-pdrb-34-provinsi-di-indonesia-pada-2018; [76,77,81,82]) ; accessed on 12 December 2021).

## 5. Results (Audit Findings)

Our findings revealed gaps between criteria and conditions as shown in Table 3. The evidence for the findings (Condition column, Table 3) is provided in the discussion of each criterion at Section 7.

**Table 3.** Summary of audit findings.

Elements of Effectiveness	Audit Criteria	Condition	Result
- Policy coherence	Policies from the SDGs, Government Legislations, Presidential Regulation, Ministerial Regulations and Provincial Regulations are synergistic towards one another.	The UN SDGs complements the relevant Basic Law, Government Legislations Presidential Regulation, Ministerial Regulations and Provincial Regulations. The hierarchical government structure proclaimed in the Constitution of 1945, however, contradicts the co-governance SDGs structure suggested by the UN and adopted by the Ministry of Development Planning.	Lack of policy coherence
- Multi-level policy coherence	Policies among different ministries regarding the implementation of SDGs are synergistic towards one another	Some ministries contradict each other due to the conflicting nature of their sectors. Ministry of Public Works, Ministry of Industry, Ministry of Agriculture and Ministry of Mining naturally contradict the Ministry of Environment & Forestry as well as the Ministry of Investment & Marine Affairs.	
- Multi-sector policy coherence			
Appropriate Participation	Indonesia moved to the SDGs continuation stage in 2018.	The type of participation applied in Indonesia is currently still at the	Lack of appropriate participation

	Hence, the type of participation should be collective action or supportive participation	consultation stage. Some provinces in Indonesia therefore improvise with their own mechanism to enable more collective participation	
Agile reflexivity	Multidisciplinary understanding exists across social economic and environmental aspects of sustainability. Anticipation of uncertainty through adaptive strategies and experiments Anticipation of long-term impact of potential failure of a sustainability approach Collective goal formulation Collaborative strategy making	Lack of in-depth multidisciplinary understanding across social, economic, and environmental aspects of sustainability among stakeholders. Lack of adaptive strategies to anticipate uncertainty. Lack of anticipation of long-term impacts of the potential failure of sustainability approach. Lack of collective goal formulation. Strategy making not yet collaborative	Lack of reflexivity
Structure fit for purpose	The governance structure enables policy coherence, participation level and reflexivity mechanisms	Indonesian governance structure is a mixture of co-governance (without any intermediary) and self-governance (without any mechanism to adjust to one another), making it challenging to enable coherent policies, adequate participation and reflexivity mechanism	Structure is not fit for purpose

### 5.1. Policy Coherence

Vertically, almost all policies regarding the adoption of the SDGs from the UN to the country, and on to the local level, are coherent (Table 4). The 17 SDGs complement Indonesia's long-term development planning (RPJP) and National Five-Year Development Planning (RPJMN), which is underpinned by the national strategy of "Nawa Cita" or the nine goals [83]. Some issues, which have not yet been clearly addressed in both RPJP and RPJMN, such as gender equality and environment, are revealed by the SDGs, making it more likely that they will be addressed in future.

Indonesia's National Action Plan (RAN), on the implementation of the SDGs targets [84] is substitutable with the Annual Development Plan (RKP) 2018. The RKP is also the guideline for the Ministry of Finance to plan the national annual budget (RAPBN) and for each ministry to apply for its annual ministerial budget (APBN) [85]. Likewise, all four provinces have adopted the 169 targets from the RAN into their Provincial Action Plans (RAD).

Some ministries implement their specific SDGs programs only within a particular province. For example, the Ministry of Marine Affairs and Fisheries has its "Blue Economy" program in NTB; the Ministry of Environment and Forestry has its peat restoration and conservation program in Riau; the Ministry of Industry has its Special Economic Zone (KEK) in Sumsel; and the Ministry of Infrastructure has its development corridor project "Trans Maluku" in Maluku province. In all programs, the provincial governments have provided support and included the programs of the ministries in their own RAD [86]. The provinces' RAD is also substitutable with the provincial five-year development plan (RPJMD) and the provincial annual development plans (RKPD). The RKPD is the guideline for allocating the available resources and budgeting the relevant programs and projects in the provincial annual budget plan (RAPBD). This budget plan is established as the provincial Budget Plan (APBD) [87]. The annual reports of both Ministries and provincial governments on SDGs implementation and budget acquittals either complement or are substitutable with one another.

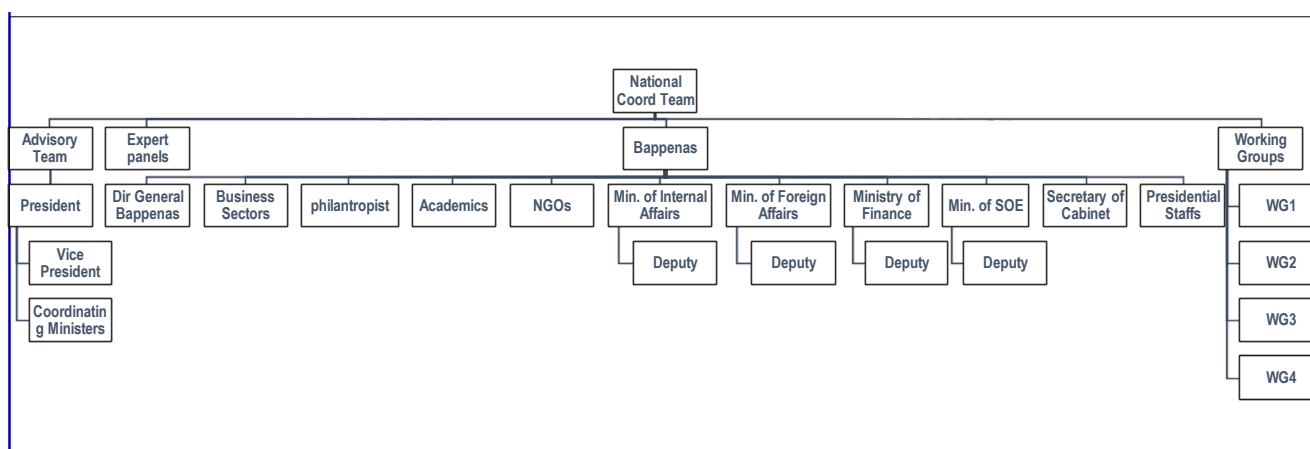
**Table 4.** Information identified from the performance audit that is used to assess the coherence of multilevel policies concerning the implementation of SDGs in Indonesia.

Rules/Regulations	Key Instruments	Remarks	
UN	UNSDG	17 Sustainable Development Goals	The UNSDG is synergistic with state principles, the constitution and the basic laws. Panca Sila and UUD 1945
State Principles	Panca Sila	5 principles of Indonesia	have not yet specifically mentioned
Constitution	UUD 1945	Article 4 (1)	environmental issues and gender equality, hence the SDG complement both well. UU 25/2004 and UU
	UU 25/2004	National development planning system	17/2007 are in substitution with the SDG since all the 17 goals have been devolved into these long term development planning. Meanwhile, UU
Basic Law	UU 17/2007	Long Term National Development Planning 2005/2025	23/2014 about local governments gives a mandate for local governments to support the national development plans.
	UU 23/2014	Local governments	These presidential regulations are substitutable with the long term development plan. All the 17 SDG are incorporated in the RPJMN and RKP.
Presidential Regulation	Perpres 2/2015	Mid Term National Development Planning 2015/2019 (RPJMN)	The presidential regulation no 59/2017 has tied all the adoption of SDG with its guidance on the process for adopting and implementing SDG in Indonesia.
	Perpres 59/2017	Implementation of Sustainable Development Goals in Indonesia	
	Perpres 72/2018	Annual National Development Planning 2019 (RKP)	
Ministerial regulation of National Development Planning	Permen 38/2017 and Permen 112/2017	Strategic coordination team for SDG implementation	The regulations are in coherence with SDG and all the higher level regulations, except for the Constitution 1945. In the constitution, Indonesia's structure is hierarchical, however, the UNSDG and Permen 7/2018 propose for non hierarchical structure.
	Permen 7/2018	Coordinating, planning, monitoring and reporting the implementation of SDG	
Provincial regulation	Perda 7/2014	Mid Term Development Planning Riau Province 2014/2019	The provincial regulations are in complementarity with the SDG and its targets. All provinces have accommodated SDG and most of its 169 targets into its Mid Term Development Planning (RPJMD), especially for targets from goal 1 to 10. None of the provinces have managed to devolve all the 169 targets due to various technical reasons, such as inapplicability to local context and lack of data integration to produce the required statistics.
	Perda 9/2014	Mid Term Development Planning Sumsel Province 2014/2019	
	Perda 1/2019	Mid Term Development Planning Sumsel Province 2019/2024	
	Perda 2/2014	Mid Term Development Planning NTB Province 2013/2018	
	Perda 1/2019	Mid Term Development Planning NTB Province 2019/2024	
Governor Regulation	Perda 21/2014	Mid Term Development Planning Maluku Province 2014/2019	
	PerGub 34/2019	Annual Development Planning 2018 Riau	All annual development planning complement the SDG and its targets.
	PerGub 26/2019	Annual Development Planning 2018 Sumsel	

PerGub 19/2019	Annual Development Planning 2018 NTB
PerGub 22a/2018	Annual Development Planning 2018 Maluku

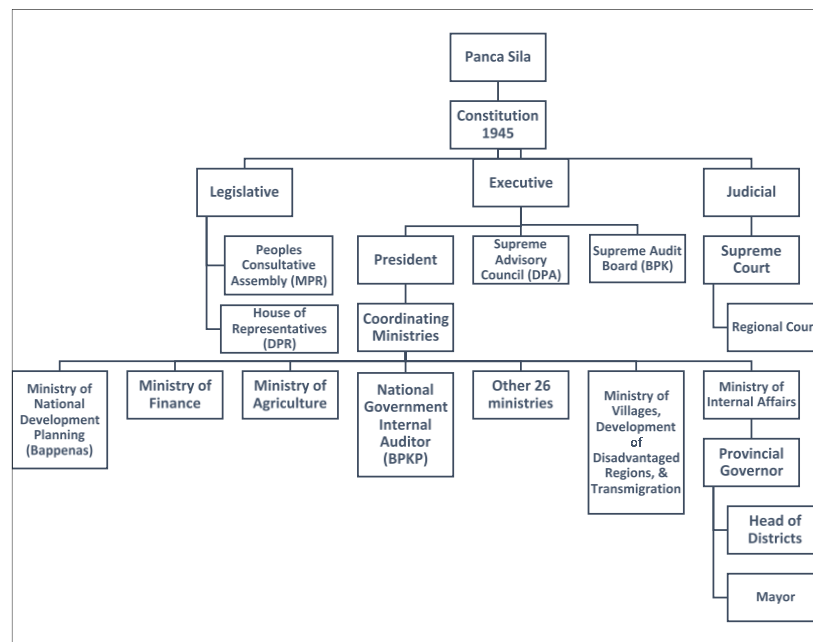
Source: <https://jdih.bpk.go.id/> (accessed on 12 November 2021).

The only incoherence in multi-level policies is regarding the governance structure. The UN proposes non-hierarchical governance for the implementation of SDGs [88]. In an effort to comply with this, Indonesia issued Presidential Regulation 59/2017 requiring the Ministry of National Development Planning (referred to hereafter as Bappenas) to take the lead on SDGs implementation in Indonesia [89]. Responding to the task, Bappenas later issued Ministerial Regulation 7/2018 explaining the mechanism for coordinating collaboration among all stakeholders for implementing SDGs (Figure 3) [84].



**Figure 3.** The co-governance structure arising from Presidential Regulation 59/2017 and ministerial regulation 7/2018, on the implementation of SDGs in Indonesia. Each Working Group (WG) has its own responsibility. WG1: social development; WG2: Economic Development; WG3: Environmental Development; WG4: Justice and Governance.

While authorizing Bappenas as the only coordinating ministry is coherent with non-hierarchical governance proposed by the UN, it contradicts the constitution of Indonesia on political structure. The constitution established five hierarchical levels of governance, where several coordinating ministries are designated to have higher authority than Bappenas, and other ministries have equal authority with Bappenas (Figure 4). Moreover, the constitution stipulates that the Ministry of Internal Affairs is to lead and coordinate with provinces and districts or municipalities [90]. Presidential Regulation No 59/2017, delegating the role of leading and coordinating all ministries to Bappenas, contradicts this stipulation (Figure 4).



**Figure 4.** The hierarchical structure of the governance of Indonesia according to the Constitution of 1945. There are 34 ministries, but for simplicity we have shown only the six ministries most relevant to the SDGs.

Horizontally, some policies for achieving the SDGs and their targets are incoherent. At the UN-level, some goals are synergistic with each other, and some require trade-offs [7,90,91]. Goals such as 1 Eliminate Poverty, 2 End Hunger, 3 Provide Good Healthcare and 4 Deliver Education, are likely to support one another. Yet, goals 6 Clean Water and Sanitation, 14 Life Below Water and 15 Life on Land, potentially may conflict with goal 9 Industry, Innovation, and Infrastructure, or vice versa [92,93]. Looking into the targets, similar potential contradictions are present; within the energy sector for example, about 69 targets are inconsistent with one another [94]. Nevertheless, these conflicting goals and targets seem less problematic—and even necessary at the UN-level—to accommodate the conflicting nature of sustainability itself.

When adopted by Indonesia at the national and local levels, the incoherent goals have made it hard for the relevant ministries to have synergistic policies. At the national level, Indonesia—through Bappenas—allocates SDGs and targets to the relevant ministries, who then adopt the goals into their specific SDGs action plans and ministerial strategic plans [95]. Due to the presence of conflicting goals and targets, these ministerial plans also conflict with one another [96].

We provide examples from three ministries. The Ministry of Agriculture, having been allocated goal 2 End Hunger, is focusing on national food security. Its action plan and development plan include giving more permits for agricultural plantations [95]. The Ministry of Industry, having been allocated goal 9 Industry, Innovation, and Infrastructure, is focusing on producing more industrial products [97]. These ministerial plans contradict the action plan of the Ministry of Environment and Forestry, which has been allocated goal 15 Life on Land. This ministry is focusing on conservation and restoration and one of its goals is to preserve forests as they are and to halt deforestation [98].

When these ministerial plans are implemented in any province, they clash further with the province's own local goals and targets. Riau is a rich province with its oil and mining concessions. The strategic plan of this province includes policies to ameliorate the plight of marginalized local Melayu people, to create more employment opportunities, and to facilitate a fairer distribution of wealth [99,100]. Riau's strategic plans are coherent

with those of the Ministry of Industry but might contradict those of the Ministry of Agriculture and the Ministry of Environment and Forestry.

Sumsel is also a rich province with abundant natural resources including oil, minerals, and forests [80]. Its development focus, however, is to resolve land uses conflicts and environmental degradation due to mining, mining exploration and plantation activities [101]. Sumsel's strategic plans are coherent with the Ministry of Environment and Forestry but might conflict with activities of the Ministry of Industry and the Ministry of Agriculture.

In contrast, Maluku, being poor and remote but rich in natural resources, has focused on attracting more investors, improving livelihoods, and promoting education and healthcare. It also aims at more resilience in the face of climate change and natural disasters [81]. Maluku's plans are coherent with those of the Ministry of Industry and the Ministry of Agriculture, but not necessarily with that of the Ministry of Environment and Forestry. Likewise, West Nusa Tenggara (NTB) province, located on resource-poor islands with a history of earthquakes, relies heavily on tourism and focuses its strategic policies on social capital, tourism facilities, and self-resilience [82,102]. In the case of NTB, the ministerial strategic plans are complementary since NTB's own strategic plans are not closely aligned to those of the ministries.

### 5.2. *Appropriate Participation*

Even though the adoption of the SDGs in Indonesia is officially in the continuation stage, our results show that participation is still at the consultation stage. Under Presidential Regulation 39/2019, every government institution in Indonesia ought to contribute its data to centralized databases: "One Data" and "One Map", which will be consolidated into a national website by Bappenas [103]. The official website "One Data" provides a national database of statistical information and all regulations issued (<https://data.go.id/> accessed on 24 September 2021) while "One Map" is the database for land delineations and spatial information (<https://tanahair.indonesia.go.id/portal-web> accessed on 24 September 2021).

Likewise, "SDG Indonesia One" is a platform to provide funding for SDGs infrastructure projects in Indonesia (<https://ptsmi.co.id/id/sdg-indonesia-one/> 24 September 2021). The Ministry of Finance established PT Sarana Multi-Infrastruktur (SMI) to raise voluntary contributions and/or funds from SDGs stakeholders and lend them to suitable companies interested in commencing projects. Besides the infrastructure projects, business actors are also invited to participate in the Indonesia Business Council for Sustainable Development (IBCSD) working group (<https://www.ibcsd.or.id/updates/join-our-sdgs-working-group/> accessed on 12 December 2021).

Many international NGOs participate in SDGs implementation through some forums and platforms such as the International NGO Forum on Indonesia Development (INFID) and SDG Philanthropy Platform (SDGPP) [104,105]. While these initiatives offer some opportunities for all stakeholders to contribute during the implementation stage, there is no evidence of collective actions or supportive participation among civil communities during decision-making [106].

Neither IBCSD working groups nor INFID—which initially was designated to support government, business actors and NGO collaborations [107] have yet been involved in collaborative decision-making with the government nor in supporting the participation of civil communities during implementation [108,109]. Neither is there any evidence that local communities or citizens participate in the implementation of SDGs beyond the consultation phase.

The four provinces endeavor to establish their own alternative mechanisms for accommodating civil societies in the provincial decision-making process. In Riau, many NGOs at provincial level assist societies to communicate their aspirations to the governor and the president on issues regarding the environment and the rights of indigenous people [109,110]. In Sumsel, the governor himself communicates with societies via Facebook pages and regularly visits communities. In Maluku, the governor established bottom-up

interactions by authorizing the spiritual or customary leaders to become government representatives, since this province is highly diverse and the governor himself is hardly a fair representation of all tribes [111]. In NTB, the governor used a religious approach by regularly praying at different mosques to gain support and grasp provincial community aspirations [112]. NTB people are strongly Islamic so a governor who is a highly respected Islamic scholar is an effective form of leadership [113]. While these attempts might work in the four provinces, the informal improvisations still need to be formalized into official arrangements to be sufficient and sustainable in the long run.

### 5.3. Agile Reflexivity

Our findings on the five elements of reflexivity (Table 2) are as follows:

- (a) Lack of in-depth, multidisciplinary understanding across social, economic, and environmental aspects of sustainability among stakeholders. The SDGs is a novel concept and the translation into Indonesian “*Tujuan Pembangunan Berkelanjutan*” or “continual development goals” is hardly adequate to grasp all the nuances of sustainable development [114]. Indonesia’s archipelagic territory also poses some challenges to adequate socialization throughout the regions. Capacity building programs, either through the UN Program, NGOs or government institutions simply cannot reach every stakeholder in some very remote places, who speak little to no Indonesian [115]. This is especially so since information and promotional activities are often conducted via national television and local radio [116], which are still considered luxuries for 34% of Indonesians living with limited electricity and access to technology [117]. Bappenas and the Provincial Planning Boards (Bappeda), which are expected to explain the concept locally in understandable ways, lack the capacity to fulfil this expectation. Our observation and interviews with some local communities in the four provinces showed that the SDGs is still a relatively foreign concept among local government officials and remains unfamiliar to many local communities.
- (b) Lack of adaptive strategies to anticipate uncertainty. Indonesia’s top-down approach requires provinces to prioritise implementing national programs ahead of their own [118]. However, challenges such as different budgetary and resource capacities confronting different provinces, can potentially trigger unavoidable conflicts and uncertainties during the implementation phase [119]. Maluku, a low-income province, could not afford to fund all 169 targets simultaneously, so has had to prioritise based on the availability of resources [120]. NTB, being exposed to a high risk of natural disasters, prioritizes funding for programs related to disaster anticipation and mitigation [121]. The rich provinces of Riau and Sumsel have different priorities, such as corruption, land use conflicts, inequalities, and environmental impacts [100,122]. Bappenas does not have any mechanism to perform the multi-sectoral multi-level assessments of these conflicting priorities, while the Supreme Audit Board (BPK) has the mechanism [123] but lacks the authority to link assessments to the implementation of SDGs.
- (c) Lack of anticipation of long-term impacts of potential failure. Bappenas has prepared some interventions if any institution fails to achieve its SDGs targets when the monitoring report is reviewed [67]. The monitoring report is a summary of the level of achievement of 169 SDGs targets by each government or non-government entity [83]. Hence, it provides information on current failure instead of anticipating any potential long-term impact or failure.
- (d) Lack of collective goal formulation. In all four provinces, Indonesia’s goals and targets are designated by Bappenas. The National Discussion on Development Planning (Musrenbangnas) and Regional Discussion on Development Planning (Musrenbangda) are the two formal processes held by Bappenas and Bappeda, respectively, to understand the aspirations of stakeholders and to facilitate discussions between governments and other governance actors [124]. However, there is no evidence that



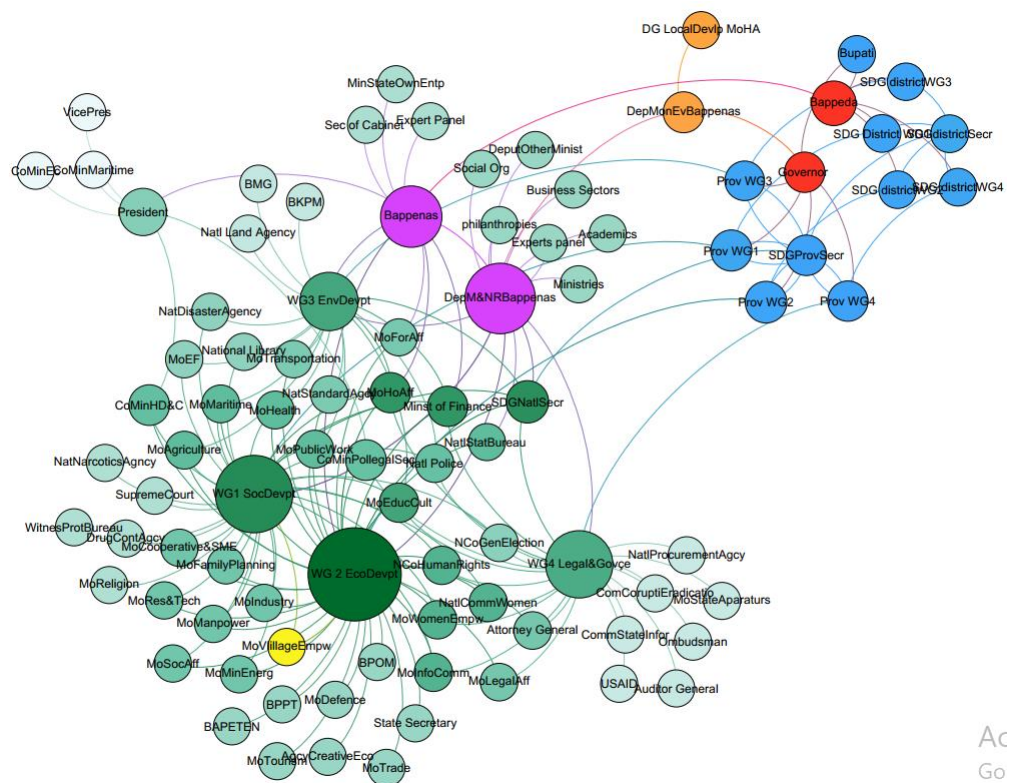
these companies, NGOs, and local communities were also involved in the process of adopting the SDGs into actual implementation strategies [125].

- (e) Strategy-making is not yet collaborative. Most strategies for implementation are determined by Bappenas and provincial departments are obliged to comply. Neither businesses, NGOs nor civil societies are involved in determining the overarching strategy. There are some websites offering opportunities to anyone to provide feedback (<https://www.sdg2030indonesia.org/> accessed on 12 December 2021). However, the level of engagement of these websites is low, suggesting that this effort is not popular enough to be effective. Some road shows and public hearings were also held to promote the SDGs as well as to gain public feedback [125,126]. However, this effort is limited given the size of the Indonesian population.

#### 5.4. Structure Fit for Purpose

According to the constitution, the governance structure of Indonesia is hierarchical (Figure 4). It is a multi-level arrangement where the government becomes the governing body and other stakeholders are influenced by the government's decision-making [127]. The president holds the most power and influence, followed by the ministries, provincial governors, heads of districts and mayors. Even after the decentralization policy of 2004, ministries have more power than the provincial governors regarding their own portfolios [128]. However, Presidential Regulation 59/2017 on the implementation of SDGs specified a co-governance model, where the president delegated power to Bappenas as the coordinator for other ministries implementing SDGs. Bappenas was given the role of intermediary between all stakeholders involved in the implementation of SDGs in Indonesia.

When we map both structures—the one according to the constitution, and the one resulting from Presidential Regulation 59/2017—onto the same diagram, we find that the governance arrangement is neither hierarchical nor reflects co-governance. Rather, the arrangement is more that of self-governance (Figure 5).



**Figure 5.** Self-governance arrangements for the implementation of SDGs in Indonesia, mapped using Gephi software [74]. Instead of a hierarchy, the governance actors form two clusters: national

(green nodes) and regional (blue nodes). The national cluster is much larger with many more actors than the regional cluster. Within the national cluster, Bappenas and its Directorates of Planning (purple nodes) coordinate well with the national coordinating team and working groups. Within the regional cluster, Bappeda and the provincial governors (red nodes) coordinate with local stakeholders. The only connection between national and regional governments is through Bappenas' Directorate of Monitoring and Evaluation and Directorate of Local Development from the Ministry of Home Affairs (orange nodes). Meanwhile, The Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (yellow node) is alienated from the regional governments. This lack of connectivity has caused the regional governments to become alienated from decision-making at the national level, forcing them to develop self-governance.

The national cluster (green nodes) is heavily weighted in size and complexity of actor interactions compared to the regional cluster (blue nodes). In the national cluster, Bappenas coordinates properly with the national coordinating team, such as the president, the ministries, the national working groups, and the national secretariat of SDGs. On the other hand, in the regional cluster, provinces and regional stakeholders have formed their own set of arrangements, which seem to be alienated from Bappenas and the national team. Even the Ministry of Village, Development of Disadvantaged Regions and Transmigration (yellow node) is estranged from local villages at the provincial and district levels. These two clusters are mediated by two actors in this governance arrangement for connecting Bappenas with the regional governments: the Bappenas' Directorate of Monitoring and Evaluation and the Ministry of Human Affairs' Directorate of Local Development (orange nodes). Neither the presidential regulation nor the ministerial decree on SDGs provide direct access from Bappenas to the departments or boards at provincial levels, except through Bappeda (Provincial Development Planning), who has to first report to the heads of regional governments (provincial governor, Head of District (Bupati) and Mayor) (red nodes). These heads of regional governments will then authorize Bappeda to coordinate with other departments or boards at the provincial level [94]. Provinces are the loci for implementing the SDGs, yet the provincial governments seem to be alienated from the whole arrangement because ministries and Bappenas have limited access to them.

Such an arrangement can be improved. Several ministries could assist with the coordination task due to the better access to regional governments that they have, courtesy of other presidential and ministerial decrees [129]. The Ministry of Internal Affairs has a direct hierarchical link to all the regional governments for their supervisory and monitoring function [87]. The Ministry of Village and Development of Disadvantage Region (orange box in Figure 5) has direct programs and projects at the village level [130]. Furthermore, the BPK and the National Government Internal Auditor (BPKP) have established regular auditing functions [131]. Yet, none of the ministries are tasked with coordination and none of the audit bodies are assigned for monitoring, in either Presidential Regulation 59/2017 or the Ministerial Decree 7/2018. When these ministries and boards report to Bappenas, which has no direct access to other provincial boards and departments, collaboration and monitoring becomes cumbersome and inefficient.

## 6. Discussion

Achieving the 17 SDGs by 2030 is a challenging task for any country. Some of the 17 goals, 169 targets and 242 indicators inevitably contradict one another. Moreover, each participating country has its own unique challenges arising from its particular geographical, cultural, and socio-economic conditions, involving the collaboration of multiple stakeholders from multiple sectors within regional, national and international levels. Indonesia is a middle-income country with a wide variety of environmental conditions and varied social, economic, and cultural settings. Given Indonesia's diversity and complexity, it is important that the country adapt the SDGs concept and implementation style to suit its unique context and challenges.

We believe the use of performance audits can help Indonesia implement the SDGs by embedding the audit approach into existing regular examinations by Indonesia's audit

institutions. The result of our study align with other more complex analyses. A similar assessment of the SDG governance system in Indonesia using qualitative matrix tools and scoring also found that Indonesia's governance system needs improvement if it is to achieve the SDGs [131]. Another study assessing the effectiveness of governance in one landscape in Indonesia used focus-group discussion, a context diagnostic approach, and formal survey and arrived at the same conclusion [132]. The advantage of the performance audit mechanisms enabled us to gather more information regarding the patterns of interaction between all governance actors, at different scales and sectors including the national and regional levels, and the trade-offs among SDGs. In the case of Indonesia, our performance audit showed that the key finding was that some multi-level and multi-sectoral policies are incoherent. This resulted in the failure of governance. A possible solution to this lack of governance is to adopt SDGs by adjusting them to fit Indonesia's existing governance arrangements and not the other way around. The constitution prescribes that Indonesia's political structure is hierarchical with a multi-level governance system, so Presidential Regulation 59/2017 should take this pre-existing structure into account and adjust the regulation accordingly. This would provide Indonesia with a governance structure that is more fit for purpose, helping to make goals achievable more synergistically by all stakeholders. Furthermore, performance auditing can be a useful tool for assessing the effectiveness of a governance structure for the implementation of the SDGs. Monitoring by Bappenas only provides information on whether the goals are achieved, based on reports, which may or may not reflect reality. Monitoring, however, cannot adequately assess the cause of under-achievement or verify the validity of the reports. As sustainability is dynamic, Indonesia would benefit from a mechanism that assesses the governance of SDGs regularly. Indonesia's current political structure has already adopted a performance auditing mechanism through other government organizations such as BPKP (National Government Internal Auditor) and BPK (The Supreme Audit Board). It would be more effective if Bappenas incorporated the existing audit mechanisms of BPKP and BPK into its monitoring function.

The problem of monitoring progress on the implementation of SDGs in a widely diverse country is not exclusive to Indonesia. SDGs implementation in Uganda, South Africa and Nigeria have not yet adequately involved all stakeholders in the decision making process due to their widely diverse social structures and ethnicities [133,134]. Likewise, SDG implementation in India is handicapped by data limitation, lack of coordination between central and state governments and insufficient funding for monitoring implementation [135]. We argue that this novel auditing approach can be a valuable tool for resolving such important issues. Thus, we are optimistic that our method for assessing Indonesia's governance arrangements will assist other countries facing similar problems to create more effective governance structures for the implementation of the SDGs. We hope our findings inspire any participating country to implement the SDGs more effectively, as well as to contribute to the governance auditing body of knowledge.

## 7. Conclusions

We conclude that instead of measuring the achievement of 17 goals and 169 targets and 242 indicators using extensive databases and surveys, a country can assess the progress on implementation by assessing the governance arrangements for SDGs using a performance audit. This would help countries with limited funding and technological support for SDGs. More broadly, it might provide all countries with an alternative that attempts to balance the achievement of SDGs when priorities have to be set and trade-offs have to be made. Such auditing procedures can be accommodated into the regular audit assignments by a country's Supreme Audit Institution (SAI) so that the assessment of SDG implementation is more economical and can be conducted on a regular basis to ensure continuous monitoring and adaptation when necessary.

We also conclude that based on our audit evidence, the current governance arrangements for the implementation of the SDGs at the UN organizations, country and local

levels are not effective for achieving the 17 goals in Indonesia. Some multi-level and multi-sectoral policies are incoherent, which has meant that the governance structure has failed to encourage synergistic interactions among all stakeholders. This problematic structure has also resulted in inadequate participation and lack of reflexivity to respond to unpredictable situations, conflicts of interest and trade-offs.

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**Data Availability Statement:** Restrictions apply to the availability of these data. Data was obtained from several government institutions of Indonesia and are available from the correspondent author with the permission of the government's data custodians.

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